

AIR PERMIT REVIEW

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| APPLICANT: International Paper- Riegelwood Mill | SITE LOCATION: Riegelwood | COUNTY: Columbus | |
| TECHNICAL CONTACT: Gary Morrow | PHONE: (910) 655-6309 | RESPONSIBLE OFFICIAL: Edward Kreul | TITLE: Environmental, Health & Safety Manager |
| REVIEW ENGINEER: Mark Cuilla | SIGNATURE: | DATE: XXXXXX, 2003 | |
| REGIONAL CONTACT: Dean Carroll | REGIONAL OFFICE: WIRO | SIC CODE: 2611, 2631 | |
| APPLICATION NUMBER: 2400036.03C | EXISTING PERMIT NUMBER: 03138R19 | NEW PERMIT NUMBER: 03138R20 | |

I. Purpose of Application

The 1990 amendments to section 112 of the CAA included a new section, 112(j). Section 112(j) states that the provisions of 112(j) apply if the EPA misses a deadline for promulgation of a standard under 112(d). On January 13, 2003, EPA proposed the MACT standards for industrial, commercial, and institutional boilers (Subpart DDDDD). This proposal date was beyond the MACT hammer date in 112(j); therefore, facilities subject to the MACT are required to submit a permit application within 18 months after the missed deadline. EPA allowed this submittal to take two parts: Part I was due May 2002 and required facilities to supply facility information and MACT applicability information. Part II requires facilities to supply a complete application in which MACT standards are determined on a case-by-case basis.

This submittal for International Paper – Riegelwood Mill satisfies the case-by-case maximum achievable control technology (MACT) requirements in subsection 112(j) and 15A NCAC 2D .1109. The application is based on an assessment of public health risk consistent with subsections 112(d)(4) and 112(f)(2). The use of risk assessment to evaluate MACT is discussed in Section IV(E) of the preamble to the proposed ICI MACT and in the white paper published by the American Forest and Paper Association.

Based on the results of the risk assessment presented in the application, the facility is requesting the following:

1. that the risk assessment be accepted by DAQ in support of a determination that the existing potential emissions and air pollution control equipment satisfy MACT requirements to protect public health with an ample margin of safety as defined in subsections 112(d)(4) and 112(f)(2) of the Clean Air Act;
2. that the permit be modified and re-issued to reflect the case-by-case determination that the existing air pollution control equipment on power boilers 2 and 5 satisfy the requirement under section 112 to employ MACT. Furthermore, if the EPA promulgates the standard under Section 112(d) after the date this permit is issued that would be applicable to the facility, in lieu of the emission limitation established by this case-by-case MACT risk assessment, the facility requests that the mill be granted eight years to comply as allowed by section 112(j)(6);

3. that compliance with the proposed case-by-case MACT be based on the following permit conditions for power boilers 2 and 5:
 - a. particulate matter not to exceed the existing permit limits (0.16 pounds per million Btu), which are consistent with the existing best available control technology (BACT) permit requirements;
 - b. hydrogen chloride (HCl) not to exceed 0.09 pounds per million Btu; and
 - c. mercury (Hg) not to exceed 0.000007 pounds per million Btu.

It should be noted that particulate matter is a surrogate for control of metals other than Hg and will ensure that the potential emissions used in the risk assessment will not be exceeded. The mercury and hydrogen chloride limits requested are those proposed for each existing industrial, commercial, and institutional boiler or process heater in the large solid fuel category; and

4. that if DAQ does not concur that the risk assessment demonstrates the section 112 criteria have been met then the specific reasons for rejection be provided in writing in accordance with section 505 of the clean air act.

II. Facility Description

International Paper operates two solid fuel-fired boilers at its Riegelwood Mill. The facility is classified as a major source of hazardous air pollutants (HAPs) and these two solid fuel-fired boilers, Power Boilers 2 and 5, are covered by the proposed Industrial, Commercial, Institutional (ICI) Boiler source category MACT standard under 40 CFR Part 63.

III. History/Background/Application Chronology

May 21, 2002 – 112(j) Part I application received by DAQ.

August 7, 2003 – 112(j) Part II application received by DAQ.

IV. Permit Modification/Changes

The following table describes the modifications to the current permit.

| Page(s) | Section | Description of Change(s) |
|---------|------------|--|
| 1 | Cover Page | -amended all permit revision numbers and dates |
| 8 | A.1 | -added reference to 2D .1109 “Case-by-Case MACT” |
| 12 | A.10 | -added permit condition for 2D .1109 |

V. Regulatory Review

This proposed modification does not affect any of the current regulatory requirements. However, it does add a new requirement for power boilers 2 and 5. 15A NCAC 2D .1109, 112(j) Case-by-case Maximum Achievable Control Technology, has been added to the permit as demonstrated and outlined in the permit application. This condition adds emissions limits for particulate matter, mercury and hydrogen chloride.

VI. NSPS, NESHAPS, PSD, Attainment Status, 112(r), CAM

NSPS

The facility currently operates under multiple NSPS emission limitations for its existing pulping operations, chemical recovery operations, and causticizing and lime recovery operations. This proposed permit modification does not affect these requirements.

NESHAP/MACT

The facility currently operates under MACT standards for pulp and paper manufacturing (40 CFR 63, Subpart S). This proposed permit modification does not affect these requirements.

On January 13, 2003, the EPA proposed MACT standards for industrial, commercial, and institutional boilers (40 CFR 63, Subpart DDDDD). Under the proposed rule, existing solid fuel-fired boilers larger than 10 million Btu per hour would be required to comply with limitations on either particulate matter or the aggregate emissions of eight metals (arsenic, beryllium, cadmium, hexavalent chromium, lead, manganese, nickel, and selenium), on mercury, and on hydrogen chloride. This proposed modification addresses these requirements with a case-by-case MACT determination in which a health based risk assessment is used.

PSD

The facility currently operates under multiple PSD avoidance conditions for its power boilers and chemical recovery operations. These PSD requirements are limited to best available control technology (BACT) emission rates. Lime kilns 2, 3, and 4 operate under a maximum nitrogen oxides emissions cap. This proposed permit modification does not affect these requirements.

112(r)

This facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule.

CAM

As of this permit modification, the facility is operating under a State construction and operation permit; therefore, a CAM analysis is not required at this time.

VII. Facility Wide Air Toxics

The facility is subject to the following state-enforceable only toxic emission rates pursuant to 15A NCAC 2D .1100 in accordance with approved demonstration:

| AIR TOXICS POLLUTANT(S) | EMISSION LIMIT(S) |
|--------------------------------|--------------------------|
| Acetaldehyde | 857.7 lb/hr |
| Acrylonitrile | 436.3 lb/yr |
| Carbon disulfide | 2702.4 lb/day |
| Carbon tetrachloride | 23125.5 lb/yr |
| Chlorine | 274.9 lb/day |
| | 36.2 lb/hr |
| Chloroform | 38,051.4 lb/yr |
| Chromium VI | 80.4 lb/yr |
| Cresol | 10.4 lb/hr |
| Fluorides | 207.4 lb/day |
| | 37.6 lb/hr |
| Formaldehyde | 8.3 lb/hr |
| Hexachlorocyclopentadiene | 4.3 lb/day |
| | 0.3 lb/hr |
| Mercury and compounds | 376.4 lb/day |
| Methylene chloride | 18,150,346.4 lb/yr |
| | 4336.2 lb/hr |
| Pentachlorophenol | 6.3 lb/day |
| Phenol | 0.9 lb/hr |
| Sulfuric acid | 3663.3 lb/day |
| | 225.0 lb/hr |

As part of the application, the facility provided an air quality dispersion modeling analysis for the emission of the toxic air pollutants of concern in the MACT (see Section VI of this document for a list). The analysis used the NC Acceptable Ambient Levels (AALs) to evaluate short-term impacts and used the risk approach described by EPA to evaluate long-term impacts. Per Mark Yoder, DAQ AQAB, “the modeling analysis adequately demonstrates compliance with the appropriate AALs for the seven NC toxics on a source-by-source basis.” The modeling analysis indicated that the maximum short-term impact was 47.8% (arsenic) of the appropriate AAL. This compliance demonstration assumes the pollutant emission rate calculations provided are correct.

The long-term risk assessment modeling included metals and HCl emissions from eleven sources. The modeling concatenated five-years of meteorological data to calculate the five year average concentration for the pollutants. Mr. Yoder states that “the modeling methodologies used for the long-term risk assessment are consistent with NC air quality guidelines for the pollutants listed...but should be reviewed at the federal level to determine consistency and applicability to EPA risk assessment modeling guidelines and dose-response values.”

VIII. Statement of Compliance

Based on the latest inspection of August 25, 2003, by Lynette Bryan of the Wilmington Regional Office, the facility was found to be in compliance with all applicable air quality regulations.

IX. Stipulation Review

The Wilmington Regional Office did not request a review of the current permit conditions. It should be noted that the initial title V draft permit has been taken to public notice. All permit conditions and stipulations will be updated with the issuance of that permit. The modifications in this application will be consolidated upon completion of both permitting activities.

X. Public Notice / EPA and Affected State Review

Pursuant to 2Q .0521, a notice of the draft Title V Permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the draft Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above. There are no affected States for this facility.

XI. Conclusions, Comments, and Recommendations

Permit 03138R19 is proposed to be modified as requested by the Permittee to include a case-by-case MACT determination with associated emission limits for particulate matter, mercury, and hydrogen chloride on power boilers 2 and 5. These limitations adequately demonstrate compliance with the proposed MACT standard, and with EPA concurrence on the long-term risk assessment DAQ concurs with the modification of the permit.

Upon completion of the 30-day public comment period, EPA will be given their required 45-day period in which to review all relevant documentation (including the permit application itself) in order to approve of the federally enforceable case-by-case determination as proposed in the DRAFT permit.