# 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


**SENT BY ELECTRONIC MAIL – RECEIVED RECEIPT REQUESTED**

**PERMITTEE**

Ascend Performance Materials
Post Office Box 97
Gonzalez, Florida 32560-0097

*Authorized Representative:*
Mr. Timothy N. Montgomery
Chemicals & Utilities Plant Manager

Air Permit No. 0330040-035-AC
Permit Expires: January 4, 2016

Pensacola Plant
Title V Air Construction Permit
990 MAR Adipic Acid Production Increase

This is the final air construction permit, which supersedes Permit 0330040-034-AC and authorizes the equipment and process changes necessary for the Area II Adipic Acid Production Increase from 850 to 990 MAR Project and the ancillary changes throughout the facility to support the project. The proposed work will be conducted at the Pensacola Plant, which is a chemical processing plant (Standard Industrial Classification No. 28, 2824, 2869) manufacturing chemical intermediates and nylon fiber and pellets. The facility is located at 3000 Old Chemstrand Road, Cantonment in Escambia County, Florida. The UTM coordinates are Zone 16, 476.0 km East and 3385.0 km North. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

This final permit is organized by the following sections.

Section 1. General Information
Section 2. Administrative Requirements
Section 3. Emissions Unit Specific Conditions
Section 4. Appendices

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). Permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C., for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing 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 (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 must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Pensacola, Florida

/s/ 1/4/11

Rick Bradburn, Air Program Administrator (Date)

## CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on January 4, 2011 to the persons listed below.

Timothy N. Montgomery, Ascend Performance Materials: tnmont@ascendmaterials.com
Ken Kosky, P.E., Golder Associates: kkosky@golder.com
Roy W. Noble, Ascend Performance Materials: rwnobl@ascendmaterials.com
James K. Schulze, Ascend Performance Materials: jkschu@ascendmaterials.com

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

/s/ 1/4/11

(Clerk) (Date)

## FACILITY AND PROJECT DESCRIPTION

This construction permit follows Title V revision permit 0330040-029-AV, effective March 25, 2009, to Title V operation permit 0330040-018-AV, effective November 2, 2006. Permit 0330040-030-AC, effective December 30, 2008, allowed vaporizer modernizations and conversion of Continuous Polymerization Lines 22 and 23 to pellets. Permit 0330040-031-AC, effective March 16, 2009, allowed the modification of 0330040-027-AC to update past actual and future projected actual NOx emissions from those given in 0330040-027-AC. Permit 0330040-032-AC, effective August 14, 2009, was the transfer of ownership and name change from Solutia to Ascend Performance Materials LLC, and permit 0330040-033-AC, effective March 24, 2010, allowed the conversion of Continuous Polymerization Lines 16 and 17 to pelletizing. Permit 0330040-034-AC, effective August 13, 2010, allowed equipment and process changes necessary for the Area II Adipic Acid Production Increase (from 850 to 930 MAR) Project and ancillary changes throughout the facility to support that project. Permit 0330040-035-AC incorporates and supersedes permit 0330040-034-AC.

### Existing Facility

Ascend Performance Materials LLC (Ascend) owns and operates a nylon and intermediate chemical manufacturing facility located in Cantonment, Florida, approximately 20 kilometers north of Pensacola on the Escambia River. The facility manufactures various chemicals including adipic acid, nylon fibers, nylon resins, hexamethylene diamine and maleic anhydride. The existing facility consists of the following emissions units:

**Facility ID No. 0330040**

| ID No. | Emission Unit Description (1 of 2) |
|---|---|
| 003 | Boiler No. 8 |
| 004 | Boiler No. 7 |
| 014 | Boiler No. 4 |
| 015 | Boiler No. 5 |
| 016 | Boiler No. 6 |
| 099 | Boiler No. 9 |
| 100 | Boiler No. 10 |
| 049 | Hydrogen Generating Plant #1 |
| 060 | Adipic Acid 485 BEPEX Dryer |
| 061 | Adipic Acid Dryer 405-A |
| 062 | Adipic Acid Dryer 405-B |
| 063 | Adipic Acid Dryer 465-A |
| 064 | Adipic Acid Dryer 465-B |
| 079 | Adipic Acid 485 NIRO Dryer |
| 005 | Vaporizer No.1 |
| 007 | Vaporizer No.2 |
| 008 | Vaporizer No.3 |
| 009 | Vaporizer No.4 |
| 010 | Vaporizer No.5 |
| 011 | Vaporizer No.6 |
| 013 | Vaporizer No.7 |

| Facility ID No. 0330040 | |
|---|---|
| **ID No.** | **Emission Unit Description continued (2 of 2)** |
| 075 | Vaporizer No.8 |
| 020 | Cyclohexane Oxidation Process |
| 002 | Adipic Acid Process |
| 090 | Adipic Acid Process- Fugitive Emissions |
| 032 | Cogeneration Plant |
| 040 | Hexamethylene Diamine Synthesis and Refining |
| 041 | B and C Hexamethylene Diamine Stripper Distillation Column |
| 076 | Maleic Anhydride (MA) Plant |
| 081 | Continuous Nylon Polymerization Lines |
| 082 | Batch Nylon Polymerization |
| 042 | Nitric Acid Plant |
| 088 | Area 480 KA Expansion, P2K |
| 089 | Area 480 KA Expansion, P2K - Fugitive Emissions |
| 097 | NSPS Storage Tanks |
| 073 | Abrasive Blast Facility |
| 038 | Research and Development |
| 050 | Adipic Acid Bulk Loading No. 1, Building 346 |

**Proposed Project**

Ascend submitted this permit application to increase the permitted annual capacity for adipic acid production in Emissions Unit 002 from 850 MAR (million pounds annual rate) adipic acid to 990 MAR based on a 12-month rolling basis. Ascend has the ability to produce more than the currently permitted 850 MAR adipic acid by increasing the currently permitted 92,000 lbs/hr KA feed rate to 98,000 lbs/hr KA feed rate and emphasizing minimization of equipment down-time and enhanced management of the unit operation cycle times associated with the process. A portion of the adipic acid production is dried and sold to support a segment of customer demand. The remainder of adipic acid production is processed into nylon salt for the manufacture of nylon polymers. Under PSD rules, the proposed project will be a minor modification by accepting limits on $NO_X$ and $SO_2$ emissions, and limits on heat inputs, fuel usage and production rate in some emissions units.

**Emissions Changes Due to Project:** (Emissions listed in tons per year)

| **Regulated Air Pollutant** | **Baseline Actual Emissions** | | **Baseline Actual Emissions plus Demand Growth** | | **Projected Actual Emissions** | | **Project Increase** | | **Significant Emissions Rate (TPY)** |
|---|---|---|---|---|---|---|---|---|---|
| CO | 552 | | 499 | | 512 | | 13 | | 100 |
| NOx | 1,927 | | 2,300 | | 2,336 | | 36 | | 40 |
| PM | 312 | | 418 | | 425 | | 7 | | 25 |
| PM10 | 312 | | 418 | | 425 | | 7 | | 15 |
| SO2 | 3,564 | | 4,604 | | 4,629 | | 25 | | 40 |
| VOC | 255.3 | | 302 | | 328 | | 26 | | 40 |

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities (See Appendices U-1 and I-1).

Based on the construction permit application received November 2, 2010, this facility is a major source of hazardous air pollutants (HAP). The facility is considered a major stationary source with respect to PSD because it is a chemical process plant that has the potential to emit 100 tons per year or more of the regulated air pollutants: $NO_X$, CO, PM, VOC and $SO_2$.

**FACILITY REGULATORY CLASSIFICATION**

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Northwest District Air Resource Management Program, Florida Department of Environmental Protection (Department). The District's mailing address is 160 Governmental Center, Suite 308, Pensacola, Florida 32502-5794. All documents related to applications for permits to operate an emissions unit shall be submitted to the District Office.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the District Office at the above address or nwdair@dep.state.fl.us.

3. Appendices: The following Appendices are attached as part of this permit:

   a. Appendix A. Citation Formats and Glossary of Common Terms;

   b. Appendix B. General Conditions; and

   c. Appendix C. Common Conditions;

   d. Appendix I-1. Insignificant Emissions Units

   e. Appendix U-1. Unregulated Emissions Units

   Company Confidential Appendix is not attached, but filed separately from the permit per Section 403.111, Florida Statutes.

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve Permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require Permittee to conform to new or additional conditions. The Department shall allow Permittee a reasonable time to conform to the new or additional conditions, and on application of the Permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: Permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Source Obligation:

   (a) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12), F.A.C.]

8. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. Permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

9. Actual Emissions Reporting: This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., Permittee is subject to the following monitoring, reporting and recordkeeping provisions.

   a. Permittee shall monitor the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of ten years following resumption of regular operations after the change. Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C., which are provided in Appendix C of this permit, and consistent with the methods used to estimate projected emissions for this project.

   b. Permittee shall report to the Department within 60 days after the end of each calendar year during the ten-year period setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:

      1) The name, address and telephone number of the owner or operator of the major stationary source;

      2) The annual emissions as calculated pursuant to the provisions of 62-210.370, F.A.C., which are provided in Appendix C of this permit;

      3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and

      4) Any other information that the owner or operator wishes to include in the report.

   c. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1 and 2, F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.

   For this project, the Department requires the annual reporting of actual $NO_X$, CO, PM, VOC and $SO_2$ emissions for the following units:

| E.U. ID No. | Brief Description |
|---|---|
| 003 | Boiler No. 8 |
| 004 | Boiler No. 7 |
| 014 | Boiler No. 4 |
| 015 | Boiler No. 5 |
| 016 | Boiler No. 6 |
| 099 | Boiler No. 9 |
| 100 | Boiler No. 10 |
| 049 | Hydrogen Generating Plant #1 |
| 060 | Adipic Acid 485 BEPEX Dryer |
| 061 | Adipic Acid Dryer 405-A |
| 062 | Adipic Acid Dryer 405-B |

| | |
|---|---|
| 063 | Adipic Acid Dryer 465-A |
| 064 | Adipic Acid Dryer 465-B |
| 079 | Adipic Acid 485 NIRO Dryer |
| 005 | Vaporizer No.1 |
| 007 | Vaporizer No.2 |
| 008 | Vaporizer No.3 |
| 009 | Vaporizer No.4 |
| 010 | Vaporizer No.5 |
| 011 | Vaporizer No.6 |
| 013 | Vaporizer No.7 |
| 075 | Vaporizer No.8 |
| 020 | Cyclohexane Oxidation Process |
| 002 | Adipic Acid Process |
| 032 | Cogeneration Plant |
| 040 | Hexamethylene Diamine Synthesis and Refining |
| 041 | B and C Hexamethylene Diamine Stripper Distillation Column |
| 081 | Continuous Nylon Polymerization Lines |
| 082 | Batch Nylon Polymerization |
| 042 | Nitric Acid Plant |
| 088 | Area 480 KA Expansion, P2K |
| 097 | 40 CFR 60 Kb VOL Tank Inventory |
| | UNREGULATED EU's |
| 050 | Adipic Acid Bulk Loading No. 1, Building 346 |
| 051 | Adipic Acid Bulk Loading No. 2 |
| 080 | Adipic Acid Building 373 Loading |
| 045 | Adipic Acid Building 465 Boxing/Bagging |

[Permit applications 0330040-034-AC and 0330040-035-AC, and Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS
## A. Boilers Nos. 4, 5, and 6

This section of the permit addresses the following emissions units.

| ID No. | Emission Unit Description |
|---|---|
| 014 | Boiler No. 4 |
| 015 | Boiler No. 5 |
| 016 | Boiler No. 6 |

Boilers Nos. 4, 5 and 6 are normally fueled by natural gas. No. 6 fuel oil is an alternate fuel, which may contain blended on-specification used oil as supplemental fuel. The used oil must meet the requirements of 40 CFR 279.11 (Standards for the Management of Used Oil). Boiler No. 4 and Boiler No. 5 may also burn as supplemental fuels AGS (a mixture of organic acids from deep well waste stream), KATT (a mixture of organic esters), DME (Dimethyl Esters), Amines and Area 480 residue. Emissions are controlled by proper combustion control and by fuel composition.

1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the changes noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

**PERFORMANCE RESTRICTIONS**

2. Authorized Fuels. Boilers Nos. 4, 5 and 6 may be fueled by natural gas. No. 6 fuel oil, blended with on-specification used oil, may be used as an alternate fuel provided the Department is notified in writing within seven days of the fuel change over. If fuel oil use exceeds six hours per day on each of four or more days within a 30-day period, a visible emissions compliance test shall be conducted within 14 days using the maximum quantity of fuel oil. Testing is not required if a passing test has been successfully conducted within the last 12 months.

   Used Oil
   Burning of on-specification used oil is allowed in this emissions unit in accordance with all other conditions of this permit and the following conditions:

   On-specification Used Oil Emissions Limitations: This emissions unit is permitted to burn on-specification used oil. On-specification used oil is defined as used oil that meets the specifications of 40 CFR 279 - Standards for the Management of Used Oil, listed below. The owner shall maintain records to demonstrate that each shipment of used oil meets the specifications of 40 CFR 279. "Off-specification" used oil shall not be burned. Used oil which fails to comply with any of these specification levels is considered "off-specification" used oil.

| CONSTITUENT/PROPERTY | ALLOWABLE LEVEL |
|---|---|
| Arsenic | 5 ppm maximum |
| Cadmium | 2 ppm maximum |
| Chromium | 10 ppm maximum |
| Lead | 100 ppm maximum |
| Total Halogens | 1000 ppm maximum |
| Flash point | 100°F minimum |

Supplemental Fuels.
The following supplemental fuels may be burned in Boiler No. 4 and/or Boiler No. 5 in conjunction with burning of gas or fuel oil:
1. AGS, a mixture of organic acids extracted from the deep well waste stream, up to 8,000 pounds per hour, and/or
2. KATT composite fuel, consisting of KATT (Ketone Alcohol Topper Tails), DME (mixture of Dimethyl Esters), Amines (from nylon and nylon intermediates manufacturing) and Area 480 residue (a mixture of alcohol and ketone by-products) up to 10,000 pounds per hour.
3. These fuels may only be burned in Boiler No. 4 and/or Boiler No. 5. Records shall be maintained of the supplemental fuel quantities burned. A request may be made by the Department to periodically sample and analyze supplemental fuels.
4. Supplemental fuels shall be sampled with results submitted with the application for permit renewals. Supplemental fuels not analyzed upon permit renewals will not be authorized for burning. The resumption of burning of these supplemental fuels requires an analysis provided to the Department seven days prior to use and Department approval.
[Rules 62-4.070, 62-4.160(2) and 62-213.440(1), F.A.C., 40 CFR 279.11, and permit applications 0330040-034-AC and 0330040-035-AC]

3. Heat Input Limit. For a period of ten years from the effective date of this permit, total heat input for EU 003, 004, 014, 015, 016, 032 and 099 shall not exceed more than 16,374,276 MMBtu/yr from all fuels in any 12-month rolling period and the total No. 6 fuel oil combustion in EU 014, 015 and 016 shall not exceed 3,439,781.33 MMBtu in any 12-month rolling period. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

**EMISSIONS STANDARDS**

4. Emissions Limitation for $SO_2$. For a period of ten years from the effective date of this permit, $SO_2$ emissions from all emission units affected by the project shall not result in emissions increases of 25 or more tons per year. For a period of ten years from the effective date of this permit, the project $SO_2$ emissions from fuel oil firing shall not exceed 4,628.91 TPY in any 12-month rolling period. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

**RECORDS AND REPORTS**

5. Heat Input Limit. Permittee shall maintain and submit to the Department on an annual basis for a period of ten years from the effective date of this permit, information demonstrating in accordance with Rule 62-212.300(1)(e), F.A.C., that the project did not result in total heat input for EU 003, 004, 014, 015, 016, 032 and 099 in excess of 16,374,276 MMBtu/yr from all fuels in any 12-month rolling period and that the total No. 6 fuel oil combustion in EU 014, 015 and 016 did not exceed 3,439,781.33 MMBtu in any 12-month rolling period. Permittee shall use the same calculation methodology of emissions as outlined in the application and used to report emissions in Annual Operating Reports pursuant to Rules 62-210.370 and 62-210.900(5), F.A.C. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

6. Actual Emissions Reporting for $SO_2$. Permittee shall maintain and submit to the Department on an annual basis for a period of ten years from the effective date of this permit, information demonstrating in

accordance with Rule 62-212.300(1)(e), F.A.C., that the project did not result in emissions increases of 25 tons/year for $SO_2$. Permittee shall maintain and submit to the Department on an annual basis for a period of ten years from the effective date of this permit, information demonstrating in accordance with Rule 62-212.300(1)(e), F.A.C., that the project did not result in total $SO_2$ emissions from fuel oil firing in excess of 4,628.91 TPY in any 12-month rolling period. Permittee shall use the same calculation methodology of emissions as outlined in the application and used to report emissions in Annual Operating Reports pursuant to Rules 62-210.370 and 62-210.900(5), F.A.C. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

7. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: EUs 003, 004, 014, 015, 016, 032 and 099 total emissions of CO, $NO_X$, PM/PM10, $SO_2$ and VOC are estimated at 230.86, 1262.38, 348.80, 4628.91 and 64.26 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC}*

## B. Boilers Nos. 7 and 8

This section of the permit addresses the following emissions units.

| ID No. | Emission Unit Description |
|---|---|
| 003 | Boiler No. 8 |
| 004 | Boiler No. 7 |

Boilers Nos. 7 and 8 have been modified to incorporate low NOx burners and are fueled by natural gas, maleic anhydride production off gas, and pentane vapor stream. Each of the modified burners is rated for 388 MMBtu/hour and 225,000 pounds/hour steam production. Emissions are controlled by proper combustion controls. $SO_2$ emissions are controlled by sulfur content of fuel.

1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

### PERFORMANCE RESTRICTIONS

2. Authorized Fuels. Boilers Nos. 7 and 8 may be fueled by natural gas, maleic anhydride production off gas and pentane vapor stream. The maximum total natural gas usage shall be limited to 1,100 million standard cubic feet per year for each boiler (Boiler No. 7 and Boiler No. 8). Records of monthly total and annual total natural gas, maleic anhydride production off gas and pentane vapor stream usage shall be maintained and available for Department inspection. [Rules 62-4.160(2) and 62-213.440(1), F.A.C., Permittee letter dated June 22, 2006, and permit applications 0330040-034-AC and 0330040-035-AC]

3. Heat Input Limit. For a period of ten years from the effective date of this permit, total heat input for EU 003, 004, 014, 015, 016, 032 and 099 shall not exceed more than 16,374,276 MMBtu/yr from all fuels in any 12-month rolling period. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

### EMISSIONS STANDARDS

4. Emissions Limitation for $SO_2$. For a period of ten years from the effective date of this permit, $SO_2$ emissions from the project shall not result in emissions increases of 25 or more tons per year. For a period of ten years from the effective date of this permit, the project $SO_2$ emissions from fuel oil firing shall not exceed 4,628.91 TPY in any 12-month rolling period. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

### RECORDS AND REPORTS

5. Heat Input Limit. Permittee shall maintain and submit to the Department on an annual basis for a period of ten years from the effective date of this permit, information demonstrating in accordance with Rule 62-212.300(1)(e), F.A.C., that the project did not result in total heat input for EU 003, 004, 014, 015, 016, 032 and 099 in excess of 16,374,276 MMBtu/yr from all fuels in any 12-month rolling period. Permittee shall use the same calculation methodology of emissions as outlined in the application and used to report emissions in Annual Operating Reports pursuant to Rules 62-210.370 and 62-210.900(5), F.A.C. [Rules

62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

6. Actual Emissions Reporting for $SO_2$. Permittee shall maintain and submit to the Department on an annual basis for a period of ten years from the effective date of this permit, information demonstrating in accordance with Rule 62-212.300(1)(e), F.A.C., that the project did not result in emissions increases of 25 tons/year for $SO_2$. Permittee shall use the same calculation methodology of emissions as outlined in the application and used to report emissions in Annual Operating Reports pursuant to Rules 62-210.370 and 62-210.900(5), F.A.C. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

7. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: EUs 003, 004, 014, 015, 016, 032 and 099 total emissions of CO, $NO_X$, PM/PM10, $SO_2$ and VOC are estimated at 230.86, 1262.38, 348.80, 4628.91 and 64.26 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC}*

## C. Boilers Nos. 9 & 10

This section of the permit addresses the following emissions units.

| ID No. | Emission Unit Description |
|---|---|
| 099 | Boiler No. 9 |
| 100 | Boiler No. 10 |

Two-natural gas fired boilers (Boilers Nos. 9 and 10). Each of these packaged boilers has a maximum heat input of 344 MMBtu per hour, with a design rating of 250,000 pounds per hour steam. The packaged boilers are manufactured by Indeck Power Equipment Company/Volcano Technologies, Inc., Model No. A5-250-S.

The boilers will start operation through a three phase approach.

Phase 1 Boiler No. 9 will operate up to a maximum of 63.7 % rated heat input and without the SCR unit installed. The restricted heat input of 63.7% of design provides assurance that PSD thresholds will not be exceeded. Ascend will adhere to fuel (natural gas) limitation of 1,845,732 MSCF/yr (12-month rolling period) during Phase 1.

Phase 2 One Boiler will operate up to a maximum of 100% rated heat input with an SCR unit installed. Either Boiler No. 9 or Boiler No. 10 will be chosen to operate based on current economics. At 100% of the rated heat input, emission limits will not be exceeded.

Phase 3 Boilers Nos. 9 and 10 will operate up to a maximum of 82% rated heat input and both will have SCR units installed. The heat input will be restricted to 82% of design for the combined total for the two boilers as assurance that PSD thresholds will not be exceeded.

NOx emissions are controlled with low NOx burners, flue gas recirculation and by use of a Selective Catalytic Reduction (SCR) Unit, which reduces NOx emissions by 70 to 90 percent. Ascend Inc has established an annual fuel limitation with a maximum natural gas rate of 4,750,272 thousand standard cubic feet per year (MSCF/yr) for Boiler Nos. 9 and 10 combined, as assurance that Prevention of Significant Deterioration (PSD) thresholds will not be exceeded.

1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

2. As of July 2010, Ascend has built only Boiler No. 9. Ascend has indicated that it presently does not intend to build Boiler No. 10 or the SCRs. Ascend also indicated it wishes to retain the option of building Boiler No. 10 in the future. The application for this permit and the PSD applicability evaluation did not include emissions from Boiler No. 10. Permittee will conduct detailed engineering design studies and apply for a revision to this permit prior to undertaking any construction associated with Boiler No. 10. [Rules 62-4.070, 62-212.300(1)(e) and 62-210.370, F.A.C., and permit applications 0330040-034-AC and 0330040-035-AC]

### PERFORMANCE RESTRICTIONS

3. Heat Input Limit. For a period of ten years from the effective date of this permit, total heat input for EU 003, 004, 014, 015, 016, 032 and 099 shall not exceed more than 16,374,276 MMBtu/yr from all fuels in

any 12-month rolling period. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

**EMISSIONS STANDARDS**

4. Emissions Limitation for $SO_2$. For a period of ten years from the effective date of this permit, $SO_2$ emissions from the project shall not result in emissions increases of 25 or more tons per year. For a period of ten years from the effective date of this permit, the project $SO_2$ emissions from fuel oil firing shall not exceed 4,628.91 TPY in any 12-month rolling period. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

**RECORDS AND REPORTS**

5. Heat Input Limit. Permittee shall maintain and submit to the Department on an annual basis for a period of ten years from the effective date of this permit, information demonstrating in accordance with Rule 62-212.300(1)(e), F.A.C., that the project did not result in total heat input for EU 003, 004, 014, 015, 016, 032 and 099 in excess of 16,374,276 MMBtu/yr from all fuels in any 12-month rolling period. Permittee shall use the same calculation methodology of emissions as outlined in the application and used to report emissions in Annual Operating Reports pursuant to Rules 62-210.370 and 62-210.900(5), F.A.C. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

6. Actual Emissions Reporting for $SO_2$. Permittee shall maintain and submit to the Department on an annual basis for a period of ten years from the effective date of this permit, information demonstrating in accordance with Rule 62-212.300(1)(e), F.A.C., that the project did not result in emissions increases of 25 tons/year for $SO_2$. Permittee shall use the same calculation methodology of emissions as outlined in the application and used to report emissions in Annual Operating Reports pursuant to Rules 62-210.370 and 62-210.900(5), F.A.C. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

7. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: EUs 003, 004, 014, 015, 016, 032 and 099 total emissions of CO, $NO_X$, PM/PM10, $SO_2$ and VOC are estimated at 230.86, 1262.38, 348.80, 4628.91 and 64.26 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC}*

## D. Cogeneration Plant

This section of the permit addresses the following emissions unit.

| ID No. | Emission Unit Description |
|---|---|
| 032 | Cogeneration Plant |

The cogeneration plant consists of one combustion turbine that exhausts through a heat recovery steam generator with duct burner. The heat recovery steam generator supplies steam to the manufacturing operations and replaces steam generated by the existing boilers. The turbine, fueled by natural gas as defined in 40 CFR 60.331(u), turns a generator capable of producing a nominal 86 megawatts of electricity. Supplemental firing of natural gas at the heat recovery steam generator will supply additional steam, if needed. The combustion turbine employs steam injection to control $NO_x$ emissions. The duct burner is equipped with a low $NO_x$ burner. Operation of the combustion turbine using evaporative direct water spray fogging inlet air cooling is also authorized.

1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

### PERFORMANCE RESTRICTIONS

2. Heat Input Limit. For a period of ten years from the effective date of this permit, total heat input for EU 003, 004, 014, 015, 016, 032 and 099 shall not exceed more than 16,374,276 MMBtu/yr from all fuels in any 12-month rolling period. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

### EMISSIONS STANDARDS

3. Emissions Limitation for $SO_2$. For a period of ten years from the effective date of this permit, $SO_2$ emissions from the project shall not result in emissions increases of 25 or more tons per year. For a period of ten years from the effective date of this permit, the project $SO_2$ emissions from fuel oil firing shall not exceed 4,628.91 TPY in any 12-month rolling period. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

### RECORDS AND REPORTS

4. Heat Input Limit. Permittee shall maintain and submit to the Department on an annual basis for a period of ten years from the effective date of this permit, information demonstrating in accordance with Rule 62-212.300(1)(e), F.A.C., that the project did not result in total heat input for EU 003, 004, 014, 015, 016, 032 and 099 in excess of 16,374,276 MMBtu/yr from all fuels in any 12-month rolling period. Permittee shall use the same calculation methodology of emissions as outlined in the application and used to report emissions in Annual Operating Reports pursuant to Rules 62-210.370 and 62-210.900(5), F.A.C. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

5. Actual Emissions Reporting for $SO_2$. Permittee shall maintain and submit to the Department on an annual basis for a period of ten years from the effective date of this permit, information demonstrating in

accordance with Rule 62-212.300(1)(e), F.A.C., that the project did not result in emissions increases of 25 tons/year for $SO_2$. Permittee shall use the same calculation methodology of emissions as outlined in the application and used to report emissions in Annual Operating Reports pursuant to Rules 62-210.370 and 62-210.900(5), F.A.C. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

6. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: EUs 003, 004, 014, 015, 016, 032 and 099 total emissions of CO, $NO_X$, PM/PM10, $SO_2$ and VOC are estimated at 230.86, 1262.38, 348.80, 4628.91 and 64.26 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC}*

## E. Adipic Acid Drying

This section of the permit addresses the following emissions units.

| ID No. | Emission Unit Description |
|---|---|
| 060 | Adipic Acid 485 BEPEX Dryer |
| 061 | Adipic Acid Dryer 405-A |
| 062 | Adipic Acid Dryer 405-B |
| 063 | Adipic Acid Dryer 465-A |
| 064 | Adipic Acid Dryer 465-B |
| 079 | Adipic Acid 485 NIRO Dryer |

Adipic acid is dried using steam as the heat supply. Particulate emissions are controlled by bag filters and/or scrubbers. For this project, worst case emissions assumptions are used in the calculation of emissions changes due to adipic acid drying and loading. A higher proportion of adipic acid was sent to the EU 061, 062, 063 and 064 dryers than historical usages, resulting in using conservatively higher drying emissions estimates. Similarly, the loading emissions assessment assumed that all of the materials from these four dryers were bulk loaded into railcars at EU 050 rather than being split with loading in the lower emitting boxing and bagging operation. Emissions from steam used in the dryers are included in the project emissions assessment. No physical changes are needed in these emissions units and no permit changes are requested.

1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

### PERFORMANCE RESTRICTIONS

2. Permitted Capacity. The combined process/operation rate for the Adipic Acid Drying, EU 060, 061, 062, 063, 064, and 079, shall not exceed the amount given in the Company Confidential Appendix in Million Pounds dried Adipic Acid per year based on a 12-month rolling total basis. [Rules 62-4.030, 62-4.070(3), 62-4.160(2), 62-210.200(PTE), and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

### RECORDS AND REPORTS

3. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: total emissions of PM/PM10 for EUs 060, 061, 062, 063, 064, and 079 are estimated at 41.87 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC PSD Determination}*

## F. Adipic Acid Synthesis

This section of the permit addresses the following emissions units.

| ID No. | Emission Unit Description |
|---|---|
| 002 | Area II Adipic Acid<br>TRU/SCR I; existing TRU and SCR II<br>SCR II; Backup SCR<br>- Process Equipment; Product Synthesis, Refining and Raw Material Recovery |

A ketone and alcohol mixture (KA, cyclohexanone/cyclohexanol) is oxidized with nitric acid to produce an Adipic Acid solution. The solution is refined by chilling due to vacuum evaporation, forming Adipic Acid crystals at the bottom of the process vessel. The resulting slurry is centrifuged to remove water and form a wet cake. The wet cake is re-dissolved in pure water and the purified Adipic Acid solution is sent to the Nylon Salt Strike or Drying and Product Loading operations. Emissions of CO, VOC and $NO_x$ will be controlled by sending them to the TRU/SCR I or the SCR II.

1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

### EQUIPMENT

2. Permittee is authorized to make changes in methods of operation leading to increased on-stream time along with minor pump optimization associated with the adipic acid refining such as motor sizes, impeller changes, and/or pump replacement. With the following exception, none of these changes will impact the regulatory status of any currently installed equipment. There is a distillation column constructed prior to 1980 that is used to remove water from the process to recover nitric acid and is nearing the end of its service life. If this column needs to be replaced within life of this permit, Permittee shall conduct detailed engineering design studies and submit documentation to the Department for a permitting determination prior to undertaking any construction associated with replacing the column. [Rules 62-4.030 and 62-4.070(3), F.A.C., and permit applications 0330040-034-AC and 0330040-035-AC]

   *{Permitting Note: As a replacement column would be subject to 40 CFR 60 Subpart NNN, Permittee will be required to comply with all applicable requirements of subpart NNN.}*

### PERFORMANCE RESTRICTIONS

3. Permitted Capacity: The maximum allowable operating rates for each, TRU/SCR I, and SCR II, shall not exceed the rate of all combined process gases from the Area I HALCON stream, and the Area II process gases, the Area I maximum operating rate of 82,000 lbs process air/hr (hourly average basis), and the Area II maximum operating rate of 98,000 lbs KA feed/hr (hourly average basis). [Rules 62-4.030, 62-4.070(3), 62-4.160(2), 62-210.200(PTE), and 62-212.400(12), F.A.C., permit AC17-262486, Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

   *{Permitting Note: The capacity limitations have been placed in the permit to identify the capacity of each unit for the purpose of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emissions limits and to aid in determining future rule applicability. Permittee is expected to determine adipic acid production rate whenever emissions testing is required, in order to demonstrate at what percentage of the rated capacity*

*that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emissions tests. Such capacity determinations may be based on measurements of process inputs, flow measurements and/or other data to calculate average hourly capacity.}*

4. Permitted Capacity. The process/operation rate for the Area II Process Equipment; Product Synthesis, Refining and Raw Material Recovery, shall not exceed the maximum operating rate of 98,000 lbs KA feed/hr (hourly average basis), up to 990 Million Pounds Adipic Acid produced per year based on a 12-month rolling total basis. [Rules 62-4.030, 62-4.070(3), 62-4.160(2), 62-210.200(PTE), and 62-212.400(12), F.A.C., amendment to permit AC17-262486, Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]
*{Permitting Note: The Title V permit has a maximum operating rate of 92,000 lbs KA feed/hr (hourly average basis), up to 850 Million Pounds Adipic Acid produced per year based on a 12-month rolling total basis.}*

## EMISSIONS STANDARDS

5. $NO_x$ Emissions. The $NO_x$ emissions concentration from each of the TRU/SCR I or SCR II shall not exceed 500 ppm on a 30-day rolling average. Total $NO_x$ emissions from E.U. 002 shall not exceed 610 TPY, on a 12-month rolling average. $NO_x$ emissions from the stacks of TRU/SCR I and SCR II shall be demonstrated by means of a $NO_x$ Continuous Emissions Monitor (CEM), which is operated under a Department approved QC plan, while firing the process gases from Area I and Area II. [Rules 62-4.030, 62-4.070(3), and 62-212.400(12), F.A.C., Consent Order OGC File No. 97-2066, executed February 2, 1998, permits AC17-262486 and 0330040-018-AV, Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: This emissions unit had been issued permit no. 0330040-011-AC to expand production. Upon completion of the construction the $NO_x$ limitation would have been lowered to 150 ppm. The authorized expansion work was not done, and therefore, the $NO_x$ limit remains at 500 ppm. The only portion of this permit completed was that required by Consent Order OGC File No. 97-2066, executed February 2, 1998.}*

## MONITORING REQUIREMENTS

6. Continuous Compliance - $NO_x$ Emissions Concentrations. Permittee shall demonstrate continuous compliance that the $NO_x$ emissions concentration from each of the TRU/SCR I or SCR II stacks do not exceed 500 ppm on a 30-day rolling average by proper maintenance and operation of Continuous Emission Monitors (CEMs) for NOx from the exhaust stacks of the TRU/SCR I and SCR II, in conformance with a Department approved QC plan and annual CEMs RATA testing. CEMs readings shall be recorded continuously, and rolling 30-day and 12-month calculated averages shall be recorded and made available for Department inspection. Annual compliance testing may be waived if the Department receives reasonable assurance that the CEMs and data processing/recording systems have been functioning properly. [Rules 62-4.030 and 62-4.070(3), F.A.C., Consent Order OGC File No. 97-2066, executed February 2, 1998, Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

## TEST METHODS AND PROCEDURES

7. Volatile Organic Compounds (VOC) emissions tests are required to show compliance with the standards of the Department at the TRU/SCR I and SCR II INLET and OUTLET. The test method for VOC emissions shall be EPA Method 25A, incorporated and adopted by reference in Rule 62-297.401(7), F.A.C. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. Such tests shall be conducted once during each federal fiscal year (1 Oct – 30 Sept). The Department shall be notified at least 15 days prior to testing to allow witnessing. Results shall be submitted to the Department within 45 days after testing. A special requirement for the first test conducted under this permit shall be to run a standard sample with a known KA concentration through the sampling train to determine and report testing methodology accuracy. [Rules 62-4.070, 62-297.310(7), and 62-297.401(7), F.A.C. , and permit application 0330040-035-AC]

8. The test reports shall comply with applicable portions of Rule 62-297.310, F.A.C., Test Reports. The Department can require special compliance tests in accordance with Rule 62-297.310(7) F.A.C. Other test methods and alternate compliance procedures may be used only after prior Departmental approval has been obtained in writing. [Rules 62-297.310(7) and 62-297.620(1), F.A.C.]

9. Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 90-100% of rated capacity. If it is impractical to test at capacity, then sources may be tested at less than capacity; in this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department. [Rules 62-297.310(2) and 62-4.070, F.A.C.]

## RECORDS AND REPORTS

10. KA feed and Adipic Acid Production. Permittee shall maintain records of KA feed on an hourly and 12 month rolling averages. Permittee shall also maintain records of adipic acid production on a daily basis, monthly totals and 12-month rolling totals. Permittee shall also maintain records of adipic acid sales monthly totals and 12-month rolling totals. These records shall be made available for Department inspection. [Rules 62-4.030, 62-4.070(3), 62-4.160(2) and 62-210.200(PTE), F.A.C., amendment to permit AC17-262486, and permit applications 0330040-034-AC and 0330040-035-AC]

11. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

    *{Permitting Note: Total emissions for EU 002 of CO, $NO_X$, PM/PM10 and VOC are estimated at 15.95, 610.00, 25.95 and 49.44 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC}*

## G. Vaporizers

This section of the permit addresses the following emissions units.

| ID No. | Emission Unit Description |
|---|---|
| 005 | Vaporizer No.1 |
| 007 | Vaporizer No.2 |
| 008 | Vaporizer No.3 |
| 009 | Vaporizer No.4 |
| 010 | Vaporizer No.5 |
| 011 | Vaporizer No.6 |
| 013 | Vaporizer No.7 |
| 075 | Vaporizer No.8 |

Operation of eight Vaporizers: Total capacity is 136 million Btu/hr heat input total for all Vaporizers. There are no individual Vaporizer limits beyond this total limit. These emissions units are primarily fueled by natural gas. No. 2 fuel oil with a maximum of 0.5 % sulfur by weight is allowed as an emergency fuel. Vaporizer No. 8 is regulated under applicable portions of 40 CFR 60 Subparts A and Dc, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

Energy conservation features, which do not affect emissions, have been incorporated into the Vaporizer facility. Vaporizer unit exhausts have been consolidated in some cases. The facility is still capable of exhausting through individual stacks, if necessary.

1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

### PERFORMANCE RESTRICTIONS

2. Permitted Capacity. The combined process/operation rate for the Vaporizers, EUs 005, 007, 008, 009, 010, 011, 013 and 075, shall not exceed the maximum operating flow rate given in the Company Confidential Appendix in million scf per year of natural gas based on a heating value of 1020 Btu/scf and a 12-month rolling total basis. [Rules 62-4.030, 62-4.070(3), 62-4.160(2), 62-210.200(PTE) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

### EMISSIONS STANDARDS

3. Emissions Limitation for $SO_2$. For a period of ten years from the effective date of this permit, $SO_2$ emissions from the project shall not result in emissions increases of 25 or more tons per year. For a period of ten years from the effective date of this permit, the project $SO_2$ emissions from fuel oil firing shall not exceed 4,628.91 TPY in any 12-month rolling period. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

### RECORDS AND REPORTS

4. Actual Emissions Reporting for $SO_2$. Permittee shall maintain and submit to the Department on an annual basis for a period of ten years from the effective date of this permit, information demonstrating in

accordance with Rule 62-212.300(1)(e), F.A.C., that the project did not result in emissions increases of 25 tons/year for $SO_2$. Permittee shall use the same calculation methodology of emissions as outlined in the application and used to report emissions in Annual Operating Reports pursuant to Rules 62-210.370 and 62-210.900(5), F.A.C. [Rules 62-212.300(1)(e) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

5. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: EUs 005, 007, 008, 009, 010, 010, 013 and 075 total emissions of CO, $NO_X$, PM/PM10, $SO_2$ and VOC are estimated at 49.06, 58.40, 1.11, 0.35 and 3.21 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC}*

## H. Nylon Polymerization

This section of the permit addresses the following emissions units.

| ID No. | Emission Unit Description |
|---|---|
| 081 | Continuous Nylon Polymerization Lines |
| 082 | Batch Nylon Polymerization |

Nylon salts are mixed, concentrated and polymerized to form a molten polymer by both continuous and batch processes. The molten polymer is solidified to nylon fiber or flake from the continuous lines and to flake (pelletized) products from the batch lines. Unconfined emissions of organic compounds occur during this solidification and are vented away from the working areas and discharged without controls.
The 12 continuous polymerization lines normally operate using an Evaporator/Reactor/Finisher process design or an alternative polymerization method, involving an Evaporator/Pre-reactor/Reactor/Finisher process design. Each continuous line has a separate evaporator. A portion of evaporator emissions is used to preheat the nylon salts, and the remaining emissions are normally fed to a distillation column shared by other yarn plant equipment. Pre-reactor steam and emissions are also fed to the distillation column control device. Reactor steam is condensed to produce process steam and the condensate is handled as wastewater. Monomer scrubbers control the emissions from the Finishing step.
Four batch evaporators cyclically feed the batch lines' 12 autoclaves where the batch polymerization takes place. The autoclave emissions are also normally fed to the distillation column. The organics recovered by the distillation column are used as supplemental fuel in power boilers or routed to the plant process waste disposal system.

1. Previous Permits. This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

### PERFORMANCE RESTRICTIONS

2. Permitted Capacity. The combined process/operation rate for EUs 081 and 082 shall not exceed the maximum operating rate given in the Company Confidential Appendix in million pounds nylon per year based on a 12-month rolling total basis, as measured by nylon salt fed to polymerization. [Rules 62-4.030, 62-4.070(3), 62-4.160(2), 62-210.200(PTE), and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

### RECORDS AND REPORTS

3. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: EUs 081 and 082 total emissions of VOC are estimated at 75.52 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC.*

## I. Cyclohexane Oxidation Process (Halcon)

This section of the permit addresses the following emissions units.

| EU ID No. | Emission Unit Description |
|---|---|
| 020 | Cyclohexane Oxidation Process (Halcon) |

Ascend produces cyclohexanone/cyclohexanol, a ketone and alcohol mixture (KA), as an intermediate chemical in the production of adipic acid and for outside sales. Cyclohexane is oxidized with air in two high-pressure reactor trains. Two high-pressure scrubbers reduce the loss of VOC. Emissions are primarily VOC and CO. Further, VOC and CO emissions reductions are affected by routing the emissions from the high-pressure scrubbers to a NOx thermal reduction unit (TRU) when operating. A thermal oxidizer is used as a backup device to control the VOC and CO emissions from the Halcon process area during times when the TRU is down or during other process upset conditions. The reactors are discharged to cyclohexane recovery, product refining, and distillation operations. Emissions from these operations are controlled by two low-pressure scrubbers, which vent to atmosphere. The emissions from low-pressure scrubbers are of similar composition but lesser quantity than those from high-pressure scrubbers. Total process emissions from all scrubbers of volatile organic compounds prior to the TRU or backup thermal oxidizer are estimated at 926 pounds per hour and emissions of carbon monoxide are estimated at 1,404 pounds per hour.

Per Application 0330040-035-AC, there are no physical changes involved in this emissions unit for the Area II Adipic Acid Expansion Project. There will be no increase in emissions over those associated with excluded emissions due to demand growth up to 850 MAR. There are emissions recordkeeping requirements for ten years to ensure proper PSD Avoidance.

1. Previous Permits. This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

### PERFORMANCE RESTRICTIONS

2. Permitted Capacity. The process/operation rate for the Cyclohexane Oxidation Process (Halcon), EU 020, shall not exceed the maximum operating rate given in the Company Confidential Appendix in million pounds KA per year based on a 12-month rolling total basis. [Rules 62-4.030, 62-4.070(3), 62-4.160(2), 62-210.200(PTE) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

3. Permitted Capacity. The process/operation rate for the Cyclohexane Oxidation Process (Halcon), EU 020, and the Area 480 KA Expansion, EU 088, apportioned to Adipic Acid Synthesis, EU 002, shall not exceed the combined maximum operating rate given in the Company Confidential Appendix in million pounds KA per year based on a 12-month rolling total basis. [Rules 62-4.030, 62-4.070(3), 62-4.160(2), 62-210.200(PTE) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

### TEST METHODS AND PROCEDURES

4. Accuracy of the Air Flow Meter. Permittee shall verify the accuracy of the process air flow metering system using standard approved methods at the next scheduled process shutdown not to exceed 180 days from date of permit issuance. Permittee shall report the “as found and as left condition” of the meters and

associated transmitters to the Department within 30 days of testing. [Rules 62-4.030, 62-4.070(3), 62-4.160(2), 62-210.200(PTE) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

**RECORDS AND REPORTS**

5. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. Permittee must keep records to show the percentage of production that is fed to the adipic acid unit and that percentage of the total emissions will be reported for the purposes of 62-212.300(1)(e), F.A.C. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: Total emissions for EU 020 of CO, $NO_X$, PM/PM10, $SO_2$ and VOC are estimated at 215.64, 1.56, 0.03, 0.01 and103.80 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC}*

## J. Hexamethylene Diamine Synthesis & Stripper

This section of the permit addresses the following emissions units.

| ID No. | Emission Unit Description |
|---|---|
| 040 | Hexamethylene Diamine Synthesis and Refining |
| 041 | B and C Hexamethylene Diamine Stripper Distillation Column |

Adiponitrile is hydrogenated to yield crude Hexamethylene Diamine (HMD). The HMD is then refined by vacuum distillation. A vacuum is achieved by staged steam jets. The water soluble HMD is discharged in the steam condensate to the wastewater system. The concentration of HMD in the non-condensable emissions is reduced in each stage.

Per Application 0330040-035-AC, there are no physical changes involved in this emissions unit for the Area II Adipic Acid Expansion Project. Emissions associated with increased hydrogen demand for P2K-KA production and downstream HMD production (used in the ancillary emissions evaluation of increased nylon production) are calculated based on production at EU-049. Should liquid vaporization be used to meet a portion of the hydrogen demand, emissions would be less than stated. No credit was taken for export of steam from waste heat recovery in this area at EU-049. There are emissions recordkeeping requirements for ten years to ensure proper PSD Avoidance.

1. Previous Permits. This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

### PERFORMANCE RESTRICTIONS

2. Permitted Capacity. The process/operation rate for the HMD Synthesis and Stripper Distillation Column, EU's 040 and 041, shall not exceed the maximum operating rate given in the Company Confidential Appendix in million pounds HMD per year based on a 12-month rolling total basis. [Rules 62-4.030, 62-4.070(3), 62-4.160(2), 62-210.200(PTE) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

### RECORDS AND REPORTS

3. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: EUs 040 and 041intoto emissions of VOC are estimated at 20.90 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC}*

## K. Nitric Acid Plant

This section of the permit addresses the following emissions units.

| ID No. | Emission Unit Description |
|---|---|
| 042 | Nitric Acid Plant |

In the synthesis process, ammonia is oxidized in the presence of a catalyst to form $NO_x$, which is then converted to nitric acid by a reaction with water. $NO_x$ emissions are controlled by process operating conditions and/or use of a Selective Catalytic Reduction (SCR) $NO_x$ abatement device.

Per Application 0330040-035-AC, there are no physical changes involved in this emissions unit for the Area II Adipic Acid Expansion Project. There will be no increase in emissions over those associated with excluded emissions due to demand growth up to 850 MAR. There are emissions recordkeeping requirements for ten years to ensure proper PSD Avoidance.

1. Previous Permits. This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

### PERFORMANCE RESTRICTIONS

2. Capacity. For testing purposes, the maximum allowable operating rate is 1,500 tons of 100% nitric acid produced per day. [Rules 62-4.160(2), 62-210.200(PTE), F.A.C., and permit application 0330040-035-AC]

   *{Permitting Note: The capacity limitations have been placed in the permit to identify the capacity of each unit for the purpose of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Permittee is expected to determine nitric acid production rate whenever emission testing is required, in order to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in this permit, requires measurement of the process variables for emissions tests. Such capacity determinations may be based on measurements of process inputs, flow measurements and/or other data to calculate average hourly capacity.}*

### EMISSION LIMITATIONS AND STANDARDS

3. No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which:
   (1) Contain nitrogen oxides, expressed as $NO_2$, in excess of 1.5 kg per metric ton of acid produced (3.0 lb per ton), the production being expressed as 100 percent nitric acid. The maximum allowable annual $NO_x$ emissions are 360 tons of $NO_x$ per year based on a 365-day rolling total amount as determined by the CEMs data and stack flow rate. Records shall be kept for a 365-day rolling total amount calculated in tons of $NO_x$ per year.
   (2) Exhibit 10 percent opacity, or greater.
   [40 CFR 60.72(a)(1) and (2) and Permit 0330040-003-AC, and permit applications 0330040-034-AC and 0330040-035-AC]

**RECORDS AND REPORTS**

4. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: Total emissions for EU 042 of $NO_X$ are estimated at 360.00 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC}*

## L. Area 480 KA (P2K)

This section of the permit addresses the following emissions units.

| ID No. | Emission Unit Description |
|---|---|
| 088 | Area 480 KA (P2K)- Product Synthesis, Refining and Raw Material Recovery and all related ancillary equipment and systems - VOC Control Flare and Backup Flare |

This process reacts phenol with hydrogen in a gas phase hydrogenation reaction for conversion to cyclohexanone/cyclohexanol mixture (KA). The KA is used in adipic acid production or for outside sales. Process emissions will be primarily VOC. Fugitive emissions will be VOC, primarily cyclohexanone and cyclohexanol; and HAP, primarily phenol. The VOC emissions control equipment for the Area 480 KA process consists of a Flare and a Backup Flare. Per Application 0330040-035-AC, there are no physical changes involved in this emissions unit for the Area II Adipic Acid Expansion Project. The minor emissions increases at Area 480 KA resulting from the need for additional KA in EU 002 are included in the ancillary emissions increase assessments presented in the application. Should more P2K-KA be produced for adipic acid manufacturing than accounted for in these emissions calculations, it will be at the expense of KA produced at the higher emission rate Halcon Unit (EU 020), as a result, overall emissions will be lower. Emissions from increased steam demand in this unit are included in the assessment. There are emissions recordkeeping requirements for ten years to ensure proper PSD Avoidance.

1. Previous Permits. This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

### PERFORMANCE RESTRICTIONS

2. Permitted Capacity. The process/operation rate for the Area 480 KA (P2K) Synthesis, EU 088, shall not exceed 400 million pounds KA per year based on a 12-month rolling total basis. [Rules 62-4.030, 62-4.070(3), 62-4.160(2), 62-210.200(PTE), and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

3. Permitted Capacity. The process/operation rate for the Cyclohexane Oxidation Process (Halcon), EU 020, and the Area 480 KA Expansion, EU 088, apportioned to Adipic Acid Synthesis, EU 002, shall not exceed the combined maximum operating rate given in the Company Confidential Appendix in million pounds KA per year based on a 12-month rolling total basis. [Rules 62-4.030, 62-4.070(3), 62-4.160(2), 62-210.200(PTE) and 62-212.400(12), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

4. Capacity. For testing purposes, the maximum allowable operating rate is 54,795 pounds per hour of KA mixture. [Rules 62-4.160(2), 62-210.200(PTE), F.A.C., and permit application 0330040-035-AC]

### RECORDS AND REPORTS

5. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative

Requirements. Permittee must keep records to show the percentage of production that is fed to the adipic acid unit and that percentage of the total emissions will be reported for the purposes of 62-212.300(1)(e), F.A.C. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: EU 088 total emissions of CO, $NO_X$, PM/PM10 and VOC are estimated at 0.46, 4.38, 0.33 and 3.57 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC}*

## M. 40 CFR 60 Subpart Kb – Liquid (VOL) Tanks Inventory

This section of the permit addresses the following emissions units.

| EU I.D. No. 097 | | | | |
|---|---|---|---|---|
| **40 CFR 60 Subpart Kb Volatile Organic Liquid (VOL) Tanks Inventory - 5/23/2000** | | | | |
| [for tanks constructed, modified or reconstructed after July 23, 1984, with volumes over 10,600 gallons, which are subject to 40 CFR 60 Subpart Kb, VOL Tank regulations] | | | | |
| Tank Number | Facility ID Number | Tank Volume (Kgal) | Tank Contents | NSPS Applicability |
| 486TA19 | 77 | 35.8 | Methanol | Subpart Kb requirements met by use of floating roof design. |
| 480TA602 | 480 | 50 | Off-Spec. Oil | Subject to Kb with emissions controlled by the Area 480 primary or backup flare |

Two storage tanks, Tank 486TA19 for methanol, and Tank 480TA602 for off-spec oil, with volumes of 35,800 gallons and 50,000 gallons, respectively. These tanks are regulated by 40 CFR 60 Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels [Including Petroleum Liquid Storage Vessels] for which construction, reconstruction, or modification commenced after July 23, 1984).

Per Application 0330040-035-AC, there are no physical changes involved in this emissions unit for the Area II Adipic Acid Expansion Project. There are emissions recordkeeping requirements for ten years to ensure proper PSD Avoidance.

1. Previous Permits. This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

**RECORDS AND REPORTS**

2. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

## N. Adipic Acid Bulk Loading, Bagging, & Boxing

This section of the permit addresses the following emissions units.

| ID No. | Emission Unit Description |
|---|---|
| 050 | Bulk Loading #1 |
| 051 | Bulk Loading #2 |
| 080 | Building 373 Loading |
| 045 | Building 465 Boxing/Bagging |

Dried Adipic Acid is loaded into railcars, boxed, and bagged based on customer demand.

1. Previous Permits. This permit supplements all previously issued air construction and operation permits for this emissions unit. This permit supersedes Permit 0330040-034-AC. Except for the change noted below, the unit remains subject to the conditions of all other valid air construction and operating permits. [Rule 62-210.300(1), F.A.C.]

**PERFORMANCE RESTRICTIONS**

2. Methods of Operation. EU 050, Bulk Loading #1 Baghouses shall use Tetratex PTFE Membrane filter bags or equivalent, made of polyester felt or equivalent, to maintain equivalent baghouse efficiency. Bulk Loading shall not be conducted without properly installed, operated and maintained baghouses. Baghouses shall be operated and maintained in accordance with the manufacturer's recommendations. Bulk Loading shall not occur without an appropriate loading spout seal and operational dust return system. [Rules 62-4.160(2), 62-210.200(PTE) and 62-213.440(1), F.A.C. and permit application 0330040-035-AC]

*{Permitting Note: This is based on Ascend's PSD analysis and statement that they saw a 15 TPY reduction in PM after installing the Tetratex PTFE Membrane filter bags.}*

**RECORDS AND REPORTS**

3. PSD Avoidance - Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (11), F.A.C., for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., this emissions unit is subject to the "Actual Emissions Reporting" provisions in Section 2, Administrative Requirements. Permittee must keep records to show the percentage of production that is fed to the adipic acid unit and that percentage of the total emissions will be reported for the purposes of 62-212.300(1)(e), F.A.C. [Rule 62-212.300(1)(e), F.A.C., Requested by Permittee to avoid PSD Review, and permit applications 0330040-034-AC and 0330040-035-AC]

*{Permitting Note: EUs 050, 051, 080 and 045 total emissions of PM/PM10 are estimated at 2.82 tons per year, as represented at the 990 MAR limit in permit application 0330040-035-AC. These emissions are after Ascend installed the Tetratex PTFE Membrane filter bags.}*