

## AIR PERMIT REVIEW FOR TITLE V FACILITY

APPLICANT RADICISPANDEX Corporation	SITE LOCATION Gastonia	COUNTY Gaston
CONTACT Davis Sores	PHONE 704-864-5495 ext 3217	
APPLICATION FOR: Significant Modification TV		Existing P/N 02106T16
APP. NO. 3600053.04A	REVIEWER Michael Brandon	SIGNATURE DATE February 5, 2004
RECOMMENDATION AND COMMENT Issue Permit 02106T17		FEE CLASS Title V

### 1. Purpose of Application:

The RADICISPANDEX Corporation received a construction permit PART II to change the raw materials it uses in extrusion lines No. 4 and No. 5 for Spandex production from the esterification of toluene diisocyanate in a toluene/ethylene diamine bath to the esterification of methylene diphenyl diisocyanate in a isopropyl alcohol/ethylene diamine bath. In conjunction with this change, a 10,000 gallon solvent storage tank (ID No. ES08) and a distillation column (ID No. ES09A) with three associated 1,000 reclaim tanks (ES09B, ES09C, and ES09D) will be installed. The column will be used to separate desorbed isopropyl alcohol from the water introduced during steam stripping of the carbon adsorption units.

This permit modifies the Title V permit through public notice to include these changes in the PART I operating permit as enforceable and covered under the permit shield.

Changes to the Title V permit are as follows:

Page No.	Condition No.	Change
2	table of content	Reference to PART II removed.
3	na	The equipment table was modified to remove 501(C)(2) notation
na	PART II	Part II Construction permit removed.

### 2. Application Chronology:

The application chronology is detailed on the attached IMPAQ Report.

### 3. New Equipment/Change in Emission and Regulatory Review

- a. **Distillation Column (ID No. ES09A), three storage tanks (ID Nos. ES09B through ES 09D) ducted to carbon adsorption unit (ID No. CD01B), and Storage tank (ID No. ES08)**

This new equipment will result in no emissions increases as assured by a PSD avoidance condition equal to the estimated actual emissions from Line No. 4 and Line No. 5 of 48 tons per year plus a less than 40 ton per year increase. This cap is placed within the existing PSD cap for Lines No.1 through Lines No. 5 (i.e., emission from all lines can not exceed 250 tons per year and emissions from just Line No. 4 and Line No. 5 and the new equipment can not exceed 88 tons per year.

The applicable regulations are:

2D .0317-PSD Avoidance:

PSD avoidance is discussed in Section 4 PSD Issues.

2D.0958-Work Practices for Sources of VOC

These work practice standards applies facility wide to all sources with emissions greater than 15 pounds per day.

**4. PSD Issues:**

The PSD avoidance condition was set up to require I&M of carbon adsorbers and record keeping to determine monthly emissions. Previous determination methods were required daily, which is no longer required with the replacement of the photochemically reactive compound rule. The method of determination of emissions was also changed so that VOC emissions can be determined from the amount issued to a particular process minus the amount reclaimed via carbon adsorption (e.g., material balance). This will preclude re-evaluation of emission factors for EDA emissions based on relative volatility. The reports of the rolling 12 consecutive month totals are now required on a semi annual rather than quarterly basis as now allowed by EPA.

The new PSD avoidance condition does not contravene the existing condition as its maintains the existing 250 ton per year cap for the modified sources, but adds an extra cap to limit the modified sources to less than a significant PSD increase. The Permittee stated that their assessment of actual emissions for the modified lines were about 48 tons per year of VOC to which 40 tons was added to produce a cap of 88 tons of VOC. Since this is a significant modification that introduces a requirement to avoid an applicable requirement but does not contravene any existing condition, the modification is being processed as a 501(c)(2) modification. This procedure allows the Permittee to construct and operate the proposed modifications without public notice pursuant to the 2Q .0300 regulations provided they file for a complete Title V operating permit within one year of start up, to include public notice.

**5. Facility Wide Toxic Air Pollutants - State Enforceable Only**

The emissions of the toxic air pollutant toluene decrease as a result of the proposed modification. This source has not triggered a toxic air pollutant review.

**6. Facility Compliance Status:**

The facility is presently in compliance with all applicable regulations and permit conditions.

**7. Facility Emissions Review:**

Potential emissions will not increase as a result of the proposed modifications.

**8. Conclusions, Comments, and Recommendations:**

The RCO recommends issuance of permit revision 02106T17

The MRO recommends issuance of permit revision 02106T17.