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Subject: Technical Support Document  
Title V Operating Permit Renewal  
Ranbar Electrical Materials, Inc.  
Manor Products Division  
Westmoreland County

October 25, 2004

To: File TV - 65 - 00042

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**BACKGROUND**

Ranbar Electrical Materials (Ranbar) is a paint, coatings and resin manufacturer located in Manor Twp., Westmoreland County. Operations at this facility are comprised of a paint manufacturing area and a resin manufacturing area which produces wire enamel, varnishes and related industrial coatings. VOC sources include paint and resin manufacturing, cleanup solvent use, material storage and natural gas fired boilers. Paint is produced in ball mills, continuous mills, high speed dispersion mills, roll mills and other miscellaneous equipment. Various resins are cooked in reactors or kettles

Ranbar is a major stationary source as defined in Title I, Part D of the Clean Air Act Amendments. As such, the facility is subject to the Title V permitting requirements adopted at 25 PA Code, Chapter 127, Subchapter G. Ranbar submitted the renewal application on July 19, 2004. The application was deemed timely and administratively complete on September 9, 2004. The original Title V permit for this facility was issued on January 21, 2000 and it expires on January 20, 2005. The facility has been in compliance with the requirements of this permit during the length of the original Title V Permit. The facility has been inspected on an annual basis. The only change from the initial Title V permit is the replacement of a 5.25 MM Btu/hr. Cleaver Brooks natural gas-fired boiler with a 3.36 MM Btu/hr. Hurst natural gas-fired boiler, as identified in Section H. Miscellaneous of the renewed permit.

## EMISSION INFORMATION

### PAINT MANUFACTURING

Ranbar (formerly Westinghouse Electrical Materials) notified the Department on May 12, 1994, in accordance with Ch. 129.91(b) that the Manor Plant is a major stationary source of VOC emissions and non-major for emissions of NOx. The sources of VOC emissions from the Manor Plant include the paint manufacturing operations, resin manufacturing, miscellaneous solvent usage and natural gas combustion. The largest sources of VOC emissions are the paint manufacturing operations. The second largest source is the resin manufacturing area. VOC emissions from natural gas combustion and miscellaneous solvent usage are a minor source of VOC emissions.

The total VOC emissions allowed by the RACT Operating Permit as a result of paint production correspond to 72.4 tons/yr. Actual VOC emissions based on paint production for the 2003 calendar year are reported as 8 tons.

Actual particulate matter emissions from these operations amounted to 0.1 tons/year.

### RESIN MANUFACTURING

Potential VOC emissions for resin manufacturing processes are established in the RACT operating permit and are limited to 37.6 tons/yr. Actual VOC emissions as reported in the 2003 AIMS emissions report calculate to 1.1 tons/yr.

Actual particulate matter emissions from these operations amount to 0.2 tons/year.

### COMBUSTION SOURCES

Actual and potential emissions for the combustion sources were calculated using AP-42 emission factors and the rated heat input capacities for the various small combustion units at this facility. The potential to emit calculations were based on the highest AP-42 emission factors for natural gas or No.2 fuel oil. Also, the maximum allowable emission rates for SOx and particulate matter were used to calculate PTE for the incinerator.

Actual VOC emissions for all combustion sources combined compute to 0.11 tons/year.

Actual NOx emissions for all combustion sources combined calculate to 2.1 tons/year. These sources were not subject to RACT requirements for NOx emissions as this facility was non-major for NOx. Actual SO<sub>2</sub> emissions for all combustion sources combined calculate to 0.01 tons/year. Actual particulate matter emissions from these combustion sources amount to 0.06 tons/year.

### FACILITY WIDE

Actual emissions submitted in the 2003 AIMS Emission Statement are reported as 11.9 tons of VOC's, 2.1 tons of NOx and 0.6 tons of PM-10. Hazardous air pollutants were reported as 10.2 tons/year, of which xylene accounted for 5.5 tons. There are no additional SIP requirements for NOx or VOC emissions applicable to these sources, nor are there any applicable NSPS requirements.

### **OPERATIONAL FLEXIBILITY**

The Title V permit may include provisions to allow a permitted facility to make certain changes without requiring a permit revision. Ranbar has requested that the de minimus emissions increases as defined in Pa. Code Title 25, Ch. 127.449 be included in their Title V permit. This operational flexibility request has been provided for in Section B. General Requirements, Condition #025.

### **ALTERNATIVE OPERATING SCENARIOS**

Ranbar has not proposed any alternative operating scenarios.

### **AMENDMENTS**

There were no amendments to this application.

### **PREVIOUS OPERATING PERMITS AND PLAN APPROVALS**

The emissions sources at this facility were considered "grandfathered" sources, exempt from plan approval/operating permit requirements, including all the various small combustion sources and the various mixing vessels, mills and reaction kettles.

The major sources of VOC emissions at this facility, painting and resin manufacturing are subject to the requirements of Ch. 129.91 - Ch. 129.93. These sources are also subject to the recordkeeping requirements of Ch. 129.52(c). It is these sources that make Ranbar a major source subject to Title V requirements. This facility was issued a RACT/Synthetic Minor Operating Permit No. 04-000-013. The applicable requirements from this operating permit have been incorporated into the Title V Permit.

This incinerator was subject to the BAT requirements of Chapter 127.12(a)(5), when installed. The applicable requirements from this operating permit were incorporated into the initial, as well as the renewal Title V Permit.

## **STREAMLINING**

There are no emissions restrictions or operating parameter limitations that meet the criteria for streamlining.

## **REGULATORY REQUIREMENTS**

The MACT standard for Miscellaneous Organic Chemical Manufacturing (MON rule), 40 CFR Part 63, Subpart FFFF, was promulgated on November 10, 2003 and requires compliance by November 10, 2006. The rule provides for controlling emissions from process vents, storage tanks, transfer racks and various other ancillary sources. The MACT standard for Miscellaneous Coating Manufacturing, 40 CFR Part 63, Subpart HHHHH, was promulgated on December 11, 2003 and requires compliance by December 11, 2006. For stationary process vessels with capacities greater than or equal to 250 gallons, the final rule requires an overall reduction, adjusting for capture and control efficiency based on enclosure tests, as applicable, of at least of 75 percent by weight for HAPs with a vapor pressure greater than or equal to 0.6 kilopascals, and at least a 60% reduction for HAPs with a vapor pressure less than 0.6 kPa. The final rule also provides for an emissions averaging alternative for stationary process vessels that are equipped with a tightly-fitting cover.

Ranbar completed a CAM applicability worksheet, Addendum 3, and determined that this facility is not subject to the CAM requirements. Pre-control emissions from all reactors combined are greater than the VOC major source threshold of 50 tons/year. However, the pre-control emissions of each individual Pollutant Specific Emission Unit (PSEU) are less than the major source thresholds. Hence, consistent with EPA guidance, the facility is not subject to the CAM requirements of 40 CFR Part 64.

## **CONCLUSIONS AND RECOMMENDATIONS**

The various miscellaneous combustion sources are not significant sources of criteria pollutants and as such, monitoring and testing requirements are inappropriate and unwarranted. Ranbar shall determine emissions from these sources using AP-42 emission factors and monthly natural gas usage.

Ranbar was asked to re-evaluate their potential-to-emit for hazardous air pollutants to determine if they are indeed subject to any promulgated MACT standards. Provided the revised PTE's are still above the HAP major source thresholds, Ranbar shall comply with the applicable MACT requirements or obtain a Synthetic Minor permit limiting HAP emissions prior to the compliance dates (November 10, 2006, December 11, 2006).

I have completed my review of Ranbars Title V permit application for their Manor facility. Ranbar has met the regulatory requirements associated with this application submittal. The attached

draft permit reflects terms and conditions as described in Ranbars permit application. It is my recommendation to issue a Title V permit renewal for this facility with a permit term of 5 years.