Florida Department of Environmental Protection

Northwest District
160 Governmental Center, Suite 308
Pensacola, Florida 32502-5794

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Mimi A. Drew
Secretary

November 19, 2010

By Electronic Mail, Received Receipt Requested
tnmont@ascendmaterials.com

Mr. Timothy N. Montgomery
Chemicals & Utilities Plant Manager
Ascend Performance Materials
Post Office Box 97
Gonzalez, Florida 32560-0097

Dear Mr. Montgomery:

This is to acknowledge receipt of your application, file number 0330040-035-AC, for the Ascend Performance Materials Pensacola Plant in Escambia County. This letter constitutes notice that a permit will be required for your project pursuant to Chapter 403, Florida Statutes.

Your application for permit is incomplete. Please provide the information listed below within 90 days of receipt of this letter. Evaluation of your proposed project will be delayed until all requested information has been received. References made below to "Application" refer to DEP Form No. 62-210.900(1), Effective March 11, 2010 and its instructions.

1. In the permit 0330040-034-AC application to go from 850 to 930 MAR, there were changes and/or replacements in the Area II Adipic Acid (EU 002) to pumps, motor sizes, distillation columns and impellers. Emissions from these changes were included in the .5 lb/ton emission factor from AP-42 previously used to estimate VOC emissions from the entire adipic refining area. Fugitive emissions from these changes do not seem to be included in the current application. Please clarify how fugitive emissions from the adipic process are accounted for in the new analysis for the current permit. Please provide emissions calculations for these fugitives showing all calculations and providing references to any factors used to go from 850 to 990 MAR. [Rule 62-210.370(2)(g) F.A.C.]

2. NO_X baseline actual emissions must use CEMs emission data. Provide, in summary, the CEMs data used to calculate 524.9 tons per year, as shown in the Application, Section III, emissions Unit Information, Subsection F1., Emissions Unit Pollutant Detail Information, Item 8.a. [Rule 62-210.370(2) F.A.C.]

3. The use of baseline years for CO, NO_X, PM/PM_{10}, SO_2, and VOC did not consider the average rate in tons per year, as required by Rule 62-210.200(36)(b), F.A.C., but instead used the highest annual total based on annual operating report emissions. Provide corrected PSD emissions calculations from 850 to 990 MAR for all affected emissions units. Show all calculations and provide references to any factors.

4. Provide the Adipic Acid MAR operating rate during the VOC testing. [Rule 62-4.070(1), F.A.C.]

5. Provide a revised VOC emissions factor for the Adipic Process based on MAR, not on pounds of off gas. Provide VOC emissions factor for other affected processes based on appropriate process units. [Rule 62-4.070(1), F.A.C.]

6. The VOC Emission Study did not demonstrate the ability of Method 25A to identify and quantify all of the species that could reasonably be expected to be present in the adipic acid offgas and the Halcon offgas at the TRU inlet, and at the TRU outlet. Page 2 of the VOC emission study states, *"The process is designed to aggressively oxidize cyclohexane and cyclohexanol to adipic acid. Thus, based on the process chemistry low molecular weight aldehydes are not expected."* However, EPA literature on the adipic acid process indicates that the conversion of KA to adipic acid is in the 92-96% range. The disposition of any unreacted KA, as well as other compounds, such as benzene or oxygenated compounds that may be present in either the adipic acid offgas or the Halcon offgas, is not clear. Provide discussion, calculations, documentation and possible methods to validate the use of Method 25A (i.e., use of a known standard with given quantities of cyclohexanone, cyclohexanol, etc.) for measuring other compounds that may be present in either the adipic acid offgas, the Halcon offgas or the TRU outlet. [Rule 62-4.070(1), F.A.C.]

7. We concur with the use of the Water9 program to estimate emissions from the tanks in the adipic acid refining process. However, the number of turnovers per day estimated for the Refine Feed Tank (2.42) seems inconsistent with the adipic acid concentration given in the table on Page 4 of the study and a production rate of 850 MAR. Back- calculating the number of turnovers per day from 850 MAR suggests about 11 turnovers per day. Please reexamine this issue and provide updated calculations, if necessary. [Rule 62-4.070(1), F.A.C.]

8. The analysis of the samples from the tanks only looked for monobasic and dibasic acids, even though the analysis on Page 4 of the study indicates there are other species present (namely glutaric and succinic acids) and the chromatographs provided have several relatively large peaks that are not identified. Please identify these peaks and elaborate on other species, including unreacted KA, present in the adipic refining tanks and their contributions to emissions from all the tanks listed, especially the Refine Feed Tank, which is the largest component of tank emissions. [Rule 62-4.070(1), F.A.C.]

9. Table 4. Revised PSD Applicability Analysis—Adipic Acid 990 MAR Project (Company Confidential). It appears that the PSD Review Applicability Analysis for 930 MAR uses the old emission factor. Comparing this with the analysis for 990 MAR using the new emission factor is not appropriate. The PSD applicability should use the new emission factor to compare 850 MAR emissions with 990 MAR emissions from the adipic acid process and include emissions changes from all affected emissions units. Please provide an updated PSD Review Applicability Analysis from 850 MAR to 990 MAR using the proposed new emission factor. Include all emissions from all supporting emission units (i.e., HMD, Nitric Acid, Utilities, Adipic packaging, etc.), showing all calculations and emission factors used.

Professional Engineer (P.E.) Certification Statement: Rule 62-4.050(3), F.A.C., requires that all applications for a Department permit 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. As a result, your response should be certified by a professional engineer registered in the State of Florida. Please complete and submit a new P.E. certification statement page from the application form, DEP Form No. 62-210.900(1), effective March 11, 2010 (enclosed).

When referring to this project, please use the file number indicated above. The Department must receive a response from you within 90 days of receipt of this letter, unless you (the applicant) request additional time under Rule 62-4.055(1), F.A.C. If you have any questions, please contact Rick Prusa at 850/595-0634 (or rick.prusa@dep.state.fl.us) or Teresa Knepper at 850/595-0670 (or teresa.knepper@dep.state.fl.us).

Sincerely,

/s/

Rick Bradburn
Air Program Administrator

RB/rp/c

Enclosure
c: Kennard F. Kosky, P.E., Golder Associates: kkosky@golder.com
Jim Schultze, Ascend: jkschu@ascendmaterials.com
Roy Noble, Ascend: rwnobl@ascendmaterials.com
Jeff Koerner, Division of Air Resource Management: jeff.koerner@dep.state.fl.us

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name:
   Registration Number:

2. Professional Engineer Mailing Address...
   Organization/Firm:
   Street Address:
   City: State: Zip Code:

3. Professional Engineer Telephone Numbers...
   Telephone: ( ) - ext. Fax: ( ) -

4. Professional Engineer E-mail Address:

5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐ , if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☐ , if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐ , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐ , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

_____ _____
Signature Date

(seal)

* Attach any exception to certification statement.