

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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From _____	Date _____

Interoffice Memorandum

TO: Scott Sheplak
Bill Schroeder (EPCHC)
Andy Kutyna
Mirza Baig

FROM: Bill Thomas *WCT*

DATE: February 5, 1992

SUBJ: Ammonia MOU

RECEIVED

FEB 7 1992

Division of Air
Resources Management

Attached is the Phosphate Industry response to the Draft MOU forwarded to them recently. Please peruse and consider for further comment.

I will schedule a meeting with the Florida Phosphate Council and advise you of the time and place. I plan to schedule a meeting of our committee prior to meeting with the Council.

WCT/vsa

Attachment



D.E.R.

JAN 30 1992

SOUTHWEST DISTRICT
TAMPA

- Reply to:
- 830 First Florida Bank Building
215 South Monroe Street
Tallahassee, Florida 32301
Telephone 904/224-8238
FAX 904/224-8061
 - Suite 24, Executive Plaza
4406 S. Florida Avenue • P.O. Box 5530
Lakeland, Florida 33807-5530
Telephone 813/646-8583
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January 20, 1992

Mr. Bill Thomas
State of Florida Department
of Environmental Regulation
Southwest District
4520 Oak Fair Boulevard
Tampa, FL 33610-7347

Re: Ammonia MOU

Dear Bill:

Thank you very much for forwarding to us the Department's revised draft version of the Memorandum of Understanding (MOU) on ammonia management. We forwarded the draft on to the appropriate Council technical committee for review and a special meeting for this purpose was held on January 14, 1992.

We have attached a further revision of the draft MOU reflecting suggested changes by the member companies. To assist you in your evaluation, we have prepared the attached revised draft in the ~~strike-through~~ and underline format to show where changes have been suggested.

The changes to Part I of the MOU are largely self explanatory and generally reflect a view by member company representatives that certain of the proposed requirements were unnecessary or impractical.

With regard to Part II.B. you will note that we have proposed deletion of certain of the presumptive minimum operating standards that were contained in the draft provided to us. Essentially, the member company representatives believe that such operating procedures will need to be established on a case-by-case basis for each permittee.

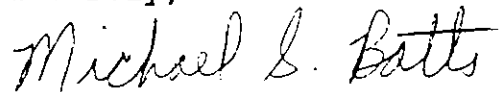
Finally, we have deleted your proposed Part III. This should not be interpreted, however, as a rejection of the concept of modelling. To the contrary, the member

Mr. Bill Thomas
January 20, 1992
Page 2

companies have indicated a willingness to implement modelling under appropriate terms and conditions.

After you have had a chance to review the attached proposed revision, I suggest that it would be appropriate for us to get together with technical committee representatives to continue our discussions on this matter. We are ready to proceed at your convenience.

Sincerely,



Michael S. Batts
Assistant Vice President
Environmental Affairs

MSB/cb
Attachment
cc: Air Quality Committee
FPC Staff

1/20/92
Draft

MEMORANDUM OF UNDERSTANDING

DER

BEST MANAGEMENT PRACTICES FOR ANHYDROUS
AMMONIA STORAGE AND HANDLING AND BEST
OPERATIONAL START UP/SHUT DOWN AND OPERATING
PRACTICES FOR DIAMMONIUM PHOSPHATE AND
MONOAMMONIUM PHOSPHATE GRANULATION FACILITIES

I. ANHYDROUS AMMONIA STORAGE AND HANDLING

- A. Recommendations detailed in the American National Standards Institute, Inc. (ANSI) Standard K61.1-Safety Requirements for the Storage and Handling of Anhydrous Ammonia-shall be followed where applicable.
- B. Pressurized ammonia storage and handling equipment shall be operated at a pressure no greater than the engineering design pressure. The pressure level of the ammonia storage vessel will be continuously recorded in the plant control room or the operator control station. Alarms will be used to detect high pressure in ammonia storage vessels. Audio and visual alarms will be set at least ~~±0%~~ 5% below the relief (pop-off) setting and will be located in the plant control room or the operator control station.
- C. Noncondensable gases shall not be allowed to accumulate in the head space of pressurized ammonia storage tanks.
- D. All valve stem packing, pump packing, pipe flanges and heat exchanger flanges shall be inspected ~~daily~~ regularly for evidence of leakage. Any leakage shall be corrected promptly. ~~A record of each inspection shall be made.~~
- E. All temporary piping connections used to transfer liquid or gaseous ammonia to or from a transport container to a permanent container shall be emptied of liquid ammonia before disconnection unless supplied with an end shut-off valve. The emptying process shall be done by either displacing the liquid with gaseous ammonia or by use of a flare system or by discharging the liquid ammonia into a sufficiently large water container with a flow of water continually moving through the container provided that ANSI K-61.1, Standard 4.4.1., shall be followed if the latter procedure is used.
- ~~--F. Check all relief valves after plant upsets, downtime etc. for their proper operating condition.~~
- G.F. All mechanical pressure relief valves greater than 1 inch shall be serviced, repaired, tested, and certified and sealed every five years. All needed repairs and replacements shall be promptly performed.

- H:G. Storage containers shall be filled to a maximum liquid level not to exceed 80% 90% of the container's total volume.
- F:H. All ammonia storage vessels will have non-destructive testing every six years.
- J:I. All connected ammonia rail cars will display the appropriate flags and rail car wheels will be chocked and derailleurs installed in accordance ANSI K61.1, Standard 8.4.

II. DAP/MAP OPERATIONAL PRACTICES

A. Startup

1. Acid recirculation shall be started and verified before the scrubber fan(s) are started and before any process flows are started. All scrubber liquid flows shall be established (both acid and tail gas) prior to starting the scrubber fans. Process flows shall be started only after establishing equipment ventilation to the scrubber.
2. If the pre-neutralizer has been emptied, the operator shall ~~inspect insure that~~ the ammonia sparging system ~~for-its proper-operation is properly operating~~ and shall fill the pre-neutralizer with phosphoric acid or slurry to a minimum operating level before ammonia flow is started through the vessel.
3. After the granular recirculation system has been started, ammonia and slurry feeds shall be brought into the granulator as simultaneously as practicable.

B. Operating Procedures

1. The operator shall monitor the pressure drop across the scrubber systems and promptly correct the cause of any upset condition. In the event of a failure of the acid recirculation, the operator shall immediately, in a controlled manner, shut down process in-feeds and correct the problem before resuming production.
2. Acid flow to the ammonia scrubbers shall be continuously recorded ~~and equipped with a low flow alarm.~~

The pressure drop across the acid scrubbers shall be continuously recorded ~~and equipped with an alarm to indicate delta P's outside of 90-110% of the delta P from baseline operating conditions.~~

The minimum acid flow and delta P shall be in accordance with the air operating permit. ~~---If not specified in the operating permit, the minimum flow and delta P shall be 90% of the average numbers recorded in the most recent successful compliance test for fluorides (F).---The plant~~

~~shall be shut down and corrections made to avoid below 90% readings.~~

~~The final ammonia scrubber circulating acid mole ratio shall be determined and recorded at a minimum, every 2 hours, and shall always be maintained not to exceed 1:0 N/P.~~

3. Those plants with a tail gas scrubber and dedicated pond shall continuously monitor and record pH in all circulation water. ~~The pH shall be maintained below 7.0.~~

4. ~~All equipment that is evacuated to an acid scrubber shall be inspected daily for evidence of inadequate evacuation. Any malfunction shall be corrected promptly. A record of each inspection shall be made.~~

C. Shutdown Procedures

1. The operator shall shut down all ammonia flows to the pre-neutralizer ~~and granulator~~ before process acid flow shut-off. Ammonia flow to the granulator shall be shut off as soon as practicable to allow drying of the bed following shut off of slurry flow. During plant shutdowns where the pre-neutralizer cannot be emptied, ammonia shall be fed in small quantities as required to maintain slurry chemical controls only when effective scrubbing is in operation.

2. The operator shall maintain recirculation acid flows in all process scrubber systems during the shutting down of process acid and ammonia in-feed.

III. BASELINE OPERATING CONDITIONS [DELETED ENTIRELY]

The parties jointly agree that the ammonia storage and handling procedures for phosphate fertilizer manufacturing facilities set forth in Part I above constitute best management practices designed to minimize excess emissions of ammonia and further agree that the operational procedures set forth in Part II above constitute "best operational practices" for the startup, operation and shutdown of granular diammonium and monoammonium phosphate (DAP/MAP) fertilizer plants for the purposes of Rule 17-2.250 Florida Administrative Code (FAC).

Violations of Rule 17-2.620 FAC may indicate pollution control equipment deficiencies.

The operational practices outlined in Part II above are applicable only to the production of granular diammonium and monoammonium phosphates in a continuous TVA type process. The best operational practices for other types of DAP/MAP facilities shall be established by the Department in coordination with the owner/operator on a case-by-case basis.

The owner/operator shall maintain a log of all ammonia releases including those reportable under the SARA requirements and shall make the log available for inspection by the Department upon Request.

All records required by this MOU shall be maintained for at least 2 years after the date of recordation and be made available for inspection by the Department upon request.

These best management practices and best operational practices shall be made available in the control room at all times.

Amendments to this MOU ~~shall be~~ approved by the Department and agreed to by the Permittee in writing and shall become part of the MOU.

Steve Smallwood, P.E. (Date)
Director, Division of Air
Resources Management
Department of Environmental
Regulation

(Permittee) (Date)

(FACILITY NAME)

Dr. Richard Garrity (Date)
Director of District Management,
Southwest District
Department of Environmental
Regulation

Ernie Frey (Date)
Director of District Management
Northeast District
Department of Environmental
Regulation