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April 8, 2002

Mr. Clair H. Fancy, PE
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road, Mail Drop # 5500
Tallahassee, FL 32399-2400

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Subject: Air Permitting Requirements for Increasing the Amount of Low Density Product Made in the Ammonium Nitrate Prill Tower
Nitram, Inc, Tampa FL
FDEP Air Facility No. 057 0029

AC Permit Issues – Discussion Points for District Air Staff
Current Status – Proposed Final Agency Action

Dr. Mr. Fancy:☐

This report provides the permitting history for Nitram's request to allow low-density prill to be produced at the same rate that high-density prill is currently produced. Both types of ammonium nitrate prill are produced in the same prill tower at the Tampa plant. Only one type of prill can be produced at any given time. The prill tower and the associated rotary drying / cooling drums are permitted for continuous operation and may produce HD prill at a maximum rate of 50 tons per hour. LD prill has a lower per ton PM emissions rate than HD prill.

During our rule applicability meeting with you this past fall, you determined that PSD does not apply to the requested change if the sum of the HD prill PM emissions from the prill tower and rotary drums is greater than the sum of the LD prill PM emissions from the prill tower and rotary drums. Special emissions tests conducted by Southern Environmental Sciences for the prill tower and rotary drums PM emissions have shown that the combined LD prill PM emissions are less than the combined HD prill PM emissions.

At the January 10 meeting at the county air staff office in Tampa, the district staff took the position that PSD, nevertheless did apply, contrary to what you had determined this past fall, because LD and HD prill are different products. This and other related issues were thoroughly discussed during two meeting this past fall. Nitram believes the detetmination you made then is still the correct way to apply the rule. Please discuss this issue with the district air staff and advise Nitram if there is a way that this issue can be resolved without having an administrative hearing.

Permitting History

This past August, Nitram asked the Department to revise the air permit(s) for the Tampa plant to allow the company to produce and process low density (LD) ammonium nitrate prill at the same maximum rate that it is currently allowed to process high density (HD) ammonium nitrate prill.

I am providing you with this letter report on the current status of our discussions on the Nitram air construction permit application, because I believe a summary of the events of the past eight months and the issues raised will be helpful to you, to Debra Getsoff, Director of District Management, and anyone else you choose to consult with in deciding how the Department wants to resolve the company's pending request.

Request for Rule Applicability Determination

- In it's August 6, 2001, letter to Bill Thomas, Nitram described the changes they proposed to make, summarized the permitting history of the AN prill production unit, and provided a detailed rule applicability analysis that explained why the permit revisions the company was asking the Department to make were not the type of changes that are subject to any type of PSD review. The company asked the Department to make a formal rule applicability determination as soon as possible, so the company could prepare and submit an appropriate application to the District Office for the proposed changes.

- Jim McDonald, the permit engineer assigned to process the company's request, provided me with a copy of the Nitram prill tower particulate matter (PM) emissions test results that were on file at the District Office. Jerry Kissel, the district air permitting supervisor, told me that he was not sure that the available test data adequately supported the company's statement that the LD prill has a lower PM emissions rate (in lbs PM / ton of prill produced) than the HD prill. He said he would talk with Al Linero, the Administrator, New Source Review Section, in Tallahassee, about whether an additional LD prill PM emissions test might be needed, but the Tallahassee Office would determine whether the major source Prevention of Significant Deterioration (PSD) rules applied to Nitram's request.

Tallahassee Meeting – PSD Applicability

- On September 26, in Tallahassee, Dan Ross, Nitram VP, Bill Taylor, Nitram's Attorney, and I met with you, Al Linero, John Reynolds, and one of the Air Division's Attorneys, Doug Beason, to discuss Nitram's rule applicability request.

- After two hours of discussion, you determined that: (a) it was reasonable to concluded that the existing Nitram test data (that was provided by the District Office) does shows that the annual average LD prill PM emissions rate is lower than the annual average HD prill PM emission rate from the prill tower; and, (b) allowing the increased production of the lower PM-emitting product (LD prill) is not the type of change that is subject to any type of PSD review.

You suggested that the quickest way to implement the requested changes to the Title V permit would be for the District Office to issue a simple air construction permit with provisions that supercede those in the Title V permit, and then later update the Title V permit.

AC Permit Application

- Early in October, Nitram submitted the AC permit application. On October 15, Jim McDonald visited the Nitram plant and spoke with Dan Ross and Charles Ingram. Jim McDonald identified several questions for which he needed additional information. He also noted that there is a 23-tph LD prill throughput limit for the Rotary Dryer & Cooling Drums that immediately follow the prill tower, and that limit would also have to be changed. Nitram agreed that the Rotary Drums limit would have to be changed for the same reason and on the same basis as the LD production limit on the prill tower.

- On October 23, 2001, Jim McDonald sent a 10-question incompleteness letter to Nitram. He asked the company to provide a reply to each of the ten questions by the end of December 2001.

- On November 15, 2001, in Tallahassee, I met with you, Al Linero, and John Reynolds to discuss the Rotary Drums PSD questions. Jerry Kissel and Jim McDonald participated by phone from Tampa. After two hours of discussion, you concluded that the prill tower and rotary dryer & cooling drums operate as one production unit and should be considered as one unit for PSD applicability purposes. You said that if the sum of the LD prill PM emissions from the tower scrubber & from the rotary drums scrubber was less than the sum of the HD prill PM emissions from the tower scrubber & from the rotary drums scrubber, PSD would not apply, for the same reasons as previously given for the prill tower alone.

- One PM emissions test had been conducted for the rotary drums pursuant to the Title V air permit. No emissions tests had been required for the rotary drums prior to the issuance of the Title V permit. You suggested that it would be helpful to conduct a special PM comparative test for both HD & LD prill being processed as it typically is processed, but with the LD prill being processed at as high a rate as possible up to 50 TPH. You suggested the company and the District work out the details for the special test. Since the HD prill emissions test result (7 lbs PM / hour) is significantly lower than the typical plant data used to develop the EPA's AP-42 AN Production rotary drums PM emissions factors (the Nitram rotary drums are subject to a PM nonattainment area's RACT rule), and there was no test data that showed that the LD prill PM emissions comply with the RACT PM emissions limit (9.24 lbs/hour), Nitram agreed to conduct the special emissions test.

Rotary Drums Comparative PM Emissions Test

The special comparative test was conducted during December 2001, and the results were provided to the district air staff at our January 10, 2002 meeting with them at the EPCHC Air Division Office in Tampa. The reply to Jim McDonald's incompleteness letter was provided to him prior to the end of December 2001.

The results of the comparative PM tests for the rotary drums was:

a) HD prill PM emissions: 1.4 lb/hr @ 49.75 tph
b) LD prill PM emissions: 0.8 lb/hr @ 33.64 tph

As expected for the type of rotary drums design that Nitram has, the LD prill PM emissions were less than the HD prill PM emissions.

But, even if they were not, (as we had discussed at our November meeting in Tallahassee), the average prill tower HD PM emissions are greater than the average prill tower LD PM emissions by enough [11 lb/hr (20 -2x4.5 lb/hr)] @ 50 tons/hr each, so that even if the rotary drums average LD PM emissions @ 50 tons/yr were 9 lb/hr and the HD PM emissions @ 50 tons/yr, were 1 lb/hr (for a series of comparative tests), the net difference [as a result of increasing the LD prill throughput rate from 25 tons/hr to 50 tons/hr] would be a decrease of 3lb/hr [(20 + 1) - ((2x4.5) + 9)] for the combined tower - rotary drums production unit. If the HD and LD prill PM emissions rates for the rotary drums were the same, the decrease would be more than 3 lbs/hr.

Therefore, as long as the tower & the rotary drums meet their current BACT (26 lb/hr) & RACT (9.24 lb/hr) PM emissions limits, the result of increasing the LD prill throughput rate will be a net decrease in the annual average PM emissions rate for the combined tower - rotary drums production unit. That kind of a change, as you said in both the September and the November Tallahassee meetings, is not subject to PSD review. Therefore the AC permit can and should be issued as requested.

The combined prill tower – rotary drums production unit should be re-permitted to allow a maximum throughput rate of 1200 tons/day of HD or LD prill. Since the maximum test rate for LD prill was about 34 tons/hr (~ 807 tons/day), the max LD prill throughput rate (by the general conditions of the Title V permit) would be restricted to that plus 10%, for a temporary max rate of 37 tph (888 tpd), until future test data shows that the unit would still comply with the RACT rule and the PSD non-applicability criteria, when operated at a higher throughput rate [not to exceed 50 tons/hr (1200 tons/day)].

January 10 Meeting in Tampa

When we met with Bill Thomas, and other members of the District and County air staff at the EPCHC Air Division Office in January 2002, we thought that, except for the comparative test data that we would present at that meeting, we had provided the Department with all of the information that you and the District air permitting staff had requested.

At that meeting, we learned that Jerry Campbell, Jerry Kissel, and Al Linero (who participated part-time by phone), were not prepared to proceed on the basis of what you had told us at the two meetings in Tallahassee. [At the time of the January meeting, you were at home, recovering from major surgery].

Jerry Kissel told us that he had concluded that since the LD prill was a distinctly different product than HD prill, that allowing an increase in it's current maximum allowable daily production rate would be subject to PSD review, and a current actual to future potential annual emissions increase calculation needed to be done to determine how much of an increase in the LD prill production rate could be allowed without triggering a full PSD review and a Best Available Control Technology (BACT) determination.

We did not agreed with his conclusion, but Dan Ross agreed to provide the District Office with the annual production data for both HD & LD prill for the past 5 years, so the District would have the data needed to make that calculation. That data has been provided to the District Office. All of the other data needed to make that calculation was provided in Nitram's December 2001 reply to Jim McDonald's incompleteness letter, or is in the District's files, or otherwise available to the District air permitting staff.

Current Status – AC Permit Application

Since the Department did not send Nitram an additional incompleteness letter within 30 days after the January 10 meeting in Tampa, Nitram's application is now "complete," and the Department needs to take final agency action to issue or deny the requested permit as soon as possible but not later than April 10, 2002.

In deciding what final action the Department will take on the pending application, it is appropriate for the District to consider whether the questions and issues raised at the January 10 meeting in Tampa provide an adequate basis for denying the requested permit, or whether the District should issue the requested permit on the basis that you provided in the September and November rule applicability meetings with us in Tallahassee.

To assist you, and others within the Department who may be involved in making that decision, we have specifically addressed the issues raised at the Tampa meeting, and summarized the reasons Nitram believes the requested permit revisions are not subject to a PSD review of any kind. The following discussion does not provide any new application information or change the permit revisions requested. It addresses the recent issues raised by the district and the county air staff, and explains why Nitram believes the Department should issue the permit as requested.

Response to January 10 Meeting Issues

Jerry Campbell's Comments

At the January 10 meeting, Jerry Campbell asked if you had all of the facts when you met with us in Tallahassee, and suggested that the reason you proposed the District issue a construction permit was to allow the district and the county to sort out all of the fact before making a final decision on this matter.

I noted that you are the Chief, FDEP Bureau of Air Regulation; the senior air permitting officer in the state, responsible for making final technical decisions on all state air permitting matters, in particular, PSD permitting issues; that you have been making these kinds of decisions for over 20 years, and have as much experience doing so, as anyone in the county; and that you are Al Linero's supervisor.

Mr. Linero, John Reynolds's (who works for Al Linero), and one of the Air Division's Attorneys, Doug Beason, participated in the September PSD rule applicability meeting. The purpose of that meeting was for the company to learn from you if the Department's PSD rules applied to the permit revisions requested.

The basic question Nitram asked you to answer was: If the average lbs PM emissions per ton of LD prill produced is equal to or less that the average lbs PM emissions per ton of HD prill produced, is allowing an increase in the LD prill production rate (not to exceed the currently allowed HD prill production rate) the type of change that is subject to any type of PSD review?

A secondary question was: Does the existing available data show that it is reasonable to conclude that the typical annual average LD prill PM emissions rates (in lbs/ton) from the Nitram prill tower are lower than the typical annual average HD prill PM emissions rates (in lbs/ton) from the prill tower?

During that meeting, Al Linero took the role of the devil's advocate and presented various arguments for concluding that the proposed change was subject to PSD review. I told you about Jerry Kissel's concern about whether the Nitram PM emissions test data was adequate to establish that the LD prill actually has lower PM emissions than the HD prill. Each issue was discussed. I gave you a copy of the Nitram test data that had been provided to me by Jim McDonald.

At the January 10 meeting, I noted that I thought you understood the issues and had all of the facts you needed to make an informed decision. After listening to 2-hours of discussion, you concluded that the existing Nitram test data shows that the LD prill does have a significantly lower PM emissions rate than the HD prill, and that allowing an increase in the LD prill production rate (not to exceed the currently allowed HD prill production rate) was not the type of change that is subject to any kind of PSD review. [The AP-42 emissions factor information that I provided to Bill Thomas before the January 10 meeting showed the same result. The LD PM emissions from an AN prill tower are typically about 1/3 of the HD prill PM emissions from an AN prill tower].

You suggested the District Office issue a simple air construction permit, not because you though you didn't have all of the factual information needed, but (as you noted at the meeting) because you understood that every day that getting the Department's authorization to make the requested permit revisions was delayed, would cost the company a substantial loss in LD prill income.

Al Linero's Comment

Toward the end of the January 10 meeting in Tampa, Al Linero (by phone) said that since you did not put your conclusions from the September and November rule applicability meetings in Tallahassee in writing, you actually didn't make any rule applicability determinations on this matter, but he would be glad to do so, if the company would write it up and send it to him.

Perhaps, Mr. Linero meant that to be a humorous remark. If not, I don't understand why he said it. I think everyone else at both meetings understood that you made the rule applicability determination that the company had requested in it's August 6 letter to Bill Thomas.

Jerry Kissel's Comments

Before you get to the part of the PSD rule that requires a "significant net increase" calculation, you have to determine if the proposed physical or operational change, or addition to a facility is the type of change or addition to a facility that requires a PSD review. The types of changes or additions (in general) that do are those that would result in (cause) an increase in annual emissions (that would not otherwise occur).

In the early 1990's, the EPA added several specific exemptions to the PSD rules. One of those addressed "pollution control projects." Several years ago, I talked with Bill Thomas about two such projects that Al Linero was involved in.

One involved a phosphate plant that changed the catalyst used to convert sulfur dioxide to sulfur trioxide that is mixed with water to produce sulfuric acid. The better catalyst increased the acid plant's production rate, but by converting more of the SO_2 to acid, less SO_2 and acid mist was emitted from the process. Mr.

Linero determined that in this case the increase in the production rate was not a change that required a PSD review.

TECO switched one of its power plants to lower sulfur western coal. The lower sulfur coal had a higher ash content that caused higher particulate matter emissions. Mr. Linero determined that the project was "environmental beneficial" and ruled that it did not require a PSD review. Both were judgment calls. The PSD rules require such judgment calls to be made. In both of these cases, I think he made the right choice. Determining whether other types of changes are the type that is subject to PSD review also involves a judgment call.

EPA Permitting Guidance

Since the late 1980's, the EPA air permitting guidance has required the inclusion of maximum allowable production rates or heat input rates in air permits to establish the potential emissions of process operations and combustion units. When multiple raw materials, products, or fuels are involved, the raw material, product, or fuel, or combination of them that are used together that has the greatest emissions rate as a function of the process's production rate or unit's heat input rate is used to calculate the annual maximum allowable emissions rates (potential emissions for the process operation or combustion unit.)

In a case where several products are made using one set of process equipment, which can only be used to make one product at a time, but could make any one of the products all of the time, and emits only one type of air pollutant, but at a different rate for each product, the annual maximum allowable emissions of that air pollutant (potential emissions) is calculated by assuming the process is used on a continuous basis to makes the product with the greatest emissions rate at the maximum production rate for the process.

Unless the owner specifically requests the permitting office to restrict the production rate of the most polluting product (or some other combination of the products) to avoid a particular permitting requirement, the permitting office does not need to establish separate production limits for the products.

In Nitram's case, the potential PM emissions for the prill tower – rotary drums process operation is calculated on the basis of the continuous production of HD prill at a maximum production rate of 1200 tons per day, while just complying with the BACT limit that applies to the prill tower scrubber and the RACT limit that applies to the rotary drums scrubber. The LD prill production limit in the Title V permit is not needed to establish the process operation's potential emissions, and is not needed to avoid any potentially applicable permitting requirement. Increasing it to the same as the HD prill production limit will not change the potential emissions, but allowing relatively more LD prill to be made will result in lower annual average PM emissions than otherwise will occur.

Conclusion

To be sure that what I have told you in this report is as accurate as I can make it, Dan Ross and William Taylor have review this report to ensure that the information provided is consistent with the documents they have read and the discussions they have participated in.

If it would be helpful for Dan Ross and/or me to talk with you by phone or to meet with you to discuss any of this, please call Dan Ross at the telephone number provided below, or me at the telephone or cell phone number provided in the letterhead on the first page of this letter report.

Please let us know as soon as possible how the Department wants to proceed.

Sincerely,

Stephen Smallwood

Stephen Smallwood, PE
Air Consultant

c: Daniel E. Ross, PE, Nitram Executive VP & Chief Operating Officer, Tampa (813) 626-2181
William B. Taylor IV, Esquire, Macfarlane Ferguson & McMullen, Tampa (813) 273-4200

AQS File: C:\AQServices\Projects\924_Nitram - ACTIVE\01_Prill Tower - LDP\AC_Permit\Nitram_AC_Permit__Issues_Mar25_2002.doc

Reynolds, John

From: Linero, Alvaro
Sent: Wednesday, January 09, 2002 2:20 PM
To: Reynolds, John
Subject: FW: AC Permit Breifing Letter - EPCHC Mtg Thur 01/10 9:30 am Tampa

AC_Permit_DO_EPCH
C_Mtg_0110_s3...

-----Original Message-----
From: Thomas, Bill
Sent: Wednesday, January 09, 2002 2:13 PM
To: Linero, Alvaro; 'campbell@epchc.org'; 'harman@epchc.org'
Subject: FW: AC Permit Breifing Letter - EPCHC Mtg Thur 01/10 9:30 am Tampa

-----Original Message-----
From: Ssm97@aol.com [mailto:Ssm97@aol.com]
Sent: Wednesday, January 09, 2002 12:44 PM
To: Thomas, Bill; Moore, Carol
Cc: wbt@macfar.com; dross@nitramtampa.com; cinitram@tampabay.rr.com
Subject: AC Permit Breifing Letter - EPCHC Mtg Thur 01/10 9:30 am Tampa

January 9, 2002
AC Permit Breifing Letter - EPCHC Mtg Thur 01/10 9:30 am Tampa

Bill Thomas
Carol Moore

Attached is a breifing letter and an attachment for Bill Thomas on the issues we need to discuss at our meeting tomorrow morning.

Steve Smallwood, PE
Air Quality Services
Tallahassee

850 385-0002

January 9, 2002

Stephen Smallwood, PE
Air Quality Services

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Florida Department of Environmental Protection
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Subject: Air Permitting Requirements for Increasing the Amount of Low Density Product Made in the Ammonium Nitrate Prill Tower
Nitram, Inc, Tampa FL
FDEP Air Facility No. 057 0029

AC Permit Meeting at the EPCHC Office – Thursday, 10 Jan 2001, 9:30 am

Dear Bill:

This letter provides you with a summary of the main issues we need to discuss at the Thursday meeting concerning Nitram's request for the DEP to issue an air construction permit to allow an increase in the relative amount of low density (LD) prill produced at the plant.

At the meeting we need to discuss and answer any remaining questions that you or the county air staff have about Nitram's pending AC permit application, and to learn from you what additional information (if any) the Department needs in order to issue the AC permit that Nitram requested early in October 2001.

Request for Rule Applicability Determination

- In it's August 6, 2001, letter to you, Nitram described the changes they need to make, summarized the permitting history of the AN prill production unit, and provided a detailed rule applicability analysis. The company asked the Department to make formal rule applicability determinate as soon as possible, so the company could prepare and submit an appropriate application for the needed changes. As part of that letter, Nitram asked that the 25 tph throughput limit for LD prill be removed from the Title V permit, on the basis that there is no air regulatory need for that limit (in addition to the overall 50 tph AN prill throughput limit). Prior to the issuance of the Title V permit, there was no specific LD prill throughput limit in any of the Department's permits for the unit.

- As you know, a Title V permit is not intended to be a means for establishing any new regulatory requirements for an emissions unit. Its purpose is to list all of the specific requirements that have already been established by a source-specific rule or previously issued federally enforceable air construction permit.

a) There are no previous AC permits that establish the 25-tph limits in the Title V permit. The AC permit referenced in the Title V permit is a Cargill permit. It was a mistake.

b) The first time the 25 tph LD prill limit appears is in an early 1990's state air operating permit, not as a specific condition, but as part of the process description. That description became "segment" information in the company's Title V application. Several years passed before the Title V permit was issued. Neither the DEP permit engineer or the consultant who worked on the initial Title V application were still involved when the Title V permit was issued with the 25 tph LD prill throughput limit, which was not required by any specific rule or previously issued AC permit.

c) If there were data that showed that a LD prill throughput rate greater than 25 tph would result in violating the 26 lb/hr BACT PM limit, there would be a reason for such a limit. However, all of the available data indicates that that is not true.

The company's old data for the operation of the #1 prill tower on both LD & HD prill without a scrubber, indicated that the prill tower PM emissions from HD prill are significantly higher than from LD prill. EPA's AP-42 data indicates the same thing. The results of the Nitram compliance tests for the #2 prill tower over the past 15 years also show the same result. And the recently completed comparative PM emissions test for the Rotary Dryer & Cooling Drums showed that the HD prill PM emissions from the Rotary Drums also are greater than the LD prill PM emissions from the Rotary Drums.

Tallahassee Meeting – PSD Applicability

- The initial response from the District staff was that they tentatively agreed with Nitram's analysis of the situation, but Jerry Kissel said it might be necessary to conduct a special LD prill PM emissions test to verify that the LD prill emissions are actually lower than the HD prill emissions. On behalf of the county, Sterlin Woodard advised J. Kissel that he thought PSD would apply, but didn't say why. J. Kissel said it was up to Tallahassee to determine if PSD applied, and referred the matter to Al Linero.

- On September 26, in Tallahassee, Dan Ross, Nitram VP, Bill Taylor, Nitram's Attorney, and I met with Clair Fancy, Al Linero, John Reynolds, and the Bureau's Air Attorney, to discuss Nitram's rule applicability request.

- After two hours of discussion, Mr. Fancy concluded that the existing Nitram test data shows that the LD prill PM emissions are lower than the HD prill PM emissions from the prill tower; that allowing the increased production of the lower PM-emitting product (LD prill) would result in the annual average prill tower PM emissions being lower than they otherwise would be, and therefore the proposed change is not the type of change that is subject to PSD review.

He suggested that the quickest way to implement the requested changes to the Title V permit would be for the District Office to issue a simple AC permit with provisions that supercede those in the Title V permit, and then later update the Title V permit.

AC Permit Application

- Early in October, Nitram submitted the AC permit application. On October 15 Jim McDonald visited the Nitram plant and spoke with Dan Ross and Charles Ingram. Jim McDonald identified several questions for which he needed additional information. He also noted that there is a 23-tph LD prill throughput limit for the Rotary Dryer & Cooling Drums that immediately follow the prill tower, and that limit would also have to be changed. Nitram agreed that the Rotary Drums limit would have to be changed for the same reason and on the same basis as the LD limit on the prill tower.

- On October 23, 2001, Jim McDonald sent a 10-question incompleteness letter to Nitram.

- On November 15, 2001, in Tallahassee, I met with C. Fancy, Al Linero, and John Reynolds to discuss the Rotary Drums PSD questions. Jerry Kissel and Jim McDonald participated by phone from Tampa. After two hours of discussion, C. Fancy concluded that the prill tower and rotary dryer & cooling drums operate as one production unit and should be considered as one unit for PSD applicability purposes. He said that if the sum of the LD prill PM emissions from the tower scrubber & from the rotary drums scrubber was less than the sum of the HD prill PM emissions from the tower scrubber & from the rotary drums scrubber, PSD would not apply, for the same reasons as previously given for the prill tower alone.

AP-42 AN Production Data

At a recent meeting between Bill Taylor, Nitram's Attorney, and the district and county air staff, Sterlin Woodard said he thought AP-42 should be used to determine PSD applicability and the comparative LD prill PM emissions test results were meaningless.

It is true that the emissions thresholds listed in the PSD rule are annual emissions amounts, and the AP-42 emissions factors represent long term average values (like annual amounts). When there are applicable AP-42 EFs that specifically represent a specific process, it is appropriate to use the AP-42 factors. If source specific emissions data is available, AP-42 tells you to use the best available data. In making his determinations, Clair Fancy was, of course, aware of that. He suggested the comparative test, because there was no source specific LD prill PM emissions data available. The company needed to conduct the LD prill test to verify that the unit would comply with the applicable PM RACT limit at the higher throughput rate. The results of the comparative test were not to be used alone, but in combination with all of the other available data.

Enclosed is an attachment entitled "AP-42 AN Production Data." It addresses the questions that Sterlin Woodard raised about the use of AP-42. It explains why the AP-42 information supports C. Fancy's decision on the prill tower emissions alone, and how the Nitram rotary drums dryer & cooling drums operation is different than the typical drums operation that the AP-42 drums EFs are based on.

Conclusion

The results of the comparative PM tests for the rotary drums is:

a) HD prill PM emissions: 1.4 lb/hr @ 49.75 tph
b) LD prill PM emissions: 0.8 lb/hr @ 33.64 tph

As expected for the type of rotary drums design that Nitram has, the LD prill PM emissions are less than the HD prill PM emissions.

But, even if they were not, the average prill tower HD PM emissions are greater than the average prill tower LD PM emissions by enough [11 lb/hr (20 -2x4.5 lb/hr)] @ 50 tons/hr each, so that even if the rotary drums average LD PM emissions @ 50 tons/yr were 9 lb/hr and the HD PM emissions @ 50 tons/yr, were 1 lb/hr (for a series of comparative tests), the net difference [as a result of increasing the LD prill throughput rate from 25 tons/hr to 50 tons/hr] would be a decrease of 3lb/hr [(20 + 1) - ((2x4.5) + 9)] for the combined tower - rotary drums production unit.

Therefore, as long as the tower & the rotary drums meet their current BACT (26 lb/hr) & RACT (9.24 lb/hr) PM emissions limits, the result of increasing the LD prill throughput rate will be a net decrease in the annual average PM emissions rate for the combined tower - rotary drums production unit. That kind of a change is not subject to PSD review. Therefore the AC permit can be issued as requested.

The combined prill tower – rotary drums production unit should be re-permitted to allow a maximum throughput rate of 1200 tons/day of HD or LD prill. Since the maximum test rate for LD prill was about 34 tons/hr (~ 807 tons/day), the max LD prill throughput rate (by the general conditions of the Title V permit) would be restricted to that plus 10%, for a temporary max rate of 37 tph (888 tpd), until future test data shows that the unit would still comply with the RACT rule and the PSD non-applicability criteria, when operated at a higher throughput rate (not to exceed 50 tons/hr (1200 tons/day).

If you have any questions about this information, please call me at 850 385-0002 in Tallahassee.

Sincerely,

Stephen Smallwood

Stephen Smallwood, PE
Consultant

Enclosures: AP-42 AN Production EF Data
SS/ssm

AP-42 AN Production Data

Prill Tower Emissions

EPA' Compilation of Air Pollutant Emissions Factors (AP-42), Table 8.3-2, gives the AN EFs in English Units. The "uncontrolled" PM EFs for the prill tower are 3.18 lb/ton for HD prill & 0.92 lb/ton for LD prill. The LD emissions are about 30% of the HD emissions. The "controlled" emissions listed in the table for a prill tower assume that the scrubber is 62% efficient on HD prill PM emissions, and only 43% efficient on LD prill emissions.

Both the HD & the LD prill PM emissions from the Nitram prill tower have to meet a PM BACT emissions limit of 26 lb/hr. At 50 tpy that is an emission factor of 0.52 lb/ton. The actual average HD tests result for ten Nitram tests was 0.40 lb/ton. The actual average LD tests result for two tests was 0.18 lb/ton, which is approximately 45% of the HD emissions rate. If the uncontrolled HD prill PM emissions for the Nitram prill tower were the same as the AP-42 factor, the tower scrubber would have to 84% efficient to just meet the BACT limit, and 88% efficient to achieve the average emission rate of 20 lb/hr.

The AP-42 EFs for the prill tower suggests that if we had more LD prill tower test data, the average LD prill PM emissions would be about 3 lb/hr instead of the 4.5 lb/hr average of the two tests we do have.

All of that supports what we have said about the prill tower PM emissions: "They are controlled much better that the PM emissions from the typical AN prill tower because of the BACT limit. The LD prill PM emissions are significantly less than the prill tower HD prill emissions on a lb/ton basis, which means that producing relatively more LD prill will result in a lower long-term average PM emissions rate from the tower than would otherwise occur. Therefore, increasing the relative amount of LD prill produced is not the type of operational change that is subject to PSD review. That is what Clair Fancy concluded at our September meeting in Tallahassee.

Rotary Drying & Cooling Drums Emissions

The AP-42 Rotary Drums EFs in Table 8.3-2 say the PM emissions from the LD prill passing through the typical industry design drying and cooling drums would be greater than the PM emissions from the HD prill passing through the cooling drum. The table lists the HD EF as 0.02 lb/ton & and the LD prill EF as 1.66 [0.52 + 1.14] lb/ton. The "controlled emissions" factors assume 99% control of that level of "uncontrolled emissions."

The higher "uncontrolled" PM from the typical LD prill rotary drum unit is due to the higher percentage of relatively larger particles emitted from the LD prill. The typical design has a dryer and a cooler vented through a low energy wet scrubber. The Nitram system has a pre-dryer, a dryer, and a cooler, each vented first through a wet cyclone that removes most of the larger particles from the "uncontrolled emissions" from the drums. Then, the emissions from the wet cyclones are passed through a medium energy wet scrubber that removes at least 99% of the smaller particles that pass through the cyclones.

The PM emissions from the drums at the Nitram plant are better controlled than typical rotary drums. Most rotary drums units don't have to comply with the PM RACT rules. At the Nitram plant, both the HD prill and the LD prill PM emissions from the rotary dryers & cooling drum are subject to the 0.03 grains /dscf NAA PM RACT rule. The current Title V permit limits those emissions to no more than 9.24 lb/hr, regardless of the materials throughput rate.

Prill Tower – Rotary Dryer & Cooler Drums Production Unit Emissions

The current Nitram test data shows that the average prill tower HD prill PM emissions rate is approximately 20 lb/hr (0.40 lb/ton @ 50 tph). The current Nitram test data shows that the average prill tower LD prill PM emissions rate is approximately 4.5 lb/hr (0.018 lb/ton @ 25 tph). The AP-42 prill tower EFs suggest that if we had more LD prill tower test data, the average prill tower LD prill PM emissions rate would be approximately 3.0 lb/hr (0.012 lb/ton @ 25 tph). At 50 tph, the difference between the tower HD and LD prill PM emissions rates would be approximately 11 lb/hr (20 – 2 x 4.5).

If the average HD & LD prill rotary drums PM emissions were both about 1 lb/hr (similar to the recent comparative tests results), the net change in the average PM emissions of the tower-rotary drums production unit (as a result of increasing the relative amount of LD prill produced) would be a net decrease of 11 lb/hr. If the rotary drums average LD prill PM emissions were 9 lb/hr and the drums average HD prill PM emissions were 1 lb/hr, the average PM emissions of the tower-rotary drums production unit would still be a net decrease of 3 lb/hr [20 +1] – [2 x 4.5 + 9].

Since the average HD tower PM number (20) is based on ten test results, the AP-42 EFs for AN prill towers suggests that the LD tower PM number (4.5) is probably high, and the rotary drums HD & LD numbers have to be between 0 and 9.24, it is reasonable to conclude that the average LD PM emissions rate for the tower-rotary drums production unit @ 50 tph will be less that the average HD PM emissions rate for the tower-rotary drums production unit @ 50 tph.

Stephen Smallwood, PE
Air Quality Services
Tallahassee

January 8, 2002

Summary of Nitram Meeting

Date: November 15, 2001

Participants: Steve Smallwood (Nitram, Inc.)
Clair Fancy, Al Linero, John Reynolds (BAR)
Jerry Kissel, Jim McDonald (SWD)

Discussion and Outcome:

- Nitram agrees to conduct additional testing to demonstrate that the total emissions from the prill tower and rotary drums while producing low-density prills will be less than total emissions from the prill tower and rotary drums while producing high-density prills (considering that two drums are required for high-density vs. three drums required for low-density). The purpose of the additional testing is to resolve the Department's concerns as to whether PSD applies to the requested conversion to low-density.

- Nitram wants the Department to agree that there are no PSD implications for this conversion. Nitram's basis for this position is that there is no difference in the two products and Nitram would like for the Department to concede the PSD issue on its face. The Department's position is that, although the two products may be essentially the same chemically, the processes have variations that may result in different emissions.

- In the construction permit modification to be issued by the SWD, Nitram requested that the prill tower and rotary drums be considered as the same emission unit so that the total emissions for the tower and drums would be enforced collectively rather than individually. This could present problems with RACT compliance for the drums (0.03 gr/SCF) since the calculations would have to reflect weighted averages and other assumptions regarding volumetric flow rates for the tower vs. the drums.

- Emission tests presently scheduled for December 20 will be cancelled and rescheduled per the meeting agreement.

- During the prior meeting with Nitram, the Department accepted the results from tests already done on the prill tower so that the presumption can be made that the prill tower emissions are lower for low-density vs. high-density. This obviates the need for additional testing to show lower emissions for the prill tower. However, additional testing for the drums is required on both products to resolve any concerns about the PSD applicability issue. It is agreed that if the low-density drum emissions are less than high-density drum emissions, the PSD issue should be moot.

NITRAM, INC.
5321 Hartford St.* P.O. Box 2968 * Tampa, Florida 33601* Phone (813) 626-2181* Fax (813) 623-6080

December 18, 2001

RECEIVED
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BUREAU OF AIR REGULATION

Mr. James McDonald
Air Permitting Engineer
Air Resources Management Section
Southwest District Office
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619-8218

1 813 744-6100 x 106
1 813 744-6458 fax

Subject: Nitram AC Permit Application – October 2, 2001
Low-Density Prill Production Permit Conditions
Reference Permit No. 0570029-002-AV

DEP File No. 0570029-007-AC

Dear Mr. McDonald:

This letter addresses the 10 questions in the FDEP SW District air section's October 23, 2001 Incompleteness Letter concerning Nitram's pending air construction permit application. The purpose of that application is to delete the low-density prill production rate limits from the relevant Title V permit conditions, and to make other related corrections and clarifications to the provisions of the current Title V air operation permit.

This letter provides information on several factual and rule applicability questions concerning the Prill Tower LD prill production and processing limits in the plant's current Title V permit that we discussed with Clair Fancy, PE, Chief, FDEP Bureau of Air Regulation during our meeting with him on September 26, 2001, in Tallahassee; questions we have been discussing with you and Jerry Kissel during the past two months; questions you raised during your plant visit, and questions concerning the Prill Rotary Drums operations that we discussed with Clair Fancy, PE, Chief, FDEP Bureau of Air Regulation during our meeting with him on November 15, 2001. We have reviewed the specific conditions for all of the emissions units at the plant, and we agree with you that in addition to the wording changes we proposed for the Prill Tower's specific conditions, changes also need to be made to the specific conditions that apply to some of the other emissions units to fully implement the basic change requested in the pending application.

Attachment 1 to this letter lists the ten incompleteness questions in your October 23rd letter, followed by our specific answer to each of those questions. In answering those specific questions, we refer, in some cases, to parts of the general response provides in this letter, and to the information in the second and third attachments to this letter.

In response to the first question of the Incompleteness Letter (see Attachment 1 to this letter), add the second attachment to this letter (Attachment B - Amendments to Specific Permit Conditions & Provisions), to the pending air construction permit application.

Attachment 2 to this letter identifies the additional changes and clarifications that need to be made to the specific conditions and other provisions in the current Title V permit. Also consider the information in this letter and the third attachment to this letter as an addition to the Application Comments in the pending application.

Attachment 3 to this letter provides a statistical analysis of the PM emissions test data for the Prill Tower while processing HD prill. The results of that analysis are discussed latter in this letter.

Clay-Coated Prills

The proposed wording changes to EU 009 - Coated Ammonium Nitrate Storage and Handling and to Appendix U-1 List of Unregulated Emissions Units and/or Activities are to clarify that the conditions of that EU apply only to the storage and loadout of clay-coated ammonium nitrate prill, and that the storage and loadout of both high-density and low-density prill (other than those that are clay-coated) are considered to be exempt activities. There are no specific conditions in the Title V permit that apply to either. The clarification is needed because the low-density prill is "coated" with a liquid treatment called Galoryl that improves its handling properties, and further reduces what little dust might otherwise be generated.

The Prill Clay-Coating Operation (EU 008), and the Clay-Coated Prill Handling and Storage Operation (009), are both shutdown, and may not be reactivated without prior authorization from the Department. At the present time, the company has no plans to reactive those units. The type of low-density prill that is now being made is not subject to the specific conditions of EU 009.

Prill Rotary Drums

The capacity specific conditions for EU 012 – Prill Rotary Drums needs to be revised in the same way that the company has proposed to revise the capacity provisions of EU 006 – Ammonium Nitrate Prill Tower No. 2, and for the same reason. All of the available data indicates that the annual average emissions rates (in lbs PM / ton of prill produced) for the LD prill is equal to or less than the annual average emissions rates (in lbs PM / ton of prill produced) for the HD prill. [For a discussion of the significance of that and the comments in the following paragraph with respect to the applicability of PSD permitting requirements, see the section at the end of this letter entitled "**Change in the Method of Operation.**"]

Three drums and three fans are used to dry and cool the LD prill vs. one drum and two fans to cool the HD prill, because the just-formed LD prill is wetter than the just-formed HD prill. Wetter pellets of a given type of material typically emit less "materials handling" PM emissions than dryer pellets of the same type of material. Neither the Title V permit nor previous state permits have required the company to conduct any emissions test on the Rotary Drums while processing LD prill. The one PM emissions test that has been conducted (7.0 lbs/hr) while processing HD prill showed compliance with the unit's 9.24 lb/hr PM emissions limit.

To verify that the rotary drums operation is capable of complying with the applicable PM RACT emissions limit (and that it would comply with the PSD non-applicability criteria determined by Clair Fancy at the November 15 meeting in Tallahassee), while processing LD prill at production rates higher

than the currently permitted processing rate limit, Nitram will conduct a special comparative PM emissions test for this unit. The results of that special test will be provided to you as a separate report.

Prill Tower PM Emissions Test Data

The third attachment to this letter summarizes the PM emissions test data for the Prill Tower and provides a statistical analysis of that data.

The first Data Analysis Sheet (TABLE 1 - NITRAM PRILL TOWER PM EMISSIONS TEST DATA: 1985 –2001, High Density & Low Density Prill [Including the 1998-99 Low Test Values]) lists all of the available data for the unit (1985 – 2001): 12 tests for HD prill, and 2 tests for LD prill. The Probability Distribution Plots of the data (the two lower right graphs) shows that the 1998 & 1999 test results don't fit the normal distribution for the other 10 test results. That indicates that those two test results probably are significantly lower that the actual emissions rates during the test periods.

The second Data Analysis Sheet (TABLE 2 - NITRAM PRILL TOWER PM EMISSIONS TEST DATA: 1985 –2001, High Density & Low Density Prill [Minus the 1998-99 Low Test Values]) lists all of the available data for the unit, except for the 1998 & 1999 tests (1985 – 2001): 10 tests for HD prill, and 2 tests for LD prill. The Probability Distribution Plots of that data (the two lower right graphs) shows that the other 10 test results do fit a common lognormal distribution. That indicates that those 10 tests probably are more representative of the actual emissions rates than the 12-test data set presented in the first Summary Sheet.

There is not enough data to do a statistical analysis of the LD prill PM emissions test data. The average value is 0.176 lb PM /ton Prill Produced. The average value for the 10-test HD prill data set is 0.399 lb PM /ton Prill Produced.

The apparent significant downward trend in the 12-tests data set becomes insignificant when the two questionable test results are removed. For the 10-test data set, the decrease in the trend line over a 16-year period is about 0.050 lb/ton. The standard error for the 10-test data set is 0.103 lb/ton. That indicates that the apparent downward trend in the data is not significant. It is within the "noise" of the normal variation in the values of the test results.

The test data, (viewed in light of the nature of the prilling process in the tower, and the materials handling process in the rotary drums unit), indicates that it is reasonable to conclude that the annual average emissions rates (in lbs PM / ton of prill produced or processed) for the LD prill is equal to or less than the annual average emissions rates (in lbs PM / ton of prill produced or processed) for the HD prill.

Change in the Method of Operation

Since the HD prill and the LD prill are made in the same prill tower (one product at a time), the situation is similar to increasing the amount of "as available" natural gas burned in a boiler that is already permitted to burn fuel oil, [which has air pollutant emissions factors that are equal to or greater than the emissions factors for the natural gas burned] to provide 100% of the boiler's heat input. The increased use of a lower emitting fuel or material is not a change that results in a "net increase in emissions."

When a unit that uses multiple fuels or multiple materials is permitted for continuous operation, the potential emissions are based on the continuous use of the highest emitting fuel or material at the maximum rated heat input or production rate for the unit. There is no need to put production limits on the

lower emitting fuels or materials unless the applicant specifically requests the Department to do so. By definition it is not possible to burn or process them at a rate greater than the unit's maximum rate.

That is what Clair Fancy concluded at our September meeting with him in Tallahassee. Since this kind of "operational change" is not considered a type of change that would be a "change in the method of operation that would result in an increase in actual emissions," it is not a modification, and it is not subject to PSD review. You don't get to the question of whether the "change" results in a significant net increase, because the type of change proposed is not the type of "change" that is subject to PSD review. By definition it does not cause an increase in "actual emissions."

Clair Fancy concluded that the quickest way to remove it from the current Title V permit would be for the District Office to expeditiously issue a simple state air construction permit that would revise the relevant provisions of the current Title V permit. In making this decision, Clair Fancy was aware of the very high cost to the company of any unnecessary delays in processing and issuing the needed permit.

The air construction permit application the company has submitted to the District Office is not to obtain authorization for a "modification" to the facility. Removing the unnecessary LD prill production rate limits in the Title V permit, and correcting and clarifying some of the other specific conditions does not constitute a "modification" to the facility; however, a permit with federally enforceable permit conditions that supercede the current specific conditions in the Title V permit, is needed. That is the sole purpose of the application we have submitted.

Within 180 days after beginning the implementation of the revised permit conditions, the company, as required by the Title V rules, will submit an update to the current Title V permit that reflects the relevant provisions of the special air construction permit.

At the November meeting with Clair Fancy, he concluded that since the prill tower and the rotary drums dryer/coolers operate as one integral production unit (i.e. the amount of prill that is produced in the tower has to immediately go through the drums), the prill tower / drums production unit should be considered as a whole for determining if the proposed increase in production of LD prill through the tower and the drums is the type of change that is potentially subject to PSD review.

Therefore, if the sum of the actual emissions rate (in terms of lbs PM/ ton of prill produced or processed) from the prill tower scrubber and the rotary drums scrubber [while producing LD prill in the tower at or near its maximum practical capacity], is less than the sum of the actual emissions rates from the tower and drums while producing HD prill at or near it's maximum permitted capacity, the proposed change to the current LD prill production rate provisions for the tower and drums (increasing the relative amount of LD prill produced) would result in an overall decrease in the annual average PM emissions rate from the tower and drums. That type of change is not subject to PSD review.

Since PSD applicability is based on the annual average emissions rates, and specific PM emissions test results represent a short-term average (~3 hour), the appropriate way to compare the emissions test results is to compare the mean or average value of all of the test results for each product for each emissions point (tower & drums scrubber outlets).

Since there is no PM emissions test data currently available for processing LD prill through the Rotary Drums (the Title V permit does not require such a test, and previous permits have never required such a test), Clair Fancy concluded that if a special comparative test (a PM emissions test for the Rotary Drums scrubber while processing HD prill, followed by a PM emissions test while processing LD prill, with both tests conducted at the maximum practical LD processing rate, not to exceed 50 tph) showed that the PM emissions for the HD prill test were higher than the PM emissions for the LD prill test, it would be

reasonable to conclude that the annual HD emissions are higher than the annual LD emissions, and therefore that PSD does not apply to the prill tower / rotary drums production unit. In the September meeting, he had already determined that the Department would presume, based on the available PM emissions test data for the prill tower that the prill tower HD prill PM emissions are greater than the LD prill PM emissions.

We ask that any issues that are not directly related to removing the unnecessary LD prill production limits from the Title V permit, and making the other corrections and clarification we have requested, be taken up after the requested air construction permit is issued, and included as part of the Title V permit update which is triggered by the issuance of the construction permit.

If you have any questions about this additional information, please call me or Charles Ingram in Tampa, or our consultant, Stephen Smallwood, PE, in Tallahassee.

Sincerely,

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

Nitram, Inc
(813) 626-2181 ext 245

Sincerely,

Stephen Smallwood, PE
Consultant
Certifying Professional Engineer

Air Quality Services
(850) 385-0002

(SEAL)

Attachments: (1) FDEP October 23rd Incompleteness Letter Questions
(2) Appendix B to Application - Amendments to Specific Permit Conditions & Provisions
(3) Statistical Analysis of Prill Tower Particulate Matter Emissions Rates (1985 - 2001)

c: Charles Ingram, Manager, Safety, Environment, Quality, Nitram, Inc. (813) 626-2181 ext 230
Clair H. Fancy, PE Chief, Bureau of Air Regulation, FDEP Tallahassee (850) 488-1344
Diana Lee, PE, Air Permit Engineer, Hillsborough County EPC Air Division (813) 222-5530

Florida Department of Environmental Protection
Southwest District Office Air Resources Management Section

Attachment 1

Incompleteness Letter

Re: Application dated 10/02/2001. Reference Permit No. 0570029-002-AV.
DEP File No. 0570029-007-AC

December 18, 2001

Florida Department of Environmental Protection
Southwest District Office Air Resources Management Section

Re: Application dated 10/02/2001. Reference Permit No. 0570029-002-AV.
DEP File No. 0570029-007-AC

Each of the ten questions from the October 23, 2001, Incompleteness Letter from Jim McDonald, Air Permit Engineer, to Daniel E. Ross, PE, Executive VP & CEO, Nitram, Inc., Tampa, Florida, concerning Nitram's pending air construction permit application are listed below.

The purpose of that application is to revise the specific permit conditions of the current Nitram Title V permit to apply the current high-density (HD) ammonium nitrate prill production rate limit to both the high-density (HD), and the low-density (LD) prill, both of which are produced in the same prill tower.

Some of the specific answers to the questions listed below refer to parts of the general response letter to which this document is the first attachment, or to the other two attachments to that letter. The questions from the incompleteness letter are listed in *italics.* The answers are in normal types.

QUESTIONS

On October 2, 2001, the Department received your air pollution construction application to modify your Ammonium Nitrate Prill Tower No. 2 located at 5321 Hartford Street, Tampa. In order to continue processing the application, the Department will need the following additional information pursuant to Rules 62-4.055 and 62-4.070(l), F.A.C.:

1. *During my visit on October 15, 2001, you agreed that the process rate for the three prill rotary drums (Emission Unit No. 012) in permit 0570029-002-AV will also need to be modified, since the low density prill process rate is limited to 23 tons/hr. Therefore, submit the appropriate additional pages to the application to address this change.*

   Answer: That information is provided in Attachment 2 to this letter. Also see the section of the letter on **Prill Rotary Drums**.

   Also note:

   - *The high density prill is limited to 50 tons/hr.in the prill tower and is limited to 55 tons/hr. in the prill rotary drums.*

   - *The February 2, 2001, visible emission test for the prill rotary drums was conducted with low-density prill at 25 tons/hr., which is above the permitted 23 tons/hr. limit.*

2. *Since the low-density prill goes through all **three** drums (pre-dryer, dryer, cooler) and the high density prill goes through only **one** drum (cooler), what are the actual emissions from processing each type of prill? Show how these values were derived and explain why the actual emissions are the same or different.*

Answer: See the section in the letter on **Prill Rotary Drums.**

The Title V permit does not require any of the annual compliance tests for this unit, which is equipped with a Peabody wet scrubber, to be conducted while processing LD prill. Prior to the Title V permit only a visible emissions (VE) test was required for this unit.

Pursuant to the Title V permit one annual compliance test has been conducted on this unit, while processing HD prill. The PM emissions limit for the unit is 9.24 lbs/hr.The measured PM emission rate was 7.0 lbs/hr, and there were no visible emissions. One VE test has been conducted on the unit while it was processing LD prill. There were no visible emissions.

Since the LD prill is wetter than the HD prill and both products are ammonuium nitrate pellets (prills), it is reasonable to expect that the LD prill has a lower materials handling PM emissions factor than the HD prill. All three drums are the same size: 9 feet diameter. by 45 feet long. The two blowers that are used with one drum to process the HD prill will produce higher air velocities, and therfore would be expected to pick up more particulates than the three blowers used with the three drums when processing LD prill.

To verify that the rotary drums operation is capable of complying with the applicable PM RACT emissions limit (and that it would comply with the PSD non-applicability criteria determined by Clair Fancy at the November 15 meeting in Tallahassee), while processing LD prill at production rates higher than the currently permited processing rate limit, Nitram will conduct a special comparative PM emissions test for this unit. The results of that special test will be provided to you as a separate report.

3. *As discussed during my visit on October 15, 2001, please submit the following, which may also affect the prill rotary drums, as appropriate:*

A. Updated process flow diagrams representing the airflows, raw material flows, and liquid flows for both the process and scrubber

Answer: The scrubber airflow and water flow rate, and the process materials flow rate, are in the PM emissions test report for the emissions tests for the unit referred to in the answer to the previous question. If you think some substantive information is missing, we need to discuss that with you, so we know specifically what you need.

If you are asking us to update the process flow diagram to more accurately reflect the narrative process description, we ask that you defer that request until after the air construction permit is issued . We could address that matter and any others that are not directly related to deleting the unnecessary LD prill production and processing rates from the Title V permit. For a summary discussion of why the existing LD prill production and processing rates are unnecessary, see the section in the letter on **Change in the Method of Operation.**

B. An updated process description, which more accurately explains the process flow diagrams.

Answer: See the section in the letter on **Prill Rotary Drums.**

We think the process description provided in the Title V permit does accurately describe the process. We have proposed some clarifications in Attachment 2. If those clarifications do not completely address your questions about the wording of the process description, we would like to meet with you at your office to discuss this item and any other questions you have about our application. We are willing to work with you to develop alternate language to what we have proposed in Attachment 2 to this letter, if you will explain what additional changes or clarifications are needed.

The 23 and 55 tons/hr throughput rates that were put in the Title V permit should have been 25 and 50 tons/hr to be consistent with the limits on the prill production in the conditions for EU 006. As we have previously discussed, the reason for the air construction permit application is to correct the errors in the current Title V permit. See Attachment 2 to this letter for the proposed wording that corrects the specific conditions for EU 012 - Prill Rotary Drums.

4. *For Prill Tower No. 2 and the prill rotary drums, please explain how the process rates are determined and when the operator logs/records the associated rate for low density prill and high-density prill.*

Answer: The flow of the liquid (molten) ammonium nitrate is measured as it goes to the tower for prilling. This flow is monitored continuously by a Foxboro magnetic flow tube with totalizer and has a lowflow alarm and trip. Readings are recorded on a logsheet every hour of operation. The calculation is: (gallons per minute flow) times (specific gravity of ammonium nitrate) divided by (2000 lbs) to get tons per minute prill rate. This is the same for LD and HD prill.

5. *A spot check of some of your records for Prill Tower No. 2 indicated that required new emission tests were not being conducted when parameters (scrubber gpm and delta-P) from the most recent emission test deviated by more than 10%. Therefore, explain the procedures you intend to implement so an operator will be able to avoid this situation from occurring again in the future.*

Answer: As part of the specific conditions for each of the plant's emissions units, the Monitoring of Operations provisions require the owner to comply with the provisions of Section II, Facility-wide Conditions, General Condition 13.

General Condition 13A requires the owner to conduct a new emissions test within 30 days of the operation of a pollution control device at lower than the minimum or higher than the maximum numerical "control parameter limits" specified in the permit for that control device. The test is to be conducted at or above the new high value or at or below the new low value for the device to demonstrate that the emissions from the device are capable of complying with the emission(s) limit(s) that apply to it.

If compliance is demonstrated, the permit may be amended to show the new high or new low limit as appropriate. If compliance is not demonstrated, operation above or below the control

parameter limits in the permit is a violation of the permit. The owner must operate the device above or below the appropriate control parameter limits in the permit.

If there are no "control parameter limits" specified in the permit **(which is the case for the Nitram Title V permit)**, General Condition 13B requires the owner to conduct a new emissions test within 30 days of the operation of a pollution control device at or lower than 90% of any minimum, or at or higher than 110% of any maximum numerical "control parameter limits" determined during the most recent compliance test for that control device, to demonstrate that the emissions from the device are capable of complying with the emission(s) limit(s) that apply to it.

If compliance is demonstrated, the owner may continue to operate the device within the "control parameter limits" determined during the most recent compliance test, until the next annual or special compliance test is required. If compliance is not demonstrated, operation above or below the control parameter limits in the permit is a violation of the permit. The owner must operate the device above or below the appropriate control parameter limits in the most recent emissions test that showed compliance.

We have added proposed wording changes to the Monitoring of Operations sections for EU 006 – Prill Tower and EU)12 – Rotary Drums, to clarify how the daily pollution control device control parameter values are to be compared to the average control parameter values determined during the most recent compliance test for the control device. See those sections in Attachment 2 to this letter.

We will post an Operating Notice on or near the control panels for the scrubber on the Prill Tower and the scrubber on the Rotary Drums that will list the appropriate control parameter values (from the most recent compliance test) for each scrubber (minimum gpm water flowrate to scrubber & minimum Delta-P pressure drop across the scrubber) and instruct the operators to ensure that the scrubbers are operated with these scrubber control parameters at or above the posted values. Note that LD and HD will result in different flow and delta-P values because the pump is supplying two wet cyclones for HD and three wet cyclones for LD.

Your response should also address when a new emission test should be conducted if an operator records a process rate (tons/hr.) more than 10% above the processing rate during the most recent emission compliance test.

Answer: That has never occurred. If it did, the unit would be operated or retested as specified in Section II, Facility-wide Conditions, General Condition 10. The unit would be operated at a maximum production rate of no greater than 110% of the tested rate, except for a 30 day period at a higher rate to demonstrate that the unit can comply with the applicable emissions limit at the higher rate. In no case would the unit be operated at a rate higher than its maximum permitted production or process rate, without written authorization from the Department to do so.

6. *As a result of increasing low-density prill processing rates for Prill Tower No. 2 and the prill rotary drums, will any de-bottlenecking of any other emission units either upstream (boilers, etc.) or downstream (truck/railcar loading, etc.) occur? If no, explain.*

Answer: No. The requested changes to the Title V permit do not increase the maximum annual amount of ammonium nitrate prill that can be produced. The LD prill warehouse and all of the

other related equipment and facilities are capable of accomodating the relative increase in the amount of LD prill that would be produced.

De-bottlenecking is an issue that is involved only if PSD applies. Since the type of change proposed is not the type of change that is subject to PSD review, debottlenecking is not a factor in issuing the requested permit, which only corrects various errors in the current Title V permit. See the section in the letter on **Prill Rotary Drums** and the section on **Change in the Method of Operation.**

Also see our **Agency Rule Applicability Determination Request** letter to Bill Thomas, dated August 6, 2001. In that request, we provided a detailed discussion of these issues, so the Department's air and legal staff could tell us specifically what elements of our rule applicability analysis they thought were incorrect, if any, so we could quickly resolve this issue. That analysis was discussed at our September 26, 2001 meeting with Clair Fancy, PE, Chief, Bureau of Air Regulation, in Tallahassee.

After a detailed discussion of the potentially applicable rules, Clair Fancy and the air attorney agreed with our analysis, and he concluded that we do not need to have separate ammonium nitrate process or production limts in the Title V permit. One maximum limit is all that is needed, and to verify compliance you test the unit's emissions while processing the type product that has the highest emissions factor. If there is a good reason to question which product has the highest emissions factor, you can periodically test both (or all types, if you had more than two products). Since the production limits on the LD prill production and processing rates are unnecessary, removing them from the Title V permit, and correcting any other errors in the permit, is not a "change in the method of operation." Since it is not a "change in the method of operation," by definition, it is not a "modification" to a facility that requires a PSD review of any kind.

7. *Provide a "past actual emissions to future allowable emissions analysis" to show the requested modifications are below the Prevention of Significant Deterioration (PSD) significant emission levels shown in Table 212.400-2 contained in Chapter 62-212, F.A.C. Be sure the analysis explains how the values used in the analysis were derived/determined. Note, if the analysis shows the significant emission levels will be exceeded, a new air pollution construction application addressing PSD w/fee will be required to be submitted to the Department's Tallahassee office for processing.*

Answer: Since, as discussed above, the type of changes proposed are not the type of changes that are subject to PSD review, they do not constitute a modification to the facility, and therefore are not subject to PSD review. To get to the point where a "significant net emissions increase" calculation is required, you first have to determine that the proposed change to a major facility is a "non-exempt physical or operational change" that would result in an increase in "actual annual emissions." At the company's meeting with Clair Fancy, PE, Chief, Bureau of Air Regulation, in Tallahassee, on September 26, 2001, as discussed above, that is what Mr. Fancy and the air attorney determined. He advised the company that the quickest way to remove the unnecessary limits and correct any other associated errors in the Title V permit, would be to have the District Office issue a simple air construction permit that corrects the Title V permit condition language, and then update the Title V permit within 180 days, as allowed by the Title V permitting rules.

The sole purpose of the company's air construction permit application, currently pending at the District Office, is to do just that. Any Title V issues that are not directly related to removing the unnecessary permit conditions or conducting any compliance test associated with this specific application can be addressed after this permit is issued, as part of the Title V update application, that will be submitted within 180 days after receiving the air construction permit.

8. *In order to properly compare actual emission test results from processing and/or handling Low Density Prills vs. High Density Prills, the operating parameters for each processing and/or operating scenario need to be as consistent as possible. Therefore, for each affected emission unit, please submit the operating scenarios and parameters that will be used to verify processing and/or operating consistency. As appropriate, items such as dampers, outside intake air vents, fans, liquids or emissions from other activities that also enter the process, scrubber delta-P's, scrubber liquid flow rates, etc. should be addressed, as part of the submittal.*

Answer: The appropriate type of comparison is to compare the PM emissions (in lbs PM/ton of prill) from the production and processing of HD prill as it is typically made and cooled, with the PM emissions from the production and processing of LD prill as it is typically made, dried, and cooled. For a description of the typical method of production and the cooling/drying process, see the proposed revised process description in Appendix A of the Application for the Prill Tower EU, and in Appendix B (Attachment 2 to this letter) for the Prill Rotary Drums EU.

For both EU's, the prill would be produced and processed at 90-100% of the proposed maximum production / processing limit for each unit for each type of prill (HD or LD) [50 tons per hour], or as close to the new maximum LD production rate as physically possible at the time of the test, without exceeding the 50 tph limit.

For the Prill Tower EU, the scrubber would be operated on two of its three scrubber feedwater pumps, with the average scrubber feedwater rate (gpm), during the three sampling runs (which make up the test) equal to or greater than the three-run average rate for the last compliance test.

The scrubber fans would be operated at a rate that results in a three-run average prill tower exit gas pressure drop (delta P) across the scrubber that is equal to or greater than the three-run average pressure drop across the scrubber for the last compliance test, but not greater than 150% of that last test's average delta P.

See the answers to the next Question concerning the Prill Tower PM Test Results and Scrubber Performance Parameters.

9. *Historical review of the Prill Tower's particulate matter stack tests showed no consistency. In the last ten years, PM emissions had fluctuated between 1.97 lbs./hr. (0.0415 lbs./ton) to 25.9 lbs./hr. (0.5630 lbs./ton). The two tests conducted during the LDP production, resulted in PM emissions of 2.1 lbs./hr. (0.0840 lbs./ton) in 2001 and 6.7 lbs./hr. (0.2683 lbs./ton) in 1997.*

In addition, the scrubber volumetric liquid flow rate has been inconsistent, and thus it is not clear as to how it relates to particulate emissions. The scrubber liquid flow rate during the last five tests has fluctuated between 1,400 gpm and 3,200 gpm. Based on manufacturer's data, what should be the scrubber's optimal operation range for the volumetric liquid flow rate, pressure drop

and liquor pH that will provide a good PM removal efficiency? How do these parameters affect emissions? Do these scrubber parameters change depending on the type of prill production?

Prill Tower PM Test Results

Answer: See the section in the letter that discusses the **Prill Tower PM Emissions Data**, and Attachment 3 to this letter Statistical Analysis of Prill Tower PM Emissions rates (1985-2001). Emissions data (and ambient air quality data) when put in rank order (highest to lowest) typically forms a lognormal distribution (the logs of the rank order values are normally-distributed). A lognormal distribution plots as a straight line on a log-probability graph.

It is not unusual for short-term average values to vary significantly over the period of a year (i.e. ambient or continuous emissions monitor one-hour average values). Conducting annual 3-hour average PM emissions tests at 90-100% of maximum rated capacity, reduces but does not eliminate this natural variability in test data. The enclosed analysis of the Nitram Prill Tower PM test data shows that the unusually low test values of 1998 & 99 do not fit the lognormal distribution formed by the other 10 test results. The minor variation of the data from a perfectly straight line on the lognormal-probability graph on the Table 2 sheet is what would be expected due to the normal random errors in the test method, and the relatively small number of data points.

When the two unusally low test results are removed from the data set, and the standard error for the remaining data points is considered, the apparent downward trend in the test results disappears. There has been no statistically significant upward or downward trend in the data over the past 16 years. Although the time series plot of the 12-test data set on The Table 1 Analysis Sheet may appear to be very random, they are not inconsistent, except for the 1998-99 low values.

Scrubber Performance Parameters

Answer: What is important for wet scrubber performance is breaking the water input to the scrubber into a stream of water droplets that are as small as possible, and to force the very small water droplets into very turbulent contact with the particulate laden exit gas stream, for a long enough time to cause as many of the particles as practical to collide directly with at least one small water droplet. Each effective collision results in transfering a particle from the exit gas stream into the water droplet.

In the case of a hygroscopic, soluble particulate, rapid humidification of the air will create delaquesence, actually partially or totally dissolving some of the particles with water from the humid air. That effect accounts for some of the variation in the test results.

Different types of wet scrubbers used different methods to achieve this collision between particles and droplets. Spay-type scrubbers use spray nozzles to create the stream of small droplets. Venturi scrubbers force the gas stream through a venturi section and inject the water at the throat of the venturi. Both types can achieve high PM removal efficiencies on most typical types of materials. Since ammonium nitrate is water soluble and hygroscopic, wet scrubbers are particularly effective in removing ammonium nitrate PM from the exit gas stream.

After the exit gas stream passes through the scrubber water contact section, it moves through a "demister" section (sometimes a cyclone separator or a packed tower or both). The"demister" removes most of the water droplets that now contain the collected particles. Some of the particle

laden water droplets and the particles that were not transfered to the droplets in the scrubber section, are emitted from the scrubber stack.

There are two pollution control device "control parameters" that are typically used to characterize wet scrubber performance: (1) the water flowrate (in gpm) to the scrubber's spray nozzles or venturi throat & (2) the exit gas pressure drop (Delta-P, usually in inches of water column) across the scrubber. Beyond providing enough water to the scrubber to make enough very small water droplets to interact with the particles in the exit gas stream and to humidify the gas stream, increasing the water flow rate does not significantly improve the scrubbers performance, but neither does it degrade performance.

The pressure drop of the gas flowing through the scrubber is a measure of the energy expended in the scrubber gas-water contact area to generate very turbulent contact between the small water droplets and the particulate laden gas stream. The more turbulence and the longer the gas-water droplet contact time, the more energy required. In general, the greater the pressure drop (the energy input), the greater the particle collection for a given particle size. However, doubling the energy input will not reduce the emissions by half. Typically, it would be considerably less than half. Therefore, as for the water flow rate, a minimum pressure drop across the scrubber, based on what the compliance tests show is needed to comply with the applicable PM emissions limit, is established as the minimum operating pressure drop. Since these operating pollution control device "control parameters" are established with the unit operating at 90-100% of the unit's maximum permitted capacity, processing the material that has the greatest PM emissions factor, it is reasonable to assume that the emissions limit will be meet when operating at lower production rates and with cleaner materials. Note: HD delta-P is about 1/2 that of LD delta-P due to reduced flow. HD flow is about 2/3 LD flow. (i.e. for LD the scrubber tries to scrub 50% more air.)

That is what General Condition 13 of the Title V permit provides for. [See the answer to Question 5 above.] Since all of the compliance tests that have been conducted during the past 16 years have shown compliance with the applicable BACT PM limit for the Prill Tower and the RACT PM limit for the Rotary Drums, the minimum gpm and minimum scrubber pressure drop values for the tests for each unit have proven capable of assuring compliance with the emissions limits.

10. *Review of the current permit shows that three rotary drums are used to dry/cool down the prills. There are limits set for the rate of HDP or LDP material that is processed in the drums. If the production rate of the LDP increases, how will this affect the process rate in the rotary drums? Also, how will this affect the PM emissions?*

Answer: There are no intermediate product storage bins or silos between the Prill Tower and the Rotary drums. The maximum process throughput rate for the Rotary Drums EU needs to be the same as the maximum prill production rate for the Prill Tower EU. The proposed wording changes for the current Title V permit in Attachment 2 to this letter include changing the current Rotary Drum EU maximum 55 ton per hour limit to 50 tons/hr to be consistent with the maximum prill production limit for the Prill Tower EU, which is 50 tons/hr. The current Rotary Drum EU prill processing limits for both the LD and the HD prills appear to be the result of transcription errors.

Only one type of ammonium nitrate prill (LD or HD) can be produced and processed through the Rotary Drum EU at any given time. Under the current permit, 55 tons/hr of HD could be

processed through the unit on a continuous basis. Under the proposed revised conditions, 50 tons/hr of HD or LD prill could be processed on a continuous basis.

As discussed in the section of the letter on **Change in the Method of Operation,** there is no need for the permitting office to include separate maximum process throughput limits on each type of product made. One maximum limit that applies to all of the products is all that is needed, unless the owner specifically requests such additional restrictions. The product that has the highest emissions factor is typically processed for the purpose of conducting a compliance test. If there is ever any question about which product actually has the highest emissions factor, the Department can require a special test to determine which product does.

Based on the nature of the two types of prills, and the available test data, the actual emissions of PM while processing LD prill through the rotary drums would be the same or less than while processing HD prill. See the section of the letter on **Prill Rotary Drums**.

Also see the answer to question 2.

- END –

Florida Department of Environmental Protection
Southwest District Office Air Resources Management Section

Attachment 2

Incompleteness Letter Response

Re: Application dated 10/02/2001. Reference Permit No. 0570029-002-AV.
DEP File No. 0570029-007-AC

Nitram Air Construction Permit Application

Appendix B- Amendments to Specific Permit Conditions & Provisions

Information Requested in Question 1 Concerning
Needed Changes to The Title V Provisions of
EU 012Concerning the LD Prill Production Rate

Plus

Clarifications Needed for the Title V Provisions of
EU 009 Concerning Its Applicability to Clay Coated
Prill Only

December 18, 2001

Subsection D. This section addresses the following emissions unit(s).

E.U. ID No.	Brief Description
-006	Ammonium Nitrate Prill Tower No. 2

D.10. In order to comply with Conditions D.2 and D.7, the permittee shall maintain daily records of the scrubber operating parameters. The record log shall contain, at a minimum, the gas pressure drop across the scrubber system, the volumetric liquid flow rate, ~~and any data associated with it~~, the date and time of the measurement(s), and the name of the person responsible for performing the measurement(s). A record log entry shall be made at least once per day ~~for every 8-hour shift~~ that the Prill Tower operates. The record log shall be maintained at the facility and shall be made available to the Department ~~or its designee~~ for inspection upon request.
[Rule 62-4.070(4), F.A.C.]

Subsection G. This section addresses the following emissions unit(s).

E.U. ID No.	Brief Description
-009	Clay-Coated Ammonium Nitrate Storage and Loadout

The Clay-Coated Ammonium Nitrate Storage and Loadout consists of conveyors, and clay coated ammonium nitrate truck and railcar loading stations. At the Clay-Coated Ammonium Nitrate Storage and Loadout, clay coated ammonium nitrate is transferred to the loading stations by use of a conveyor system from either the storage warehouse or directly from the clay coating operation. *[See EU –008 Kaolin Clay Handling & Storage, which also has been shutdown].* Particulate matter emissions from the conveyors and loading stations are controlled by use of a 8,000 ACFM Research Cottrell, Model #2-803 baghouse (designated No. 1).

This emissions unit, clay-coated ammonium nitrate storage and loadout, has been shutdown. The equipment associated with this process is still in place, but no longer in service (see permitting note on page G2).

Permitting note(s): These emissions units are regulated under Rule 62-296.700, F.A.C., RACT Particulate Matter; Rule 62-296.71 1, F.A.C., Materials Handling, Sizing, Screening, Crushing and Grinding Operations; 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:

Essential Potential to Emit (PTE) Parameters

G.I. Capacity. The process/transfer rate to the clay-coated ammonium nitrate railcar and the truck loading stations shall not exceed 25.0 tons per hour of clay-coated ammonium nitrate ($NH_4 NO_3$) (daily average). [Rule 62-4.160(2), F.A.C. and Rule 62-210.200, F.A.C., Definitions - (PTE)]

Emission Limitations and Standards

G.2. Particulate matter emissions from the Clay-Coated Ammonium Nitrate Storage and Loadout (No. 1) baghouse exhaust stack shall not exceed any of the following:

a. 0.03 grains/dry standard cubic foot;
b. 2.1 pounds per hour;
C. 9.2 tons per year.

[Rule 62-296.711(2)(b), F.A.C., Air Construction Permit AC29-254 119

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

E.U. ID No.	Brief Description
-012	Prill Rotary Drums

The three prill rotary drums are used for drying/cooling two grades of ammonium nitrate prills. ~~The material process rate while manufacturing low-density prills is 46,000 pounds per hour~~. All 3 drums and all 3 fans are in service while drying and cooling ~~manufacturing~~ low-density prills. The air to the first two drums is heated with steam coils, while the third drum acts as a cooler. The low-density product travels through all three drums.

~~The materials process rate while manufacturing high-density prills is 110,000 pounds per hour.~~ Only one drum (the cooler) is operated while cooling ~~manufacturing~~ high-density prills, but air is drafted with two fans.

Particulate emissions generated from this operation are controlled by three wet cyclones in series with a Peabody Model SX-351 impingement scrubber. The source emits small amounts of ammonia.

{Permitting note(s): These emissions units are regulated under 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 specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

I.1. Capacity.

~~a.~~ The material/process rate shall not exceed 50.0 ~~23.0~~ tons per hour of ~~low-density~~ ammonium nitrate prill (daily average).

~~b. The material/process rate shall not exceed 55.0 tons per hour of high-density ammonium nitrate prill (daily average).~~

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

Emission Limitations and Standards

1.2. Particulate matter emissions from the Prill Rotary Drum scrubber shall not exceed any of the following:

a. 0.03 grains/dry standard cubic foot;
b. 9.24 pounds per hour;
c. 40.7 tons per year.

[Rule 62-296.712(2), F.A.C.]

1.3. The permittee shall not cause, permit, or allow any visible emissions (five percent opacity) from the Prill Rotary Drum scrubber exhaust.
[Rule 62-296.712(2), F.A.C.]

Test Methods and Procedures

I.4. The Prill Rotary Drum scrubber exhaust 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, and 62-296.711(3)(c),F.A.C.]

I.5. The Prill Rotary Drum scrubber exhaust shall be tested for particulate matter emissions, on or during the 120-day period prior to the expiration date of this permit. The annual visible emissions test required per Condition I.4 shall be conducted concurrently with this particulate matter emissions test.
[Rule 62-297.310(7)(a)3, F.A.C.]

1.6. Compliance with the emission limitations of Conditions I.2 and 1.3 shall be determined using EPA Methods 1, 2, 4, 5, and 9 contained in 40 CFR 60, Appendix A 4@ad 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 62297, F.A.C. and 40 CFR 60, Appendix A.
[Rule 62-297, F.A.C.]

Monitoring of Operations

1.7. In order to provide reasonable assurance that the particulates emission limitations are being met, the permittee shall create and keep a record log of the scrubber operating parameters. The record log shall contain, at a minimum:

a. the gas pressure drop across the scrubber,
b. the volumetric liquid flow rate (gpm),
~~c. the pH of the scrubber liquid~~,
c.~~d~~. the date and time of the measurements, and
d. the name of the person responsible for performing the measurements. A record log entry for the scrubber shall be made at least once per day that ~~when~~ the Prill Rotary Drums operates.

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

1.8. In order to provide reasonable assurance, when the Prill Rotary Drums are operating, that the pollution control equipment is operating properly, the permittee shall comply with Facility-wide Condition No.13).
[Rule 62-2 12).440(l), F.A.C.]

Recordkeeping and Reporting Requirements

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

a. The Prill Rotary Drums operating hours.
b. The amount of material processed (tons, ammonium nitrate) and type of prill production (high or low density ammonium nitrate).

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.]

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

a. Material/process rate (tons per hour, ammonium nitrate) and type of prill production (high or low density ammonium nitrate).
b. Gas pressure drop across the scrubber.
c. Volumetric liquid flow rate (gpm).
~~d. pH of the scrubber liquid.~~

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(')), F.A.C. and 62-213.440(l), F.A.C.]

Operation and Maintenance Plan

I.11. 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 ~~23 to 55~~ tons per hour
12. Hours of Operation: 24 hrs./day; 7 days/wk.; 52 wks./yr. (8,760 hrs.).

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

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

Monthly

1. Inspect fans f-or 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 and shall be made available to the Department or Environmental Protection Commission of Hillsborough County upon request.
[Rule 62-296.700(6), F.A.C.]

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

Nitram, Inc.

FINAL Permit No.: 0570029-002-AV
Admin. Correction: Project No. 003
Facility ID No.: 0570029

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

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

E.U. ID No.	Brief Description of Emissions Units and/or Activity
-100	Bulk loading and handling (HiD, and LoD ammonium nitrate)
-100	Rail and truck fertilizer solution loading
-100	Petroleum tank-breathing losses
-100	Emissions from surface impoundments (excludes non-contact cooling water impoundments)
-100	Ammonium nitrate neutralizer and condensing stack
-100	Product bagging operations
-100	Process fugitive emissions (Equipment leaks and particulate matter)
-100	Magnesium oxide and kaolin storage and handling
-100	Truck loading of nitric acid solution

(electronic file name: 0570029u.doc-9/9/99]

Florida Department of Environmental Protection
Southwest District Office Air Resources Management Section

Attachment 3

Incompleteness Letter Response

Re: Application dated 10/02/2001. Reference Permit No. 0570029-002-AV.
DEP File No. 0570029-007-AC

Nitram Air Construction Permit Application
Statistical Analysis of Prill Tower PM Emissions Rates (1985-2001).

December 18, 2001

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)	
1986	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	2000	HD	50.0	25.6	26.0	0.512	0.247	0.247
	2001							
Average			**49.1**	**17.0**		**0.348**		
	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			**25.0**	**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

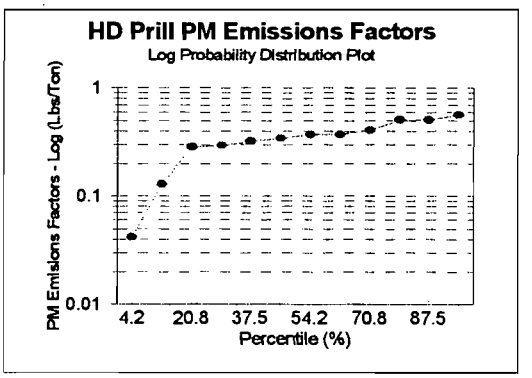
Analysis of Variance

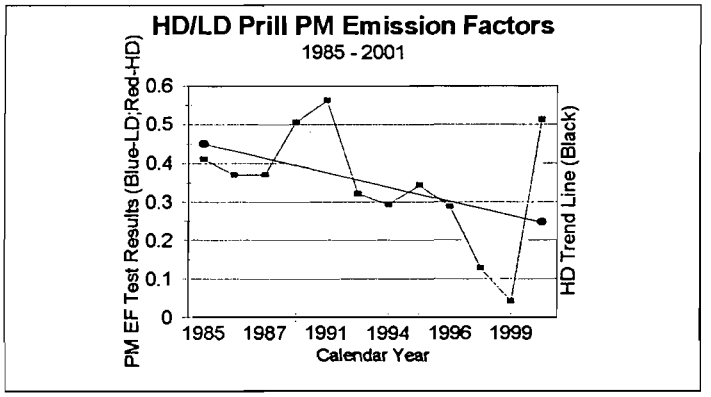
	df	*Sum of Squares*	*Mean Square*	*F*	*Significance F*
Regression	1.000	0.055	0.055	2.787	0.126
Residual	10.000	0.198	0.020		
Total	11.000	0.253			

	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	0.265	1.886

Percentile	*EFa(lb/Ton)*
4.2	0.042
12.5	0.128
20.8	0.288
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





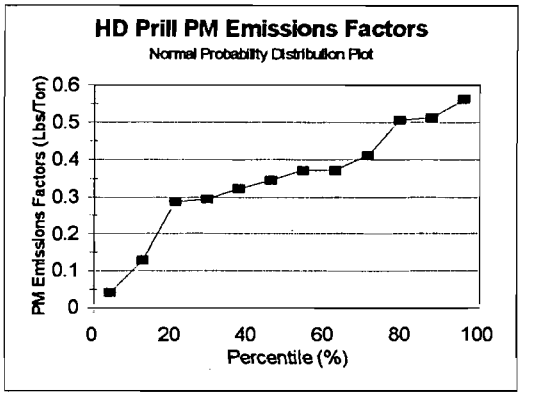


TABLE 2 - NITRAM PRILL TOWER PM EMISSIONS TEST DATA: 1985 -2001

November 4, 2001

High Density & Low Density Prill
[Minus 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)	
1986	1985	HD	50.0	20.6	26.0	0.411	0.410	0.450
	1986	HD	50.0	18.6	26.0	0.372	0.408	
	1987	HD	50.0	18.6	26.0	0.372	0.406	
	1988	HD	46.0	23.3	26.0	0.507	0.404	
	1991	HD	46.0	25.9	26.0	0.563	0.399	
	1993	HD	49.0	15.8	26.0	0.322	0.396	
	1994	HD	53.0	15.6	26.0	0.294	0.394	
	1995	HD	51.0	17.6	26.0	0.345	0.393	
	1996	HD	49.0	14.1	26.0	0.288	0.391	
2000	2000	HD	50.0	25.6	26.0	0.512	0.384	0.384
	2001							
Average			49.4	19.6		0.399		

	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			25.0	4.4		0.176

Regression Statistics

Multiple R	0.085
R Square	0.007
Adjusted R Square	-0.117
Standard Error	0.103
Observations	10.000

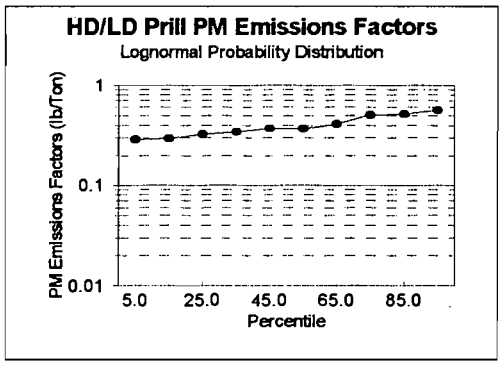
Analysis of Variance

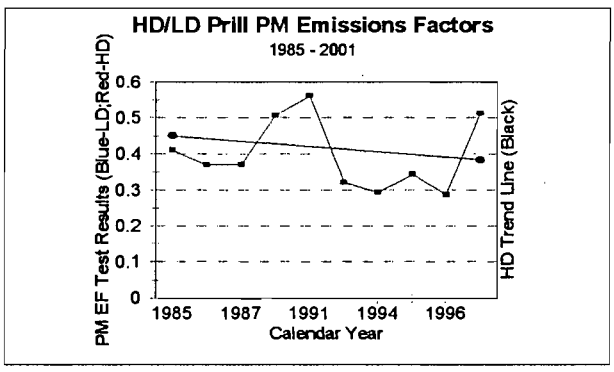
	df	Sum of Squar	Mean Squ	F	Significance F
Regression	1.000	0.001	0.001	0.058	0.815
Residual	8.000	0.084	0.011		
Total	9.000	0.085			

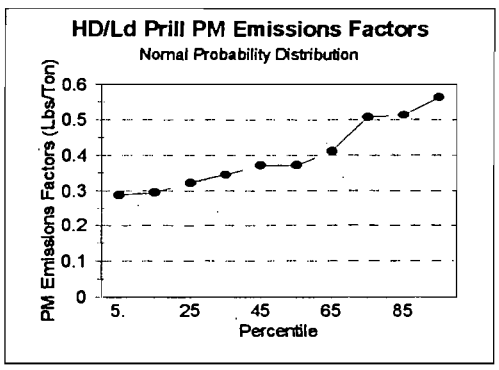
	Coefficients	Standard Erro	t Statistic	P-value	Lower 95.	Upper 95.00
Intercept	3.745	13.839	0.271	0.793	-28.168	35.659
Yr	-0.002	0.007	-0.242	0.814	-0.018	0.014

Observations	Predicted Y	Residuals	Stdzd Residuals
1.000	0.410	0.002	0.017
2.000	0.408	-0.036	-0.353
3.000	0.406	-0.035	-0.336
4.000	0.404	0.102	0.994
5.000	0.399	0.164	1.593
6.000	0.396	-0.074	-0.717
7.000	0.394	-0.100	-0.974
8.000	0.393	-0.048	-0.463
9.000	0.391	-0.103	-1.005
10.000	0.384	0.128	1.245

Percentile	EFa(lb/Ton)
5.0	0.288
15.0	0.294
25.0	0.322
35.0	0.345
45.0	0.372
55.0	0.372
65.0	0.411
75.0	0.507
85.0	0.512
95.0	0.563







Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

REVISED NOTICE OF TEST AUTHORIZATION

Note: The only change from the prior version is a deleted word in condition 3, shown in ~~strikethrough format~~.

CERTIFIED MAIL

Mr. Daniel E. Ross, P.E.
Exec. V.P. & COO
Nitram, Inc.
P.O. Box 2968
Tampa, FL 33601

RECEIVED
DEC 13 2001
BUREAU OF AIR REGULATION

Dear Mr. Ross:

Re: Letter dated November 7, 2001
Reference Permit 0570029-002-AV
FDEP Project No.: 0570029-007-AC

On November 13, 2001, the Department received your letter requesting authorization to conduct tests at your facility located at 5321 Hartford Street, Tampa. Specifically, the request was for authorization to conduct particulate emission tests on the Prill Rotary Drums (E.U. 012) when using Low Density Prills at as high a processing rate as possible, but ≤50 tons/hr. These tests were also discussed during a teleconference on November 15, 2001, with your consultant, Mr. Stephen Smallwood, and other Department Tallahassee personnel. The Department authorizes the following:

1. The Prill Rotary Drums shall be tested separately for particulate emissions, first when processing Low Density Prill (LD), followed by testing on High Density Prill (HD).

2. The normal annual tests for the prill tower, specified in the Title V permit shall be conducted in the same period

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(see items 3.and 5. below) as the test above, if possible. Those tests are particulate matter (PM) and visible emissions (VE) tests for the prill tower only when producing HD prill. The normal annual VE test specified for the drums in the Title V permit shall be conducted in the same period (see items 3. and 5. below) as the test specified in item 1 above. The VE test on the drums is not specified in the Title V permit as to HD or LD product and VE tests shall be conducted on both HD and LD product.

3. Testing of the prill tower and the rotary drums shall each be conducted at as high a processing rate as possible, but ≤50 tons/hr. Note, processing of LD Prill in the Prill Rotary Drums above the current permitted level is only authorized for up to 14* ~~consecutive~~ calendar days for the sole purpose of bringing the plant to higher production levels and to conduct emission tests. Following the tests on LD prill, the facility shall return to the limits specified in the Title V permit until further written authorization from the Department.
*The Department may authorize additional time for good cause.

4. To the greatest extent reasonably practicable, testing on HD prill shall follow as soon as possible and under the same conditions (including constant scrubber parameters) as testing on LD prill.

5. The testing period shall not exceed a continuous 30 calendar day period, which commences the first day that production of LD prill exceeds 25 tph. (Note that LD prill production above permitted levels is limited to 14 days as in item. 3. above.)

6. The tests shall be conducted in accordance with the test methods, procedures, and reporting requirements as stipulated in Title V Operation Permit 0570029-002-AV.

7. Test notifications shall be submitted to the Air Permitting Sections of this office and the Environmental Protection Commission of Hillsborough County at least 5 days prior to

testing. The notice shall include the date of first production of LD prill in excess of 25 tph (reference item 5 above).

8. The test reports shall be submitted to the Air Permitting Sections of this office and the Environmental Protection Commission of Hillsborough County within 45 days of completing the last emission test conducted during the 30 day period.

9. Each test report shall also include the following:

   A. All the information as required by Title V operation permit 0570029-002-AV, which also includes the pH information for the scrubber controlling the Prill Rotary Drums (see Title V Permit Condition I.11.)

   B. During the actual particulate emission test period, each test report shall also include for each test run along with an average of the three test runs the following:

      1. The type of prill processed (low or high density).
      2. The process rate in tons/hr. along with documentation of how this rate was determined.
      3. The amount of particulate emissions, in lbs./hr.
      4. The factor for pounds of particulate emitted per ton of prill processed, in lbs./ton.
      5. The liquid flow rate of the scrubber, in gpm, and the water pressure to the drums scrubber. (Note: if instrumentation for recording of water pressure to the drums scrubber does not exist or can not be reasonably installed in time for this test, request authorization from the Department).
      6. The gas pressure drop across the scrubber, in inches of water.
      7. The pH and product concentration of the liquid in the scrubber for only the Prill Rotary Drums scrubber (Note the applicability of condition 4. on page 2 regarding pH and product concentration).

Permitting Note: The purpose of this test authorization is to provide additional information for the purpose of generating the construction permit currently in process (DEP reference 0570029-007-AC). The Department makes no representation as to the effect of the test results from this test authorization on its permitting determination.

* * * * * * *

A person whose substantial interests are affected by the proposed test authorization may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;
(b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of how and when petitioner received notice of the agency action or proposed action;
(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
(e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's action; and
(f) A statement of specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and
(g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this test authorization. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542, F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. The petition must specify the following information:

(a) The name, address, and telephone number of the petitioner;
(b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any;
(c) Each rule or portion of a rule from which a variance or waiver is requested;
(d) The citation to the statute underlying (implemented by) the rule identified in (c) above;
(e) The type of action requested;
(f) The specific facts that would justify a variance or waiver for the petitioner;
(g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and
(h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2), F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of EPA and by the person under the Clean Air Act unless and until Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This test authorization is final and effective on the date filed with the Clerk of the Department unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S. or unless a request for an extension of time in which to file a petition is filed within the time specified for filing a petition. Upon timely filing of a petition or a request for an extension of time to file the petition, this test authorization will not be effective until further Order of the Department.

Any party to the Order (Test Authorization) has the right to seek judicial review of the Order pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal under Rule 9.110 of the Florida rules of Appellate Procedure, with the clerk of the Department of Environmental Protection in the Office of General Counsel, Douglas Building, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days after this Order is filed with the Clerk of the Department.

If you have any questions, please call Mr. Jerry Kissel of my staff at (813)744-6100 extension 107.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

W.C. Thomas, P.E.
District Air Program Administrator

cc: Ms. Diana Lee, P.E. - EPCHC
Mr. Al Linero, P.E. - FDEP, Tallahassee
Mr. Clair Fancy, P.E. - FDEP, Tallahassee
Mr. Ken Roberts - Southern Environmental Sciences, Inc.
Mr. Stephen Smallwood, P.E.
Air Quality Services
1640 Eagles Landing Blvd., Unit 103
Tallahassee, FL 32308-1560

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF TEST AUTHORIZATION AMENDMENT was sent to the addressee by certified mail and all copies were sent by regular mail before the close of business on 12-11-01 to the listed persons, unless otherwise noted.

Clerk Stamp

FILING AND ACKNOWLEDGEMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledge.

Carol L. Moore (Clerk) 12-11-01 (Date)

Best Available Copy

NITRAM, INC.

5321 Hartford St. • P.O. Box 2968 • Tampa, Florida 33601 • Phone (813) 626-2181 • Fax (813) 623-6080

November 29, 2001

RECEIVED
DEC 03 2001
BUREAU OF AIR REGULATION

Mr. William Thomas, PE
Administrator
Air Resources Management Section
Southwest District Office
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619-8218

Subject: Air Permitting Requirements for Increasing the Amount of Low Density Product Made in the Ammonium Nitrate Prill Tower Nitram, Inc, Tampa FL FDEP Air Facility No. 057 0029

Notice of Special Rotary Drums PM Emissions Tests - December 2001

Dear Mr. Thomas:

Nitram operates a chemical plant in Tampa, Florida. The plant makes a high-density (HD) and a low-density (LD) ammonium nitrate prill in the plant's No. 2 prill tower. The company needs to increase the maximum permitted production rate of the LD prill to meet their customer's need for this product. The company has not requested an increase in the maximum permitted hourly or annual production rate for the prill tower, just for this product.

PSD Review Applicability Determination - Prill Tower

On August 6, 2001, Nitram submitted a request for a rule applicability determination to you. The request explained what the company proposed to do, and why we thought the PSD air permitting rules did not apply. After several discussions with the Tampa and the Tallahassee air permitting staff, we met with Clair Fancy in Tallahassee on September 26. At that meeting, he determined that the available PM emissions data for the Prill Tower provides reasonable assurance that the PM emissions while

producing LD prill would be lower than the PM emissions while producing HD prill. Ten of the 12 PM emissions test results, while producing HD prill @ approximately 50 tph, fit the expected lognormal distribution with a mean value of 19.9 lbs/hr. Two test results are statistical outliers. The average value of the two PM emissions tests conducted while processing LD prill @ approximately 25 tph is 4.4 lbs/hr.

Therefore, increasing the LD prill production rate from 25 tph up to 50 tph is not the type of change that is subject to PSD review. He said that the quickest way to authorize the requested change to the current permit would be for the FDEP District Office to issue a simple air construction permit that would supercede the conditions in the current permit, and that after the permit was issued, the company could be required to conduct a normal compliance test to verify the prill tower was operating in compliance with the 26 lbs/hr BACT PM emissions limit while processing LD prill at the higher production rate. Within 180 days after that permit was issued, Nitram would submit an update of the permit conditions changes made, as an amendment to the Title V permit.

Air Construction Permit Application

On October 2, Nitram submitted the air construction permit application to the FDEP SW District Office. On October 23, the District Office sent Nitram an incompleteness letter, requesting a reply by December 28, with a copy to the county air staff. One of the questions was whether increasing the processing rate of the rotary drums prill drying / cooling operation, which immediately follows the prill tower, from 25 to 50 tph would be subject to PSD review.

PSD Review Applicability Determination - Prill Rotary Drying / Cooling Drums

After several discussions with the Tampa and the Tallahassee air permitting staff about the rotary drums operation, we met with Clair Fancy in Tallahassee on November 15. At that meeting, he

determined that the tower and the rotary drums operate as one production unit (the prill produced in the tower must immediately pass through the drums, and both operations have to operate at the same rate at any given time).

Therefore, if the total PM emissions rate from the tower scrubber and the drums scrubber while processing LD prill would be equal to or less than the total PM emissions from the tower scrubber and the drums scrubber while processing HD prill, increasing the LD prill production rate from 25 tph up to 50 tph is not the type of change that is subject to PSD review.

Although, the PSD permitting criteria is based on the annual emissions values, he agreed that if one rotary drums HD prill PM emissions test and one LD prill PM emissions test conducted under comparable operating conditions showed that the drums' LD emissions are lower than the HD emissions, it would be reasonable to conclude that the annual LD emissions would be less than the annual HD emissions. If the test results were ambiguous, additional tests might be needed to better estimate the likely annual emissions rates.

LD / HD Special Prill Comparative Tests - History

Prior to the meeting with Clair Fancy on the rotary drums permitting issue, and in response to questions that Jim McDonald raised during his plant visit, Nitram had scheduled a special LD prill PM emissions test to provide the FDEP with actual PM emissions data for the rotary drums while processing LD prill at the higher processing rate, and had notified the Department of the scheduled time for the test. The current Title V permit does not require any PM compliance tests for the rotary drums operation while processing LD prill, so no such tests had been conducted.

Prior to the issuance of the Title V permit, no PM emissions tests were required for the rotary drums operation - only an annual visible emissions (VE) test, which always showed no visible emissions. One PM emissions test has been conducted for the rotary drums operation, since the Title V permit was issued,

postponed that special test to be sure that the test would be responsive to the result of the Tallahassee meeting.

On November 16, Steve Smallwood requested a meeting with Gerald Kissel at the Tampa District Office to discuss the special tests Nitram planned to conduct during December, so the air construction permit could be issued early in January. On November 21, Gerald Kissel notified Steve Smallwood that he had talked with Alice Harman (EPCHC Air Permitting Supervisor) and had set a tentative time for the meeting at 2:00 pm on Tuesday November 27 at the county office in Tampa. Late on Monday afternoon, November 26, Alice Harman called Steve Smallwood and advised him that the meeting was canceled because Sterlin Woodard, their compliance engineer, would not be able to attend.

LD / HD Special Prill Comparative Tests - Rotary Drums Equipment & Background Information.

As discussed during the meeting in Tallahassee on November 15, the purpose of the special LD / HD prill comparative tests is to compare the PM emissions rates from the rotary drums Peabody scrubber while operating the drums at the maximum practical processing rate for LD prill (not to exceed 50 tph), with the PM emissions rate from the Peabody scrubber while operating the drums unit at approximately the same processing rate while processing HD prill.

The rotary drum unit consists of three drums, three wet cyclones, three exhaust fans, and one Peabody impingement plate scrubber. The first drum is a pre-drying drum. The second drum is a drying drum. The third drum is a cooling drum. The prill that is produced in the prill tower immediately passes through the drums unit, where it is cooled, or dried and cooled, before it is conveyed to the product storage areas. The LD prill is wetter than the HD prill. Both are hot when they leave the prill tower.

The LD prill passes through all three drums. Heated ambient air (as needed) is pulled through the pre-dryer drum and through the dryer drum, to reduce the moisture content of the LD prill. In the cooling drum, incoming ambient air can be heated (if needed)

or cold air from a refrigeration unit can be injected into the drum (as needed) to dry or cool the prill. The HD prill only passes through the cooling drum.

While processing LD prill, all three of the exhaust fans are in operation. Each fan pulls air through one of the wet cyclones. The air leaving each of the exhaust fans passes through the Peabody scrubber. The combined rating of the three fans is approximately 47,000 acfm.

While processing HD prill, two of the three exhaust fans are in operation. Each operating fan pulls air through one of the wet cyclones. Baffles in the ductwork cause the air from the cooling drum to be split and drawn through the two operating wet cyclones. The air leaving each of the two operating exhaust fans passes through the Peabody scrubber. The combined rating of the two operating fans is approximately 36,000 acfm.

Provided that an adequate amount of water is provided to a scrubber, the airflow pressure drop across the scrubber is primarily a function of the airflow rate through the scrubber. The faster the fans run, the greater the pressure drop across the scrubber. The pressure drop is a measure of the energy used in the scrubber to break the water stream up into very fine droplets and mix the particles and very small water droplets together. In general, for a given type of scrubber, a higher pressure-drop across a scrubber indicates a higher PM collection efficiency, but the same pressure drop for different types of scrubbers does not necessarily indicate the same level of collection efficiency.

General condition 13B of the Title V permit, addresses the scrubber parameter provisions that are appropriate for Nitram's wet scrubbers. It is appropriate to require retesting, as specified in those provisions, when the operating gpm or delta P for a scrubber is lower than the three-run test average gpm or delta P, for more than three hours. It is also appropriate to conduct compliance tests at the lowest gpm and delta P that is sufficient to achieve the allowable emissions rate.

LD / HD Prill Special Comparative Tests - Rotary Drums Plan & Schedule

To conduct the special comparative tests, we first need to determine the maximum safe sustainable LD prill production rate for the prill tower (not to exceed 50 tph). We expect that will take at least a week to do it safely.

We then will conduct a three-run LD prill PM emissions test on the rotary drums Peabody scrubber stack while producing / processing LD prill at the maximum practical safe rate (not to exceed 50 tph). Then we will conduct a three-run HD prill PM emissions test on the rotary drums Peabody scrubber stack while producing / processing HD prill at approximately the same producing / processing rate as for the LD test (not to exceed 50 tph). We may need to run one or two pre-test sampling runs at the higher LD prill production rate to determine the appropriate scrubber parameters to use for the full tests. The test report will document the production rates and scrubber parameters for each emissions test. We expect it will take one week to complete the two special rotary drums comparative tests.

LD / HD Prill Compliance Tests - Prill Tower Plan & Schedule

We believe, as does FDEP, that it is appropriate to conduct the annual HD prill PM compliance test immediately following the LD prill special testing.. Nitram appreciates the FDEP has suggested this testing in December will be acceptable for the annual testing called for in the Title V permit.

We note that compliance with the BACT PM emissions limit is not at issue, and Clair Fancy has determined on behalf of the Department that it is reasonable to conclude, on the basis of the currently available data, that the PM emissions from the prill tower while processing LD prill are now, and at the higher rate would be lower than the PM emissions from the prill tower while producing HD prill.

Immediately following the testing of LD prill production, the plant will reconfigure to HD prill production, and test again to provide comparative data on LD vs. HD prill production.

The LD prill tower PM compliance test, which we would do first, would be conducted at the maximum practical safe rate (not to exceed 50 tph) as determined for the special LD prill test on the rotary drums scrubber. Unlike the Peabody scrubber on the rotary drums, which has one stack, the BECO Duel Vortex scrubber on the prill tower is divided into six cells, each with its own vent. Conducting one compliance test on the prill tower is equivalent to conducting six stack tests on the Peabody scrubber. We expect it will take one week to complete the LD prill tower six-cell PM BACT emissions compliance test. The test report will document the production rates and scrubber parameters for the test.
The HD prill PM compliance test would be conducted at 90 - 100 % of permitted capacity, as it is normally done. We expect it will take one week to complete the HD prill tower six-cell PM BACT emissions compliance test. The test report will document the production rates and scrubber parameters for the test.

The purpose for both of these prill tower tests is to verify that the PM BACT emissions limit can be met when producing either HD or LD prill at its maximum permitted or practical production rate.

We plan to begin the work of determining the maximum practical safe LD prill production rate on Friday, November 30, 2001.

We expect to begin the special rotary drums PM emissions testing the week of Monday, December 10 th.

We expect to begin the LD prill tower PM BACT compliance emissions testing upon completion of the special rotary drums testing.

We expect to begin the annual HD prill tower PM BACT compliance emissions testing immediately following the LD prill testing.

We expect to have the special rotary drums PM emissions tests results and our reply to the Department's incompleteness letter to you by December 28th.

My work schedule doesn't permit me to meet with the District and County air staff next week. The information in this letter

addresses what we would have discussed then. We need to complete the testing and the air permitting as soon as possible. We will notify you of any changes in our testing plans or schedule. We hope the District and County air staff will observe the testing beginning the week of December 10th.

If you have any questions, call me. Please do what you can to expedite the permitting process.

Sincerely,

NITRAM, INC.

Daniel E. Ross, PE
Executive Vice President
& Chief Operating Officer
(813) 626-2181 ext 245

cc: Clair H. Fancy, PE, Chief, Bureau of Air Regulation, FDEP Tallahassee (850) 488-1344
Gerald Kissel, PE, Supervisor, Air Permitting, FDEP SWD Office, Tampa (813) 744-6100 x107
Alice Harman, PE, Supervisor, Air Permitting, EPCHC Air Division, Tampa (813) 272-5530 x1281
Stephen Smallwood, PE, Air Quality Services, Tallahassee (850) 385-0002
William B. Taylor IV, Esquire, Macfarlane Ferguson & McMullen, Tampa (813) 273-4200

AQS File: C:\AQServices\Projects\924_Nitram\01_Prill Tower - LDP\Special R_Drums_LDP_PM_Em_Test_Dec2001.doc

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

NOTICE OF TEST AUTHORIZATION

CERTIFIED MAIL

Mr. Daniel E. Ross, P.E.
Exec. V.P. & COO
Nitram, Inc.
P.O. Box 2968
Tampa, FL 33601

RECEIVED
DEC 07 2001
BUREAU OF AIR REGULATION

Dear Mr. Ross:

Re: Letter dated November 7, 2001
Reference Permit 0570029-002-AV
FDEP Project No.: 0570029-007-AC

On November 13, 2001, the Department received your letter requesting authorization to conduct tests at your facility located at 5321 Hartford Street, Tampa. Specifically, the request was for authorization to conduct particulate emission tests on the Prill Rotary Drums (E.U. 012) when using Low Density Prills at as high a processing rate as possible, but ≤50 tons/hr. These tests were also discussed during a teleconference on November 15, 2001, with your consultant, Mr. Stephen Smallwood, and other Department Tallahassee personnel. The Department authorizes the following:

1. The Prill Rotary Drums shall be tested separately for particulate emissions, first when processing Low Density Prill (LD), followed by testing on High Density Prill (HD).

2. The normal annual tests for the prill tower, specified in the Title V permit shall be conducted in the same period (see items 3.and 5. below) as the test above, if possible. Those tests are particulate matter (PM) and visible

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emissions (VE) tests for the prill tower only when producing HD prill. The normal annual VE test specified for the drums in the Title V permit shall be conducted in the same period (see items 3. and 5. below) as the test specified in item 1 above. The VE test on the drums is not specified in the Title V permit as to HD or LD product and VE tests shall be conducted on both HD and LD product.

3. Testing of the prill tower and the rotary drums shall each be conducted at as high a processing rate as possible, but ≤50 tons/hr. Note, processing of LD Prill in the Prill Rotary Drums above the current permitted level is only authorized for up to 14* consecutive calendar days for the sole purpose of bringing the plant to higher production levels and to conduct emission tests. Following the tests on LD prill, the facility shall return to the limits specified in the Title V permit until further written authorization from the Department.
*The Department may authorize additional time for good cause.

4. To the greatest extent reasonably practicable, testing on HD prill shall follow as soon as possible and under the same conditions (including constant scrubber parameters) as testing on LD prill.

5. The testing period shall not exceed a continuous 30 calendar day period, which commences the first day that production of LD prill exceeds 25 tph. (Note that LD prill production above permitted levels is limited to 14 days as in item. 3. above.)

6. The tests shall be conducted in accordance with the test methods, procedures, and reporting requirements as stipulated in Title V Operation Permit 0570029-002-AV.

7. Test notifications shall be submitted to the Air Permitting Sections of this office and the Environmental Protection Commission of Hillsborough County at least 5 days prior to testing. The notice shall include the date of first

production of LD prill in excess of 25 tph (reference item 5 above).

8. The test reports shall be submitted to the Air Permitting Sections of this office and the Environmental Protection Commission of Hillsborough County within 45 days of completing the last emission test conducted during the 30 day period.

9. Each test report shall also include the following:

   A. All the information as required by Title V operation permit 0570029-002-AV, which also includes the pH information for the scrubber controlling the Prill Rotary Drums (see Title V Permit Condition I.11.)

   B. During the actual particulate emission test period, each test report shall also include for each test run along with an average of the three test runs the following:

      1. The type of prill processed (low or high density).
      2. The process rate in tons/hr. along with documentation of how this rate was determined.
      3. The amount of particulate emissions, in lbs./hr.
      4. The factor for pounds of particulate emitted per ton of prill processed, in lbs./ton.
      5. The liquid flow rate of the scrubber, in gpm, and the water pressure to the drums scrubber. (Note: if instrumentation for recording of water pressure to the drums scrubber does not exist or can not be reasonably installed in time for this test, request authorization from the Department).
      6. The gas pressure drop across the scrubber, in inches of water.
      7. The pH and product concentration of the liquid in the scrubber for only the Prill Rotary Drums scrubber (Note the applicability of condition 4. on page 2 regarding pH and product concentration).

Permitting Note: The purpose of this test authorization is to provide additional information for the purpose of generating the construction permit currently in process (DEP reference 0570029-007-AC). The Department makes no representation as to the effect of the test results from this test authorization on its permitting determination.

* * * * * * *

A person whose substantial interests are affected by the proposed test authorization may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;
(b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an

explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of how and when petitioner received notice of the agency action or proposed action;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's action; and

(f) A statement of specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this test authorization. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542, F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a

person may have in relation to the action proposed in this notice.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. The petition must specify the following information:

(a) The name, address, and telephone number of the petitioner;
(b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any;
(c) Each rule or portion of a rule from which a variance or waiver is requested;
(d) The citation to the statute underlying (implemented by) the rule identified in (c) above;
(e) The type of action requested;
(f) The specific facts that would justify a variance or waiver for the petitioner;
(g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and
(h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2), F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of EPA and by the person under the Clean Air Act unless and until Administrator separately

approves any variance or waiver in accordance with the procedures of the federal program.

This test authorization is final and effective on the date filed with the Clerk of the Department unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S. or unless a request for an extension of time in which to file a petition is filed within the time specified for filing a petition. Upon timely filing of a petition or a request for an extension of time to file the petition, this test authorization will not be effective until further Order of the Department.

Any party to the Order (Test Authorization) has the right to seek judicial review of the Order pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal under Rule 9.110 of the Florida rules of Appellate Procedure, with the clerk of the Department of Environmental Protection in the Office of General Counsel, Douglas Building, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days after this Order is filed with the Clerk of the Department.

If you have any questions, please call Mr. Jerry Kissel of my staff at (813)744-6100 extension 107.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

W.C. Thomas, P.E.
District Air Program Administrator

cc: Ms. Diana Lee, P.E. - EPCHC
Mr. Al Linero, P.E. - FDEP, Tallahassee

Mr. Clair Fancy, P.E. - FDEP, Tallahassee
Mr. Ken Roberts - Southern Environmental Sciences, Inc.
Mr. Stephen Smallwood, P.E.
Air Quality Services
1640 Eagles Landing Blvd., Unit 103
Tallahassee, FL 32308-1560

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF TEST AUTHORIZATION AMENDMENT was sent to the addressee by certified mail and all copies were sent by regular mail before the close of business on 12/4/01 to the listed persons, unless otherwise noted.

Clerk Stamp

FILING AND ACKNOWLEDGEMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledge.

Carol L. Moore (Clerk) 12/4/01 (Date)

Reynolds, John

From: Ssm97@aol.com

Sent: Monday, November 26, 2001 12:22 AM

To: Reynolds, John

Cc: Fancy, Clair; dross@nitramtampa.com; wbt@macfar.com; cinitram@tampabay.rr.com; Linero, Alvaro; Kissel, Gerald; McDonald, Jim; harman@epchc.org; leed@epchc.org

Subject: J. Reynolds's Comments on S. Smallwood's Draft Report on Second Nitram PSD Appl

November 25, 2001

J. Reynolds's Comments on S. Smallwood's Draft Report
on Second Nitram PSD Applicability Meeting w/ Clair Fancy,
Nov 15, 2001 - Tallahassee

John:

Thank you for your questions & comments on my draft meeting report. For convenience, I have provided a copy of your 11/20 e-mail note below.

Within your note, I have provided an answer, comment, or reference (in blue type) to address your specific questions and comments.

Your main comment was that, although you understand that the numbers presented in the example were only for illustration, the example which I provided on how the test data would be evaluated, might be interrupted as an agreement that if the PM emissions from the drums, while processing LD prill met the RACT rule (which it must), PSD automatically would not apply. Based on the conditions of the example, that would be true. If the results of the next set of emissions test(s) in combination with the existing data were significantly different than the data in the example that would not necessarily be true.

At the end of our recent meeting in Tallahassee, Clair and I talked through an example of how the available test results would be evaluated to determine if his criteria of PSD not applying [the total PM emissions from the tower & drums while processing LD prill is less than or equal to the total PM emissions from the tower & drums while processing HD prill], was met. For that discussion, we used the existing available test data to illustrate how the test data would be evaluated. I used that same data for the example in my draft meeting report.

Attached is a revised version of my draft meeting report, dated November 25. The revised example, written in a slightly different way, begins with the fifth paragraph on page 2. Let me know if the revised version is clearer. We need to have the same understanding of how the test data will be evaluated with respect to the criteria Clair Fancy determined, before the company conducts the special emissions tests.

Jerry Kissel has e-mailed me that the district and the county air staff can meet with the company on Tuesday afternoon, November 27, at 2:00 pm at the county air office. I will call Dan Ross, Nitram, on Monday morning. If he can meet then, we will. If not, I will reschedule the meeting with Jerry for the first time after Tuesday that the company & the air staffs are available.

The purpose of the meeting is to discuss what tests need to be conducted during December, how the process and the scrubbers are to be operated during the tests, and how the test results will be evaluated with respect to the criteria Clair Fancy determined at our recent meeting in Tallahassee.

Subj: RE: Second PSD Applicability Meeting, Nov 15, 2001 - Tallahassee
Date: 11/20/2001 6:27:30 PM Eastern Standard Time
From: John.Reynolds@dep.state.fl.us
To: Ssm97@aol.com

CC: Clair.Fancy@ dep.state.fl.us, Alvaro.Linero@dep.state.fl.us, Gerald.Kissel@dep.state.fl.us, Jim.McDonald@dep.state.fl.us
Sent from the Internet (Details)

Steve - - just a couple of points. In the last sentence of the fifth paragraph on Page Two, I assume you mean "total emissions" (drums plus prill tower) where you said..., the LD prill emissions are lower than the HD prill emissions." Is this correct? Reply: That is correct. -- SSm

Concerning the last sentence in the next to last paragraph on Page Two, the prill tower emissions for LD @ 50 TPH may be higher than 0.18 on a per ton basis (but presumably below the 0.40 for HD), therefore it would best not to agree prior to testing that if the LD drum emissions are below 0.36 lb/ton, that PSD would not apply. We understand that these numbers are presented only for illustration. Our agreement was to presume (on the basis of prior data) that the LD prill tower emissions should be lower than HD prill tower emissions at equivalent production rates.

Reply: See the lead-in paragraphs of this note and the attached revised draft meeting report. -- SSm

I think the key is to demonstrate via additional testing that the extra drum(s) required for processing LD product will not result in an emissions increase vs. the HD product. As discussed, this is best shown by comparative testing of the drums (producing LD vs. HD) at equivalent rates. The point you made about RACT compliance being required is valid in any case, but the PSD issue rests on the mass emissions increase.

Reply: See the lead-in paragraphs of this note and the attached revised draft meeting report. -- SSm

If we were to consider this as a modification by virtue of any physical changes that will be required to double the LD production from 25 to around 50 TPH (we're not saying there will be but presumably there could be some) and the change results in any actual emissions increase for the total process (tower plus drums), then a determination of actual vs. allowable emissions is triggered. Those actual pre-modification emissions could conceivably be low enough that PSD might be triggered without exceeding the 9.24 lb/hr RACT limit (an increase of 3.43 lb/hr equals 15 TPY for 8760 hrs/yr). Of course, in that instance, ratcheting down the allowables would avoid PSD.

Reply: As discussed in Nitram's request for a rule applicability determination (which C. Fancy has made), and in the company's air construction permit application (which the company has filed with the FDEP District Air Section in Tampa), the company is not proposing to make any physical changes to the plant related to the request to make the maximum LD prill production/processing rate the same as the maximum HD prill production/processing rate [50 tons/hour, continuous operation].

The question we have been discussing is whether the company's request is the type of change that is subject to PSD review. There are two step involved in making that determination.

The first step is whether a proposed change to a facility or to the most current federally enforceable air permit for the facility is a non-exempt "change in the method of operation" that would result in an increase in the actual emissions from the facility. If it is not that kind of change, PSD review does not apply. You don't need to go to the second step.

If it is that kind of change, you then do go to the second step. In that case, you determine if the increase in "actual emissions" from the affected production unit is "significant." If the net increase in "actual emissions" are "significant," PSD review does apply; otherwise, it doesn't. There are two parts to this determination.

First, is the increase in "actual emissions" from the affected production unit "significant? If yes, PSD review applies, unless there are available emissions reduction credits from other units in the facility that reduces the "net increase" in emissions to below the significant increase level on a facility-wide basis. As you noted, the significant increase level for PM10 is 15 tons/year.

Second, if the increase in "actual emissions" from the affected production unit is not "significant," but the non-

exempt physical or operational change causes a significant net increase in "actual emissions"on a facility-wide basis, BACT does not apply to the affected production unit, but air dispersion modeling may be required to verify that the facility-wide increase in "actual emissions" does not violation the applicable ambient air quality standard (s) or PSD increments(s).

In all of these determinations, the definition of "actual emissions," which is not the same for all circumstances, is very important. See the definition of "Actual Emissions," in Chapter 62-210.200 FAC. For any emissions unit (other than an electric utility steam generating unit), which has not begun normal operation, its future "actual emissions" are its "potential emissions." If a unit has begun normal operations, and is subject to a federally-enforceable unit specific emissions standard (such as a BACT, RACT, NSPS, or NESHAPs limit), that limit may be considered its current and future "actual emissions." There is no increase in actual emissions unless the future unit specific emissions limit allows greater annual emissions that the current unit specific limit. If such a unit specific limit does not apply, its current "actual emissions" are the average of the highest two years annual emissions during the previous five year period, and its future "actual emissions" are its future allowable emissions or its potential if no allowable emissions are specified.

My understanding of what Clair Fancy determinated at the first PSD applicability meeting in Tallahassee, as you said in your note above "was to presume (on the basis of prior data) that the LD prill tower emissions should be lower than HD prill tower emissions at equivalent production rates." Increasing the relative potential amount of LD prill made with respect to the amount of HD prill made over an annual period would result in a lower annual average PM emissions rate in lbs PM/ton prill produces. Therefore it is not the kind of change to the current permit that requires a PSD review. The quickest way to make that change to the permit is for the FDEP District Office to issue an air construction permit that amends the current permit. Within 180 days of issuing that permit, the company would submit an update to the Title V permit.

HD?

My understanding of what Clair Fancy determinated at the second PSD applicability meeting in Tallahassee, was the same as for the first meeting, provided the total PM emissions from the tower & drums while producing/processing LD prill is less than or equal to the total PM emissions from the tower & drums while producing/processing LD prill.

I have provided the notes on my understanding of what the air rules require/allow if the requested change were potentially subject to PSD review, so we can determine if we have the same understanding of what the rules requires. -- SSm

In any event, the statement about RACT compliance automatically ruling out PSD applicability seems potentially troublesome since your example assumes that the 0.18 for LD won't change at 50 TPH. I understand where you're coming from, but I would prefer to leave the RACT references out of the discussions.

Reply: See the lead-in paragraphs of this note and the attached revised draft meeting report. -- SSm

If the LD vs. HD drum tests show an increase below 3.43 lb/hr, we can conclude (given our prior presumption of lower tower emissions for LD) that PSD does not apply. If the differential is above 3.43 lb/hr, then additional testing of tower emissions (LD vs. HD) might be required to show that the lower tower LD emissions will offset the higher drum emissions rendering the total increase to be less than significant.

Reply: See the lead-in paragraphs of this note and the attached revised draft meeting report. -- SSm

Let us know if any of this differs from your recollection.

Reply: See the lead-in paragraphs of this note and the attached revised draft meeting report. -- SSm

JR

-Original Message-
From: Ssm97@aol.com [mailto:Ssm97@aol.com]
Sent: Monday, November 19, 2001 8:49 PM
To: Fancy, Clair; Reynolds, John
Cc: Kissel, Gerald; dross@nitramtampa.com; wbt@macfar.com;

cinitram@tampabay.rr.com
Subject: Second PSD Applicability Meeting, Nov 15, 2001 - Tallahassee

Page 1 of 2

Steve Smallwood, PE
Air Quality Services
Tallahassee

850 385-0002
850 385-8715 fax

Attachment: Second Meeting with Clair Fancy, PE, Chief, BAR on PSD Applicability - Tallahassee Office (Draft 2), S. Smallwood, Nov 25, 2001

C:\AQServices\Projects\924_Nitram\01_Prill Tower - LDP\AC_Permit\R_App_Tally_PSD_Mtg_2_JRComents.doc

Stephen Smallwood, PE
Air Quality Services

1640 Eagles Landing, Unit 103
Tallahassee, FL 32308

850 385-0002 Phone
850 385-8715 Fax
850 509-3149 Cell Phone
E-mail: Ssm97@AOL.com

November 25, 2001

Mr. Clair H. Fancy, PE
Chief, Bureau of Air Regulation
Division of Air Resources Management
Florida Department of Environmental Protection
2600 Blair Stone Road MS 5505
Tallahassee, FL 32399-2400

850 488-1344
850 922-6979 fax

Subject: Air Permitting Requirements for Increasing the Amount of Low Density Product Made in the Ammonium Nitrate Prill Tower
Nitram, Inc, Tampa FL
FDEP Air Facility No. 057 0029

Second Meeting with Clair Fancy, PE, Chief, BAR on PSD Applicability – Tallahassee Office

Dear Mr. Fancy:

The following is a summary of the result of my meeting with you in Tallahassee, on Thursday, November 15, 2001, 2:00 pm – 4:00 pm, to discuss whether increasing the relative amount of LD prill processed through the company's Tampa rotary drums dryer/ coolers would be the type of change that would require a PSD review. Al Linero and John Reynolds were present, and Jerry Kissel & Jim McDonald participated by phone from the Tampa District Office. We discussed the Rotary Drums PSD applicability and the LD prill emissions test data questions that the District air staff has asked in their incompleteness letter to Nitram.

You concluded that since the prill tower and the rotary drums dryer/coolers operate as one integral production unit (i.e. the amount of prill that is produced in the tower has to immediately go through the drums), the prill tower / drums production unit should be considered as a whole for determining if the proposed increase in production of LD prill through the tower and the drums is the type of change that is potentially subject to PSD review.

The company has not proposed increasing the total amount of ammonium nitrate prill produced by the prill tower or processed through the rotary drums [50 tons/hour, 1200 tons/day, continuous operation]. Only one product (LD or HD prill) can be produced and processed (dried and/or cooled) at a time. The total amount of ammonium nitrate prill produced is the sum of the two. The company's proposal would allow the plant to produce any mix of the two products that their customer's need, provided that not more than 50 tons/hour of either product is produced at any given time.

Therefore, if the sum of the actual emissions rate (in terms of lbs PM/ ton of prill produced or processed) from the prill tower scrubber and the rotary drums scrubber [while producing LD prill in the tower at or near its maximum practical capacity], is less than the sum of the actual emissions rates

from the tower and drums while producing HD prill at or near it's maximum permitted capacity, the proposed change to the current LD prill production rate provisions for the tower and drums (increasing the relative amount of LD prill produced) would result in an overall decrease in the annual average PM emissions rate from the tower and drums. That type of change is not subject to PSD review.

PM emissions test data is available for producing and processing HD prill. Since PSD applicability is based on the annual average emissions rates, and specific PM emissions test results represent a short-term average (~3 hour), the appropriate way to compare the emissions test results is to compare the mean or average value of the test results for each product for each emissions point (tower & drums scrubber outlets).

The ten-test average value for PM emissions from the tower, while producing HD prill @ a 50 tons/hr rate is 0.37 lbs/ton. Two of the 12 HD test results are statistical outliers. The two-test average value for PM emissions from the tower, while producing LD prill @ a 25 tons/hr rate, is 0.176 lbs/ton. No test data is available for PM emissions from the tower, while producing LD prill @ greater than a 25 tons/hr rate. The one-test value for PM emissions from the drums, while processing HD prill @ a 50 tons/hr rate, is 0.14 lbs/ton. No LD prill PM emissions tests have ever been required by the plant's air permits for the rotary drums, therefore no LD prill PM emissions test data is available for the drums. Prior to the current Title V permit, no PM emissions tests were required for the drums for HD or LD prill - only VE tests.

The company had proposed conducting a special LD prill emissions test on the prill tower scrubber exhaust after the construction permit was issued to verify that the tower PM emissions, while producing LD prill at rates higher than currently permitted, would still comply with the 26 lbs/hour BACT emissions limit that applies to the tower. More recently, the company has proposed conducting a special LD prill emissions test on the drums scrubber exhaust to show that the drums PM emissions, while processing LD prill at rates higher than currently permitted, would still comply with the 0.03 gr/dscf RACT emissions limit that applies to the drums.

The company is currently considering conducting both of those special LD prill PM emissions tests in December 2001, if the Department provides permission to operate the tower & drums on LD prill above the currently permitted production / processing rate for a long enough time to determine the maximum practical LD processing rate [not to exceed 50 tons/hour], and to conduct the special LD prill emissions tests. The result of those tests would be used to estimate the annual average of the LD prill emissions vs. the HD prill emissions for the tower/drums production unit to verify that it is reasonable to conclude that the total LD prill PM emissions for the prill tower / rotary drums production unit are equal to or less than the HD prill PM emissions for that production unit.

The plant is currently scheduled to conduct the annual PM emissions compliance tests for the prill tower scrubber and the rotary drums scrubber in January or February 2002, while processing HD prill. Both of those tests could possibly be conducted in December 2001, if the Department waived the permit requirement to conduct the annual compliance tests in the January-February time period.

The following discussion, [based on the currently available test data, how the new test data might affect the overall results, and the fact that the tower & drums scrubbers will have to be operated with a gpm & a delta P across the scrubber that will result in complying with the BACT & RACT emissions limits], provides a context for further discussing what tests need to be conducted during December, how the process and the scrubbers are to be operated during the special tests, and how the

test results will be evaluated with respect to the criteria you determined at our recent meeting in Tallahassee.

The currently available data for HD prill PM emissions @ a 50 tons/hr rate is 0.37 lbs/ton for the tower (or 18.5 lbs/hr), and 0.14 lbs/ton for the drums (or 7.0 lbs/hr), for a total HD prill emission rate from the tower/drums production unit of 0.51 lbs/ton (or 25.5 lbs/hr). The available data for LD prill PM emissions @ a 25 tons/hr rate is 0.176 lbs/ton for the tower (or 4.4 lbs/hr), and no data for the drums. There is no data for LD prill PM emissions @ greater than a 25 tons/hr rate.

Since the PM emissions from the drums are subject to the 0.03-grains/dscf RACT emissions limit & a 9.24-lbs/hr cap, the drums scrubber must be operated at a gpm & delta P across the scrubber that will result in compliance with those limits. If the drums meet the 9.24-lbs/hr limit at 50 ton/hr LD prill, the maximum compliant emissions factor is 0.185 lbs PM/ton (or 9.24 lbs/hr). If the max LD prill throughput is 35 tons/hr, the maximum compliant emissions factor is 0.264 lbs PM/ton prill processed (or 9.24 lbs/hr).

The lowest likely valid value for the next prill tower HD prill PM emissions test @ a 50 tons/hr rate (based on a statistical analysis of the prill tower HD prill PM emissions data; ten data points) is ~ 0.28 lbs/ton (or 14.0 lbs/hr). The highest compliant value is 26.0 lbs/hr. The mean value for the prill tower HD PM emissions data after the next HD PM emissions test most likely will be in the range of 0.36 – 0.38 lbs/ton (or 18-19 lbs/hr).

There is not enough data to do a statistical analysis for the other emissions test data. The next rotary drums HD prill PM emissions test @ a 50 tons/hr rate will probably be no lower than ½ the current value of 7.0 lbs/hr, and the highest compliant value is 9.24 lbs/hr. That gives a likely range of 0.11-0.16 lbs/ton (or 5.3 – 8.1 lbs/hr).

That give a likely range for the tower / rotary drum HD prill total PM emissions of 0.47 – 0.54 lbs/ton (or 23.5 – 27.0 lbs/hr). That indicates that the next HD PM emissions test will probably not have a significant effect on the estimated annual average Total HD PM emissions for the tower / drums process unit of about 25 lbs/hr (+/- 7%). Most likely 18 lbs/hr would be from the tower & 7 from the drums.

The only LD prill PM emissions data we have is for the tower @ a 25 tons/hr rate. The two-test average is 0.176 lbs/ton for the tower (or 4.4 lbs/hr). If this value is close to the true average rate and that average PM emissions rate is the same for the higher prill production rates, the PM emissions rate @ a 35 tons/hr rate would be ~ 6 lbs/hr; and at a 50 tons/hr rate would be ~ 9 lbs/hr.

The HD prill is denser and dryer than the LD prill. The HD prill uses the cooling drum with two exhaust fans. The LD prill uses the pre-drying drum, the drying drum, and then the cooling drum, and all three exhaust fans. All three exhaust fans are vented to the outside air through the Peabody wet scrubber.

If the additional handling of the wetter LD prill is offset by its higher moisture content, the ratio of the LD prill PM emissions from to the drums to the LD prill PM emissions from the tower would be about the same. If that is the case, the rotary drums LD prill PM emissions @ a 35 tons/hr rate would be ~ 2 lbs/hr; and at a 50 tons/hr rate would be ~ 3 lbs/hr.

Stephen Smallwood, PE
Air Quality Services

' 5$)7

Still not enough to preclude need for testing

If all of those assumptions are true, the LD prill emissions tests will show that the estimated annual average Total LD PM emissions for the tower / drums process unit are about 8 lbs/hr @ a 35 tons/hr rate; and about 12 lbs/hr @ a 50 tons/hr rate. If the LD prill PM emissions rates are twice that amount, they would still be less than the estimated average annual Total HD prill PM emissions rate for the tower / drums process unit.

To determine if those assumptions are correct, the company needs to conduct special LD prill PM emissions tests while operating the tower and drums at a LD prill production / processing rate of up to 50 tons/hr. If the tower / drum production unit can not be operated at 50 tons/hr during the time of the special test, the tests should be conducted at the highest practical rate that is safe, feasible, and compliant with the BACT & RACT PM emissions limits.

If, at that special LD prill test production rate, the test results in combination with the currently available test data shows compliance with the PSD non-applicability criteria determined by you at our recent meeting, the requested changes to the air permit should be made, with the proviso that the tower / drums production unit can not be operated at a LD production rate of more than 10% above the special LD test average production rate (not to exceed 50 tons/hr), until the company conducts additional special LD prill emissions test pursuant to General Condition 10 of the current Tile V permit that shows the PSD non-applicability criteria is met at a higher LD prill production rate.

Based on this "available test data" discussion, priority should be given to obtaining the special LD prill PM emissions test data @ a LD production rate as high above the current permitted limit as practical (not to exceed 50 tons/hr). The company will probably need at least a week to determine the maximum safe and feasible LD prill production rate.

Before conducting the two three-run special LD prill PM emissions tests, the company may need to conduct a special test run for the tower and the drums to determine the minimum scrubber parameters for the LD prill at the higher production rates, to assure compliance with the BACT & RACT emission limits. All of this needs to be done before obtaining any additional HD prill PM emissions test data. The current HD PM emissions data is probably sufficient for the PSD determination that needs to be made. If additional HD PM data is needed, additional HD PM data for the rotary drums should be obtained first.

Nitram has drafted a specific answer for each of the District's incompleteness letter questions. That information, which includes a statistical analysis of the available HD prill PM emissions test data for the prill tower, will be provided to the District within the next two weeks.

Jerry Kissel has e-mailed me that the district and the county air staff can meet with the company on Tuesday afternoon, November 27, at 2:00 pm at the county air office. The purpose of the meeting is to discuss what tests need to be conducted during December, how the process and the scrubbers are to be operated during the tests, and how the test results will be evaluated with respect to the criteria you determined at our recent meeting in Tallahassee.

Stephen Smallwood, PE
Air Quality Services

I will call Dan Ross, Nitram, on Monday morning. If he can meet then, we will. If not, I will reschedule the meeting with Jerry for the first time after Tuesday that the company & the air staffs are available.

Sincerely,

Stephen Smallwood

Stephen Smallwood, PE
Air Quality Services
Tallahassee, FL

(850) 385-0002
(850) 385-8715 fax

Attachment: Nitram Rule Applicability Meeting, September 26, 2001 – Tallahassee, FL

c: Gerald Kissel, PE, Air Permitting Supervisor, FDEP SWD/ARM Section – Tampa, FL

Reynolds, John

From: Reynolds, John
Sent: Tuesday, November 20, 2001 6:27 PM
To: 'Ssm97@aol.com'
Cc: Fancy, Clair; Linero, Alvaro; Kissel, Gerald; McDonald, Jim
Subject: RE: Second PSD Applicability Meeting, Nov 15, 2001 - Tallahassee

Steve - - just a couple of points. In the last sentence of the fifth paragraph on Page Two, I assume you mean "total emissions" (drums plus prill tower) where you said "..., the LD prill emissions are lower than the HD prill emissions." Is this correct? Concerning the last sentence in the next to last paragraph on Page Two, the prill tower emissions for LD @ 50 TPH may be higher than 0.18 on a per ton basis (but presumably below the 0.40 for HD), therefore it would best not to agree prior to testing that if the LD drum emissions are below 0.36 lb/ton, that PSD would not apply. We understand that these numbers are presented only for illustration. Our agreement was to presume (on the basis of prior data) that the LD prill tower emissions should be lower than HD prill tower emissions at equivalent production rates. I think the key is to demonstrate via additional testing that the extra drum(s) required for processing LD product will not result in an emissions increase vs. the HD product. As discussed, this is best shown by comparative testing of the drums (producing LD vs. HD) at equivalent rates. The point you made about RACT compliance being required is valid in any case, but the PSD issue rests on the mass emissions increase. If we were to consider this as a modification by virtue of any physical changes that will be required to double the LD production from 25 to around 50 TPH (we're not saying there will be but presumably there could be some) and the change results in any actual emissions increase for the total process (tower plus drums), then a determination of actual vs. allowable emissions is triggered. Those actual pre-modification emissions could conceivably be low enough that PSD might be triggered without exceeding the 9.24 lb/hr RACT limit (an increase of 3.43 lb/hr equals 15 TPY for 8760 hrs/yr). Of course, in that instance, ratcheting down the allowables would avoid PSD. In any event, the statement about RACT compliance automatically ruling out PSD applicability seems potentially troublesome since your example assumes that the 0.18 for LD won't change at 50 TPH. I understand where you're coming from, but I would prefer to leave the RACT references out of the discussions. If the LD vs. HD drum tests show an increase below 3.43 lb/hr, we can conclude (given our prior presumption of lower tower emissions for LD) that PSD does not apply. If the differential is above 3.43 lb/hr, then additional testing of tower emissions (LD vs. HD) might be required to show that the lower tower LD emissions will offset the higher drum emissions rendering the total increase to be less than significant.

Let us know if any of this differs from your recollection.

JR

-----Original Message-----
From: Ssm97@aol.com [mailto:Ssm97@aol.com]
Sent: Monday, November 19, 2001 8:49 PM
To: Fancy, Clair; Reynolds, John
Cc: Kissel, Gerald; dross@nitramtampa.com; wbt@macfar.com; cinitram@tampabay.rr.com
Subject: Second PSD Applicability Meeting, Nov 15, 2001 - Tallahassee

November 19, 2001
Second PSD Applicability Meeting, Nov 15, 2001 - Tallahassee

Clair:

Attached is my draft report on our Nitram PSD applicability discussion this past Thursday.

I appreciate the time and effort that you and the others, who participated in the discussion, devoted to addressing the issues raised by the district & county air staff. I hope we now have a complete agreement that will expedite

the processing and issuance of the air construction permit that Nitram has requested to correct several errors in the current Title V permit.

Please let me know if there are any corrections I need to make to my draft report to accurately reflect what you said and concluded at the meeting.

Also attached is a copy of my report on our first PSD Applicability meeting with you on September 26.

Stephen Smallwood, PE
Air Quality Services
Tallahassee

850 385-0002
850 385-8715 fax

BEST AVAILABLE COPY

October 19, 2001

To: File

Re: Nitram application 0570029-007-AC

This memo documents our reasoning and conclusions to date.

We initially questioned whether the increase in production of Low-Density product (LD) was a change in the method of operation. Per the meeting in Tall'e on about 9/28/01 between Nitram, their consultants, and the DEP, it was determined that LD emissions from the prill tower were no higher than HD (High-Density product) emissions and that the increase in production of LD product did not represent a change in the method of operation requiring "prior actual to future potential" reasoning.

The review of the current construction permit application showed that in addition to the prill tower emissions discussed above, this process also involves passing the product through cooling drums. (This was not in the current application, but rather in the Title V permit and our file). These drums are emission sources, with production and emission limits in the Title V permit, and a scrubber. In LD mode, three drums in series are used, and in HD mode, one drum is used. Emissions from the drums scrubber have only been tested once, in 1997 in HD mode, and are roughly in the same range as emissions from the main prill production process.

Although Nitram's consultant states that LD emissions from three drums would be lower than HD emissions from one drum, we believe that we do not have reasonable assurance of that without additional tests. Thus we are proceeding down the track that "prior actual vs. future potential" limits are required in the permit to avoid PSD. (Emissions would be the sum of emissions from the prill tower plus the drums). An incompletion letter along these lines is being prepared.

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

October 23, 2001

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

Dear Mr. Ross:

Re: Application dated 10/02/01
Reference Permit No. 0570029-002-AV
DEP File No. 0570029-007-AC

On October 2, 2001, the Department received your air pollution construction application to modify your Ammonium Nitrate Prill Tower No. 2 located at 5321 Hartford Street, Tampa. In order to continue processing the application, the Department will need the following additional information pursuant to Rules 62-4.055 and 62-4.070(1), F.A.C.:

1. During my visit on October 15, 2001, you agreed that the process rate for the three prill rotary drums (Emission Unit No. 012) in permit 0570029-002-AV will also need to be modified, since the low density prill process rate is limited to 23 tons/hr. Therefore, submit the appropriate additional pages to the application to address this change. Also note:

   - The high density prill is limited to 50 tons/hr. in the prill tower and is limited to 55 tons/hr. in the prill rotary drums.

   - The February 2, 2001, visible emission test for the prill rotary drums was conducted with low density prill at 25 tons/hr., which is above the permitted 23 tons/hr. limit.

2. Since the low density prill goes through all **three** drums (pre-dryer, dryer, cooler) and the high density prill goes through only **one** drum (cooler), what are the actual emissions from processing each type of prill? Show how

"More Protection, Less Process"

Printed on recycled paper.

these values were derived and explain why the actual emissions are the same or different.

3. As discussed during my visit on October 15, 2001, please submit the following, which may also affect the prill rotary drums, as appropriate:

   A. Updated process flow diagrams representing the airflows, raw material flows, and liquid flows for both the process and scrubber.

   B. An updated process description, which more accurately explains the process flow diagrams.

4. For Prill Tower No. 2 and the prill rotary drums, please explain how the process rates are determined and when the operator logs/records the associated rate for low density prill and high density prill.

5. A spot check of some of your records for Prill Tower No. 2 indicated that required new emission tests were not being conducted when parameters (scrubber gpm and ΔP) from the most recent emission test deviated by more than 10%. Therefore, explain the procedures you intend to implement so an operator will be able to avoid this situation from occurring again in the future. Your response should also address when a new emission test should be conducted if an operator records a process rate (tons/hr.) more than 10% above the processing rate during the most recent emission compliance test.

6. As a result of increasing low density prill processing rates for Prill Tower No. 2 and the prill rotary drums, will any de-bottlenecking of any other emission units either upstream (boilers, etc.) or downstream (truck/railcar loading, etc.) occur? If no, explain.

7. Provide a "past actual emissions to future allowable emissions analysis" to show the requested modifications are below the Prevention of Significant Deterioration (PSD) significant emission levels shown in Table 212.400-2 contained in Chapter 62-212, F.A.C. Be sure the analysis explains how the values used in the analysis were derived/determined. Note, if the analysis shows the significant emission levels will be exceeded, a new air pollution construction application addressing PSD w/fee will be required to be submitted to the Department's Tallahassee office for processing.

8. In order to properly compare actual emission test results from processing and/or handling Low Density Prills vs. High Density Prills, the operating parameters for each processing and/or operating scenario need to be as consistent as possible. Therefore, for each affected emission unit, please submit the operating scenario(s) and parameters that will be used to verify processing and/or operating consistency. As appropriate, items such as dampers, outside intake air vents, fans, liquids or emissions from other activities that also enter the process, scrubber ΔP's, scrubber liquid flow rates, etc. should be addressed, as part of the submittal.

9. Historical review of the Prill Tower's particulate matter stack tests showed no consistency. In the last ten years, PM emissions had fluctuated between 1.97 lbs./hr. (0.0415 lbs./ton) to 25.9 lbs./hr. (0.5630 lbs./ton). The two tests conducted during the LDP production, resulted in PM emissions of 2.1 lbs./hr. (0.0840 lbs./ton) in 2001 and 6.7 lbs./hr. (0.2683 lbs./ton) in 1997. In addition, the scrubber volumetric liquid flow rate has been inconsistent, and thus it is not clear as to how it relates to particulate emissions. The scrubber liquid flow rate during the last five tests has fluctuated between 1,400 gpm and 3,200 gpm.

   Based on manufacturer's data, what should be the scrubber's optimal operation range for the volumetric liquid flow rate, pressure drop and liquor pH that will provide a good PM removal efficiency? How do these parameters affect emissions? Do these scrubber parameters change depending on the type of prill production?

10. Review of the current permit shows that three rotary drums are used to dry/cool down the prills. There are limits set for the rate of HDP or LDP material that is processed in the drums. If the production rate of the LDP increases, how will this affect the process rate in the rotary drums? Also, how will this affect the PM emissions?

NOTE - Rule 62-4.050, F.A.C. requires applications of this type must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Therefore, your response to the above requests should be certified by a professional engineer.

Your response should be submitted by December 28, 2001, and a copy of your response should also be sent to Ms. Diana Lee of the Environmental Protection Commission of Hillsborough County. If you have any questions, please call me at (813)744-6100 extension 106.

Sincerely,

James L. McDonald

James L. McDonald
Air Permitting Engineer

cc: Ms. Diana Lee, P.E. - EPCHC

Mr. Al Linero, P.E. - FDEP, Tallahassee

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

CHF

October 19, 2001

To: File

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Executive V. P. & CEO
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Sincerely,

James L. McDonald
Air Permitting Engineer

cc: Ms. Diana Lee, P.E. - EPCHC

Mr. Al Linero, P.E. - FDEP, Tallahassee

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

FACSIMILE COVER PAGE FOR:

NITRAM, INC.

5321 Hartford St.
P.O. Box 2968
Tampa, FL 33601

Phone (813) 626-2181
Fax (813) 623-6080

DATE: 11-14-01

TO: Air Quality Services (850) 385-8715

ATTN: Steve Smallwood

FROM: Charles Ingram

Total # of pages (including cover page): 2

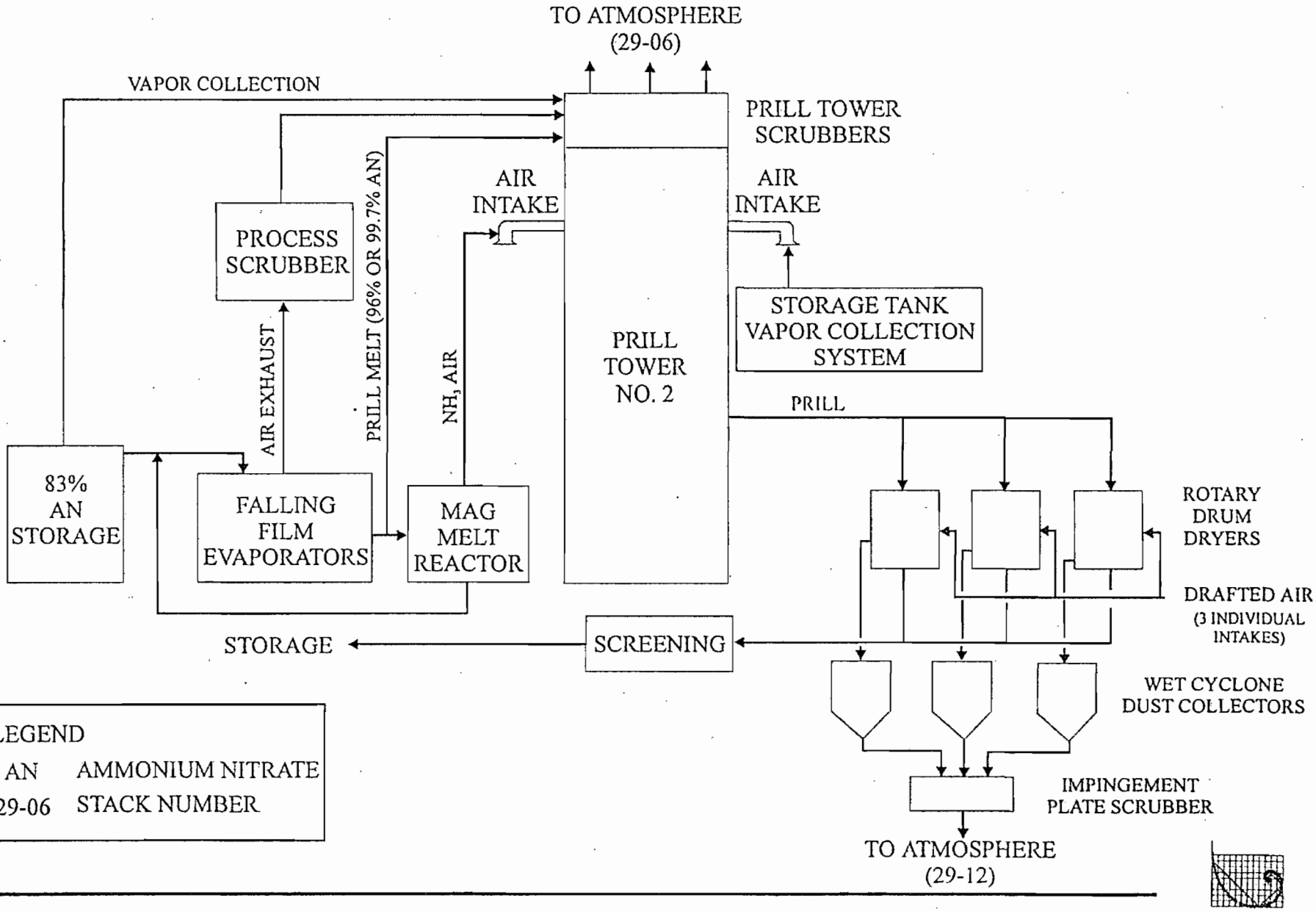
If you do not receive all pages, please call the number above as soon as possible.

The information contained in this facsimile message is proprietary and confidential. Information is intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone. Thank you.

MESSAGE:

High-D only uses cooling drum and BX-304 & BX-306. Low-D uses everything as shown.

Figure 3a
Prilling Process
Nitram, Inc.
Tampa, Florida



ERM

LOW DENSITY PRILL
"FINES" RECOVERY& AIR SYSTEM
(CYCLONES AND BLOWERS)

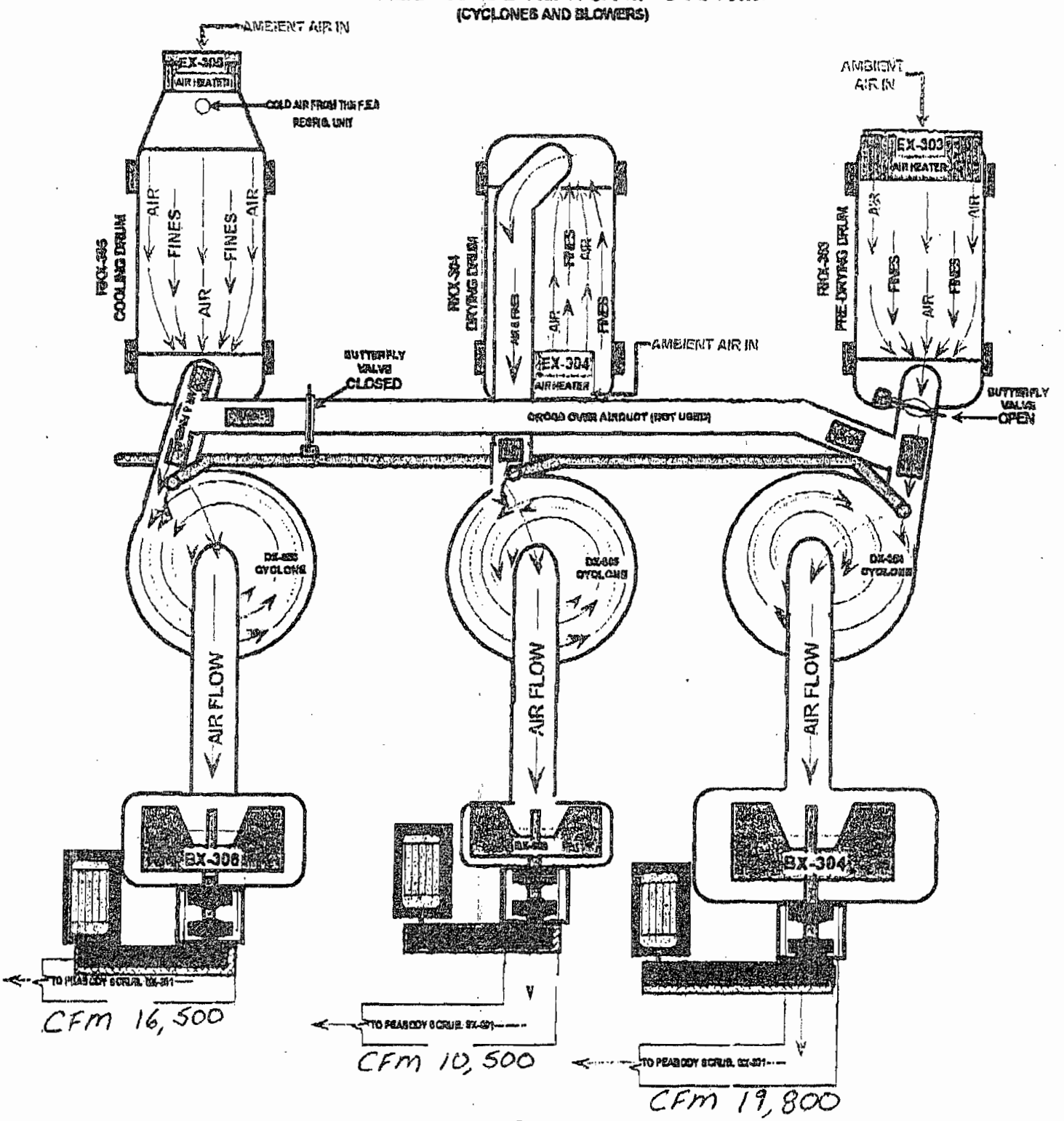


TABLE 1 - NITRAM PRILL TOWER PM EMISSIONS TEST DATA: 1985 -2001

November 4, 2001

High Density & Low Density Prill

[Including the 1998-99 Low Test Values]

DRAFT

	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)	
1986	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	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			**25.0**	**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

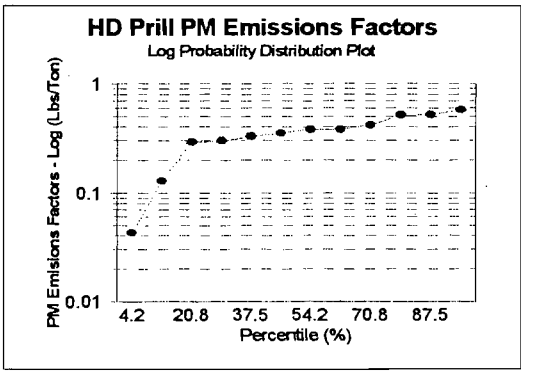
Analysis of Variance

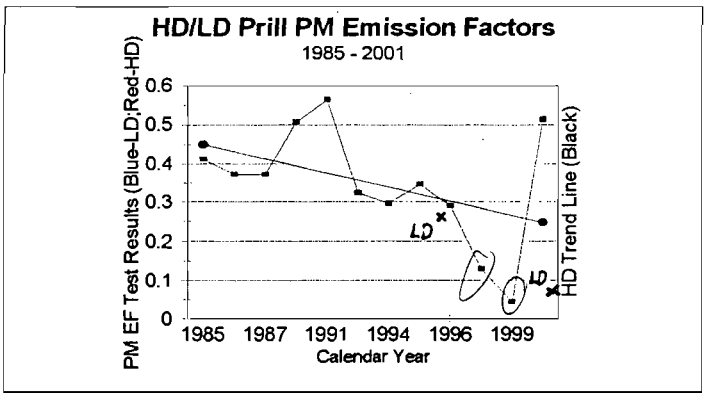
	df	*Sum of Squares*	*Mean Square*	*F*	*Significance F*
Regression	1.000	0.055	0.055	2.787	0.126
Residual	10.000	0.198	0.020		
Total	11.000	0.253			

	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	0.265	1.886

Percentile	*EFa(lb/Ton)*
4.2	0.042
12.5	0.128
20.8	0.288
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





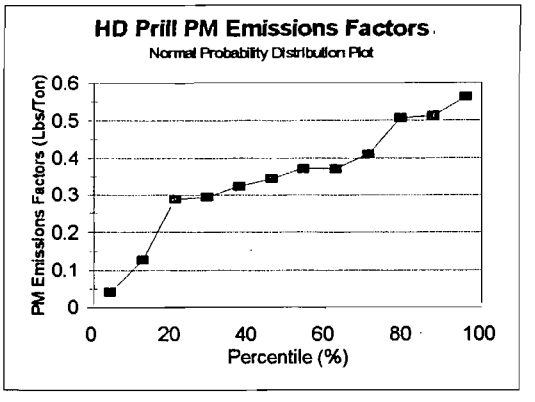


TABLE 1 - NITRAM PRILL TOWER PM EMISSIONS TEST DATA: 1985 -2001

November 4, 2001

High Density & Low Density Prill

[Minus the 1998-99 Low Test Values]

DRAFT

	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)	
1986	1985	HD	50.0	20.6	26.0	0.411	0.410	0.450
	1986	HD	50.0	18.6	26.0	0.372	0.408	
	1987	HD	50.0	18.6	26.0	0.372	0.406	
	1988	HD	46.0	23.3	26.0	0.507	0.404	
	1991	HD	46.0	25.9	26.0	0.563	0.399	
	1993	HD	49.0	15.8	26.0	0.322	0.396	
	1994	HD	53.0	15.6	26.0	0.294	0.394	
	1995	HD	51.0	17.6	26.0	0.345	0.393	
	1996	HD	49.0	14.1	26.0	0.288	0.391	
2000	2000	HD	50.0	25.6	26.0	0.512	0.384	0.384
	2001							
Average			49.4	19.6		0.399		

	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			25.0	4.4		0.176

Regression Statistics

Multiple R	0.085
R Square	0.007
Adjusted R Square	-0.117
Standard Error	0.103
Observations	10.000

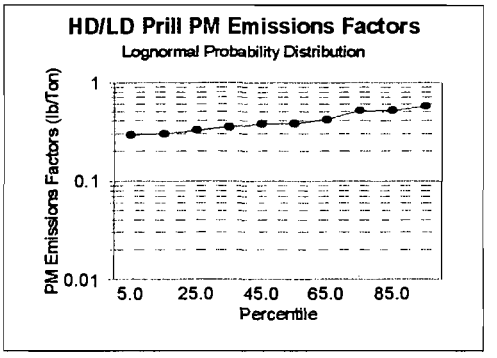
Analysis of Variance

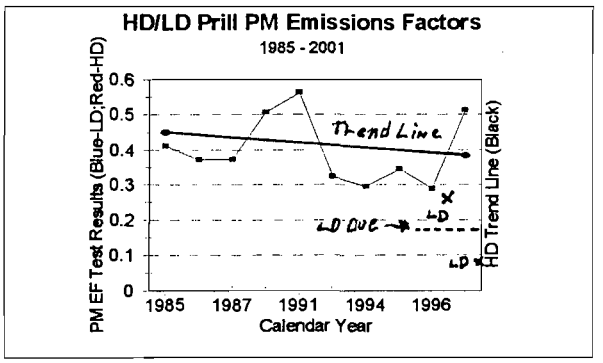
	df	Sum of Squar	Mean Squ	F	Significance F
Regression	1.000	0.001	0.001	0.058	0.815
Residual	8.000	0.084	0.011		
Total	9.000	0.085			

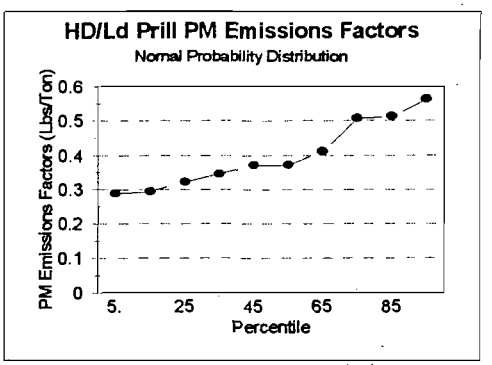
	Coefficients	Standard Erro	t Statistic	P-value	Lower 95.	Upper 95.00
Intercept	3.745	13.839	0.271	0.793	-28.168	35.659
Yr	-0.002	0.007	-0.242	0.814	-0.018	0.014

Observations	Predicted Y	Residuals	Stdzd Residuals
1.000	0.410	0.002	0.017
2.000	0.408	-0.036	-0.353
3.000	0.406	-0.035	-0.336
4.000	0.404	0.102	0.994
5.000	0.399	0.164	1.593
6.000	0.396	-0.074	-0.717
7.000	0.394	-0.100	-0.974
8.000	0.393	-0.048	-0.463
9.000	0.391	-0.103	-1.005
10.000	0.384	0.128	1.245

Percentile	EFa(lb/Ton)
5.0	0.288
15.0	0.294
25.0	0.322
35.0	0.345
45.0	0.372
55.0	0.372
65.0	0.411
75.0	0.507
85.0	0.512
95.0	0.563







PROCESS WEIGHT CERTIFICATION

DATE: FEB 11 1997 SAMPLING TIME: FROM 09:11 TO 13:07

STATEMENT OF PROCESS WEIGHT:

COMPANY NAME: NITRAM, INC.

MAILING ADDRESS: P.O. BOX 2968, TAMPA, FL 33601

SOURCE IDENTIFICATION: THREE PRILL ROTARY DRUMS / AO29-201365

SOURCE LOCATION: 5321 HARTFORD ST TAMPA FL 33615

DATA ON OPERATING CYCLE TIME:

START OF OPERATION, TIME 09:00

END OF OPERATION, TIME 13:10

ELAPSED TIME

IDLE TIME DURING CYCLE:

DESIGN PROCESS RATING:
PROCESS WEIGHT RATE (INPUT) 110,000 #/HR PRODUCT (OUTPUT) 100,000 #/HR

DATA ON ACTUAL PROCESS RATE DURING OPERATION CYCLE:
(INCLUDE SPECIFICATIONS ON FOSSIL FUELS)

MATERIAL Ammonium Nitrate RATE* 100,000 # HR.

MATERIAL Scrubber Recycle ~~RATE~~* 400 G.P.M.

MATERIAL Air Pressure drop RATE* 3.0

TOTAL PROCESS WEIGHT RATE*

PRODUCT Ammonium Nitrate RATE** 100,000 # HR

*FOR PHOSPHATE PROCESS EXPRESSED AS ACTUAL TONS/HOUR AND AS TONS P_2O_5/HOUR.

FOR FOSSIL FUEL STEAM GENERATORS EXPRESSED AS BTU/HOUR HEAT INPUT.

**FOR SULFURIC ACID PLANTS EXPRESSED AS 100% H_2SO_4/HOUR.

I CERTIFY THAT THE ABOVE STATEMENT IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SIGNATURE Donald R. [signature]

TITLE: Prill Superintendent

Feb 1997

TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Company: NITRAM, INC.
Source: Peabody Scrubber

	Run 1	Run 2	Run 3	
Date of Run	02/14/97	02/14/97	02/14/97	
Process Rate (lbs./hr.)	100,000	100,000	100,000	
Start Time (24-hr. clock)	0911	1040	1205	
End Time (24-hr. clock)	1013	1142	1307	
Vol. Dry Gas Sampled Meter Cond. (DCF)	32.373	37.298	37.759	
Gas Meter Calibration Factor	1.015	1.015	1.015	
Barometric Pressure at Barom. (in. Hg.)	30.08	30.10	30.10	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	32.542	37.257	37.475	
Vol. Liquid Collected Std. Cond. (SCF)	2.084	1.075	2.876	
Moisture in Stack Gas (% Vol.)	6.0	2.8	7.1	
Molecular Weight Dry Stack Gas	30.00	30.00	30.00	
Molecular Weight Wet Stack Gas	29.28	29.66	29.14	
Stack Gas Static Press. (in. H2O gauge)	-0.17	-0.15	-0.17	
Stack Gas Static Press. (in. Hg. abs.)	30.07	30.09	30.09	
Average Square Root Velocity Head	0.517	0.467	0.468	
Average Orifice Differential (in. H2O)	0.932	1.239	1.270	
Average Gas Meter Temperature (°F)	77.2	81.4	84.9	
Average Stack Gas Temperature (°F)	104.5	105.0	106.5	~ 105 °F
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	29.73	26.71	27.02	
Effective Stack Area (sq. ft.)	19.63	19.63	19.63	
Stack Gas Flow Rate Std. Cond. (DSCFM)	30,939	28,740	27,709	~ 29,129 dscfm
Stack Gas Flow Rate Stack Cond. (ACFM)	35,026	31,463	31,833	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.250	0.278	0.278	
Percent Isokinetic	101.0	100.7	105.1	
Particulate Collected (mg.)	55.9	48.9	90.4	
Particulate Emissions (grains/DSCF)	0.027	0.020	0.037	
Particulate Emissions (lb./hr.)	7.0	5.0	8.8	~ 6.9 #/hr

Avg. Particulate Emissions (grains/DSCF)	**0.028**
Avg. Particulate Emissions (lb./hr.)	**7.0**
Allowable Particulate Emissions (grains/DSCF)	**0.03**
Allowable Particulate Emissions (lb./hr.)	**9.24**

7.49 @ 0.03 gr/dscf
#/hr

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

Nitram wants principle agreed on

Summary of Meeting with Nitram, Inc.
September 26, 2001

- The emissions increase of approximately 9 lbs/hr associated with the 1981 construction of a new prill tower would likely not trigger retroactive PSD review since the two old towers (high emitters) were shut down and never reactivated. The old emissions would have more than offset the increase in emissions (over 36 TPY) and thus PSD review was not required in 1981.

- Nitram's request to revise its Title V permit by way of an administrative correction to drop the existing condition limiting low density production to 25 TPH is not appropriate since this is not simply an administrative or clerical error. BAR advised Nitram to apply to the Southwest District for a minor modification construction permit for 50 TPH of "prilled product" (generic, i.e. no distinction between products) and then test the unit to verify the anticipated lower emissions. A new Title V permit would then be issued with the new federally enforceable permit condition.

- Based on Nitram's representations that process differences between the high and low density product grades will result in lower emissions after the conversion to low density, BAR agreed that the conversion will not be a change in the method of operation (no increase in actual emissions) and that the last two years of test data may be sufficient to avoid requiring additional testing prior to obtaining a construction permit modification. However, Nitram was advised that the decision on whether additional testing will be required prior to issuing a construction permit will be made by the District staff who will process the permit.

- Nitram will provide sufficient process information to the District for reasonable assurance prior to issuing the permit including an explanation of design/operating parameters accounting for lower emissions from the low-density product. The permit will require one-time comparative tests on both products at the same production rate to verify that emissions are in fact reduced with the low-density product.

HD - 0.4 lb/ton Product Tower @ 50 TPH LD = 0.18 lb/ton Tower @

0.28 " " 2 Drums ? 3 Drums

0.68

9.42 lb/hr / 0.03 g/scf

lb/ton vs lb/hr

Combine emission limits as single EU

cancel test sched. for 20th

~~not~~ include tower in next test - no/have to use next scheduled test for FFY

K'ssel - letter requesting 30 days for testing drums

drums - test drums HDPE

Permit File Scanning Request from Elizabeth

Priority: ☐-ASAP (Public Records Request, etc.) ☒-Place in Normal Scanning Queue

Facility ID	Project#	Type	PSD #	Submittal Date	Batch #
0570029	001	AC			

☒ File Approved For Disposal ☒ Correspondence ☐ Intent ☐ Permit ☐ Draft

☐ Return File to BAR ☐ Amendment ☐ Application ☐ OGC ☐ Proposed

Document Date 9/24/01

MACFARLANE FERGUSON & MCMULLEN

ATTORNEYS AND COUNSELORS AT LAW

500 SOUTH FLORIDA AVENUE
SUITE 240
LAKELAND, FLORIDA 33801
(863) 680-9908 FAX (863) 683-2849

400 NORTH TAMPA STREET, SUITE 2300
P.O. BOX 1531 (ZIP 33601)
TAMPA, FLORIDA 33602
(813) 273-4200 FAX (813) 273-4396

625 COURT STREET
P. O. BOX 1669 (ZIP 33757)
CLEARWATER, FLORIDA 33756
(727) 441-8966 FAX (727 442-8470

IN REPLY REFER TO:

Tampa

April 30, 2002

RECEIVED
MAY 03 2002
BUREAU OF AIR REGULATION

Mr. Clair H. Fancy, PE
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road, Mail Drop # 5500
Tallahassee, FL 32399-2400

Re: Air Permitting Requirements for Increasing the Amount of Low Density Product Made in the Ammonium Nitrate Prill Tower
Nitram, Inc, Tampa FL
FDEP Air Facility No. 057 0029

Request for Rule Applicability Determination

Dr. Mr. Fancy:

On behalf of Nitram, Inc., I respectfully request that you, as the FDEP Chief, Bureau of Air Regulation, confirm your previous verbal determination that an increase in production of Nitram's low density ammonium nitrate prill ("Prill") to 50 tons/hr would not trigger PSD review.

History

Nitram produces ammonium nitrate products. The plant is located in Tampa, Hillsborough County, Florida. One of Nitram's products, Prill, is produced as high density ("HD") and low density ("LD") Prill. The current Title V permit limits production of LD Prill at 25 tons/hr and HD Prill at 50 tons/hr. Prior to the Title V application, there was no federally enforceable production limits for LD Prill. When Nitram filed its Title V application, the Company inadvertently accepted the 25 tons/hr, rather than 50 tons/hr production limit for LD Prill. Nitram is now requesting a correction so that the Company will be permitted to produce LD Prill at the same maximum production rate that is currently allowed for HD Prill. In other words, the production limit shall be applicable to production of Prill with no distinction between whether the Prill being produced is LD or HD. There will be no modification to the plant, as that term is defined by applicable federal and state rules, nor will there be an increase in actual emissions.

The Prill Tower is equipped with a wet scrubber that is subject to a PM emissions limit established by a PSD best available control technology (BACT) determination. The rotary drying /cooling drums unit is equipped with a wet scrubber that is subject to a PM emissions limit established by the PM nonattainment area reasonably available control technology (RACT) rule. The previous nonattainment area is currently in compliance with state and national ambient air quality standards.

Both the Company's 15 years of PM test data for the prill tower and the US EPA prill tower emissions factors indicate that the PM emissions from HD Prill are typically about three times more per ton than the PM emissions from LD Prill. All of the tests and AP-42 data taken together show that the annual average PM emissions from LD Prill (from the Prill Tower & rotary drums at the Nitram plant) will be less than the annual average PM emissions from HD Prill.

The available EPA guidance and the history of the specific exemptions in the PSD rule indicate that replacing or using relatively more of a lower polluting fuel, raw material, or type of product is encouraged as a pollution prevention measure, and is not the type of change that is subject to PSD review of any kind.

It is clear from a review of EPA guidance documents concerning production limits to be placed in air permits, that the primary purpose is to establish the "potential emissions" of an :emissions or production unit." Increasing the LD Prill production rate up to 50 tons/hr does not change the units "potential emissions." Limiting a unit's potential emissions to below its natural potential emission is only to be done by a permitting office to ensure that the unit does not cause or contribute to a violation of a PSD increment or an ambient air quality standard. Limiting a unit's potential emission to below the natural potential emissions to avoid a specific regulatory requirement is only to be done at the specific request of the owner (applicant). Nitram did not request (and should not have accepted) the 25 tons/hr production limit. The DEP was not required by any applicable rule to put any LD limit (other than 50 tons/hr) in the permit.

As you are aware, there have been many meetings and telephone conversations on this issue between representatives of Nitram and representatives of the FDEP and the HCEPC. We are at an impasse and need a written confirmation of your previous rule applicability determination in order to avoid the necessity of Nitram filing an administrative action. The following is a summary of pertinent events relating to the issues raised in this request.

In an August 6, 2001 letter to Bill Thomas of the Southwest District Air Section, Nitram submitted the proposed change to the air permit. That letter gave a summarization of the permitting history of the Prill production unit together with a detailed rule analysis to support the requested permit revision. In that analysis, it was determined that the proposed permit change would not trigger PSD review. Nitram requested that the Department make a formal rule applicability determination as soon as possible.

As a follow up to the August letter, I, as Nitram's legal counsel, Steve Smallwood, as its air permitting consultant, and Dan Ross, Executive VP and Chief Operating Officer of Nitram, met with you, Al Linero, John Reynolds, and Doug Beason of the Office of General Counsel, on September 26, 2001 to discuss Nitram's rule applicability request. At this meeting, you concluded that the available Nitram PM emissions test data for the Prill Tower did provide reasonable assurance that the annual PM emissions that result from processing LD Prill (in lbs/ton processed) would be less than or equal to the annual PM emissions that result from processing HD Prill (in lbs/ton processed). Nitram understood that you concluded that increasing the process production rate of LD Prill in the Prill Tower up to the current HD Prill production limit of 50 tons/hr would not subject such increase to PSD review. You suggested that the most expedient alternative to implement the requested change to the Title V permit would be for the Southwest District Office to issue a simple air construction permit with provisions that supercede those in the current Title V permit, and then later update the Title V permit.

On September 27, 2001, Steve Smallwood sent Jerry Kissel, Permitting Supervisor at the Southwest District Air Section, a letter which summarized the September 26th meeting and the determinations that you made at that meeting.

In early October, 2001, Nitram submitted an air construction permit application to the Southwest District.

On October 15, 2001, Jim McDonald, the permit engineer assigned to review the construction permit application, visited the Nitram plant and spoke to Dan Ross and Charles Ingram. Jim McDonald identified several questions for which he needed additional information. He also noted that there is a 23 tons/hr LD Prill throughput limit for the rotary dryer and cooling drums that immediately follow the Prill Tower, and noted that this limit would also have to be changed.

On October 23, 2001, Jim McDonald sent a 10-question incompleteness letter to Nitram. He asked the Company to provide a reply to these questions by the end of December 2001.

On November 15, 2001, Steve Smallwood met in Tallahassee with you, Al Linero, and John Reynolds to discuss the rotary drums PSD questions. Jerry Kissel and Jim McDonald participated by phone from Tampa. At the end of this meeting, you concluded that the Prill Tower and rotary dryer and cooling drums operate as one production unit and should be considered as one unit for PSD applicability purposes. You stated that if the sum of the LD Prill PM emissions from the Tower scrubber and from the rotary drums scrubber was less than the sum of the HD Prill PM emissions from the Tower scrubber and from the rotary drums scrubber, PSD would not apply, for the same reasons previously given for the Prill Tower analysis.

The parties acknowledged that one PM emission test had been conducted for the rotary drums pursuant to the Title V air permit. No emissions tests had been required for the rotary drums prior to the issuance of the Title V permit. You suggested that it would be helpful to conduct a special PM comparative test for both HD and LD Prill being processed as it typically is processed, but with the LD Prill being processed at as high a rate as possible up to 50 tons/hr. You suggested the Company and the District work out the details for conducting this special test. As there were no test data that showed that the LD Prill PM emissions comply with the RACT PM emissions limit (9.24 lbs/hour), Nitram agreed to conduct this test.

The comparative test was conducted in December 2001, and the results provided to the District at a January 10, 2002 meeting. The results of the comparative PM test for the rotary drums were:

a) HD Prill PM emissions: 1.4 lbs/hr @ 49.75 tons/hr
b) LD Prill PM emissions: 0.8 lbs/hr @ 33.64 tons/hr

These results confirmed Nitram's assertion that the LD Prill PM emissions would be less than the HD Prill PM emissions. The obvious significance of this is that Nitram's request for an increase in production in LD Prill would result in a potential decrease in emissions when LD Prill is being produced compared to HD Prill.

As Steve Smallwood previously explained to you at the November, 2001 meeting, the average Prill Tower HD PM emissions are greater than the average Prill Tower LD PM emissions [11 lbs/hr (20 -2x4.5 lbs/hr)] @ 50 tons/hr each, so that even if the rotary drums average LD PM emissions @ 50 tons/yr were 9 lbs/hr and the HD PM emissions @ 50 tons/yr, were 1 lb/hr (for a series of comparative tests), the net difference [as a result of increasing the LD Prill throughput rate from 25 tons/hr to 50 tons/hr] would be a decrease of 3lbs/hr [(20 + 1) - ((2x4.5) + 9)] for the combined Tower - rotary drums production unit. If the HD and LD Prill PM emissions rates for the rotary drums were the same, the net decrease in the combined PM emissions would be more than 3 lbs/hr.

Therefore, as long as the Tower and the rotary drums meet the current BACT (26 lbs/hr) and RACT (9.24 lbs/hr) PM emissions limits, the result of increasing the LD Prill throughput rate will be a net decrease in the annual average PM emissions rate for the combined Tower - rotary drums production unit. That type of a change, as you stated at both the September and November meetings, is not subject to PSD review. We ask that you confirm that this was and is still your determination and direct your staff to act accordingly.

While Nitram does not believe that a construction permit is necessary to accomplish the change in the LD production allowable (a letter modification would be an acceptable alternative), it is willing to continue through the construction permit process. However, that is conditioned upon

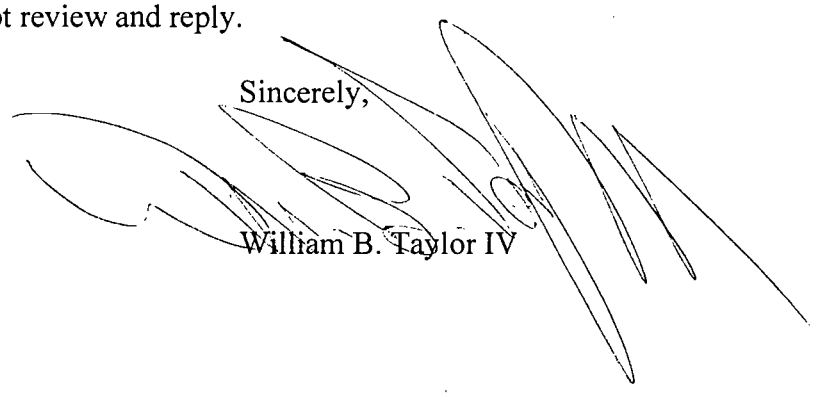
the DEP acknowledging that PSD is not triggered and that the permit impose no reduced limitations on either LD or HD Prill production as a consequence of the increase in the production limits for LD Prill or any other operational limitations (other than agreed to herein) which are more restrictive than the current permit requirements.

The combined Prill Tower – rotary drums production unit should then be re-permitted to allow a maximum throughput rate of 1200 tons/day of HD or LD Prill. Since the maximum test rate for LD Prill was about 34 tons/hr (~ 807 tons/day), the max LD Prill throughput rate (by the general conditions of the Title V permit) would be restricted to that plus 10%, for a temporary max rate of 37 tons/hr (888 tons/day), until future test data shows that the unit would still comply with the RACT rule and the PSD non-applicability criteria, when operated at a higher throughput rate [not to exceed 50 tons/hr (1200 tons/day)].

In conclusion, please provide a written response to this request for rule applicability within seven (7) days. Should you disagree with any of the recited facts herein or require additional information, please direct your inquiry to Steve Smallwood. Should a reasonable determination, satisfactory to both parties, not be reached within this time frame, Nitram will have no other alternative but to file a declaratory judgment for rule applicability determination under the provisions of the administrative procedures act.

Thank you for your prompt review and reply.

Sincerely,



William B. Taylor IV

WBTIV:kkb
c: Daniel E. Ross
Stephen Smallwood, P.E.
H:\WBTMAIN\NITRAM\ClairFancy5.ltr.wpd

Best Available Copy

NITRAM, INC.
5321 Hartford St.* P.O. Box 2968 * Tampa, Florida 33601* Phone (813) 626-2181* Fax (813) 623-6080

November 7, 2001

REC
NOV 13 2001
BUREAU OF AIR REGULATION

Mr. Gerald Kissel
Air Permitting Supervisor
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619-8218

Subject: Nitram AC Permit Application – October 2, 2001
Special LD Prill PM Emissions Test Production Rate Request
Reference Permit No. 0570029-002-AV.
DEP File No. 0570029-007-AC

Dear Mr. Kissel:

To provide the District Office with additional LD prill PM emissions test data for the Prill Rotary Drum EU, Nitram plans to conduct a special PM emissions compliance test for this unit, while processing LD prill. To provide a comparison to the previous HD prill test for this unit, we need to operate the Rotary Drums Unit at as high a processing rate that is possible that is less than the 50 ton per hour processing rate that have we proposed for the unit for both HD and LD prill. Other than operating at a higher rate than currently allowed by the Title V permit, the LD prill will be processed as it typically is, and the scrubber feed water rate (gpm) and the exit gas stream pressure drop (delta P, inches of water column) across the scrubber will be similar to the three run average values of those parameters during the previous HD prill PM emissions compliance test for this unit.

Please provide us with a letter that authorizes Nitram to operate the Prill Tower and the Rotary Drums EUs at up to 50 tons per hour, for a 30-day period, to determine the maximum practical rate that the Prill Tower and Rotary Drums Units can be operated while producing and processing LD prill.

If you have any questions about this special PM emissions compliance test request, please call me or Charles Ingram in Tampa, or our consultant, Stephen Smallwood, PE, in Tallahassee (850 385-0002).

Sincerely,

Daniel E. Ross, PE
Executive Vice President
& Chief Operating Officer
Nitram, Inc.

c: Charles Ingram, Manager, Safety, Environment, Quality, Nitram, Inc. (813) 626-2181 ext 230
Clair H. Fancy, PE Chief, Bureau of Air Regulation, FDEP Tallahassee (850) 488-1344
Diana Lee, PE, Air Permit Engineer, Hillsborough County EPC Air Division (813) 222-5530
Stephen Smallwood, PE, Air Quality Services, Tallahassee, FL (850) 385-0002

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

RECEIVED
SEP 10 2001
BUREAU OF AIR REGULATION

FACSIMILE TRANSMISSION SHEET

DATE 9/10/01

TO: Al Linero

Department DARM

Phone _____ Fax SD#03

FROM: Jerry Kissel
DEP Southwest District Office - Air Program
Phone: (813) 744-6100 (SunCom 512-1042) Ext. 107

OPERATOR: Pat Pritchett

SUBJECT: _____

Total Number of Pages, Including Cover Page: 12

DEP SWD AIR PROGRAM FAX NUMBERS: (813) 744-6458
(Suncom) 512-1073

September 7, 2001

To: Al Linero

From: Jerry Kissel

Re: Nitram 8/6/01 Rule Applicability Request

Per our telecon last week, you will be making the call in this case, and the purpose of this memo is to summarize the issues and suggest a course of action.

Nitram produces a low-density (LD) and a high-density (HD) product. Their Title V permit limits LD to 25 tons/hr and HD to 50 tons/hr. They would like to increase production of LD to a higher rate, probably 35-40 tph.

The 25 tph limit first appeared in a 1992 operating permit in the description, not as a permit limit, although the test condition states that testing shall be done at "approximately (± 10%) of the permitted production rate of 50 tph of HD prill or 25 tph of LD prill." The 1996 Title V permit application listed the 25 and 50 tph values and those values were subsequently included in the Title V permit as limits, which was the first federally enforceable reference to the 25 tph LD limit.

The two principal options appear to be:
1) An increase in the 25 tph limit is a modification and forces a PSD analysis (prior actual to future potential) and the difference must be a) kept below the PSD significance level with a minor source construction permit, or b) if greater than the PSD significance level, processed as a PSD construction permit.

2) Since the 25 tph LD limit was never in a construction permit, and can be considered to have been added unnecessarily, it can be removed by Title V revision (not as an administrative change or 7-day letter operating change, as in the request). This presumes that it is not a modification, i.e., LD emissions are not greater than HD emissions (lbs/ton).

The request states that "the available PM emissions test data indicates that the LD prill has a lower actual PM emissions rate (in lbs/ton of prill produced) than the HD prill." Attachment 1 shows that there seems to be no indication of a difference in emissions between HD and LD product. Note that LD product has been tested only twice since 1985 (in 1997 and 2001), and the general trend of decreasing emissions and the anomalous point in 2000 render any conclusions along these lines too uncertain. Thus, with the data at hand, we could not support option 2).

Since we don't know what the emission rates would be for LD production over 25 tph, it seems appropriate to specify a special test. If Nitram wants to pursue option 2), it seems appropriate to test on consecutive days in the HD and LD modes, at as high a rate as possible (35-40 tph) in the LD mode and compare the emission rates. If the LD emission rate does not show an increase, on a lbs/ton basis, then we could support option 2).

Annual stack tests at this facility require a summation of Method 5 emissions at each of 6 similar stacks. We looked at stack test data from the past 5 years (see Attachment B) in an attempt to moderate the requirement to test each of the six stacks twice. We found considerable variability - among the three test runs at a given stack in a given year, and from stack to stack in the same year, and at the same stack in different years. Thus we would like to see the annual stack test, which is normally conducted in January, accelerated to October 2001 in the HD mode, followed by tests the following day of two of the stacks in the LD mode. (The Title V permit requires one year's test during the term of the permit to be in LD mode, and that test was done last year, so this year's test must be in HD mode).

If Nitram prefers to base the following-day test on only one stack, that could be their option, but statistically, it may be more favorable to them for there to be six data points (two stacks, at three runs each) than three. Attachment B indicates to us that the best stack to test for the following-day test would be Stack A, and the next best, Stack E.

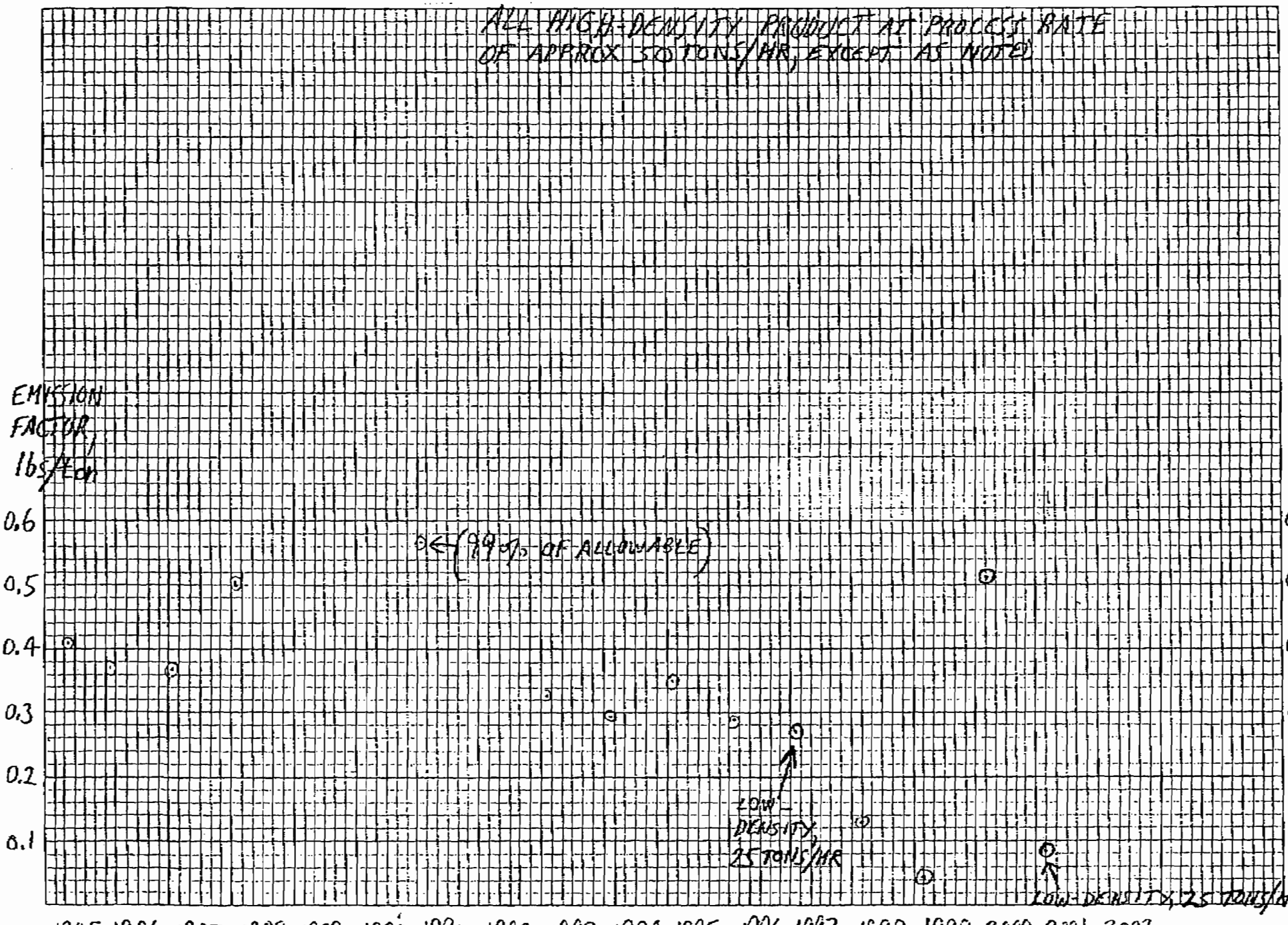
Please give us your comments. By copy of this letter to EPC, their comments are also solicited. (Attachment C is a letter we received from EPC). If you agree with this approach please let us know and we will write a test authorization letter. That letter would have to specify the statistical criterion for determining whether there was an increase. We would also go further than the Title V permit in trying to assure constant conditions for the tests.

c: EPC

10 X 12 PER INCH

ATTACH. A

NITRAM PM - STACK TEST RESULTS



JK 8/6

SEP-10-2001 11:38 DEPT. OF ENVIR. PROTECT. 813 7446458 P.04/12

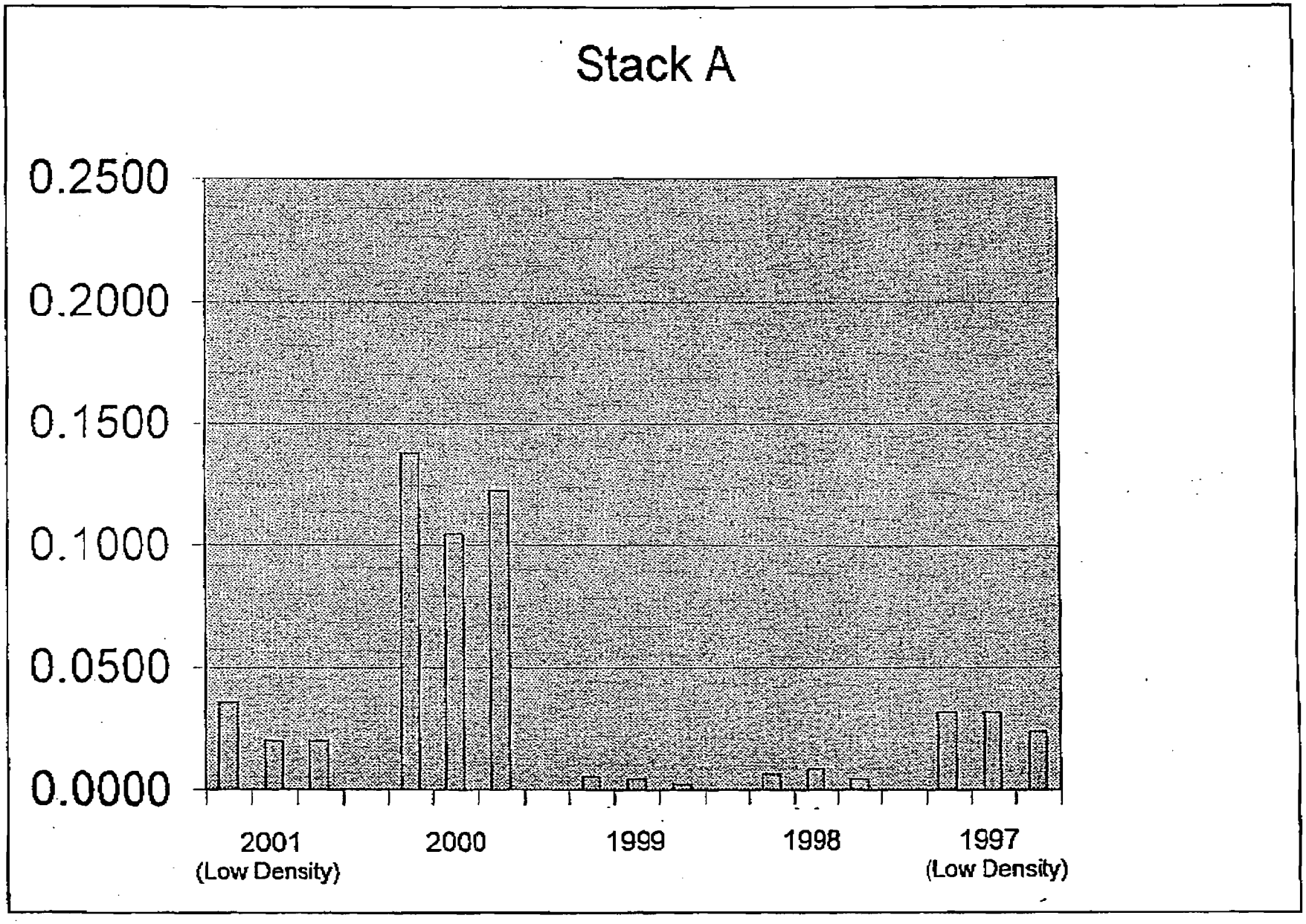
ATTACH. B
1 of 7

Nitram Stack Test Data (lbs./ton)

Stack A	Stack B	Stack C	Stack D	Stack E	Stack F		YEAR	
0.0360	0.0160	0.0200	0.0240	0.0120	0.0080		2001	Low Density
0.0200	0.0120	0.0080	0.0160	0.0040	0.0040		2001	Low Density
0.0200	0.0120	0.0040	0.0040	0.0080	0.0160		2001	Low Density
0.1380	0.1490	0.1490	0.0174	0.1122	0.0172		2000	High Density
0.1048	0.1438	0.1438	0.0276	0.0464	0.0152		2000	High Density
0.1224	0.1970	0.1970	0.0502	0.0332	0.0068		2000	High Density
0.0053	0.0073	0.0073	0.0275	0.0073	0.0028		1999	High Density
0.0043	0.0004	0.0040	0.0065	0.0017	0.0070		1999	High Density
0.0023	0.0041	0.0041	0.0054	0.0048	0.0089		1999	High Density
0.0063	0.0008	0.0008	0.0105	0.0529	0.0488		1998	High Density
0.0084	0.0004	0.0004	0.0042	0.0244	0.0325		1998	High Density
0.0042	0.0008	0.0008	0.0042	0.1349	0.0224		1998	High Density
0.0320	0.0841	0.0841	0.0200	0.0160	0.0200		1997	Low Density
0.0320	0.0160	0.0160	0.0080	0.0360	0.0160		1997	Low Density
0.0240	0.0240	0.0240	0.0160	0.0240	0.0080		1997	Low Density
0.0373	0.0445	0.0442	0.0161	0.0345	0.0156		Average of all years	

[File name: NitramTable3.xls]
Jim McDonald - 9/7/2001

SEP-10-2001 11:39 DEPT. OF ENVIR. PROTECT. 813 7446458 P.05/12



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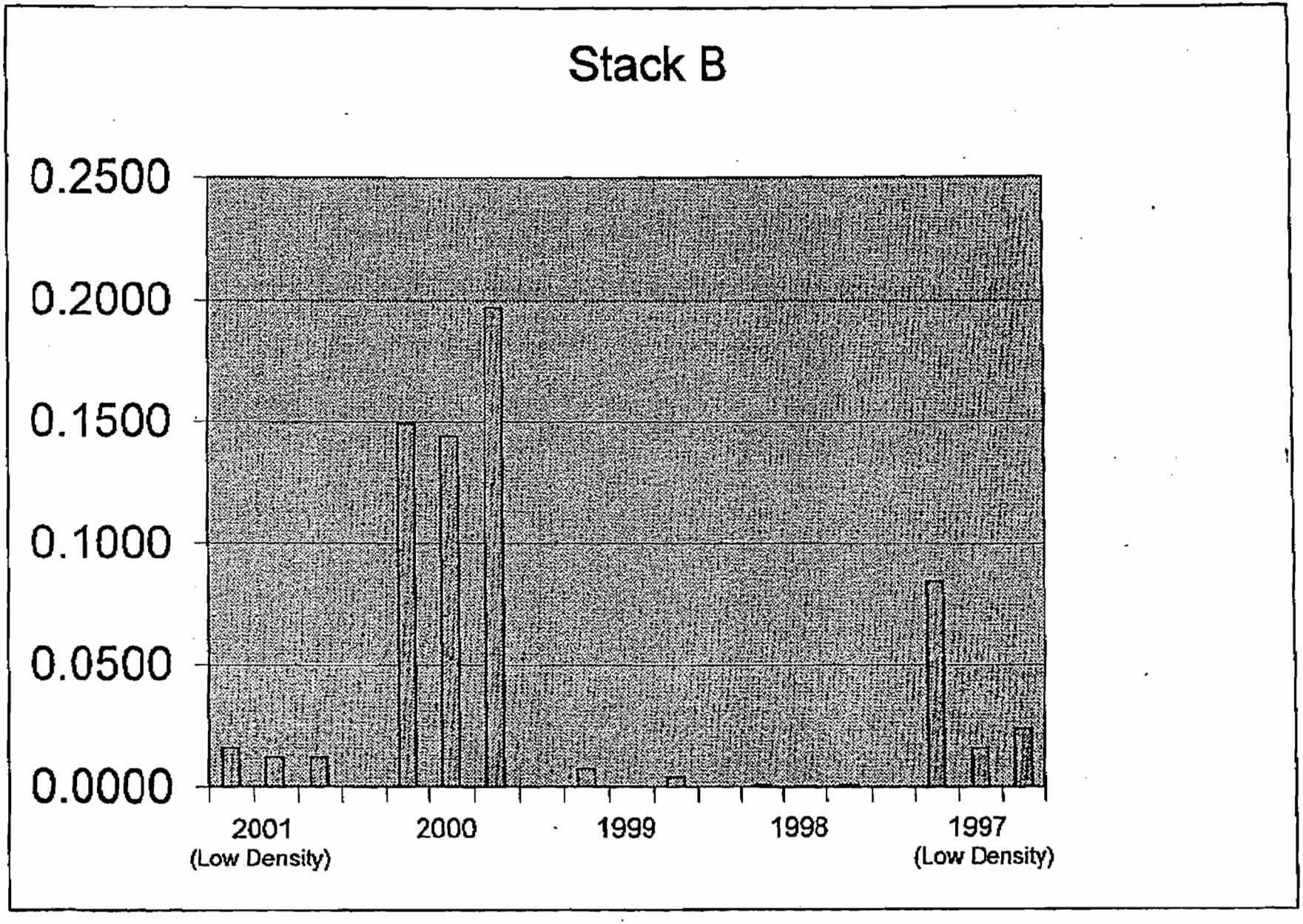

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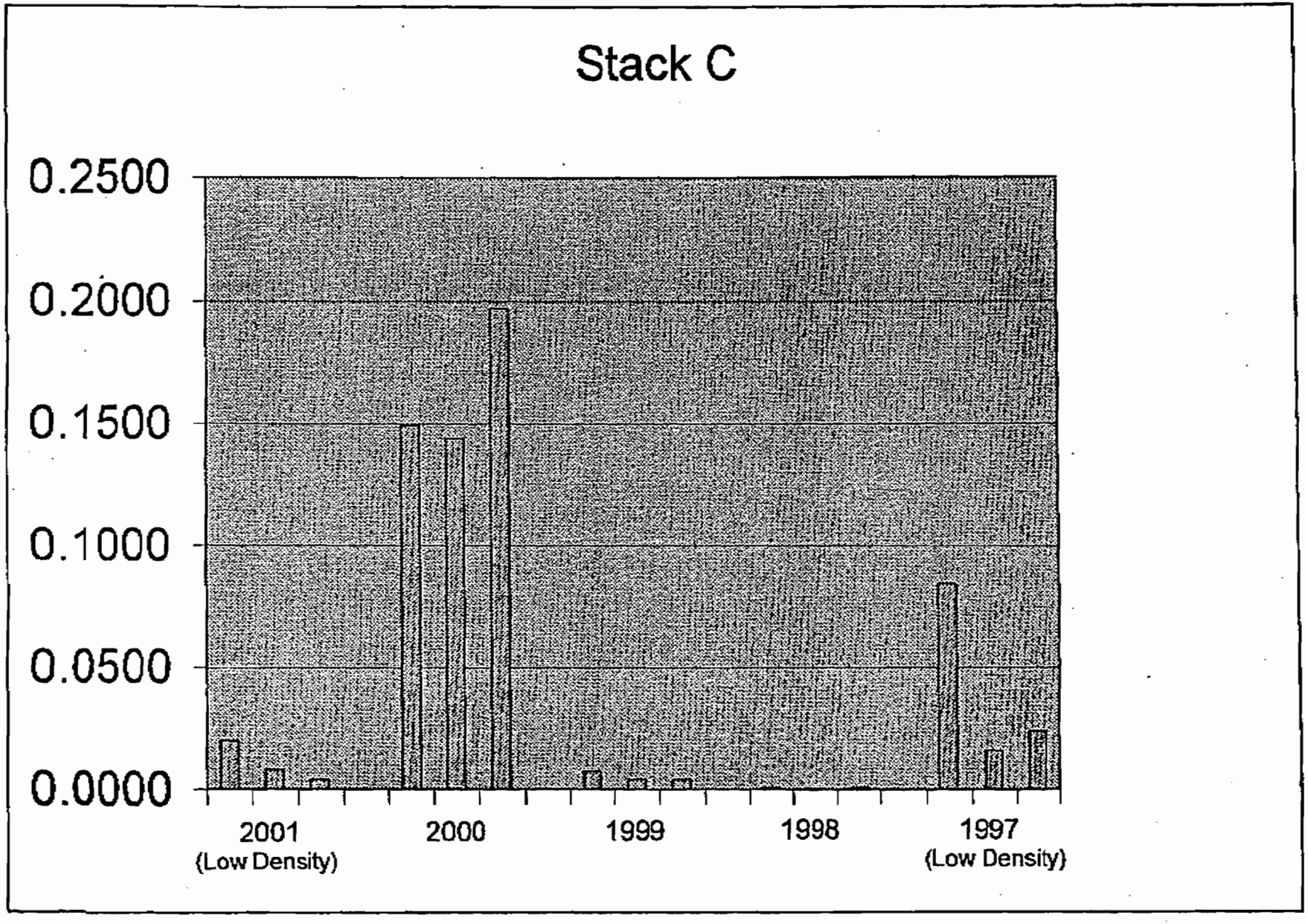

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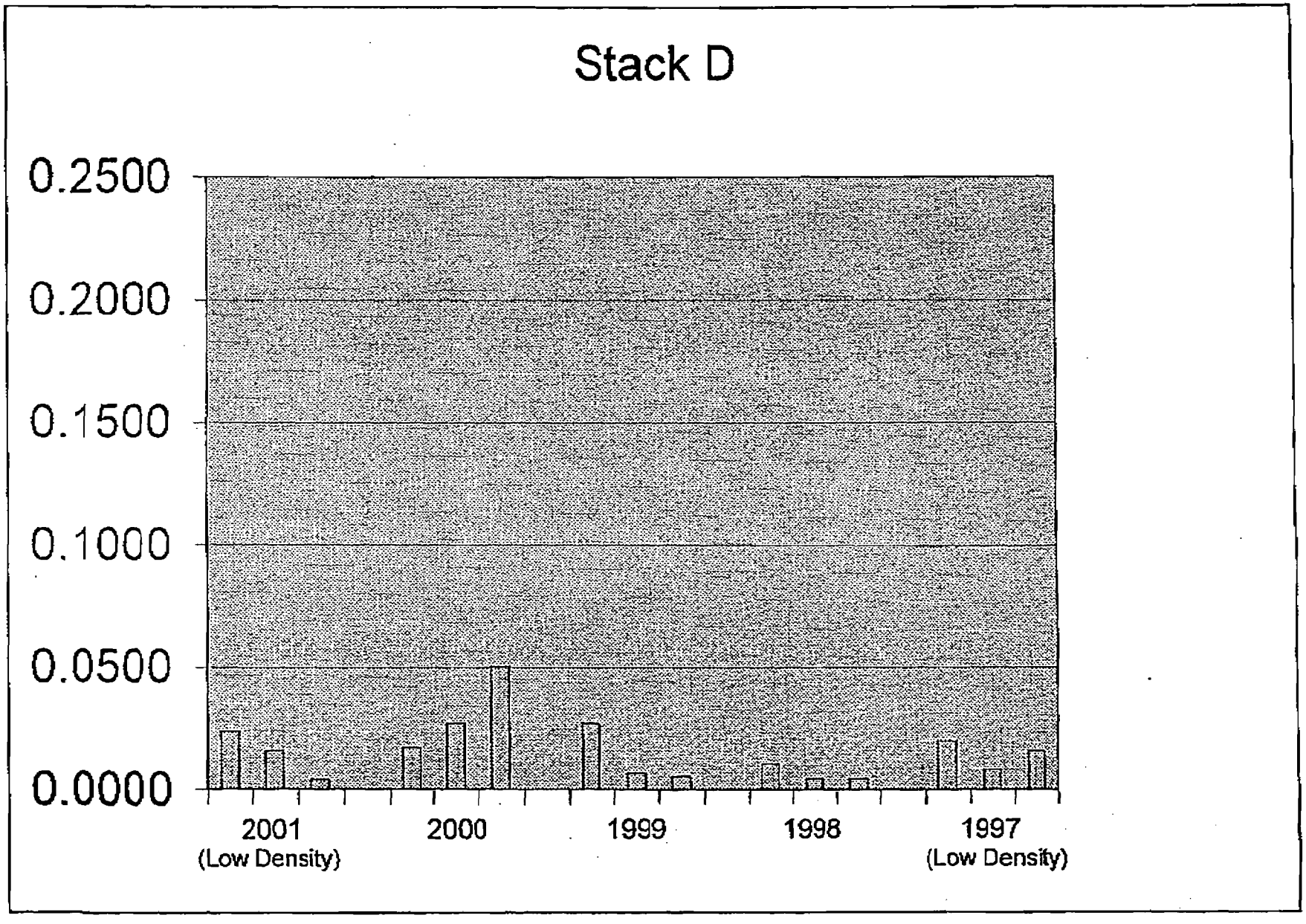

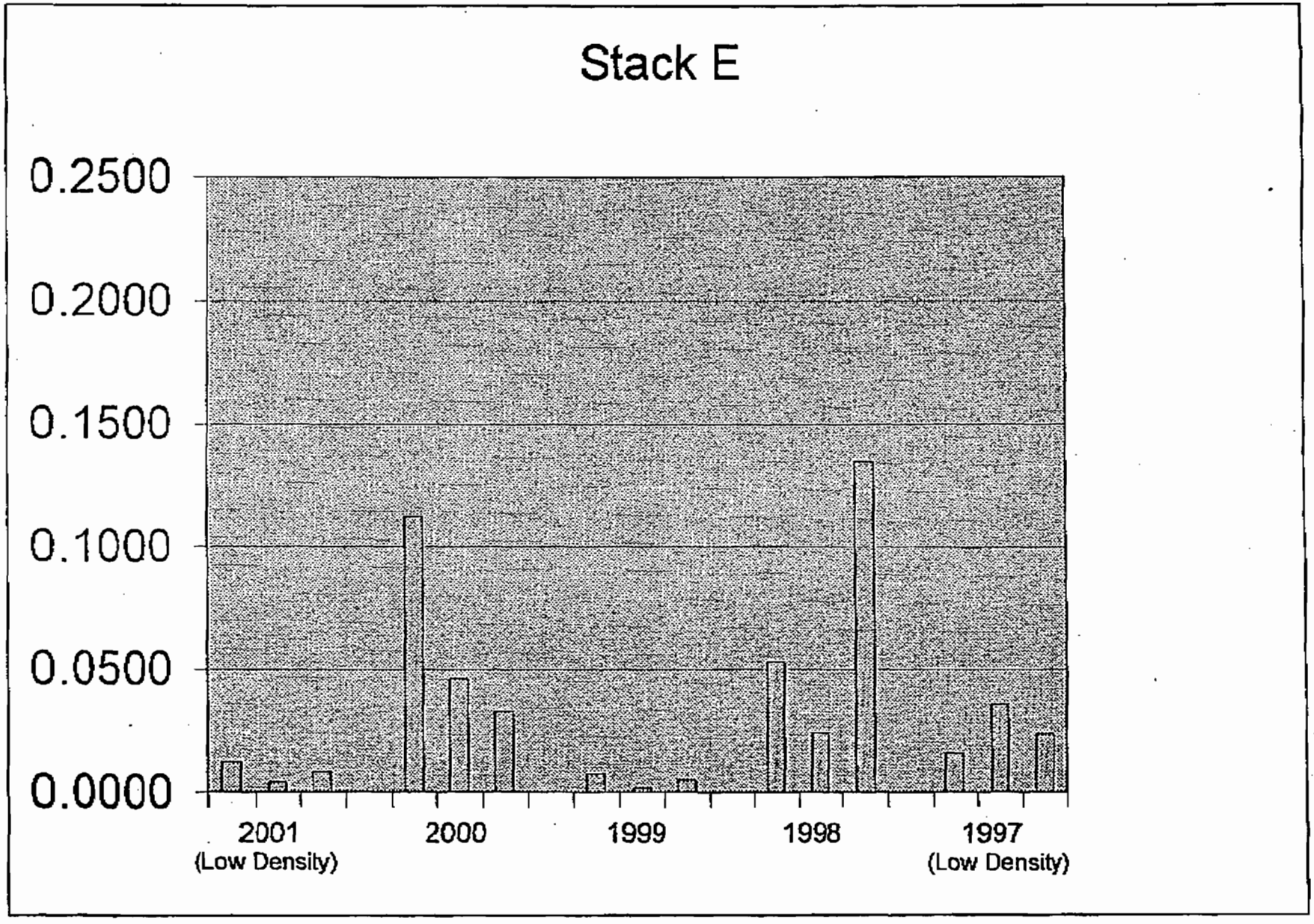

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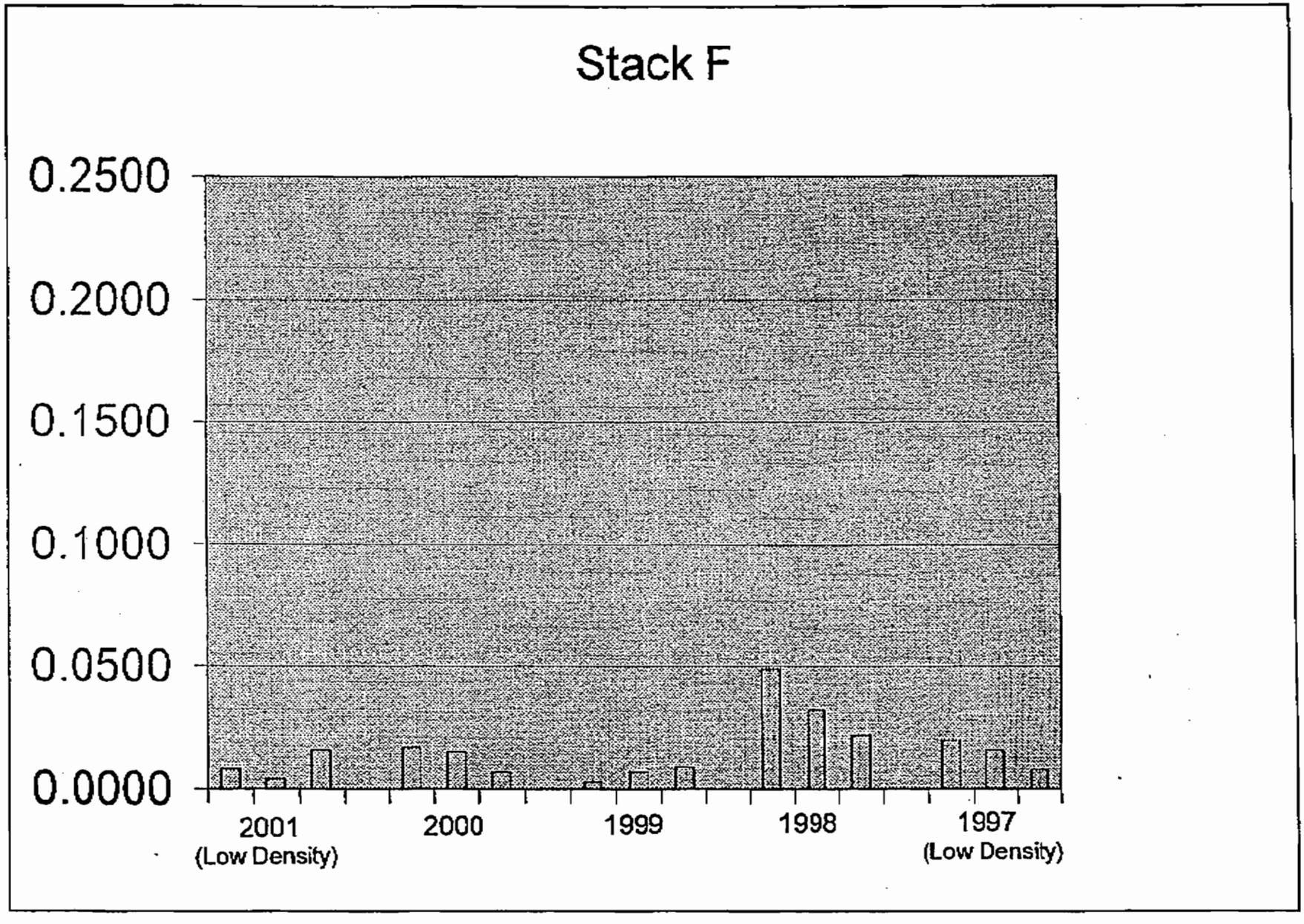
Stack F
0.2500
0.2000
0.1500
0.1000
0.0500
0.0000
2001
(Low Density)
2000
1999
1998
1997
(Low Density)

MEMORANDUM

DATE: August 24, 2001

TO: Jim McDonald

FROM: Diana M. Lee, P.E.

SUBJECT: **Nitram's Request for Production Rate Increase on Low Density Prill**

On August 13, 2001 we received Nitram's letter requesting the FDEP to do an administrative permit amendment to change the low density (LD) prill production rate from 25 TPH to 50 TPH. I reviewed the annual operating reports from 1996 to 2000 and stack test reports from 1990 to 2000 in other to determine the particulate emissions from the prill tower. I also estimated the potential emissions that would result from the production rate increase on the LD prill. Based on preliminary review, EPC staff believes that this project is subject to PSD review.

Reynolds, John

From: Ssm97@aol.com
Sent: Monday, November 19, 2001 8:49 PM
To: Fancy, Clair; Reynolds, John
Cc: Kissel, Gerald; dross@nitramtampa.com; wbt@macfar.com; cinitram@tampabay.rr.com
Subject: Second PSD Applicability Meeting, Nov 15, 2001 - Tallahassee

Rule_Applicability_Tall y_PSD_M...

November 19, 2001
Second PSD Applicability Meeting, Nov 15, 2001 - Tallahassee

Clair:

Attached is my draft report on our Nitram PSD applicability discussion this past Thursday.

I appreciate the time and effort that you and the others, who participated in the discussion, devoted to addressing the issues raised by the district & county air staff. I hope we now have a complete agreement that will expedite the processing and issuance of the air construction permit that Nitram has requested to correct several errors in the current Title V permit.

Please let me know if there are any corrections I need to make to my draft report to accurately reflect what you said and concluded at the meeting.

Also attached is a copy of my report on our first PSD Applicability meeting with you on September 26.

Stephen Smallwood, PE
Air Quality Services
Tallahassee

850 385-0002
850 385-8715 fax

Stephen Smallwood, PE
Air Quality Services

1640 Eagles Landing, Unit 103
Tallahassee, FL 32308

850 385-0002 Phone
850 385-8715 Fax
850 509-3149 Cell Phone
E-mail: Ssm97@AOL.com

November 19, 2001

Mr. Clair H. Fancy, PE
Chief, Bureau of Air Regulation
Division of Air Resources Management
Florida Department of Environmental Protection
2600 Blair Stone Road MS 5505
Tallahassee, FL 32399-2400

850 488-1344
850 922-6979 fax

Subject: Air Permitting Requirements for Increasing the Amount of Low Density Product Made in the Ammonium Nitrate Prill Tower
Nitram, Inc, Tampa FL
FDEP Air Facility No. 057 0029

Second Meeting with Clair Fancy, PE, Chief, BAR on PSD Applicability – Tallahassee Office

Dear Mr. Fancy:

The following is a summary of result of my meeting with you in Tallahassee, on Thursday, November 15, 2001, 2:00 pm – 4:00 pm, to discuss whether increasing the relative amount of LD prill processed through the company's Tampa rotary drums dryer/ coolers would be the type of change that would require a PSD review. Al Linero and John Reynolds were present, and Jerry Kissel & Jim McDonald participated by phone from the Tampa District Office. We discussed the Rotary Drums PSD applicability and the LD emissions test data questions that the District air staff has asked in their incompleteness letter to Nitram.

You concluded that since the prill tower and the rotary drums dryer/coolers operate as one integral production unit (i.e. the amount of prill that is produced in the tower has to immediately go through the drums), the prill tower / drums production unit should be considered as a whole for determining if the proposed increase in production of LD prill through the tower and the drums is the type of change that is potentially subject to PSD review.

The company has not proposed increasing the total amount of ammonium nitrate prill produced by the prill tower or processed through the rotary drums [50 tons/hour, 1200 tons/day, continuous operation]. Only one product (LD or HD prill) can be produced and processed (cooled and/or dried) at a time. The total amount of ammonium nitrate prill produced is the sum of the two. The company's proposal would allow the plant to produce any mix of the two products that their customer's need, provided that not more than 50 tons/hour of either product is produced at any given time.

Therefore, if the sum of the actual emissions rate (in terms of lbs PM/ ton of prill produced or processed) from the prill tower scrubber and the rotary drums scrubber [while producing LD prill in the tower at or near its maximum practical capacity], is <u>less than</u> the sum of the actual emissions rate

from the tower and drums while producing HD prill at or near it's maximum permitted capacity, the proposed change to the current LD production rate provisions for the tower and drums (increasing the relative amount of LD prill produced) would result in an overall decrease in the annual average PM emissions rate from the tower and drums. That type of change is not subject to PSD review.

PM emissions test data is available for producing and processing HD prill. Since PSD applicability is based on the annual average emissions rates, and specific PM emissions test results represent a short-term average (~3 hour), the appropriate way to compare the emissions test results is to compare the mean or average value of the test results for each product for each emissions point (tower & drums scrubber outlets).

The ten-test average value for PM emissions from the tower, while producing HD prill, is 0.40 lbs/ton. Two of the 12 HD test results are statistical outliers. The two-test average value for PM emissions from the tower, while producing LD prill, is 0.18 lbs/ton. The one-test value for PM emissions from the drums, while processing HD prill, is 0.14 lbs/ton. No LD prill PM emissions tests have ever been required by the plant's air permits, therefore no LD prill PM emissions test data is available for the drums. Prior to the current Title V permit, no PM emissions tests were required for the drums for HD or LD prill - only VE tests.

The company has proposed conducting a special LD prill emissions test on the drums scrubber exhaust to show that the drums PM emissions, while processing LD prill at rates higher than currently permitted, would still comply with the 0.03 gr/dscf RACT emissions limit that applies to the drums. The result of that test also would be used to estimate the annual average of the LD prill emissions vs. the HD prill emissions for the tower/drums production unit to verify that it is reasonable to conclude that the LD PM emissions are equal to or less than the HD prill emissions.

The following example, [based on the currently available test data, and the fact that the drums scrubber would have to be operated with a gpm & a delta P across the scrubber that would result in complying with the RACT emissions limit], shows that if the drums comply with the PM RACT emissions limit at the higher LD prill production rate, the LD prill total emissions are lower than the HD prill emissions.

The available data for HD prill PM emissions is 0.40 lbs/ton for the tower, and 0.14 lbs/ton for the drums, for a total HD prill emission rate from the tower/drums production unit of 0.54 lbs/ton. The available data for LD prill PM emissions is 0.18 lbs/ton for the tower, and no data for the drums.

For the LD prill PM emissions rate to be greater than the HD prill PM emissions rate, the drums LD prill emissions rate would have to be greater than 0.36 lbs/ton [0.54 lbs/ton (HD prill total) - 0.18 lbs/ton (LD prill tower only)]. That means that if the lbs PM emissions/ton of LD prill processed thru the drums (currently no test data) is less than 0.36 lbs/ton, PSD would not apply.

Since the PM emissions from the drums are subject to the 0.03 grains/dscf RACT emissions limit & a 9.24 lbs/hr cap, the drums scrubber must be operated at a gpm & delta P across the scrubber that will result in compliance with those limits. If the drums meet the 9.24 lbs/hr limit at 50 ton/hr LD prill, the emissions factor is 0.185 lbs PM/ton. If the max LD prill throughput is 35 tons/hr, the emissions factor is 0.26 lbs PM/ton prill processed.

Stephen Smallwood, PE
Air Quality Services

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In either case, if the RACT rule is met (and it must be), the total PM emissions from the tower & drums while processing LD prill will be less than the total PM emissions while processing HD prill, which means that PSD does not apply to the proposed changes to the permit.

Nitram has drafted a specific answer for each of the District's incompleteness letter questions. That information, which includes a statistical analysis of the available PM emissions test data for the prill tower, will be provided to the District within the next two weeks.

I have asked Jerry Kissel to select a time for Nitram to meet with the FDEP's District and Hillsborough County's air staff to discuss the details of conducting the special PM emissions test(s) we discussed at the Tallahassee meeting.

Sincerely,

Stephen Smallwood

Stephen Smallwood, PE
Air Quality Services
Tallahassee, FL

(850) 385-0002
(850) 385-8715 fax

Attachment: Nitram Rule Applicability Meeting, September 26, 2001 – Tallahassee, FL

c: Gerald Kissel, PE, Air Permitting Supervisor, FDEP SWD/ARM Section – Tampa, FL

Stephen Smallwood, PE
Air Quality Services

1640 Eagles Landing, Unit 103
Tallahassee, FL 32308

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850 385-8715 Fax
850 509-3149 Cell Phone
E-mail: Ssm97@AOL.com

September 26, 2001

Mr. Jerry Kissel, PE
Supervisor, Air Permitting
Air Resources Management Section
Southwest District Office
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619-8218

813 744-6100 x 107
813 744-6458 fax

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Subject: Air Permitting Requirements for Increasing the Amount of Low Density Product Made in the Ammonium Nitrate Prill Tower
Nitram, Inc, Tampa FL
FDEP Air Facility No. 057 0029

Meeting with Clair Fancy, PE, Chief, BAR on PSD Applicability – Tallahassee Office

Dear Dr. Kissel:

The following is a summary of the meeting between Nitram and the DARM – BAR, held in Tallahassee, on Wednesday, September 26, 2001, 1:30 pm – 3:30 pm, to discuss whether increasing the relative amount of LD prill produced in the company's Tampa prill tower would be the type of change that would require a PSD review.

After reviewing the permitting history of the prill tower, the available emissions test data for HD & LD prill, and the applicable air rules, Clair Fancy, PE, the BAR Bureau Chief, concluded that PSD does not apply to the proposed change, and the District Office can authorize the proposed change through the issuance of a simple air construction permit.

1) History. The 1981 air construction permit, issued by the BAQM in Tallahassee, established the PM emissions limit for the prill tower as a BACT limit of 26 lb/hr, continuous operation, using a BECO wet scrubber that consists of six parallel scrubber sections. In 1992, the SWD office issued a state operation permit that included the HD & LD prill production rates as part of the descriptive information on the prill tower's operation, but did not include the cited production rates as specific permit conditions. The state operation permit required annual PM emissions tests for the prill tower processing HD prill using EPA Method 5. Once every five years, the annual test was to be conducted while processing LD prill.

In 1996, the descriptive HD & LD production rate information from the 1992 state operation permit was included in the Segment Information for the Prill Tower Emissions Unit part of the Title V air operation permit application. When the Title V permit was issued, the descriptive segment production rate information was included in the Title V permit. Prior to that time there was no air construction permit specific condition (federally enforceable permit condition) that established the production rate limits that were put in the Title V permit.

2) Emissions Test Data. Since 1985, twelve PM emissions tests have been conducted for the prill tower, processing HD prill. For those 12 tests, the tower was operated at a HD prill production rate of between 46 & 53 tons per hour. All tests showed compliance with the 26 lb PM /hr BACT emissions limit. The average emissions rate was 17.3 lb PM/hr. The average emissions factor was 0.346 lb PM/ ton of prill produced.

Since 1992, as required by the state operation permit, two PM emissions tests have been conducted for the prill tower, processing LD prill. For both of those 2 tests, the tower was operated at a LD prill production rate of 25 tons per hour. Both tests showed compliance with the 26 lb PM /hr BACT emissions limit. The average emissions rate was 4.4 lb PM/hr. The average emissions factor was 0.176 lb PM/ ton of prill produced. The LD prill emissions factor is approximately one half of the HD prill emissions factor.

3) Rule Applicability. If a proposed change to an emissions unit is not a physical change or a change in the method of operation, by definition, it is not a modification, and therefore is not subject to PSD review. Nitram is not proposing to make a physical change to the prill tower, or to change its method of operation.

When an emissions unit uses multiple fuels or makes multiple products, it is appropriate to establish a maximum heat input and/or production rate for the fuel or product that has the highest emissions factor to assure continuing compliance with the maximum allowable emissions rate for the unit, and to apply that maximum heat input and/or production rate to all of the other fuels burned or products made. It is not necessary to establish a separate heat input or production rate for the other fuels or products, unless the applicant specifically requests the Department to do so.

For example, if a boiler that is permitted to burn fuel oil and natural gas, just meets the emissions limit(s) at the boiler's maximum heat input rate when burning fuel oil, it is not necessary to restrict the heat input that can be provided by NG to less than the max HI for the boiler, if the NG has lower emissions for all of the emissions limited air pollutants (which it normally does). However, if the owner wants to avoid a particular rule requirement by further reducing the boilers SO_2 emissions, the owner would request a lower max HI limit for the oil, than for the gas.

Stephen Smallwood, PE
Air Quality Services

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4) Conclusion. After discussing several options, Clair Fancy concluded that:

a) the proposed change is not subject to PSD review,
b) the production limit for the LD prill in the Title V permit is not necessary,
c) the available emissions test data indicates that the LD prill has the lowest PM emissions factor,
d) it is appropriate to delete the LD prill production limit from the Title V permit & replace it & the 50 ton/hr limit on the HD prill by a new 50 ton/hr limit on the amount of ammonium nitrate prill produced, without specifying whether it is HD or LD,
e) the simplest & quickest way to do this is for the company to submit a construction permit application to the District Office that identifies the specific change to be made to the specific conditions that apply to the prill tower with a brief explanation of the basis for making those changes (basically what I have outlined above), for the district to promptly process & issue the construction permit,
f) the company would be authorized to operate under the new conditions as soon as the construction permit is issued,
g) the district could require the company to conduct a special emissions test on LD prill after the construction permit is issued, while the prill tower is operated at it maximum practical production rate, and to continue to require a special LD max production rate test once every five years to verify the LD prill emissions factor is lower than the HD emission factor,
h) the company would submit an update application for the Title V permit to the district within six months of the issuance of the construction permit to change the specific conditions for the prill tower in the Title V permit to be the same as the new federally enforceable conditions established by the construction permit.

I suggest that you talk directly with Clair Fancy, if you have any questions about his determination. I have copied him on this draft summary, so he can let us know, if I have misunderstood anything about his determination.

I will call you tomorrow (Thursday, 27 Sept) to discuss the details of the information you will need for the AC permit application.

Sincerely,

Stephen Smallwood

Stephen Smallwood, PE
Air Quality Services
Tallahassee, FL

(850) 385-0002
(850) 385-8715 fax

c: C.H. Fancy, PE, Chief, FDEP/ DARM/Bureau of Air Regulation – Tallahassee, FL

Al Linero
NSR

NITRAM, INC.

5321 Hartford St.* P.O. Box 2968 * Tampa, Florida 33601* Phone (813) 626-2181* Fax (813) 623-6080

August 6, 2001

RECEIVED
AUG 10 2001
BUREAU OF AIR REGULATION

Mr. William Thomas, PE
Administrator
Air Resources Management Section
Southwest District Office
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619-8218

813 744-6100
813 744-6084 fax

Subject: Air Permitting Requirements for Increasing the Amount of Low Density Product Made in the Ammonium Nitrate Prill Tower
Nitram, Inc, Tampa FL
FDEP Air Facility No. 057 0029

Agency Rule Applicability Determination Requested

Dear Mr. Thomas:

Nitram operates a chemical plant in Tampa, Florida. The plant makes a high-density (HD), and a low-density (LD) ammonium nitrate prill in the plant's No. 2 prill tower. The No. 1 prill tower was shutdown when the new one was modified in 1981. The annual potential PM emissions (114.3 tons/yr) from the prill tower is based on operating the tower at a maximum ammonium nitrate prill production rate of 50 tons /hour (1200 tons /day) on a continuous basis, and just meeting the 26.0 lbs of particulate matter (PM) per hour BACT emissions limit. That limit was established by the FDER on May 7, 1981 in the air construction permit (AC29 – 39 724) for the modification at the No. 2 prill tower. The modified tower is equipped with a wet scrubber.

The facility is classified under state and EPA air rules as a major source. The company has a current Title V air operation permit, AV 057 0029-005, which expires on August 17, 2003. The No. 2 prill tower is emissions unit 006.

The company needs to increase the maximum permitted production rate of the LD prill to meet their customer's need for this product. The company will not be requesting an increase in the maximum permitted hourly or annual production rate for the prill tower, just for this product.

Based on our review of the Florida air rules, we have concluded that the proposed change is the type of change that the FDEP can make to the Nitram Title V permit as an administrative permit amendment [62-210.360(1)(f), FAC] pursuant to Title V Section 62-213.410(3), FAC Changes Without Permit Revision.

If the proposed change can be made as an administrative permit amendment, Nitram could implement the proposed change after submitting any forms required by the FDEP, and providing the FDEP and the US EPA with 7 days written notice prior to implementation.

The notice would include the date on which the change would occur, a description of the change, the pollutants emitted, any changes in emissions, and identify any terms or conditions of the Title V permit that would become applicable or no longer be applicable due to the change. Within 60 days after receiving the company's notice, the FDEP would either notify the company that the change can not be made as an administrative permit change, or issue the administrative change and send a copy to the company, the US EPA, and to any affected local air program.

Since this is an unusual situation that involves restrictions on plant operation that have been applied in error, Nitram requests that the Department make a formal rule applicability determination for the change Nitram is proposing. We also request a meeting with you, before the Department makes a final rule applicability determination, to discuss the proposed change and answer any questions the Department's air staff have about the proposed change or our rule applicability analysis.

The following parts of this letter provide you with information on the air permitting history of the prill tower and our rule applicability analysis.

Air Permitting History

The annual potential PM emissions (114.3 tons/yr), from the No. 2 prill tower, are currently based on operating the prill tower at a maximum production rate of 50 tons High Density Prill per hour (1200 tons HD Prill / day) on a continuous basis and just meeting the 26.0 lbs PM emissions / hour BACT emissions limit. That limit was established by the FDER on May 7, 1981 in the air construction permit (AC29 – 39 724) for the No. 2 prill tower. The prill tower is equipped with a wet scrubber.

In the 1992 FDEP state air operating permit for the No. 2 prill tower (AO29-205 785), as part of the process description, the tower is described as now making two products, and states that the "HD Prill is produced at a maximum rate of 50 TPH, while LD prill is produced at a maximum rate of 25 TPH." The Specific Conditions do not list these rates as permit limits, but do require "annual PM emissions tests while producing HD prill, with one exception. One time during the five-year period of the permit, the annual compliance test is to be conducted while producing the low density products" [the LD prill]. That implies that the air staff assumed that forming the HD Prill would generate a higher PM emissions rates than would forming the LD prill, but concluded they needed additional data to verify that, before renewing the state air operating permit. Before the state air operating permit was due for renewal, the new federal Clean Air Act Title V air operation permit rules extended the expiration date of the state air operating permit until the new Title V air operation permit was issued for the plant.

In the 1996 Title V air operation permit application, as part of the "segment " description for the No. 2 prill tower, the maximum prill production rates described in the 1992 FDEP state air operating permit for the prill tower, were listed as the maximum hourly prill production rates for the two products.

In Subsection D, ID No.006, Ammonium Nitrate Prill Tower No. 2, of the August 19, 1998 Nitram initial Title V air operation permit, under D.1. Capacity., the maximum hourly prill production rates for the two products are listed as specific permit conditions, citing air construction permit AC-261 247 as the basis for the production limits. The PM emissions tests requirements, which were included in the 1992 FDEP state air operating permit for the prill tower, were repeated in the Title V permit. Our search of the files at the FDEP Southwest District Air Section in Tampa, and our discussion with the district air staff, has indicated that the air construction permit referenced in the Nitram Title V permit [AC-261 247] is a permit that was issued to Cargill. We have not been able to find any other air construction permit issued for the Nitram prill tower except the original air construction permit issued for the construction of the No. 2 prill tower. That permit does not include any provisions that address the LD Prill. Therefore, it appears that there is no prior federally enforceable air permit that contains any restriction on the LD Prill production rate, which might have to be changed prior to amending the current federally enforceable Title V permit.

Air Permitting Rule Applicability Analysis

The basic question is whether increasing the maximum hourly allowable LD Prill production rate is a change that the FDEP can make to the Nitram Title V permit as an administrative permit amendment [62-210.360(1)(f), FAC] pursuant to Title V Section 62-213.410(3), FAC Changes Without Permit Revision, or does the proposed change require a formal Title V permit revision, as defined in Title V Section 62-213.400, FAC Permits and Permit Revisions Required.

If a Title V permit revision is required, Nitram must submit a permit application, which documents the proposed change and any changes in emissions or permit conditions needed to amend the Title V permit to allow the proposed change. That application would be subject to the same processing requirements that are required for a major state air construction permit application plus an opportunity for review by the US EPA's Atlanta office, and the option for the US EPA to veto any proposed changes to the permit that EPA concludes are not allowed by the Title V permitting rules. The permit application processing would probable take at least 6-9 months.

Section 62-213.400, FAC Permits and Permit Revisions Required says that no facility which has a Title V air operation permit, shall make any changes in its operation without first applying for and receiving a permit revision, if the change meets any of the following ..[criteria]. The rule lists 11 criteria. If the proposed change is any of the types listed, a permit revision is required. If the proposed change is not any of the types listed, it is a change that can be made under the terms of the existing Title V permit, the terms of a recently issued air construction permit, or as an administrative permit amendment.

Constitutes a Modification

Modification is defined "as any physical change in, change in the method of operation of, or addition to a facility, which would result in an increase in the actual emissions of any air pollutant subject to regulation under the [Clean Air] Act, including any not previously emitted, from any emissions unit or facility." "A change in the method of operation shall not include an increase in the hours of operation or in the production rate, unless such change would exceed any restriction on hours of operation or production rate included in any applicable Department air construction or air operation permit."

Nitram is not proposing to make any physical changes, or to make any additions to the facility. When the modification definition refers to increases in emissions or to an increases in production rate, it is referring to the annual amount or increase for the emissions unit or the facility as a whole.

So, there are two basic questions. Is increasing the maximum allowable hourly amount of LD Prill made in the prill tower a change in the method of operation? If it is, is it a change in the method of operation that would result in an increase in the actual emissions from the prill tower or from any other part of the plant?

Since the FDEP has recently amended the Nitram Title V permit to allow the company to discontinue the use of the old LD Prill product loadout baghouses on the new coated LD Prill product, the Department has determined that the new coated LD Prill loadout PM emissions are insignificant, and therefore should not be a consideration in this determination.

Is the Proposed Change a Change in the Method of Operation?

The proposed change in the maximum hourly rate of making the new coated LD Prill product does not increase the maximum annual allowable prill production rate for the tower, which is 438,000 tons per year (439,200 tons per year, on leap year).

The maximum hourly prill production rate for emissions testing purposes is 50 tons of HD Prill per hour. The proposed change would increase the maximum hourly LD Prill production rate to be the same as the maximum hourly rate for the HD Prill. Since only one type of prill can be made at any time, the maximum allowable annual prill production rate would remain the same. The only difference would be the mix of the two types of prills, which are made at different times in the same prill tower.

need data @ same production rate to verify this

The available PM emissions test data indicates that the LD Prill has a lower actual PM emissions rate (in lb/ton of prill produced) than the HD Prill. An increase in the relative amount of LD to HD Prill made will therefore result in a decrease in the actual overall emission rate. (need to see data)

Therefore, the LD Prill production limit in the Title V permit is a redundant and an unnecessary restriction that did not have to been included in the permit to adequately limit the PM emissions from the prill tower. A limit of 50 ton per hour of LD or HD prill, on a continuous basis, would have been adequate to define the maximum annual prill production rate for calculating the prill towers' potential emissions, and for defining the required short-term operating rate for conducting required PM emissions tests.

At the time the short-term production rates were put in the 1992 air operating permit application, the company considered the information to be descriptive not restrictive. Since, typically the LD Prill has been made at a lower rate, it may have been assumed that the LD Prill could not or never would be made at a higher rate, even though the LD Prill can be made at a rate higher than 25 tons per hour, without making any physical changes to the plant equipment.

Nitram is now asking the FDEP to correct that error. It is an error because it is unnecessary. It is unnecessary because the potential PM emissions from the prill tower would be the same whether the LD Prill production limit was or was not in the Title V permit. It only has the effect of unnecessarily

restricting the amount of the LD Prill that can be produced. It does not in any way restrict the amount of PM that can be emitted from the tower, beyond the amount allowed by the restrictions on the HD Prill.

The situation is like having a boiler that is permitted to burn both fuel oil and natural gas, with a permit condition that restricts the amount of gas that can be burned to one half of the heat input capacity of the boiler, but allows fuel oil to be used up the maximum heat input capacity. Boilers that are permitted to burn fuel oil and natural gas sometimes have a restriction on the amount of fuel oil that can be burned, but not on the amount of gas burned.

If the Department's air staff discovered that type of error had been made on a boiler permit, we think you would agree that the error could be corrected by an administrative amendment to the permit. If the FDEP air staff conclude that restricting the LD Prill production to a rate that is less than that allowed for the HD Prill production in the same prill tower, when the LD Prill has lower emissions, is like restricting the amount of natural gas that can be burned in a dual-fuel boiler, we think you should conclude that the LD Prill production rate limit is unnecessary, and the error can be corrected by an administrative amendment to the permit.

Increase in Actual Emissions?

Second, if, for some reason, the FDEP air staff were to conclude that the proposed change is a "change in the method of operation," is it a change that would result in an increase in the "actual emissions" from the prill tower?

The prill tower is permitted to make HD Prill on a continuous basis at an hourly production rate of 50 tph (1200 tpd). At that maximum production rate, the tower may emit 26.0 lb PM/hour or 114.3 ton PM/year. The calendar year actual emissions for the prill tower that are reported on the company's annual operating report (AOR) depend on the total annual amount of prill produced, the relative demand for the HDP and the LDP products, and the actual PM emissions rates that result from forming the two types of prill in the tower.

The demand for both products is expected to continue to increase. When the demand increases to the maximum production capacity of the tower, the maximum actual emissions each year will depend on the relative amount of each product made. Since the LD Prill has lower PM emissions, the future actual emissions will be greatest during the years when the least amount of LD Prill is made. If the proposed change is made, the relative amount of LD Prill made could be greater than allowed by the current Title V permit, which would result in the future actual emissions being equal to or less than they otherwise would be.

As with the example of the dual-fuel fired boiler, if the restriction of providing no more than half of the boiler's maximum heat input with natural gas was changed to allow all of the boiler's maximum heat input to be provided with natural gas, the future maximum annual emissions from the boiler could [and probably would] be less than they otherwise would have been. Therefore, even if the air staff were to conclude that the proposed change would be a "change in the method of operation," it would not be a change that would result in an increase in actual emissions.

"Actual emissions" is defined in the Florida air rules in different ways for different permitting situations. In the general case, the term means about the same thing as the "calendar year" actual emissions used for the AORs, but not exactly the same thing.

"In general, "actual emissions," as of a particular date shall equal the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a two year period which precedes the particular date and which is representative of the normal operation of the unit. The Department may allow the use of a different time period upon a determination that it is more representative of the normal operation of the emissions unit . . [for the time period of interest]. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and type of materials processed, stored, or combusted during the selected time period," except . . .

"The Department may presume that unit-specific allowable emissions for an emissions unit are equivalent to the actual emissions of the emissions unit provided that, for any regulated air pollutant, such unit-specific allowable emissions limit is federally enforceable."

"For any emissions unit [other than an electric utility steam generating unit specified in subparagraph (d) . . of the definition] which has not begun normal operations on a particular date, actual emission shall be equal to the potential emissions on that date."

Since most modification determinations the Department's air permitting staff deal with are additions of new units or physical changes to existing units, which require actual emissions to be determined by the "current annual actual to future annual potential" emissions increase calculation, or are increases in hours of operation, which are also usually calculated on the basis of "current annual actual to future annual potential," a permit review engineer might assume that the "current annual actual to future annual potential" emissions increase calculation is required for any "change in the method of operation."

For the change Nitram is proposing (if it were a "change in the method of operation", and we don't think that it is), the appropriate calculation method would be the "current annual unit-specific allowable" to the "future annual unit-specific allowable."

That calculation is appropriate because the current PM emissions limit for the prill tower is a unit-specific emissions limit set by a Department BACT determination that is federally enforceable. The future "actual emissions" are not required to be represented by the future potential emissions, because the tower is in normal operation. That only applies to new or physically modified units. However, in this case, the future potential and the future allowable are the same.

And, while, in the case of an increase in the allowable hours of operation, the "current annual actual or allowable to the future annual allowable or potential" calculation will almost always show an increase in "actual" emissions, in the case of Nitram's proposed change, it does not, because the current annual allowable and the future annual allowable and potential PM emissions are all equal – so, no increase in "actual" emissions.

Therefore,

(1) The current permit restriction on the maximum hourly LD Prill production rate is a redundant and an unnecessary permit restriction, and increasing the maximum hourly LD Prill production rate up to that of the maximum hourly HD Prill production rate in the permit (50 tph), is not a "change in the method of operation," and

(2) The proposed change would not result in any increase in the actual, current allowable, or future potential PM emissions from the prill tower.

If the FDEP air permitting staff agrees that the proposed change is not a 'modification,' you then need to determine if the proposed change is one of the other 10 types of changes that must be authorized by a "permit revision." If you conclude that the proposed change is not one of the following types of changes, Nitram's proposed change to the maximum allowable short-term (hourly) LD Prill production rate may be made as an administrative amendment to the current Title V permit.

Violates any Applicable Requirement

The second criterion addresses "Applicable Requirements." In general "applicable requirements" are applicable EPA air rules and source-type specific emissions limiting standards, such as PSD and Title V permitting requirements, NSPS emissions limits, EPA-approved source-type specific SIP limits, and federally enforceable source-type specific emissions limits included in a state air construction permit – like BACT emissions limits, and restrictions on an emissions unit's allowable annual hours of operation and total production rate.

Since the current Title V permit says that LD Prill production rate restriction included in the Title V permit is based on that restriction being in a previously issued state air construction permit, the FDEP air permitting staff might conclude, based on that citation, that the Title V permit can not be administratively amended to change the LD Prill's maximum allowable hourly production rate until the air construction permit [AC29-261 247] is amended by submitting a new air construction permit application that changes that restriction.

The reason for this seemingly unnecessary procedure is that the US EPA and the FDEP air attorneys have ruled that the federally enforceable specific conditions in a state air construction permit take precedent over the specific conditions in a Title V permit. The result of this legal reasoning is that you have to change or remove the "applicable requirement" from the air construction permit before you can add a contrary or conflicting specific condition to the Title V permit by any means.

The FDEP Air Division submitted a SIP revision to EPA several years ago in an attempt to minimize the cases in which this procedure has to be followed. We think the proposed change is the type of change that does not require this procedure. If this becomes a factor in making the determination that we are requesting, the Tallahassee air permitting staff may need to make that determination. . As noted earlier, we have been advised by the FDEP district air permitting staff that the referenced permit number is a Cargill permit, and we have not found any other air construction permit in the Southwest District air files that included such a restriction. Therefore, unless there such an AC permit, this should not be a factor in your determination.

However, since the permit condition was redundant and unnecessary, the Department should be able to correct the error in an air construction permit, through the same administrative amendment that corrects the Title V permit, and to do so at the same time.

Exceed the Allowable Emissions in the Current Title V Permit

The third criterion addresses the current allowable emissions. The proposed change will not authorize the current allowable emissions from the prill tower to be exceeded.

The Other Eight Criteria

The fourth criterion addresses the current monitoring, testing, and recordkeeping. The proposed change would not contravene any of these provisions.

The fifth criterion addresses the various determinations that are required for a PSD permit. None of these items are required if the Department determines that the proposed change is not a modification or not a modification that would result in a significant net increase in any regulated air pollutant. See the discussion on Modification above.

The sixth criterion addresses any current specific permit condition that allows the emissions unit to be exempt from any applicable requirement. The proposed change would not change a permit condition that was put in the permit to avoid having to comply with an otherwise applicable requirement. See the discussions above on Modification and on Violating Any Applicable Requirement.

The seventh criterion addresses trading emissions among emissions units. The proposed change will not authorize trading emissions among emissions units.

The eighth criterion addresses changing the location of a relocatable facility. The proposed change will not authorize the relocation of any emissions unit or facility.

The ninth & tenth criteria address changes at an Acid Rain source and changes to a repowering plan, nitrogen oxide averaging plan, or a deadline extension at an Acid Rain source. The proposed change will not authorize any change or deadline extension at an Acid Rain source or any change to any repowering plan, or nitrogen oxide averaging or compliance plan.

The eleventh criterion addresses requests for an exemption under the Acid Rain Program. The proposed change does not request an exemption under the Acid Rain Program rules.

Within a few days, our consultant, Stephen Smallwood, PE, will call you to arrange a meeting at your Tampa office to discuss our proposed change and our rule applicability analysis. If it would be helpful, he will be available to meet with those members of the Tallahassee air staff, who may be involved in the rule applicability determination.

If you have any questions about this request, please call me or Charles Ingram in Tampa, or our consultant, Stephen Smallwood, PE, in Tallahassee.

Sincerely,

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

Nitram, Inc
(813) 626-2181 ext 245

Sincerely,

Stephen Smallwood, PE
Consultant

Air Quality Services
(850) 385-0002

c: Charles Ingram, Manager-Safety, Environmental, Quality, Nitram, Inc. (813) 626-2181 ext 230
Scott Sheplak, PE, Administrator, Title V Section, FDEP Tallahassee (850) 488-1344
Al Linero, PE, Administrator, New Source Review Section, FDEP Tallahassee (850) 488-1344

SS/ssm

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

FACSIMILE TRANSMISSION SHEET

DATE 8-15-01

TO: JOHN REYNOLDS

Department DARM

Phone _____ Fax _____

FROM: JIM McDONALD
DEP Southwest District Office - Air Program
Phone: (813) 744-6100 (SunCom 512-1042) Ext. 106

OPERATOR: _____

SUBJECT: NITRAN's - AOR 2000 INFO SHOWING SAME EMISSION FACTOR FOR LOW + HIGH DENSITY PRILLS

Total Number of Pages, Including Cover Page: 3

DEP SWD AIR PROGRAM FAX NUMBERS: (813) 744-6458
(Suncom) 512-1073

AOR 2000 BEST AVAILABLE COPY

Facility ID : 0570029 **Emissions Unit ID : 006** **SCC : 3-01-027-22**

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC **3-01-027-22**	2. Description of Process or Type of Fuel **Industrial Processes** **Ammonium Nitrate Production** **Chemical Manufacturing** **Prilling Tower: Low Density**	
3. Annual Process or Fuel Usage Rate **13342.77**	4. Ozone Season Daily Process or Fuel Usage Rate **43.6**	5. SCC Unit **Tons Produced**
6. Fuel Average % Sulfur **0**	7. Fuel Average % Ash **0**	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant * **PM** **Particulate Matter - Total**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) **3.42**	3. Ozone Season Daily Emissions (lb/day) **16.42**	4. Emissions Method Code **1**

5. Emissions Calculation (Show separately both annual and daily emissions calculations)
13342.77 x 0.5122 #/ton = 6,834.17 #/yr.
6,834.17 # / yr / 2000# / ton = 3.42 tons/yr.
#per hr test run HI-D x total hr. run/season /92 days in the season = (25.60 # / hr) x (0.00+9.00+50.00) /92 days = 16.42 #/day.

1. Pollutant **PM10** **Particulate Matter - PM10**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) **3.42**	3. Ozone Season Daily Emissions (lb/day) **16.42**	4. Emissions Method Code **1**

5. Emissions Calculation (Show separately both annual and daily emissions calculations)
13342.77 x 0.5122 #/ton = 6,834.17 #/yr.
6,834.17 # / yr / 2000# / ton = 3.42 tons/yr.
#per hr test run HI-D x total hr. run/season /92 days in the season = (25.60 # / hr) x (0.00+9.00+50.00) /92 days = 16.42 #/day

*: Pollutant subject to emissions limiting standard or emissions cap

APR 2000

Facility ID : 0570029 **Emissions Unit ID : 006** **SCC : 3-01-027-12**

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC **3-01-027-12**	2. Description of Process or Type of Fuel **Industrial Processes** **Chemical Manufacturing**	**Ammonium Nitrate Production** **Prilling Tower: High Density**
3. Annual Process or Fuel Usage Rate **172844.96**	4. Ozone Season Daily Process or Fuel Usage Rate **665.73**	5. SCC Unit **Tons Produced**
6. Fuel Average % Sulfur **0**	7. Fuel Average % Ash **0**	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1. Pollutant * **PM** **Particulate Matter - Total**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) **44.27**	3. Ozone Season Daily Emissions (lb/day) **247.89**	4. Emissions Method Code **1**

5. Emissions Calculation (Show separately both annual and daily emissions calculations)
172,844.96 x 0.5122 #/ton = 88,531.19 #/yr.
88,531.19 # / yr / 2000# / ton = 44.27 tons/yr.
#per hr test run HI-D x total hr. run/season /92 days in the season = (25.61 # / hr) x (182.5+444.25+263.75) /92 days = 247.89 #/day.

1. Pollutant **PM10** **Particulate Matter - PM10**	CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year) **44.27**	3. Ozone Season Daily Emissions (lb/day) **247.89**	4. Emissions Method Code **1**

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*: Pollutant subject to emissions limiting standard or emissions cap

NITRAM, INC.
5321 Hartford St.* P.O. Box 2968 * Tampa, Florida 33601* Phone (813) 626-2181* Fax (813) 623-6080

August 6, 2001

Mr. William Thomas, PE
Administrator
Air Resources Management Section
Southwest District Office
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619-8218

813 744-6100
813 744-6084 fax

Subject: Air Permitting Requirements for Increasing the Amount of Low Density Product Made in the Ammonium Nitrate Prill Tower
Nitram, Inc, Tampa FL
FDEP Air Facility No. 057 0029

Agency Rule Applicability Determination Requested

Dear Mr. Thomas:

Nitram operates a chemical plant in Tampa, Florida. The plant makes a high-density (HD), and a low-density (LD) ammonium nitrate prill in the plant's No. 2 prill tower. The No. 1 prill tower was shutdown when the new one was modified in 1981. The annual potential PM emissions (114.3 tons/yr) from the prill tower is based on operating the tower at a maximum ammonium nitrate prill production rate of 50 tons /hour (1200 tons /day) on a continuous basis, and just meeting the 26.0 lbs of particulate matter (PM) per hour BACT emissions limit. That limit was established by the FDER on May 7, 1981 in the air construction permit (AC29 – 39 724) for the modification at the No. 2 prill tower. The modified tower is equipped with a wet scrubber.

The facility is classified under state and EPA air rules as a major source. The company has a current Title V air operation permit, AV 057 0029-005, which expires on August 17, 2003. The No. 2 prill tower is emissions unit 006.

The company needs to increase the maximum permitted production rate of the LD prill to meet their customer's need for this product. The company will not be requesting an increase in the maximum permitted hourly or annual production rate for the prill tower, just for this product.

Based on our review of the Florida air rules, we have concluded that the proposed change is the type of change that the FDEP can make to the Nitram Title V permit as an administrative permit amendment [62-210.360(1)(f), FAC] pursuant to Title V Section 62-213.410(3), FAC Changes Without Permit Revision.

If the proposed change can be made as an administrative permit amendment, Nitram could implement the proposed change after submitting any forms required by the FDEP, and providing the FDEP and the US EPA with 7 days written notice prior to implementation.

The notice would include the date on which the change would occur, a description of the change, the pollutants emitted, any changes in emissions, and identify any terms or conditions of the Title V permit that would become applicable or no longer be applicable due to the change. Within 60 days after receiving the company's notice, the FDEP would either notify the company that the change can not be made as an administrative permit change, or issue the administrative change and send a copy to the company, the US EPA, and to any affected local air program.

Since this is an unusual situation that involves restrictions on plant operation that have been applied in error, Nitram requests that the Department make a formal rule applicability determination for the change Nitram is proposing. We also request a meeting with you, before the Department makes a final rule applicability determination, to discuss the proposed change and answer any questions the Department's air staff have about the proposed change or our rule applicability analysis.

The following parts of this letter provide you with information on the air permitting history of the prill tower and our rule applicability analysis.

Air Permitting History

The annual potential PM emissions (114.3 tons/yr), from the No. 2 prill tower, are currently based on operating the prill tower at a maximum production rate of 50 tons High Density Prill per hour (1200 tons HD Prill / day) on a continuous basis and just meeting the 26.0 lbs PM emissions / hour BACT emissions limit. That limit was established by the FDER on May 7, 1981 in the air construction permit (AC29 – 39 724) for the No. 2 prill tower. The prill tower is equipped with a wet scrubber.

In the 1992 FDEP state air operating permit for the No. 2 prill tower (AO29-205 785), as part of the process description, the tower is described as now making two products, and states that the "HD Prill is produced at a maximum rate of 50 TPH, while LD prill is produced at a maximum rate of 25 TPH." The Specific Conditions do not list these rates as permit limits, but do require "annual PM emissions tests while producing HD prill, with one exception. One time during the five-year period of the permit, the annual compliance test is to be conducted while producing the low density products" [the LD prill]. That implies that the air staff assumed that forming the HD Prill would generate a higher PM emissions rates than would forming the LD prill, but concluded they needed additional data to verify that, before renewing the state air operating permit. Before the state air operating permit was due for renewal, the new federal Clean Air Act Title V air operation permit rules extended the expiration date of the state air operating permit until the new Title V air operation permit was issued for the plant.

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Air Permitting Rule Applicability Analysis

The basic question is whether increasing the maximum hourly allowable LD Prill production rate is a change that the FDEP can make to the Nitram Title V permit as an administrative permit amendment [62-210.360(1)(f), FAC] pursuant to Title V Section 62-213.410(3), FAC Changes Without Permit Revision, or does the proposed change require a formal Title V permit revision, as defined in Title V Section 62-213.400, FAC Permits and Permit Revisions Required.

If a Title V permit revision is required, Nitram must submit a permit application, which documents the proposed change and any changes in emissions or permit conditions needed to amend the Title V permit to allow the proposed change. That application would be subject to the same processing requirements that are required for a major state air construction permit application plus an opportunity for review by the US EPA's Atlanta office, and the option for the US EPA to veto any proposed changes to the permit that EPA concludes are not allowed by the Title V permitting rules. The permit application processing would probable take at least 6-9 months.

Section 62-213.400, FAC Permits and Permit Revisions Required says that no facility which has a Title V air operation permit, shall make any changes in its operation without first applying for and receiving a permit revision, if the change meets any of the following ..[criteria]. The rule lists 11 criteria. If the proposed change is any of the types listed, a permit revision is required. If the proposed change is not any of the types listed, it is a change that can be made under the terms of the existing Title V permit, the terms of a recently issued air construction permit, or as an administrative permit amendment.

Constitutes a Modification

Modification is defined "as any physical change in, change in the method of operation of, or addition to a facility, which would result in an increase in the actual emissions of any air pollutant subject to regulation under the [Clean Air] Act, including any not previously emitted, from any emissions unit or facility." "A change in the method of operation shall not include an increase in the hours of operation or in the production rate, unless such change would exceed any restriction on hours of operation or production rate included in any applicable Department air construction or air operation permit."

Nitram is not proposing to make any physical changes, or to make any additions to the facility. When the modification definition refers to increases in emissions or to an increases in production rate, it is referring to the annual amount or increase for the emissions unit or the facility as a whole.

So, there are two basic questions. Is increasing the maximum allowable hourly amount of LD Prill made in the prill tower a change in the method of operation? If it is, is it a change in the method of operation that would result in an increase in the actual emissions from the prill tower or from any other part of the plant?

Since the FDEP has recently amended the Nitram Title V permit to allow the company to discontinue the use of the old LD Prill product loadout baghouses on the new coated LD Prill product, the Department has determined that the new coated LD Prill loadout PM emissions are insignificant, and therefore should not be a consideration in this determination.

Is the Proposed Change a Change in the Method of Operation?

The proposed change in the maximum hourly rate of making the new coated LD Prill product does not increase the maximum annual allowable prill production rate for the tower, which is 438,000 tons per year (439,200 tons per year, on leap year).

The maximum hourly prill production rate for emissions testing purposes is 50 tons of HD Prill per hour. The proposed change would increase the maximum hourly LD Prill production rate to be the same as the maximum hourly rate for the HD Prill. Since only one type of prill can be made at any time, the maximum allowable annual prill production rate would remain the same. The only difference would be the mix of the two types of prills, which are made at different times in the same prill tower.

The available PM emissions test data indicates that the LD Prill has a lower actual PM emissions rate (in lb/ton of prill produced) than the HD Prill. An increase in the relative amount of LD to HD Prill made will therefore result in a decrease in the actual overall emission rate.

Therefore, the LD Prill production limit in the Title V permit is a redundant and an unnecessary restriction that did not have to been included in the permit to adequately limit the PM emissions from the prill tower. A limit of 50 ton per hour of LD or HD prill, on a continuous basis, would have been adequate to define the maximum annual prill production rate for calculating the prill towers' potential emissions, and for defining the required short-term operating rate for conducting required PM emissions tests.

At the time the short-term production rates were put in the 1992 air operating permit application, the company considered the information to be descriptive not restrictive. Since, typically the LD Prill has been made at a lower rate, it may have been assumed that the LD Prill could not or never would be made at a higher rate, even though the LD Prill can be made at a rate higher than 25 tons per hour, without making any physical changes to the plant equipment.

Nitram is now asking the FDEP to correct that error. It is an error because it is unnecessary. It is unnecessary because the potential PM emissions from the prill tower would be the same whether the LD Prill production limit was or was not in the Title V permit. It only has the effect of unnecessarily

restricting the amount of the LD Prill that can be produced. It does not in any way restrict the amount of PM that can be emitted from the tower, beyond the amount allowed by the restrictions on the HD Prill.

The situation is like having a boiler that is permitted to burn both fuel oil and natural gas, with a permit condition that restricts the amount of gas that can be burned to one half of the heat input capacity of the boiler, but allows fuel oil to be used up the maximum heat input capacity. Boilers that are permitted to burn fuel oil and natural gas sometimes have a restriction on the amount of fuel oil that can be burned, but not on the amount of gas burned.

If the Department's air staff discovered that type of error had been made on a boiler permit, we think you would agree that the error could be corrected by an administrative amendment to the permit. If the FDEP air staff conclude that restricting the LD Prill production to a rate that is less than that allowed for the HD Prill production in the same prill tower, when the LD Prill has lower emissions, is like restricting the amount of natural gas that can be burned in a dual-fuel boiler, we think you should conclude that the LD Prill production rate limit is unnecessary, and the error can be corrected by an administrative amendment to the permit.

Increase in Actual Emissions?

Second, if, for some reason, the FDEP air staff were to conclude that the proposed change is a "change in the method of operation," is it a change that would result in an increase in the "actual emissions" from the prill tower?

The prill tower is permitted to make HD Prill on a continuous basis at an hourly production rate of 50 tph (1200 tpd). At that maximum production rate, the tower may emit 26.0 lb PM/hour or 114.3 ton PM/year. The calendar year actual emissions for the prill tower that are reported on the company's annual operating report (AOR) depend on the total annual amount of prill produced, the relative demand for the HDP and the LDP products, and the actual PM emissions rates that result from forming the two types of prill in the tower.

The demand for both products is expected to continue to increase. When the demand increases to the maximum production capacity of the tower, the maximum actual emissions each year will depend on the relative amount of each product made. Since the LD Prill has lower PM emissions, the future actual emissions will be greatest during the years when the least amount of LD Prill is made. If the proposed change is made, the relative amount of LD Prill made could be greater than allowed by the current Title V permit, which would result in the future actual emissions being equal to or less than they otherwise would be.

As with the example of the dual-fuel fired boiler, if the restriction of providing no more than half of the boiler's maximum heat input with natural gas was changed to allow all of the boiler's maximum heat input to be provided with natural gas, the future maximum annual emissions from the boiler could [and probably would] be less than they otherwise would have been. Therefore, even if the air staff were to conclude that the proposed change would be a "change in the method of operation," it would not be a change that would result in an increase in actual emissions.

"Actual emissions" is defined in the Florida air rules in different ways for different permitting situations. In the general case, the term means about the same thing as the "calendar year" actual emissions used for the AORs, but not exactly the same thing.

"In general, "actual emissions," as of a particular date shall equal the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a two year period which precedes the particular date and which is representative of the normal operation of the unit. The Department may allow the use of a different time period upon a determination that it is more representative of the normal operation of the emissions unit . . [for the time period of interest]. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and type of materials processed, stored, or combusted during the selected time period," except . . .

"The Department may presume that unit-specific allowable emissions for an emissions unit are equivalent to the actual emissions of the emissions unit provided that, for any regulated air pollutant, such unit-specific allowable emissions limit is federally enforceable."

"For any emissions unit [other than an electric utility steam generating unit specified in subparagraph (d) . . of the definition] which has not begun normal operations on a particular date, actual emission shall be equal to the potential emissions on that date."

Since most modification determinations the Department's air permitting staff deal with are additions of new units or physical changes to existing units, which require actual emissions to be determined by the "current annual actual to future annual potential" emissions increase calculation, or are increases in hours of operation, which are also usually calculated on the basis of "current annual actual to future annual potential," a permit review engineer might assume that the "current annual actual to future annual potential" emissions increase calculation is required for any "change in the method of operation."

For the change Nitram is proposing (if it were a "change in the method of operation", and we don't think that it is), the appropriate calculation method would be the "current annual unit-specific allowable" to the "future annual unit-specific allowable."

That calculation is appropriate because the current PM emissions limit for the prill tower is a unit-specific emissions limit set by a Department BACT determination that is federally enforceable. The future "actual emissions" are not required to be represented by the future potential emissions, because the tower is in normal operation. That only applies to new or physically modified units. However, in this case, the future potential and the future allowable are the same.

And, while, in the case of an increase in the allowable hours of operation, the "current annual actual or allowable to the future annual allowable or potential" calculation will almost always show an increase in "actual" emissions, in the case of Nitram's proposed change, it does not, because the current annual allowable and the future annual allowable and potential PM emissions are all equal – so, no increase in "actual" emissions.

Therefore,

(1) The current permit restriction on the maximum hourly LD Prill production rate is a redundant and an unnecessary permit restriction, and increasing the maximum hourly LD Prill production rate up to that of the maximum hourly HD Prill production rate in the permit (50 tph), is not a "change in the method of operation," and

(2) The proposed change would not result in any increase in the actual, current allowable, or future potential PM emissions from the prill tower.

If the FDEP air permitting staff agrees that the proposed change is not a 'modification,' you then need to determine if the proposed change is one of the other 10 types of changes that must be authorized by a "permit revision." If you conclude that the proposed change is not one of the following types of changes, Nitram's proposed change to the maximum allowable short-term (hourly) LD Prill production rate may be made as an administrative amendment to the current Title V permit.

Violates any Applicable Requirement

The second criterion addresses "Applicable Requirements." In general "applicable requirements" are applicable EPA air rules and source-type specific emissions limiting standards, such as PSD and Title V permitting requirements, NSPS emissions limits, EPA-approved source-type specific SIP limits, and federally enforceable source-type specific emissions limits included in a state air construction permit – like BACT emissions limits, and restrictions on an emissions unit's allowable annual hours of operation and total production rate.

Since the current Title V permit says that LD Prill production rate restriction included in the Title V permit is based on that restriction being in a previously issued state air construction permit, the FDEP air permitting staff might conclude, based on that citation, that the Title V permit can not be administratively amended to change the LD Prill's maximum allowable hourly production rate until the air construction permit [AC29-261 247] is amended by submitting a new air construction permit application that changes that restriction.

The reason for this seemingly unnecessary procedure is that the US EPA and the FDEP air attorneys have ruled that the federally enforceable specific conditions in a state air construction permit take precedent over the specific conditions in a Title V permit. The result of this legal reasoning is that you have to change or remove the "applicable requirement" from the air construction permit before you can add a contrary or conflicting specific condition to the Title V permit by any means.

The FDEP Air Division submitted a SIP revision to EPA several years ago in an attempt to minimize the cases in which this procedure has to be followed. We think the proposed change is the type of change that does not require this procedure. If this becomes a factor in making the determination that we are requesting, the Tallahassee air permitting staff may need to make that determination. . As noted earlier, we have been advised by the FDEP district air permitting staff that the referenced permit number is a Cargill permit, and we have not found any other air construction permit in the Southwest District air files that included such a restriction. Therefore, unless there such an AC permit, this should not be a factor in your determination.

However, since the permit condition was redundant and unnecessary, the Department should be able to correct the error in an air construction permit, through the same administrative amendment that corrects the Title V permit, and to do so at the same time.

Exceed the Allowable Emissions in the Current Title V Permit

The third criterion addresses the current allowable emissions. The proposed change will not authorize the current allowable emissions from the prill tower to be exceeded.

The Other Eight Criteria

The fourth criterion addresses the current monitoring, testing, and recordkeeping. The proposed change would not contravene any of these provisions.

The fifth criterion addresses the various determinations that are required for a PSD permit. None of these items are required if the Department determines that the proposed change is not a modification or not a modification that would result in a significant net increase in any regulated air pollutant. See the discussion on Modification above.

The sixth criterion addresses any current specific permit condition that allows the emissions unit to be exempt from any applicable requirement. The proposed change would not change a permit condition that was put in the permit to avoid having to comply with an otherwise applicable requirement. See the discussions above on Modification and on Violating Any Applicable Requirement.

The seventh criterion addresses trading emissions among emissions units. The proposed change will not authorize trading emissions among emissions units.

The eighth criterion addresses changing the location of a relocatable facility. The proposed change will not authorize the relocation of any emissions unit or facility.

The ninth & tenth criteria address changes at an Acid Rain source and changes to a repowering plan, nitrogen oxide averaging plan, or a deadline extension at an Acid Rain source. The proposed change will not authorize any change or deadline extension at an Acid Rain source or any change to any repowering plan, or nitrogen oxide averaging or compliance plan.

The eleventh criterion addresses requests for an exemption under the Acid Rain Program. The proposed change does not request an exemption under the Acid Rain Program rules.

Within a few days, our consultant, Stephen Smallwood, PE, will call you to arrange a meeting at your Tampa office to discuss our proposed change and our rule applicability analysis. If it would be helpful, he will be available to meet with those members of the Tallahassee air staff, who may be involved in the rule applicability determination.

If you have any questions about this request, please call me or Charles Ingram in Tampa, or our consultant, Stephen Smallwood, PE, in Tallahassee.

Sincerely,

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

Nitram, Inc
(813) 626-2181 ext 245

Sincerely,

Stephen Smallwood, PE
Consultant

Air Quality Services
(850) 385-0002

c: Charles Ingram, Manager-Safety, Environmental, Quality, Nitram, Inc. (813) 626-2181 ext 230
Scott Sheplak, PE, Administrator, Title V Section, FDEP Tallahassee (850) 488-1344
Al Linero, PE, Administrator, New Source Review Section, FDEP Tallahassee (850) 488-1344

SS/ssm

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR
Victoria J. Tschinkel
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

May 8, 1981

John C. Thompson
Nitram, Inc.
P. O. Box 2968
Tampa, Florida 33601

Dear Mr. Thompson:

Enclosed is Permit Number AC 29-39724, dated May 7, 1981
to Nitram, Incorporated
issued pursuant to Section 403, Florida Statutes.

Acceptance of the permit constitutes notice and agreement that the Department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement actions for violation of the conditions and requirements thereof.

Sincerely,

for Steve Smallwood, Chief
Bureau of Air Quality Management

Attachments

SS:dav

cc: Dan Williams
Hooshang Boostani
Kent Williams

SOUTHWEST DISTRICT
TAMPA
MAY 14 1981
RECD

DER Form 17-1.122(65)

7

Final Determination

Nitram, Inc.

No. 2 Ammonium Nitrate High Density Prill Tower

Hillsborough County, Florida

Construction Permit Number

AC 29-39724

Florida Department of Environmental Regulation

Bureau of Air Quality Management

Central Air Permitting

April 30, 1981

Final Determination

Nitram's application for a permit to modify its No. 2 Ammonium Nitrate Prill Tower located in Hillsborough County, Florida has been reviewed by the Bureau of Air Quality Management. Public notice of the Department's Intent to Issue the construction permit was published in the Tampa Tribune on March 30, 1981.

Copies of the preliminary determination were available for public inspection at the Department's Southwest District Office, Hillsborough County Environmental Protection Commission, and the Department's Bureau of Air Quality Management.

The only comment received on the proposed construction permit was from the Southwest District Office. The District requested the allowable particulate emission limit be reduced from the quantity requested by the Company to that guaranteed by the scrubber manufacturer. The Bureau is in agreement with this recommendation and has made the necessary changes to the construction permit and amended the BACT determination accordingly.

The final action by the Department will be to issue the permit with the changes noted above.

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

CONSTRUCTION
PERMIT

NO. AC 29-39724

NITRAM, INC.
NO. 2, AMMONIUM NITRATE HIGH
DENSITY PRILL TOWER

DATE OF ISSUANCE

May 7, 1981

DATE OF EXPIRATION

MARCH 31, 1982

Victoria J. Tschinkel

VICTORIA J. TSCHINKEL,
SECRETARY

DER FORM PERM 11-42

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Nitram, Inc.
5321 Hartford Street
P. O. Box 2968
Tampa, Florida 33601

PERMIT/CERTIFICATION
NO. AC 29-39724

COUNTY: Hillsborough

PROJECT: No. 2 Prill Tower

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For modifications required to produce high density ammonium nitrate along with the installation of a 92 percent efficient particulate matter scrubber on the No. 2 prill tower. The source is located in Tampa, Hillsborough County, Florida. The UTM Coordinates of the prill tower are 353.150E and 3089.00N.

Construction shall be in accordance with the attached permit application form, plans, drawings and other documents except as otherwise noted on page 3, Specific Conditions.

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER form 17-1.122 (16).

2. Nitram Inc., letter of February 10, 1981, (additional information to complete application).

3. BACT Determination

PERMIT NO.: AC 29-39724
APPLICANT: Nitram, Inc.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

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

3. 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 notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. 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 revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor 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.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. 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 arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, 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.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[X] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AC 29-39724
APPLICANT: Nitram, Inc.

SPECIFIC CONDITIONS:

1. The high density prill tower will not be operated unless the scrubber is in operation.

2. The maximum allowable emission rate of particulate matter will be 26.0 pounds per hour.

3. Visible emissions from the tower shall not exceed 20% opacity.

4. The maximum operation time for the prill tower will be 8,760 hours per year.

5. Construction shall reasonably conform to the plans and schedule given in the application. The applicant shall report any delays in construction and completion of the project covered by this permit to the Department.

6. The proposed tower will be sampled for particulate emissions. Test procedures will be EPA reference methods 1,2,3,4,5, and 9 as described in 40 CFR 60, Appendix A or other state approved methods. Test results will be the average of 3 runs. Minimum sample time and volume per run will be 60 minutes and 30 DSCF.

7. The applicant will demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit to the Southwest District Office prior to 90 days before the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until the expiration date or until issuance of an operating permit.

Expiration Date: March 31, 1982

Issued this 7 day of May, 1981.

_____ Pages Attached.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Victoria J. Tschinkel
Signature

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347

Lawton Chiles, Governor 813-620-6100 Carol M. Browner, Secretary

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

PERMIT/CERTIFICATION
Permit No: AO29-205785
County: Hillsborough
Expiration Date: 03/01/97
Project: No. 2 Prill Tower

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. 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 of hereof and specifically described as follows:

For the operation of the pH Adjust Tank, Nos. 1 and 2 Product Acid Tanks, three (3) 83% Ammonium Nitrate Storage Tanks, the Magnesium Oxide Additive Mix Tank, two (2) fall film evaporators, and the No. 2 Prill tower at a nitric acid/ammonium nitrate manufacturing plant. At the facility, 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 96% solution for low density prill (LDP) or a 99.7% solution for high density prill (HDP). During the manufacture of HDP, magnesium oxide is added to the solution. From the evaporators the concentrated solution is pumped to the top of the No. 2 Prill Tower and sprayed (six (6) spray bells) downward through a counter current air stream resulting in crystallization and drying of the ammonium nitrate. HDP is produced at a maximum rate of 50 TPH while LDP is produced at a maximum rate of 25 TPH.

Ammonia fumes, acid fumes and particulate matter emissions from the pH Adjust Tank, the Nos. 1 and 2 Acid Product Tanks, the three (3) 83% Ammonium Nitrate Tanks and the Magnesium Oxide Additive Tank are vented into the No. 2 Prill Tower. Emissions from the falling film evaporators are first vented through a scrubber and then into the No. 2 Prill Tower. All emissions from the No. 2 Prill Tower are controlled by the use of a BECO Duel Vortex scrubber divided into six (6) cells with six (6) separate cell vents.

Location: 5231 Hartford Street, Tampa

UTM: 17-353.2 E 3089.0 N NEDS NO: 0029 Point ID: 06

Replaces Permit No.: AO29-131402

Recycled Paper
Printed with Soy Based Inks

PERMITTEE:
Nitram, Inc.

PERMIT/CERTIFICATION NO.: AO29-205785
PROJECT: No. 2 Prill Tower

SPECIFIC CONDITIONS:

1. A part of this permit is the attached 15 General Conditions.

2. The maximum allowable particulate emission rate for this source shall not exceed 26.0 pounds per hour and 114.3 tons per year. [Construction Permit AC29-39724 (May 7, 1981) and Rule 17-2.630, F.A.C.]

3. Visible emissions from this source shall not exceed 20% opacity. [Construction Permit AC29-39724 and Rule 17-2.630, F.A.C.]

4. Nitram, Inc. shall not cause, suffer, allow or permit the discharge of air pollutants from this source which cause or contribute to an objectionable odor. [Rule 17-2.620(2), F.A.C.]

5. This source can operate continuously (8,760 hours per year).

6. Test the scrubber emissions for the following pollutant(s) at intervals of 12 months from January 23, 1992 (± 30 days) and submit 2 copies of test data to the Air Section of the Environmental Protection Commission of Hillsborough County office within forty-five days of such testing. 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 procedures shall be consistent with the requirements of Rule 17-2.700, F.A.C.:

(X) Particulates
(X) Opacity

7. Compliance with the emission limitations of Specific Condition Nos. 2 and 3 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 17-2.700, F.A.C. The EPA Method 9 observation period for this source shall be at least sixty (60) minutes in duration. The observation shall be made at a point where all six (6) scrubber stack emissions converge into a single plume. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Rule 17-2.700, F.A.C. and 40 CFR 60, Appendix A.

8. The permittee may request alternative test procedures (such as EPA Method 5D) for this multiple stack source. To properly address this matter, the request shall be directed to the Secretary of the Department or its designee in accordance with Rule 17-2.700(3), F.A.C. The alternative test method shall be used only after receipt of approval from the Secretary of the Department or its designee and after timely notification to the Environmental Protection Commission of Hillsborough County.

Title V Permit Application
Nitram, Inc.

Tampa, Hillsborough County, Florida
Facility ID No. 0570029

June 1996

Daniel E. Ross, P.E.
Manager, Production, Environmental\Engineering
Nitram, Inc.

ERM-South, Inc.
9501 Princess Palm Avenue, Suite 100
Tampa, Florida 33619
(813) 622-8727

1.0 SUPPLEMENTAL APPLICATION INFORMATION

This application is being submitted by Nitram, Inc. (Nitram) to obtain a Title V Operation Permit for its ammonium-nitrate manufacturing facility in Tampa, Hillsborough County, Florida. Ammonium-nitrate is used for fertilizer and industrial use. The general Standard Industrial Classification (SIC) code for the facility activities is 28. The facility is located at 5321 Hartford Street, Tampa, Florida A site location map is provided as Figure 1.

The following sections provide a description of the regulatory framework and manufacturing processes for the Nitram facility. It is meant as a supplement to the application to enhance the reader's understanding of the information presented.

1.1 ELSA SUBMITTAL

This application is being submitted to the Florida Department of Environmental Protection (FDEP) on a 3.5-inch computer diskette for electronic submission using FDEP's Electronic Submission of Application (ELSA) software (Section 3.0). A single hard copy of the entire application package is also being submitted with the ELSA diskette as a verification of the information contained on the diskette (Section 2.0). Signed hard copies of all signature pages for Nitram's responsible official and certifying engineer are also provided within the ELSA printout. If FDEP detects a discrepancy between the hard copy and the information on diskette, Nitram requests that FDEP assume that the hard copy contains the correct information.

1.2 FACILITY DESCRIPTION

Nitram is a manufacturer of ammonium-nitrate for fertilizer and industrial use. A site layout drawing is provided as Figure 2. The facility manufacturing processes and emissions are described in the following sections. Ammonium-nitrate solids are produced as High-density (HiD) prill for agricultural use and as Low-density (LoD) prill for industrial use. Ammonium-nitrate solutions are sold in two concentrations based in the nitrogen (N) content: 21% N is a direct application liquid fertilizer, while 29% N is used in formulating a mix for fertilizer and industrial use. Nitric acid is an intermediate product for which there is a small market for direct sales.

Nitram was originally constructed as a 150,000 tons per year (tpy) ammonium-nitrate and was expanded to 300,000 tpy with some duplicity of equipment. Major components of the two production systems were have been replaced or combined into a single series of process units.

Emissions Unit Information Section 3

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : Ammonium Nitrate Prill Tower No. 2		
2. Emissions Unit Identification Number : 06 [ ] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code : A	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code : 28
6. Emissions Unit Comment : This emissions unit is an ammonium nitrate prill tower with a Beco scrubber.		

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 3

Ammonium Nitrate Prill Tower No. 2

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	29-06	
2. Emission Point Type Code :	3	
3. Descriptions of Emission Points Comprising this Emissions Unit : The Prill Tower scrubber discharge is through six identical stacks in a 2 by 3 array.		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common : Not Applicable		
5. Discharge Type Code :	V	
6. Stack Height :	178	feet
7. Exit Diameter :	3.25	feet
8. Exit Temperature :	115	°F
9. Actual Volumetric Flow Rate :	41,000	acfm
10. Percent Water Vapor :	8.00	%
11. Maximum Dry Standard Flow Rate :	36,500	dscfm
12. Nonstack Emission Point Height :		feet
13. Emission Point UTM Coordinates : Zone : 17 East (km) : 353.200 North (km) : 3,089.000		
14. Emission Point Comment : Data is for one of six identical stacks.		

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 3

Ammonium Nitrate Prill Tower No. 2

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : High Density Prill Production	
2. Source Classification Code (SCC) : 3-01-027-12	
3. SCC Units : Tons Produced Or Manufactured	
4. Maximum Hourly Rate : 50.00	5. Maximum Annual Rate : 438,000.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment :	

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 3

Ammonium Nitrate Prill Tower No. 2

Segment Description and Rate : Segment 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Low Density Prill Production	
2. Source Classification Code (SCC) : 3-01-027-22	
3. SCC Units : Tons Produced Or Manufactured	
4. Maximum Hourly Rate : 25.00	5. Maximum Annual Rate : 219,000.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment :	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 3
Ammonium Nitrate Prill Tower No. 2

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted :	PM
2. Total Percent Efficiency of Control :	90.00 %
3. Potential Emissions :	26.00 lb/hour 114.30 tons/year
4. Synthetically Limited?	[ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions:	to tons/year
6. Emissions Factor : Reference :	
7. Emissions Method Code :	0
8. Calculations of Emissions :	By current operating permit and the previous construction permit, PM emissions are limited to 26 lbs/hr and 114.3 TPY.
9. Pollutant Potential/Estimated Emissions Comment :	

ARMINV51

POINT AIRS ID 0570039 STATUS A OFFICE SWDI SW: HILLSBOROUGH
SITE NAME NITRAM, INC. COUNTY HILLSBOROUGH
OWNER/COMP NITRAM, INC.

Description & Status

Emis Unit ID 006 Status A Active O2 SIP Base Yr UnitY Acid Rain Unit N

Permit Category	Permit Number	Office	Issued Dt	Expiration
AO1B	AO AO29205785	SWD	21-FEB-1992	01-MAR-1997
Air Operate	AV 0570029-002-AV	SWD	19-AUG-1998	17-AUG-2003
Air Operate	AV 0570029-005-AV	SWD	09-JUN-2000	17-AUG-2003
Air Operate	AV 0570029-003-AV	SWD	10-SEP-1999	17-AUG-2003

Count: *4 <Replace>

NATURE SAVER™ FAX MEMO 01618

To HARRY SMITH	Date 7-30-01 Pgs ▶
Co./Dept.	From JIM McDONALD
Phone #	Co.
Fax #	Phone #
	Fax #

TOTAL P.01

NITRAM

Date	Mode	Process Rate Tons/hr.	Test Result lbs./hr.	Emission factor lbs./ton	Emission Conc. gr/dscf	Allowable Emissions Lbs./hr.	Scrubber Gpm/pH
2-1/2-01	HD	25	2.10	0.0840	0.0011	26.0	32
2-14/15-00	HD	50	25.61	0.5122	0.0165	26.0	3200
2-4/5-99	HD	47.42	1.97	0.0415	0.0013	26.0	1400
2-17/18-98	HD	48.31	6.20	0.1283	0.0040	26.0	1800
1-28/29-97	HD	24.97	6.20	0.2483	0.0040	26.0	1
1-30-96	HD	49	14.1	0.2877			
1-23-95	HD	51	17.6	0.3451			
1-18-94	HD	53	15.6	0.2943			
1-19-93	HD	49	15.8	0.3224			
92							
1-20-91	HD	46	25.9	0.5630			
90							
89							
1-20-88	HD	46	23.3	0.5065			
1-28-87	HD	50	18.58	0.3716			
1-30-86	HD	50	18.58	0.3716			
5-1-85	HD	50	20.56	0.4112			

16.6 HD Avg

AUG-17-2001 16:20 DEPT. OF ENVIR. PROTECT. 813 7446458 P.02/04

EMISSIONS TESTING
of the
NITRAM, INC.
NO. 2 PRILL TOWER
Tampa, Florida

February 1 and 2, 2001

FDEP Permit No. 0570029-002-AV
SES Reference No. 01S07

Conducted by:

SOUTHERN ENVIRONMENTAL SCIENCES, INC.
1204 North Wheeler Street
Plant City, Florida 33566
Phone (813) 752-5014 Fax (813) 752-2475

Project Participants

Byron E. Nelson
Kenneth M. Roberts
Mark S. Gierke

TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Plant: Nitram, Inc.
Unit: No. 2 Prill Tower

STACK	DATE	PROCESS RATE (TONS/HR)	STACK TEMP. (°F)	STACK GAS FLOW RATE		PARTICULATE EMISSIONS	
				ACFM	DSCFM	GRAINS/DSCF	LBS/HR
A	2/1/01	25	98.6	36,127	33,116	0.002	0.6
B	2/2/01	25	99.4	34,625	31,947	0.001	0.3
C	2/2/01	25	97.0	36,981	33,724	0.001	0.3
D	2/1/01	25	98.3	36,219	32,955	0.001	0.4
E	2/2/01	25	92.6	36,644	33,587	0.0007	0.2
F	2/2/01	25	97.9	38,541	35,414	0.0008	0.3
AVERAGE		25	97.3	36,523	33,457	0.0011	0.35
TOTAL				219,137	200,743		2.1

Allowable Emissions (total of all stacks) = 26.0 lbs/hr
Emission rate (lb/hr) = A + B + C + D + E + F

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

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

MACFARLANE FERGUSON & McMULLEN
ATTORNEYS AND COUNSELORS AT LAW
400 NORTH TAMPA STREET, SUITE 2300
POST OFFICE BOX 1531
TAMPA, FLORIDA 33601
(813) 273-4200
(813) 273-4396

CLIENT/MATTER: 60856/10 User/Requester: WBT

FROM: William B. Taylor IV, Esquire	DATE: July 10, 2002
RE: Nitram Inc. DEP File No 0570029-007-AC	
TOTAL NO. PAGES (INCLUDING COVER): 9	

COMMENTS: Petition for Administrative Hearing attached for Filing

ATTENTION	FIRM	PHONE NO.	FAX NO.
Kathy Carter, Clerk	Office of General Counsel, DEP	850/488-9314	850/487-4938
Douglas Beason, Esq.	Office of General Counsel, DEP	850/921-9624	850/413-8977
Gerald Kissel	DEP, Southwest District, Air Permitting	813/744-6100 x107	813/744-6458

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MACFARLANE FERGUSON & MCMULLEN

ATTORNEYS AND COUNSELORS AT LAW

500 SOUTH FLORIDA AVENUE
SUITE 240
LAKELAND, FLORIDA 33801
(863) 680-9900 FAX (863) 683-2849

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(813) 273-4200 FAX (813) 273-4396

625 COURT STREET
P.O. BOX 1669 (ZIP 33757)
CLEARWATER, FLORIDA 33756
(727) 441-8966 FAX (727) 442-8470

IN REPLY REFER TO:

July 10, 2002

Tampa

VIA FACSIMILE

Kathy Carter, Clerk
Office of General Counsel
Florida Department of Environmental Regulation
3900 Commonwealth Blvd
Mail Station 35
Tallahassee, Florida 32399-3000

Re: Nitram, Inc. DEP File NO. 0570029-007-AC

Dear Ms. Carter:

Enclosed for filing is Nitram, Inc.'s Petition for Administrative Hearing. If you have any questions, please don't hesitate to contact me. Thank you.

Sincerely,

Karen Blakely

Karen K. Blakely
Paralegal to
William B. Taylor, IV

KKB/
Enclosure
c: Mr. Dan Ross

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NITRAM, INC.

Petitioner,

vs DEP File No. 0570029-007-AC

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondent.
_____/

PETITION FOR ADMINISTRATIVE HEARING

Petitioner, Nitram, Inc. ("Nitram"), hereby requests a formal administrative hearing, pursuant to Sections 120.569 and 120.57, Florida Statutes, pertaining to Nitram's challenge of a draft permit issued by Respondent, The Florida Department of Environmental Protection (the "Department"). In support of its Petition, Nitram states:

1. The name and address of the Petitioner is:

Nitram, Inc.
5321 Hartford Street
Tampa, Florida
(813)626-2181
(hereinafter referred to as "the Facility")

The mailing address is:

Nitram, Inc.
Post Office Box 2968
Tampa, FL 33601

2. The Facility which is the subject of this Petition is located at 5321 Hartford Street, Tampa, Florida. The DEP Permit File Number is 0570029-007-AC.

3. The state agency and its address is:

Florida Department of Environmental Regulation
Office of General Counsel
3900 Commonwealth Blvd
Tallahassee, FL 32399

4. Nitram received the Notice of Intent to Issue Permit of the Department action by U.S. Mail on or about June 6, 2002.

5. Preliminary Statement outlining issues of material facts in dispute and applicable laws/rules which the Department has misapplied or misconstrued - Nitram submitted an application dated October 1, 2001 for an air construction permit to increase the low density prill production rate in its Ammonium Nitrate Prill Tower No. 2. Nitram had previously met with representatives of the Department to discuss whether the increase in the low density prill production rate would be considered a "modification" of the facility, as that term is defined by Prevention of Significant Deterioration ("PSD") air permitting rules. The current Title V permit limits low density prill ("LDP") at 25 tons/hour and high density prill ("HDP") at 50 tons/hour. Prior to the Title V application, there was no federally enforceable production limit for LDP. When Nitram filed its Title V application and received a returned draft from the Department, Nitram inadvertently accepted the 25 tons/hr LDP limitation. At the meeting with the Department, Nitram requested an administrative permit amendment under Chapter 62-210.360, F.A.C. to enable it to produce LDP at the same maximum production rate that is currently allowed for HDP. Nitram's position is that there is no regulatory distinction between the production of prill whether it be LDP or HDP, with

respect to the PSD air permitting rules. Nitram's position was that the request to change the LDP production rate from 25 tons/hr to 50 tons/hr in the permit would not result in an increase in actual emissions and would not constitute a "modification" for PSD review purposes.

It was on the suggestion of the Department that Nitram filed the subject construction permit application as the expedient means of obtaining the desired permit change. Nitram contended that such construction permit filing was not necessary under the applicable regulations but acceded to the request of the Department, relying upon representation by the Department that the construction permit would be processed with the change as requested and without further limitation on the ability of Nitram to produce LDP or HDP. Nitram contends that the requested prill production amendment should be processed as an administrative permit amendment under Chapter 62-210.360(1)(f), F.A.C. and Chapter 62-213.410(3), F.A.C.

After filing the construction permit and in response to the Department's Request for Additional Information on the application, Nitram identified additional permit language changes that would apply to the Prill Rotary Drums, which immediately follow the Prill Tower and to make permit provisions for the Rotary Drums consistent with the permit language changes requested for the Prill Tower. At the request of the Department and in order to show that the requested LD prill production change would not result in increased emissions, thereby constituting a "modification," Nitram conducted a special particulate matter stack emissions test for the emissions from the wet scrubber on the Rotary Drums. The results of that test, in combination with other information presented to the Department, showed that the requested permit changes would not result in an increase in actual emissions or constitute a "modification."

The draft permit contains significant limitations beyond and unrelated to the LDP construction permit requested. For these reasons, this Petition is being filed.

6. The following are statements of material fact which are in dispute:

a. For PSD permitting purposes, there is no significant difference between LD and HD Prill. The Department claims there are relevant differences between the two products, which include differences in production parameters, additional additives, and a difference in physical equipment used for production. There is a dispute of fact between the parties as to whether there are differences between the HDP and LDP products which are significant enough as to be viewed separately for PSD air permitting purposes. The issue of fact is whether the increased production of LDP, as requested by Nitram, constitutes a "modification," of the facility as defined in Rule 62-210.200(183), F.A.C.

b. Whether the proposed LDP results in an increase in production rate under a federally enforceable permit condition and as defined by applicable PSD rule. Nitram contends, factually, that the products are the same for an analysis of whether an increase in LDP is an increase in production rate or whether LDP and HDP are to be deemed one product. Therefore, an increase in LDP is not an increase in production rate for permitting purposes. The facility's maximum annual allowable particulate matter emissions from the Prill Tower and from the Rotary Drums are based on the continuous operation of the units while producing HDP. The Department's air rules do not require the Department to limit the plant's production rate of LDP to a rate less than that specified for HDP to establish the facility's maximum annual allowable particulate matter emissions from the Prill Tower and from the Rotary Drums, or for any other air regulatory purpose.

c. Nitram challenges the methodology used by the Department to determine actual emissions of LDP/HDP; and whether the change would result in a "significant net emissions increase."

d. Nitram challenges the facts to support a required maximum combined total fuel usage limitation as a condition of the issuance of the subject permit.

e. Nitram challenges the limitation of 29.70 tons of particulate matter emissions from the Prill Tower and the Rotary Drums combined, during any consecutive twelve-month period, as a limitation in the subject permit.

f. Nitram submits, as an ultimate factual determination, whether the request for increasing the maximum hourly LDP production rate requires the application of PSD review and calculated emissions limits as is set forth in the proposed permit.

g. Should the proposed change subject the facility to review under the PSD rules, Nitram challenges the calculations applied by the Department in its determination of "significant net increase" in emissions. Under applicable rule, only if the result would result in a "significant net increase" in emissions, would the proposed change subject Nitram to permitting under the PSD rules. The Department contends that each fuel or raw material from the Prill Tower and Rotary Drums is reviewed separately for calculation purposes rather than in combination. There is, therefore, an issue of fact and applicable law which pertains to this issue.

h. The Department has viewed the application to require that, since Nitram is requesting an increase in LDP from 25 to 50 tph, that a PSD "current actual to potential future" PM

emissions increase calculation be made. That to avoid PSD review, the net PM emissions increase resulting from processing LDP must be less than 15 tons/year, which would be the significant increase threshold for PM_{10} found in the PSD rule.

i. Nitram contends that it has demonstrated that LDP produces significantly less PM emissions per ton of Prill and, therefore, negates the Department's determination that an increase in LDP would constitute a "modification."

j. Nitram has submitted evidence to the Department that if it produces relatively more of a less polluting product, that such increase in production on an annual average, decreases actual emissions, and therefore, increasing the relative amount of LDP made is not the type of operational change that constitutes a modification under the PSD rule. As such, the request for LDP increase in production is not a modification and, therefore, not a significant net emissions increase, therefore, no significant net emissions increase calculation is required. The PSD significant increase amounts, therefore, do not apply to the requested change. This is the crux of this administrative challenge.

k. Nitram challenges the following statement contained in the subject permit as being factually and legally wrong and an impermissible application of Department rule:

> In order to avoid PSD permitting requirements of Rule 62-212.400, F.A.C. and comply with a significant emission levels shown on Table 62-212.400-2, F.A.C., the Ammonium Nitrate Prill Tower Number 2 and Prill Rotary Drum, 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 PM_{10} 15 tons as shown in Table 62-212.400-2, these emissions units were allocated a combined total of 29.79 tons of PM_{10} emissions per year.

1. Nitram challenges the fact justification for the imposition of material additions and changes to its Title V permit which are not related at all to the issues presented in the construction permit application.

7. The applicable regulations and law are 40 CFR 60, subpart G, Standards of Performance for Nitric Acid Plants and Chapters 62-204.800(7)(b)(9), F.A.C., 62-210.200, F.A.C., 62-210.360(1)(f), F.A.C., 62-212.300, F.A.C., 62-212.400, F.A.C., 62-213.410(3), F.A.C., 62-296.320, F.A.C., 62-296.408, F.A.C., and 62-400, F.A.C.

8. The Petitioner seeks as its relief the prompt issuance of the air construction permit as requested in the application, as amended, or a determination that an administrative change to its Title V permit is the alternative means to permit the requested relief.

I HEREBY CERTIFY that a true and correct copy of the foregoing has been filed via Facsimile Filing (850/487-4938) with the Clerk of the Office of General Counsel, Attention Kathy Carter, Florida Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, FL 32399-3900 and a copy furnished via facsimile (850/413-8977) to Douglas Beason, Esq., Office of General Counsel, Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, FL 32399-3900 and via facsimile (813/744-6458) to Gerald Kissel, Department of Environmental Protection, Southwest District, Air Permitting, 3804 Coconut Palm Drive, Tampa, FL 33619on this 10th day of July, 2002.

WILLIAM B. TAYLOR IV, ESQ.
Fla Bar No. 144329
PATRICK T. LENNON, ESQ.
Fla. Bar No. 836818
MACFARLANE FERGUSON & MCMULLEN
Post Office Box 1531
Tampa, Florida 33601
Telephone (813) 273-4200
Facsimile (813)273-4396
E-Mail: wbt@macfar.com
Attorneys for Petitioner

H:\WBTMAIN\NITRAM\ADMINISTJHRG\PETITION4.ADM.Final.wpd

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

FACSIMILE TRANSMISSION SHEET

DATE 6-11-02

TO: JOHN REYNOLDS

Department DARM

Phone _____ Fax _____

FROM: JIM McDONALD
DEP Southwest District Office - Air Program
Phone: (813) 744-6100 (SunCom 512-1042) Ext. 106

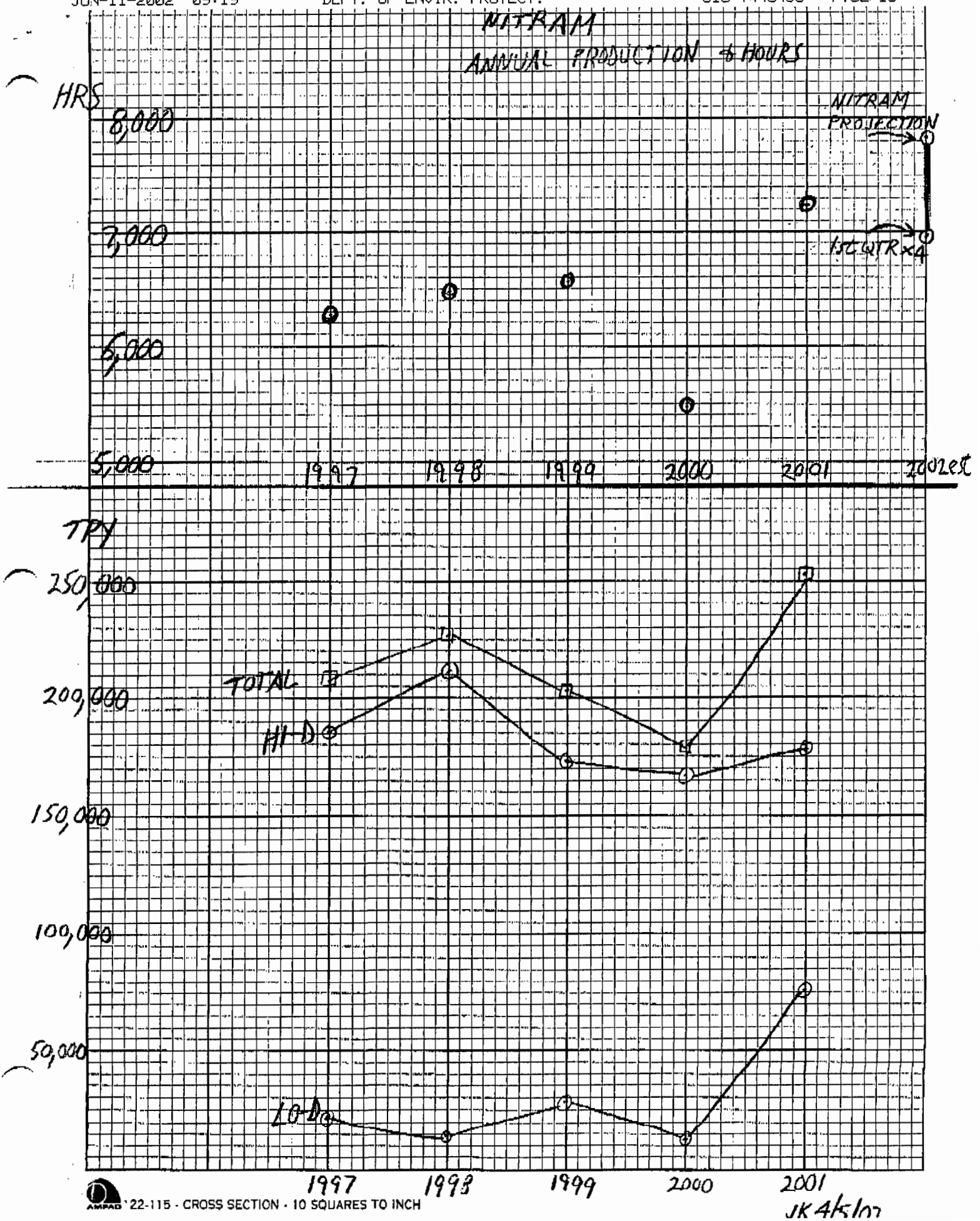
OPERATOR: _____

SUBJECT: NITRAN INFO

I re-did pages 2 + 3 of the calculations to show JERRY's "POST ITS" NOTES

Total Number of Pages, Including Cover Page: 10

DEP SWD AIR PROGRAM FAX NUMBERS: (813) 744-6458
(Suncom) 512-1073


MITRAM
ANNUAL PRODUCTION & HOURS
HRS
8,000
7,000
6,000
5,000
MITRAM PROJECTION
1ST QTR x 4
1997
1998
1999
2000
2001
2002est
TPY
250,000
200,000
150,000
100,000
50,000
TOTAL
HI-D
LO-D
1997
1998
1999
2000
2001
AMPAD 22-115 - CROSS SECTION - 10 SQUARES TO INCH
JK 4/5/01

ATTACHMENT 3

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

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)		EFs(lb/Ton)	EFc(lb/Ton)	
1988	1985	HD	50.0	20.5	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	48.0	15.6	26.0	0.322	0.342	
	1994	HD	53.0	15.5	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	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			25.0	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

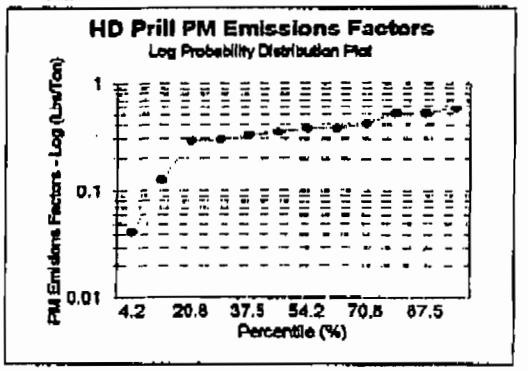
Analysis of Variance

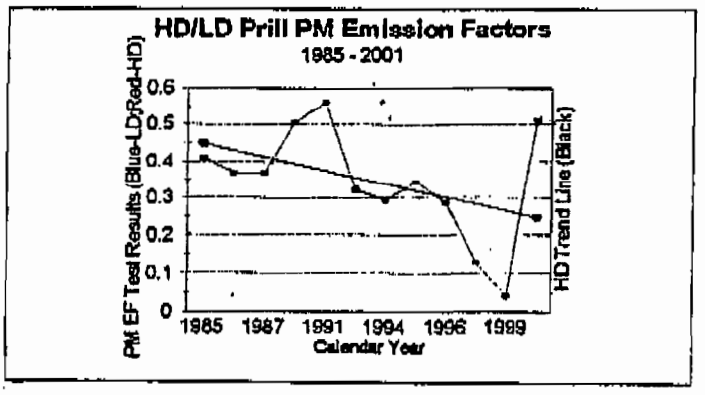
	df	Sum of Squares	Mean Square	F	Significance F
Regression	1.000	0.055	0.055	2.787	0.126
Residual	10.000	0.198	0.020		
Total	11.000	0.253			

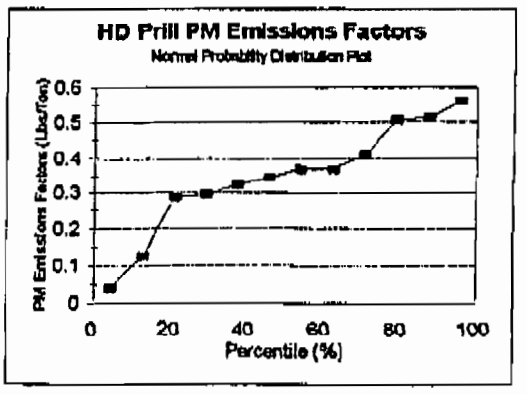
	Coefficients	Standard Error	t Statistic	P-value	Lower 95.00	Upper 95.00
Intercept	27.318	16.157	1.691	0.119	-8.681	63.318
Yr	-0.014	0.008	-1.669	0.123	-0.032	0.005

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	-0.136
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	0.265	1.886

Percentile	EFs(lb/Ton)
4.2	0.042
12.5	0.128
20.8	0.268
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







HL-29-126860

Rec'd Oct 27, 1986

PAID NOV 4 1986

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Scrubber 500.00 [ ] New[1] [X] Existing[1]

APPLICATION TYPE: [ ] Construction [X] Operation [ ] Modification

COMPANY NAME: Nitram, Inc. COUNTY: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) No. 2 Prill Plant Rotary Drum Scrubber

SOURCE LOCATION: Street 5321 Hartford Street City Tampa

UTM: East 353150M North 308900M

Latitude 82 ° 23 ' 50 "N Longitude 27 ° 54 ' 40 "W

APPLICANT NAME AND TITLE: Daniel E. Ross, Technical Manager

APPLICANT ADDRESS: P. O. Box 2968, Tampa, FL 33601

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Nitram, Inc.

I certify that the statements made in this application for a Operation permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: [signature]

Daniel E. Ross, Technical Manager
Name and Title (Please Type)

Date: 10/24/86 Telephone No. 813/626-2181

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: [signature]

Daniel E. Ross
Name (Please Type)

(Affix Seal)

Nitram, Inc.
Company Name (Please Type)

P. O. Box 2968, Tampa, FL 33601
Mailing Address (Please Type)

Florida Registration No. 29525 Date: 10/24/86 Telephone No. 813/626-2181

See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

Section V: SUPPLEMENTAL REQUIREMENTS

1. Total Process Input Rate/Product Weight:

The Prill Plant is designed to manufacture two grades of Ammonium Nitrate Prills: Low Density and High Density. When manufacturing Low Density Prills, the plant capacity is 500 ST/D, and recycle at the screening operation and scrubbing is 10%. To manufacture Low Density, all three rotary drums are in service.

When manufacturing High Density, the plant capacity is 1200 ST/D, again with a 10% recycle rate. Only one drum, the cooler, is operated, but it is drafted with two fans, so air flow through this vessel is higher.

2. Emission Estimate

The subject unit has not had an isokenetic test (EPA Method 5) run on it, but visible emissions are less than 5%, so emissions are estimated at less than 0.03 Gr/CF. For calculation purposes, assume 0.03 Gr/CF. The actual emissions will be tested and reported.

Case I: LOW DENSITY PRODUCTION:

A. Feed to Predryer Wet Cyclone

Air Rate	67,500 lb/Hr	= 2,330 lb moles/Hr
H_2O Vapor	2,650 lb/Hr	= 147 lb moles/Hr
0.0393 lb H_2O/lb. D.A.		2477 lb moles/Hr
Temp. Range = 150-175°F		T_{wb} = 105 - 108°F
		R.H. = 20% - 12.5%
Sat'd. Air (adiabatic)		= Wet Bulb
		=.05 - .052 #H_2O/#D.A.

Volume Flow Rate @ Inlet

$$pV = nRT$$
$$(15.7)V = (2477)(10.731)(460 + 165)/60$$
$$V = 17,636 \text{ ACFM}$$

B. Feed to Dryer Wet Cyclone

Air	36,000 lb/Hr	=	1243 lb mole/hr
Water Vapor	1,400 lb/Hr	=	78 lb mole/hr
			1321 lb/mole/hr

0.039 lb H_2O/lb D.A.

Temp. Range = 130 - 175°F T_{wb} = 102 - 108°F

R.H. = 35 - 12.5%

Sat'd. (Adiabatic) = 0.045 - 0.052 lb/lb
Volume Flow Rate 9405 ACFM

C. Feed to Cooler Cyclone

Air	61,000 lb	2,106 lb mole/Hr
$H_2O_{(g)}$	1,500 lb	83 lb mole/Hr
Temp	100 - 120°F	2,189 lb mole/Hr
	0.024 lb/lb	

T_{wb} = 87°F to 90°F

Adiabatic Sat'n. 0.029 - 0.031 lb/lb

$pV = nRT$

$$(15.7)V = \frac{(10,731)(110 + 450)(218}{60}$$

V = 14,200 ACFM

D. Feed to Scrubber

1. Air from each cyclone is saturated and has been adiabatically cooled to saturation.

2. Assume average values of ranges

	# Air	#H_2O/# Dry Air	#H_2O	Temperature °F
Predryer	67,500	0.051	3443	107
Dryer	36,000	0.049	1746	105
Cooler	61,000	0.030	1830	89°
	164,500 lb/Hr		7019	

Weighted Average Temperature 104°F

Humidity 0.043 #H_2O/#D.A.

T_{wb} 101°F

When adiabatically cooled in Scrubber, Sat'd. Humidity = 0.044#H_2O/#D.A.

E. Total Emissions

$$\frac{164,500 \text{ lb/Hr} \times 379.49 \text{ SCF}}{(28.8 \text{ lb/lb mole})(60 \text{ min/Hr}) \text{ lb mole}} = 36,126 \text{ SCFM}$$

$$\frac{36,126 \text{ SCFM} \times .03 \text{ Gr/SCF} \times 60 \text{ M/Hr}}{7000 \text{ Gr/lb}} = 9.29 \text{ lb/Hr}$$

$$\frac{9.29 \text{ lb/Hr} \times 8760 \text{ Hr/yr}}{2000 \text{ lb/T}} = 40.7 \text{ T/yr}$$

F. Potential Emissions: From "Ammonium Nitrate Industry Technical Document", EPA 450/381-002, Jan, 1981, Inlet loading is 262 lb/T.

$$\frac{262 \text{ lb/T} \times 500 \text{ T/D} \times 7000 \text{ Gr/lb}}{(1440 \text{ min/D})(36{,}126 \text{ Ft}^3\text{/min})} = 17.6 \text{ Gr/SCF}$$

$$\frac{262 \text{ lb/T} \times 500 \text{ T/D}}{24} = 5460 \text{ lb/Hr}$$

$$\frac{5460 \text{ lb/Hr} \times 8760 \text{ Hr/yr}}{2000} = 23{,}910 \text{ T/yr}$$

G. Efficiency

$$\text{Efficiency} = \left(1-\left(\frac{\text{outlet loading}}{\text{inlet loading}}\right)\right) \times 100$$

$$= \left(1-\frac{.03}{17.6}\right) \times 100 = 99.83\%$$

Case II: HIGH DENSITY PRODUCTION:

A. Estimated Emissions:

High Density Production uses only the Predryer Fan and the Cooler Fan, ducted so that the air all flows through the Cooler Drum.

Assume Ambient Conditions 85°F, 85% R.H.

Cooler Air Flow to Cyclones

	Air, lb/Hr	H_2O, lb/Hr
Predryer Fan	67,500	1490
Cooler Fan	61,000	1340
	128,500	2830

$$\frac{128{,}500 \text{ lb/hr} \times 379.49 \text{ SCF/lb mole} \times .03 \text{ Gr/SCF}}{(28.8 \text{ lb/lb mole})(7000 \text{ Gr/lb})} = 7.26 \text{ lb/Hr}$$

B. Potential Emissions:

Original Emission Rate: 262 lb/T from 3 drums

Effect of increased velocity: $= (128{,}500 \text{ lb/Hr}/61{,}000 \text{ lb/Hr})^{\frac{1}{4}}$

Velocity Factor = 1.45 but now using 1 drum, not 3.

New Inlet Loading $\frac{1.45 \times 262}{3} = 127$ lb/T

127 lb/T × 1200 T/D ÷ 24 = 6350 lb/Hr

$$\frac{6350 \text{ lb/Hr} \times 7000 \text{ Gr/lb} \times 28.8 \text{ lb/lb mole}}{2000 \text{ lb/T}} = 27{,}810 \text{ T/yr}$$

C. Efficiency

$$\text{Efficiency} = \left(1 - \frac{.03}{26.3}\right) \times 100$$

$$\text{Efficiency} = 99.89\%$$

Temp. Range = 130 - 175°F T_{wb} = 102 - 108°F

R.H. = 35 - 12.5%

Sat'd. (Adiabatic) = 0.045 - 0.052 lb/lb
Volume Flow Rate 9405 ACFM

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	0.024 lb/lb	

$$pV = nRT$$

$$(15.7)V = \frac{(10,731)(110 + 450)(2189)}{60}$$

T_{wb} = 87°F to 90°F

Adiabatic Sat'n. 0.029 - 0.031 lb/lb V = 14,200 ACFM

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	164,500 lb/Hr		7019	

Weighted Average Temperature 104°F

Humidity 0.043 $\#H_2O/\#D.A.$

T_{wb} 101°F

When ad [illegible] .n Scrubber, Sat'd. Humidity = 0.044$\#H_2O/\#D.A.$

When these equations work backward from the emission standard RACT of .03, they're not very useful for current analysis —JK 1/02

E. Total F[illegible]

$\frac{164,50[illegible]}{(28.8\ [illegible])}$ [illegible]F [illegible]) lb mole = 36,126 SCFM

$$\frac{36,126 \text{ SCFM} \times .03 \text{ Gr/SCF} \times 60 \text{ M/Hr}}{7000 \text{ Gr/lb}} = 9.29 \text{ lb/Hr}$$

$$\frac{9.29 \text{ lb/Hr} \times 8760 \text{ Hr/yr}}{2000 \text{ lb/T}} = 40.7 \text{ T/yr}$$

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Cooler Air Flow to Cyclones

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Predryer Fan	67,500	1490
Cooler Fan	61,000	1340
	128,500	2830

128,50(7.26 lb/Hr
(28.(

from this file?

B. Potent:

Origin: low density cyclone scrubber inlet loading

Effect = 5460 lb/hr at 500 T/DAY, or $\frac{500}{24}$ = 20.8 tph /Hr)½

New In so for 35 tph, $5460\left(\frac{35}{20.8}\right)$ = 9188 lb/hr um, not 3.

127 lb hi-density = 6350 lb/hr @ 50 tph

(9188/6350) = 1.45

NN 1/7/02

Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

FACSIMILE TRANSMISSION SHEET

DATE 8-6-02

TO: STERLIN WOODARD / AL LINERO

Department EPCHC / DARM - BAR

Phone _____ Fax _____

FROM: JIM McDONALD
DEP Southwest District Office - Air Program
Phone: (813) 744-6100 (SunCom 512-1042) Ext. 106

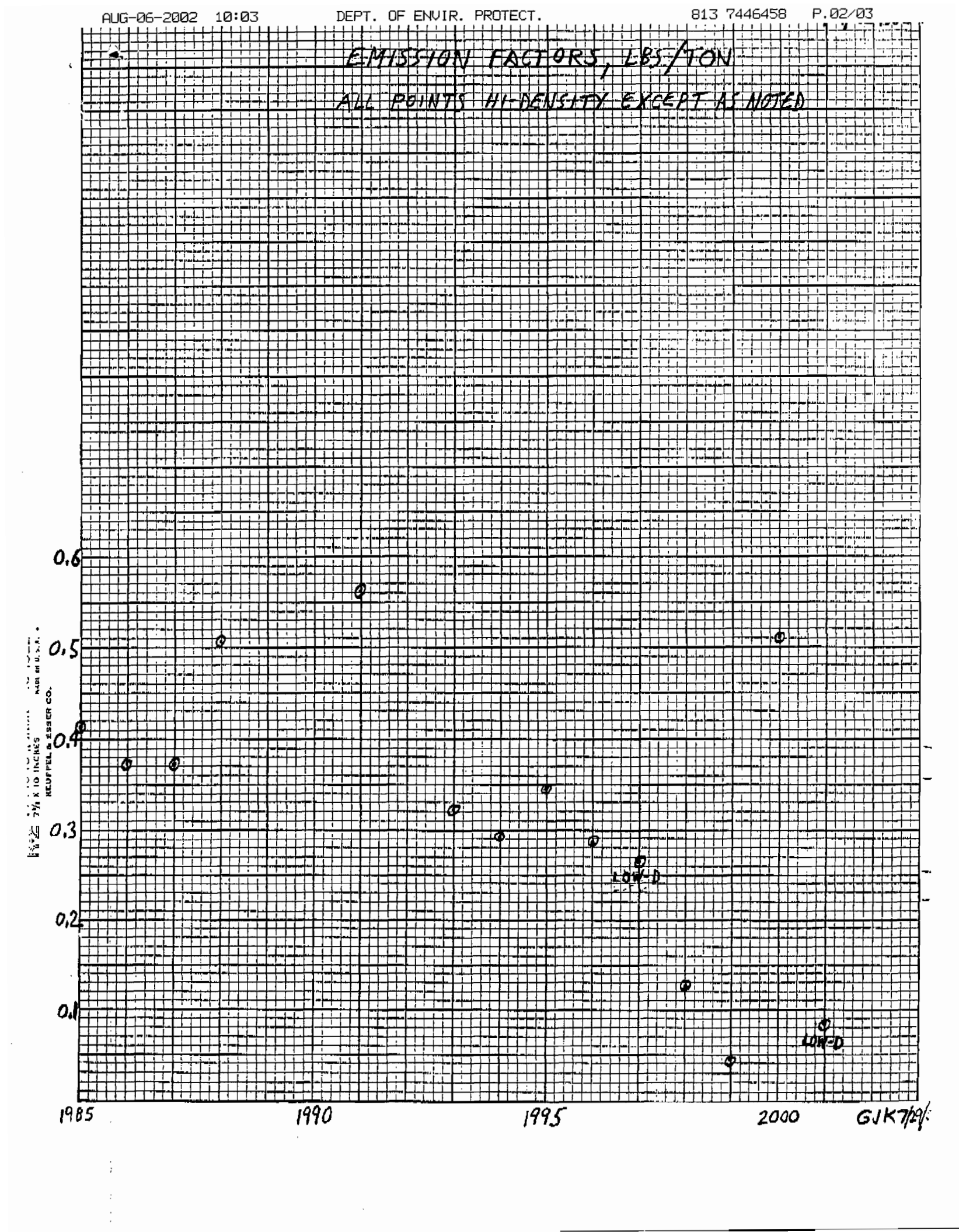
OPERATOR: _____

NITRAM

SUBJECT: JERRY KISSEL AND I WOULD LIKE TO HAVE A TELECONFERENCE WITH BOTH OF YOU ON THURSDAY AT 10:00 A.M. TO DISCUSS THE ATTACHED 2 SHEETS. LET ME KNOW IF THIS TIME IS A PROBLEM

Total Number of Pages, Including Cover Page: 3

DEP SWD AIR PROGRAM FAX NUMBERS: (813) 744-6458
(Suncom) 512-1073


EMISSION FACTORS, LBS/TON
ALL POINTS HI-DENSITY EXCEPT AS NOTED
0.6
0.5
0.4
0.3
0.2
0.1
LOW-D
LOW-D
1985
1990
1995
2000
GJK 7/29/
KEUFFEL & ESSER CO.

	1st	2nd
1993	0.3224	0.3224
1994	0.2943	0.2943
1995	0.3451	0.3451
1996	0.2877	0.2877
1997	0.2683	0.2683
1998	0.1283	0.1283
1999	0.0415	0.0415
2000	0.5122	-------
2001	0.0840	0.0840

3rd 4

5 yrs

2 yrs.

2.2838 div. by 9 = 0.2538 lbs./ton

1.7716 div. by 8 = 0.2215 lbs./ton

Strict construction, using 2000 & 2001 = 0.2980 lbs./ton

using 1997 – 2001 average = 0.2070 lbs./ton

1st

1999: 212,038 tons/yr. x 0.2538 lbs./ton x 1 ton/2000 lbs. = 26.907622 tons/yr. ~ 26.91 tons/yr.

2001: 267,630 tons/yr. x 0.2538 lbs./ton x 1 ton/2000 lbs. = 33.962247 tons/yr. ~ 34.00 tons/yr.

Example: 230,000 tons/yr. x **0.3902** lbs./ton x 1 ton/2000 lbs. = 44.87 tons/yr.

2nd

1999: 212,038 tons/yr. x 0.2215 lbs./ton x 1 ton/2000 lbs. = 23.483209 tons/yr. ~ 23.48 tons/yr.

2001: 267,630 tons/yr. x 0.2215 lbs./ton x 1 ton/2000 lbs. = 29.640023 tons/yr. ~ 29.64 tons/yr.

Example: 230,000 tons/yr. x **0.3563** lbs./ton x 1 ton/2000 lbs. = 40.987 tons/yr.

Products

Low Density Prilled Ammonium Nitrate

- Ammonia
- Methanol
- DNA / SNA
- CNA
- LDAN
- Nitro Phosphate

LOW DENSITY PRILLED AMMONIUM NITRATE | UNCOATED AMMONIUM NITRATE

Deepak Fertilisers And Petrochemicals Corporation Limited is one of the largest producers of Low Density Prilled Ammonium Nitrate (OPTIMEX) with installed capacity of 36,000 MT per year at Taloja near Mumbai.

ASSURED YEAR-ROUND SUPPLY

Consistent supply of Natural Gas in Deepak's own gas pipeline guarantees an uninterrupted stock for Ammonia and in - turn, Nitric Acid, which are manufactured in-house,effecting purity and availability of ultimate product i.e. Ammonium Nitrate.

INTERNATIONAL TECHNOLOGY

World's finest know-how and technology from Stamicarbon bv. Netherlands guarantees consistent, high purity, low density, free flowing Prilled Ammonium Nitrate.

SPECIFICATIONS	
Form	: Round, Uniform prills
Purity	: 99.8% on dry basis
Size	: Smaller than 1.4 mm 04% max Smaller than 1.8 mm 28% max Smaller than 202 mm 72% max
Moisture	: 0.2% max by weight
Bulk Density	: 750 To 850 Kg/M3
Particle Density	: 1460 Kg./M3 (Max)
Hardness	: 20 Kg/CM2
Sulphates	: 100 PPM (max)
Chlorides	: 10 PPM(max)
Characteristics	: Free flowing
Shelf Life	: More than three months with proper storage
Oil Absorption/Retention	:7.5 cc of oil per 100 gm of prills
Nonvolatile Matter	: 0.1% (max by weight)
Matter insoluble in Water	: 0.5 % (max)

USES :

Low density, free flowing Optimex brand prilled Ammonium Nitrate is used for making Ammonium Nitrate - Fuel Oil (ANFO) blasting agents as well as Emulsified ANFO (HANFO) which are used for the following applications :

1. Opencast mining
2. Underground metalliferrous mining

3. Construction Industry
4. Projects etc.

PACKAGING AND SUPPLY :
Optimex is supplied in 50 Kg laminated HDPE bags with LDPE liners.

STORAGE :
Optimex is recommended to be stored on wooden pallets inside weather protected warehouses with aisle space all around. may be stored in HM - HDPE containers.

The information contained herein is based on technical data and tests which we believe to be reliable. However, we assume no responsibility for results obtained or damage, if any, incurred through the application of data given, since conditions of use are outside our control.

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