Supplemental Comments to Draft Title V Permit 03300040-002-AV
Solutia Inc. Pensacola Plant

The following supplemental comments are provided to the Florida Department of Environmental protection regarding the Draft Title V Permit for the Solutia Pensacola Plant.

Emission Units 003 (Boiler 8) and 004 (Boiler 7) – These emission units do not have heat input limitations as a result of the air construction permits issued for the Cogeneration facility. The suggested permitting note is appropriate for these emission units. Specific Condition A.9 for particulate emissions was be deleted, since this emission unit only burns natural gas and Maleic Anhydride Production off-gas. In addition, since the only fuels are gaseous fuels, Specific Condition A.12. was deleted given that testing is not required pursuant to Rule 62-297.310(7)(a)5.

The periodic monitoring conditions requested for these emission units are:

B.16. Continuous Emissions Monitoring. Permittee shall operate and maintain a carbon monoxide (CO) continuous emission monitor (CEM) on the exhaust stack for measurement of CO concentration. The CEM shall be properly operated and maintained to ensure accurate and reliable monitoring, recording, and reporting data. Permittee shall implement and maintain a quality control program which, at a minimum, follows the quality assurance procedures set forth in 40 CFR Appendix F, Quality Assurance Procedures, and Appendix B, Performance Specifications. Such data may be used directly or indirectly for compliance determination. CO CEM data calculation is a rolling hourly average calculated every 15 min.

VOC and NOx compliance is assumed as long as CO CEMs data demonstrates compliance with the CO emission limit described in condition A.6.

[Rules 62-4.070 and 62-297.550, F.A.C. and AC17-250268 (Maleic anhydride plant)]

B.17. Natural Gas Usage. A natural gas usage heat input will be calculated on an hourly basis and reported in units of MMBtu/hr for boilers 7 and 8.

{Permitting note: Records of Maleic off-gas usage is a requirement of EU-079 condition C.6.}

Emission Units 014 (Boiler 4), 015 (Boiler 5) and 016 (Boiler 6) – These emission units do not have a heat input limitations as a result of the air construction permits issued for the Cogeneration facility. The suggested permitting note is appropriate for these emission units. However, these emission units are being included in a supplemental air construction permit to consolidate the individual capacities into a combined capacity of 723mmBtu/hr, with no individual heat input limit on any boiler. A combined capacity of 864 mmBtu/hr heat input only during outages of the Cogeneration facility would continue

to be an additional permit limit. Records would be kept for natural gas usage during outages of the Cogeneration facility. Additionally, information on the composition of Area 480 residue was provided to the Department in a letter dated May 1, 2000, which demonstrates that its fuel quality is within the quality of No. 6 fuel oil. This fuel is being included in the supplemental construction application. In addition, the existing boilers have the capability to burn this fuel, along with other supplemental fuels.

The periodic monitoring conditions requested for this emission unit are:
A.8. Natural Gas Usage. An aggregate natural gas usage heat input will be calculated on an hourly basis and recorded in units of MMBtu/hr for boilers 4, 5 and 6 combined.

A.9. Supplemental Fuel Usage. An aggregate supplemental fuel usage rate will be calculated on an hourly basis and recorded in units of lbs/hr for boilers 4 and 5 combined for each of the following supplemental fuel types

* KATT composite Fuel (KATT, Amines, DME residue, 480 residue)
* AGS

A.10. Operation and Downtime Log. An operation and downtime log will be maintained indicating the operational status of each of the boilers 4 through 8 and the Cogeneration facility

A.11. Sulfur Dioxide. Monthly records of sulfur dioxide emissions, based on fuel usage and sulfur content, shall be maintained and made available for inspection by the Department.

Emission Units 001, 030, 031, 053, 054, 059, 067, 012 and 069 (Pyrolysis Cleaning Ovens) - Emission Units 001, 030, 031, 053, 054, 067, 012 and 069 are being included in a supplemental air construction permit to classify these units as insignificant emission units due to their size. Emission Unit 059 no longer exists at the plant.

Emission Units 044, 060, 061, 062, 063, 064 and 079 (Adipic Dryers) – Emission Unit 044 has emissions of less than 5 tons/year of any regulated air pollutant and is proposed as an insignificant emission unit. For all the other Emission Units, alternate capacities are being proposed, as a basis for the compliance test. The proposed dryer capacities are air flow rate determined by motor horsepower and blower capacity. A design maximum grain loading will be proposed for Emission Units 061, 062, 063 and 064; Emission Units 060 and 079 have grain loading limitations. A table of dryer flow and grain loading is included with the supplemental construction permit.

The periodic monitoring conditions requested for these emission units are:

E.8. Reasonable Assurances. The following work practices shall be followed to insure reasonable control of particulate matter:

(1) Dust collectors or bag filters, associated with solids handling, are to be in service prior to commencement of activities such as loading, unloading, storing, handling or other industrially related activities.
(2) Operation logs shall include documentation that particulate matter control devices (hoods, fans, filters or similar equipment) are activated prior to initiation of solid material handling activities. This documentation will be maintained and made available for Department inspections.
(3) Visible emissions testing shall be conducted on an annual basis to provide reasonable assurance of system effectiveness. To perform the visible emissions testing, it will be necessary to have material handling ongoing at reasonable or typical activity levels. No operating rate limits will apply to this testing, however Solutia commits to ensure that operating rates are representative of normal operating conditions. A log of operating rates shall be maintained on a daily basis. The operating rates during testing shall be noted on the test report. These operating rate logs and visible emissions tests will also be maintained and will be made available for Department inspection.
[Rule 62-4.070, F.A.C., and permit AC17-262484]

E.9. Blower Capacity. Maintain records of blower capacity, motor size and model number for each dryer. Blower capacity will be confirmed with pitot tube during required PM testing.

E.10. Scrubber Water Flow. Maintain hourly average scrubber water flow rate for EU's 060-064.

Emission Unit 028 (Polymer Fines Removal System) – This emission unit should be classified as an insignificant emission unit. The potential emission from this emission unit is less than 5 tons/year and is controlled by a baghouse. The potential emissions are 0.91 lb/hr or 4 tons/year of particulate matter. There are no specific emission limiting standards that are applicable in the Department's rules, other than the general visible emission standard [Rule 62-296.320(b) F.A.C.]. The Department's rules regarding circumvention of pollution control equipment and proper operation (Rule 62-210.650 F.A.C.) would be applicable.

Emission Unit 045 (Adipic Acid Packaging System) – This emission unit should be classified as an insignificant emission unit. The potential emission from this emission unit is less than 5 tons/year and is controlled by a baghouse. There are no specific emission limiting standards that are applicable in the Department's rules, other than the general visible emission standard [Rule 62-296.320(b) F.A.C.]. The Department's rules regarding circumvention of pollution control equipment and proper operation (Rule 62-210.650 F.A.C.) would be applicable.

Emission Units 050 and 051 (Adipic Acid Bulk Loading, Building 346 and 372) – These emission units should be classified as unregulated emission units. The emissions from these emission units are controlled by a baghouse. There are no specific emission limiting standards that are applicable in the Department's rules, other than the general

visible emission standard [Rule 62-296.320(b) F.A.C.]. The Department's rules regarding circumvention of pollution control equipment and proper operation (Rule 62-210.650 F.A.C.) would be applicable.

Emission Units 065 and 066 (Adipic Acid Product Separator, Building 465 and Alternate Conveyor, Building 465) – These emission units should be classified as an insignificant emission unit. The potential emission from this emission unit is less than 5 tons/year and is controlled by a baghouse. There are no specific emission limiting standards that are applicable in the Department's Rules, other than the general visible emission standard [Rule 62-296.320(b) F.A.C.]. These emission units transfer material and do not physically or chemically change the material (i.e., they are not a process as defined in 62-210.200 F.A.C.). The Department's rules regarding circumvention of pollution control equipment and proper operation (Rule 62-210.650 F.A.C.) would be applicable.

Emission Unit 073 (Abrasive Blast Facility) – This emission unit is being included in a supplemental air construction permit to classify the unit as unregulated emission unit. The potential emission from this emission unit is controlled by a baghouse. There are no specific emission limiting standards that are applicable in the Department's rules, other than the general visible emission standard [Rule 62-296.320(b) F.A.C.]. The Department's rules regarding circumvention of pollution control equipment and proper operation (Rule 62-210.650 F.A.C.) would be applicable.

Emission Unit 052 (Adipic Acid Transfer System) – This emission unit should be classified as an insignificant emission unit. The potential emission from this emission unit is less than 5 tons/year and is controlled by a baghouse. The potential emissions are 0.93 lb/hr (based on 0.03 grains/dscf and 3,600 scf/min) and 4 tons/year of particulate matter. There are no specific emission limiting standards that are applicable in the Department's rules, other than the general visible emission standard [Rule 62-296.320(b) F.A.C.]. The Department's rules regarding circumvention of pollution control equipment and proper operation (Rule 62-210.650 F.A.C.) would be applicable.

Emission Unit 080 (Adipic Acid 373 Dust Collector) – Note that the name Adipic Acid Loading System, Building 465 was misnamed. EU 080 is associated with the 373 Dust Collector. This emission unit is being included in a supplemental air construction permit to classify the unit as an insignificant emission unit. The potential emission from this emission unit is less than 5 tons/year and is controlled by a baghouse. Potential emissions are 0.21 lbs/hr and 0.91 tons/year of particulate matter. There are no specific emission limiting standards that are applicable in the Department's rules, other than the general visible emission standard [Rule 62-296.320(b) F.A.C.]. The Department's rules regarding circumvention of pollution control equipment and proper operation (Rule 62-210.650 F.A.C.) would be applicable.

Emission Units 047, 070, 071 and 072 (Nylon Vydne Resin Process, Mixing operation, Resin Extrusion, Aluminum silicate storage silo and Mineral hopper) – Emission units 047, 070, 071 and 072 are requested to be classified as insignificant emission units. For

Emission Unit 047, the supplemental construction permit includes information that would classify the unit as meeting the Department's criteria for being an insignificant source. The potential emissions from these emission units are controlled by an organic scrubber in the case of EU 070 and controlled by baghouses in the case of EUs-071 and 072. Emissions from these units have been reported as less than 1 ton/year in the AOR. There are no specific emission limiting standards that are applicable in the Department's rules, other than the general visible emission standard [Rule 62-296.320(b) F.A.C.]. The Department's rules regarding circumvention of pollution control equipment and proper operation (Rule 62-210.650 F.A.C.) would be applicable.

Emission Units 005 (Vaporizer No. 1), 007 (Vaporizer No. 2), 008 (Vaporizer No. 3), Units 009 (Vaporizer No. 4), 010 (Vaporizer No. 5), 011 (Vaporizer No. 6), 013 (Vaporizer No. 7), and 075 (Vaporizer No. 8) – These emission units are being include in a supplemental air construction permit to request a combined capacity of 136 mmBtu/hr heat input total for all vaporizers with no individual limit for any vaporizer. Natural gas is the primary fuel used in these vaporizers with 0.5% sulfur No. 2 distillate oil used as emergency backup. These emissions units do not have specific emission limiting standards that are applicable in the Department's rules, other than the general visible emission standard [Rule 62-296.320(b) F.A.C.].

The periodic monitoring condition requested for these emission units is:

G.8. Natural Gas Usage. An aggregate natural gas usage heat input will be calculated on an hourly basis and recorded in units of MMBtu/hr for vaporizers 1 through 8 combined.

Emission Unit 020 (Cyclohexane Oxidation Process) – The estimated emissions of CO and VOCs that are listed in the descriptive material of the subsection should have a clarifying sentence. The requested wording is as follows: "These values are only determined during periodic emission estimates determined though testing. " This emission unit is being included in a supplemental air construction permit to clarify the capacity limitation. This emission unit has a maximum capacity limitation in the air construction permit of 82,000 lb/hr, but not a limitation of the liquid feed rate of KA. Since the applicable NSPS Subpart NNN requirements are not based on capacity the suggested permitting note is appropriate.

The periodic monitoring conditions requested for this emission unit are:

I.11. Process Air Rate. Monitor and record total process air rate on an hourly basis (lbs/hr air)

I.12. High-Pressure Scrubber Oil Flow Rate. Monitor and record high-pressure scrubber oil flow rate on an hourly basis (lbs/hr oil)

I.13. KA Recovery Column Condenser Sump Temperature. Monitor and record hourly average sump temperature on an hourly basis. (ave°C/hr)

Emission Unit 002 (Adipic Acid Process) – The specific condition should be replaced with the specific conditions of air construction permit 0330040-11-AC. A permitting note on capacity is being requested in the supplemental construction permit.

Emission Unit 032 (Cogeneration Plant) – Specific Condition Q.5. (now D.5) includes the phase " for the duct burner" at the end of the condition to clarify the reference to 184 mmbtu/hr. This would reflect the allowable heat input for the duct burner system and not the total for both the combustion turbine and duct burner. This subsection should also reflect the new conditions applicable to the operation of the turbine inlet fogging system in air construction permit 0330040-015-AC. In the description the sentence "Operation of the combustion turbine using evaporative direct water spray fogging inlet air cooling is also authorized." has been added. A change of the construction permit is requested to include the Subpart Db and Subpart GG testing requirements as identified in the May 1, 2000 letter.

The periodic monitoring conditions requested for this emission unit are:

D.16. Natural Gas Usage. Natural gas usage heat input will be calculated on an hourly basis and recorded in units of MMBtu/hr.

D.17. Steam/Fuel Ratio. Monitor and record the steam to fuel ratio on an hourly basis.

Emission Unit 038 (Research and Development) – This emission unit should be classified as an insignificant emission unit. There are no specific emission limiting standards that are applicable in the Department's rules. The general visible emission standard [Rule 62-296.320(b) F.A.C.] would be applicable if particulate matter is generated by the operations.

Emission Unit 055 (Butane Barge Unloading) – This emission unit is being included in a supplemental air construction permit to classify the unit as an insignificant emission unit. The potential emission from this emission unit is less than 5 tons/year. The potential emission are 4.7 tons/year emitted from the unloading arm based on 60 lb per barge and the maximum number of barges per year. There are no specific emission limiting standards that are applicable in the Department's rules, other than the general visible emission standard [Rule 62-296.320(b) F.A.C.].

Emission Unit 068 (Cryogenic Ammonia Handling) – This emission unit is being included in a supplemental air construction permit to classify the unit as an insignificant emission unit. The potential emission from this emission unit is less than 5 tons/year during normal operations. A flare is only used during emergency venting to control emissions of ammonia with potential emissions of 1.2 ton ammonia/year. Ammonia is not a regulated pollutant under the Department's rules. There are also no specific emission limiting standards that are applicable in the Department's rules, other than the general visible emission standard [Rule 62-296.320(b) F.A.C.]. The Department's rules

regarding circumvention of pollution control equipment and proper operation (Rule 62-210.650 F.A.C.) would be applicable.

Emission Unit 077 (Dimethyl Ester Production) – This emission unit is being included in a supplemental air construction permit to remove the specific emission limitations during periods of shutdown periods of the hydrogen reformer and classify the unit as insignificant. The emissions with the backup controls are less than 5 tons/year.

Emission Units 040 (Hexamethylene Diamine Synthesis) and 041 (B and C Hexamethylene Diamine Stripper Distillation Column)– These emission units are being included in a supplemental air construction permit to remove the capacity limitations except for determining potential to emit and capacities during testing. Since the applicable NSPS Subpart NNN requirements are not based on capacity, the capacity should be used in determining potential to emit and compliance with Subpart NNN during testing. This is consistent with the requirements of the NSPS for performance tests (40 CFR Section 60.664).

The periodic monitoring condition requested for this emission unit is:

K.7. <u>EU-041 Head Pressure</u>. Records of B & C stripper column head pressure logged hourly when the column is in service, shall be maintained and be available for inspection by the Department.

Emission Unit 076 (Maleic Anhydride Plant)– This emission unit is being included in a supplemental air construction permit to remove the capacity limitations except for determining potential to emit. The limitation in former Specific Condition W1. is requested to be deleted and replaced with former Specific Condition W.2. The only emission from the emission unit occurs during periods of startup, shutdown and malfunction. There are also no specific emission limiting standards that are applicable in the Department's rules, other than the general visible emission standard [Rule 62-296.320(b) F.A.C.]. Clarification language is included for the emission limits during startup, shut down and malfunctions.

The periodic monitoring conditions requested for these emission units are:

C.5. <u>Startup, Shutdown and Malfunction Log.</u> A log shall be maintained of all uncontrolled VOC and CO emissions resulting from startup, shutdown, and malfunctions. (Rules 62-4.070 and 62-210.700 F.A.C.)

C.6. <u>Process Off-gas Rate.</u> Monitor and record process off-gas flows to boilers 7 & 8 on an hourly basis (MMSCF/hr)

Emission Unit 081 (Continuous Nylon Polymerization Lines) and 082 Batch Nylon Polymerization) – These emission units are being included in a supplemental air construction permit to remove the capacity limitations. These emission units have a

maximum capacity limitation as a company confidential document. There are no specific emission limiting standards that are applicable in the Department's rules, other than the general visible emission standard [Rule 62-296.320(b) F.A.C.]. The emission limitation for these units is expressed as a rolling annual average and compliance demonstration is requested with the Annual Operating reports. With compliance demonstration and periodic monitoring, annual capacity rates are not relevant to the Department's determination of compliance.

The periodic monitoring conditions requested for these emission units are:

H.7. The permittee shall maintain a log of down time for each control device which controls emissions of organic compounds.
[Rule 62-4.070, F.A.C., and permit 0330040-001-AC]

H.8. The permittee shall calculate at a minimum once annually or as requested by the Department a "365 day moving average" of total organic emissions from EU-081 and EU-082 using current emissions factors. A summary graph identifying each day's average shall be attached to and submitted with each annual operating report.
[Rule 62-4.070, F.A.C., and permit 0330040-001-AC]

H.9. Distillation Column. The permittee shall monitor the operation and performance of the distillation column. As a minimum, the monitoring shall include the following:

a) monthly monitoring of off gas HMDA concentrations.

b) monitoring and maintaining a minimum acceptable column reflux flow of 5000lbs/hr hourly average.

c) records shall be maintained and made available for Department inspection.

[Rule 62-4.070, F.A.C. and permit 0330040-001-AC]

Emission Unit 042 (Nitric Acid Plant)– This emission unit is being included in a supplemental air construction permit to remove the capacity limitations except for determining potential to emit during compliance tests. The specific maximum emission limit of 2.72 lb NOx per ton of HNO_3 is requested to be replaced with the NSPS limit of 3 lb NOx per ton of HNO_3. The annual emission limit is generally more restrictive than either the previous emission limit or the NSPS.

The periodic monitoring condition requested for this emission unit is:

L.14. Continuous Emissions Monitoring. Permittee shall operate and maintain a nitrogen oxides (NOx) continuous emissions monitor (CEM) on the exhaust stack for measurement of NOx concentration. The pollutant gas mixtures under Performance Specification 2 and for calibration checks under 40 CFR 60.13(d) shall be nitrogen dioxide (NO_2). The span value shall be 500 ppm of NO_2.

Records shall be kept for a 365 day rolling total amount calculated in tons of NOx/yr
[Rule 62-296.800(7)(b)10, F.A.C. and 40 CFR 60.73(a)].

Additional Comments:

- Attached is a list (Table T-1) that provides the tanks regulated under 40 CFR Part 60 Subpart Kb. The only requirement is recordkeeping, with the possible exception of the methanol tank where a floating roof design is employed.

- The Area 480 analyzer vent stream is included, to document that this planned new source is insignificant. Emissions of VOC and HAP's are estimated at approximately 0.1 tons/year (200 lbs/year), well below the 5 ton/year VOC insignificant level and the 1000 lbs/year HAP insignificant level.

- The Vydyne additive room air dust control ventilation exhaust is included, to document that this planned new source is insignificant. Potential emissions of particulate are less than 1/2 ton/year, based on 1000 CFM air flow and 0.015 grains/scf.

- Miscellaneous room air dust control ventilation exhausts are included in EX-1,for units less than 9,000 CFM, which would be insignificant for potential emissions of particulate based on a particulate exhaust air grain loading of 0.015 grains/scf or less.