NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date: TBD

Region: Washington Regional Office
County: Craven
NC Facility ID: 2500104
Inspector's Name: Betsy Huddleston
Date of Last Inspection: 02/23/2017
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): International Paper - New Bern Mill

Facility Address:
International Paper - New Bern Mill
1785 Weyerhaeuser Road
Vanceboro, NC 28586

SIC: 2611 / Pulp Mills
NAICS: 32211 / Pulp Mills

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 02D: .0503, .0508, .0515, .0516, .0519, .0521, .0524, .0530, .0614, .1100, .1109, .1111
02Q: .0317
NSPS: Db, BB, IIII
NESHAP: S, MM, ZZZZ, DDDDD, Case-by-Case
PSD: CO
PSD Avoidance: SO_2, NOx, total reduced sulfur
NC Toxics: 02D .1100
112(r): n/a
Other: **02D .0530(u), recycled fuel oil, MACT avoidance, NSPS avoidance**

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Paul Rodock Sr. Env. Engineer (252) 633-7459 1785 Weyerhaeuser Road Vanceboro, NC 28586	John Ashley Mill Manager (252) 633-7242 1785 Weyerhaeuser Road Vanceboro, NC 28586	Paul Rodock Sr. Env. (252) 633-7459 1785 Weyerhaeuser Road Vanceboro, NC 28586

Application Data

Application Number: 2500104.16B
Date Received: 03/24/2016
Application Type: Renewal
Application Schedule: TV-Renewal

Existing Permit Data
Existing Permit Number: 02590/T53
Existing Permit Issue Date: 12/01/2016
Existing Permit Expiration Date: 12/31/2016

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2015	265.65	684.79	454.89	691.32	73.64	258.41	200.37 [Methanol (methyl alcohol)]
2014	266.27	689.85	452.56	305.61	70.80	255.72	199.20 [Methanol (methyl alcohol)]
2013	292.00	750.03	489.45	516.39	76.16	268.98	204.14 [Methanol (methyl alcohol)]
2012	346.01	708.88	685.17	418.23	40.18	297.66	235.63 [Methanol (methyl alcohol)]
2011	505.78	726.44	722.46	480.31	53.54	318.07	251.03 [Methanol (methyl alcohol)]

Review Engineer: Russell Braswell

Review Engineer's Signature: **Date:**

Comments / Recommendations:
Issue 02590/T54
Permit Issue Date: TBD
Permit Expiration Date: TBD

1. Purpose of Application:

International Paper - New Bern Mill (IP-NBM) currently operates under Title V permit 02590T53, with an expiration date of December 31, 2016. On March 24, 2016, NC DAQ received an application to renew this permit. Because the renewal application was received at least nine months before the expiration date of the permit, the existing permit will remain in effect, regardless of the expiration date, until the renewal application is approved.

2. Facility Description:

According to the most recent inspection report[1], this facility manufactures "fluffed pulp" from softwood, and has been in operation for more than 45 years. In addition, the pulping process also produces saleable turpentine.

3. History/Background Since the Previous Permit Renewal:

- January 13, 2009 Permit R35 issued in response to application .08C. This action renewed the permit, added natural gas as a fuel source for the lime kiln, and changed the ownership of the facility.
- April 6, 2009 Permit R36 issued in response to application .09D. This was a TV-State application, and allowed burning of small amounts of black liquor solids in the recovery furnace.
- June 15, 2009 Permit R37 issued in response to applications .06C/.08B/.08D/.09A. This handled as a TV-state application. The facility upgraded the recovery furnace and associated sources, allowed for burning HVLC gasses in more sources, and incorporated new TAP modeling.
- August 7, 2009 Permit R38 issued in response to application .09E. This was a TV-State application that added sources associated with a pilot lignin removal plant.
- March 3, 2010 Permit R39 issued in response to application .09H. This was a TV-State application that added natural gas to the Power Boiler 2.
- October 26, 2010 Permit R40 issued in response to application .10A. This was a TV-State application. The facility made various upgrades that increased efficiency and utilization and submitted this application to demonstrate that a PSD review was not required.
- January 4, 2011 Permit R41 issued in response to application .09G. This action added the Case-by-Case MACT to the boilers.
- April 7, 2011 Permit R42 issued in response to application .10B. This was a State-Only modification. This action allowed upgrades to the delignification system and bleach plant, allowed Power Boiler 1 to burn natural gas, and removed the black liquor gasifier and supporting sources.

1 Betsy Huddleston, October 10, 2016

- January 3, 2012 Permit T43 issued in response to application .05A. This permit was issued because the initial Title V permit was appealed. After the appeal was settled, this permit was issued.

- April 19, 2012 Permit T44 issued in response to application .12A. This was the first step of a 2-step TV-Significant application. This action allowed for an alternate operating scenario (AOS) for the smelt tank during maintenance.

- July 19, 2012 Permit T45 issued in response to applications .12B/C/D. This was the first step of a 2-step TV-Significant application. This action added more sources to the pilot lignin removal plant, added MACT ZZZZ to emergency generators on the permit, and removed the applicability of NSPS Dc to the temporary boiler.

- April 8, 2013 Permit T46 issued in response to application .12G. This was the first step of a 2-step TV-Significant application. This action allowed for an AOS where only half of the electrostatic precipitator would be active when in use. With this permit, IP-NBM also requested an analysis of TAP emission limits as allowed under Session Law 2012-91.

- August 1, 2013 Permit T47 issued in response to application .13A. This was the first step of a 2-step TV-Significant application. This action upgraded the steam system and steam turbine, which increased utilization at the facility. This application was submitted to demonstrate that a PSD review was not required.

- February 11, 2014 Permit T48 issued in response to application .11B. This was a PSD-Major application that upgraded the control of HVLC/LVHC systems, upgraded the recovery furnace, replaced the smelt tanks, added a scrubber to the smelt tanks, and increased the firing rate of black liquor solids.

- November 25, 2015 Permit T49 issued in response to application .15A. This was a TV-Minor application that added small emergency generators to the permit.

- April 5, 2016 Permit T50 issued in response to application .15C. This was a TV-Minor application that added the CTO Reactor System to the permit.

- June 13, 2016 Permit T51 issued in response to application .15B. This was a TV-Significant application that removed the expired CAIR requirements from the permit.

- September 13, 2016 Permit T52 issued in response to application .14A. This was a 2nd step TV-Significant application that satisfied all outstanding 2nd step application requirements. In addition, it removed No. 6 oil from Power Boiler 1, added No. 2 oil to the lime kiln, and added additional emergency-use engines.

- December 1, 2016 Permit T52 issued. This reflected a change in ownership of the facility.

4. Application Chronology:

- March 24, 2016 Application received.
- April 5, 2016 Permit T50 (TV-minor) issued.

- June 13, 2016 — Permit T51 (TV-significant) issued.
- September 13, 2016 — Permit T52 (TV-significant, 2nd step) issued.
- November 11, 2016 — Email sent to IP-NBM with several minor questions about the facility and TV permit (e.g. is the size of the ESP per-chamber, or total?).
- December 1, 2016 — Permit T53 (ownership change) issued.
- January 3, 2017 — Response received to the November 11 email.
- January 14 – February 27, 2017 — Internal research into the exempt/no-requirements sources under MACT Subpart MM.
- March 3 – April 27, 2017 — Email correspondence with Treva Maxwell-Anderson regarding the nominal heat input rate of the recovery boiler.
- April 28, 2017 — An initial draft of the permit and review were sent to DAQ staff (Tom Anderson, Jeff Twisdale, Samir Parekh, Betsy Huddleston, Robert Bright) and to IP-NBM staff (Treva Maxwell-Anderson). For a summary of comments received, see Attachment 2.
- August 28, 2017 — Based on comments received, and email was sent to IP-NBM requesting a CAM plan for the recovery boiler and lime kiln.
- November 16, 2017 — IP-NBM supplied the requested CAM plans via email.
- December 4, 2017 — Email sent to IP-NBM regarding the classification of #1 Power Boiler under MACT Subpart DDDDD.
- December 5, 2017 — Response received to the December 4 email.
- December 5, 2017 — A second draft of the permit and review were sent to DAQ staff (Tom Anderson, Mark Cuilla, Samir Parekh, Betsy Huddleston, Robert Bright) and to IP-NBM staff (Paul Rodock). For a summary of comments received, see Attachment 3.
- February 5- February 7, 2018 — Email correspondence regarding IP-NBM's responses to the second draft.
- February 27, 2018 — Third draft of the permit sent to IP-NBM staff. For a summary of comments received, see Attachment 4.
- March 20, 2018 — Email sent to IP-NBM staff regarding comments on the third draft.
- March 22, 2018 — Phone call to Amy Marshall (PE for AECOM, a consulting firm representing IP-NBM) regarding opacity monitoring for NSPS Subpart Db.
- XXXXX — EPA / Public Notice.
- XXXXX — Permit issued.

5. Permit Modifications/Changes and TVEE Discussion:

- Residual oils have been removed from the list of fuels for #1 power boiler.

- Residual oils and biofuel have been removed from the list of fuels for #2 power boiler.
- The emission source description of the recovery boiler (ID No. ES 445-001) has been updated to include the natural gas burners in the boiler. According to an email from Treva Maxwell-Anderson, the boiler is equipped with four starter burners (24.5 MMBtu/hr, each), two "load" burners (109 MMBtu/hr), and one burner for natural gas and the SOG/etc. gasses (30.7 MMBtu/hr). This change to the description in the permit does not reflect a change to the physical source, and is only for clarity and future reference.
- References to one-time testing for the recovery boiler have been removed because the testing has been completed.
- The permit conditions for MACT Subparts S and MM have been rewritten to reflect regulatory updates and better fit DAQ formatting.
- The permit condition for NSPS Subpart Db has been rewritten in order to match DAQ formatting and reflect that the Permittee no longer burns residual oil in #2 power boiler.
- The permit conditions for 02D .0530(u) have been updated to reflect the beginning and end dates of the required reporting.
- Corrected the equipment table for ES 402-141 to show that it can exhaust to the lime kiln.
- A permit condition for MACT Subpart DDDDD for the #1 and #2 power boilers has been added to the permit.
- A permit condition for 02D .0521 was added to the permit to cover the specific operating scenario of the #2 Power Boiler operating on only natural gas and/or pulping waste gasses.
- Two permit conditions for CAM have been added to the permit.

The complete list of changes can be found in Attachment 1.

6. Regulatory Review:

IP-NBM is subject to the following regulations, in addition to the requirements in the General Conditions:

- 15A NCAC 02D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers"
- 15A NCAC 02D .0508 "Particulates from Pulp and Paper Mills"
- 15A NCAC 02D .0515 "Particulates from Miscellaneous Industrial Processes"
- 15A NCAC 02D .0516 "Sulfur Dioxide from Combustion Sources"
- 15A NCAC 02D .0519 "Control of Nitrogen Dioxide and Nitrogen Oxides Emissions"
- 15A NCAC 02D .0521 "Control of Visible Emissions"
- 15A NCAC 02D .0524 "New Source Performance Standards"
  (40 CFR Part 60, Subparts Db, BB, IIII)
- 15A NCAC 02D .0530 "Prevention of Significant Deterioration"
- 15A NCAC 02D .0614 "Compliance Assurance Monitoring"
- 15A NCAC 02D .1100 "Control of Toxic Air Pollutants"
- 15A NCAC 02D .1109 "112(j) Case-by-Case Maximum Achievable Control Technology"
- 15A NCAC 02D .1111 "Maximum Achievable Control Technology"
  (40 CFR Part 63, Subparts S, MM, ZZZZ, DDDDD)
- 15A NCAC 02Q .0317 "Avoidance Conditions"
  (PSD Avoidance, MACT Avoidance, NSPS Avoidance, Recycled Fuel Oil)

An extensive review for each applicable regulation is not included in this document, as the facility's status with respect to these regulations has not changed. The permit will be updated to reflect the most current stipulations for all applicable regulations.

Note that 15A NCAC 02D .0528 "Total Reduced Sulfur from Kraft Pulp Mills" does not apply to this facility because 02D .0528(b) specifically states that processes subject to 02D .0524 (i.e. NSPS Subpart BB) are not subject to this rule. All potentially applicable sources at this facility are subject to the NSPS, so this rule does not apply.

7. NSPS, MACT/GACT, PSD/NSR, 112(r), RACT, CAM:

a. 40 CFR Part 60: New Source Performance Standards (NSPS)

1. Subpart Db "Industrial-Commercial-Institutional Steam Generating Units"

This rule applies to boilers with a heat input greater than 100 MMBtu/hr and constructed/modified after 1984. Only the #2 Power Boiler is subject to this rule.

The rule sets emission limits for PM, NOx, SO_2, and opacity. The requirements and limits change based on the size of the boiler, fuels used in the boiler, date of construction, and any control devices used. Based on the information received from the applicant, the #2 Power Boiler is:

1) Greater than 250 MMBtu/hr;
2) Fired only with No. 2 oil, natural gas, waste gas, or a combination of these
3) Fired only with fuel that meets the definition of "very low sulfur fuels";
4) Uses no specific control device for SO_2 or PM; and
5) Has not been modified after 2005.

Based on these characteristics, the boiler has the following limits and requirements:

a) SO_2 not to exceed 0.20 pounds per million Btu of heat input. [§60.42b(a)]
b) NOx not to exceed 0.10 pounds per million Btu of heat input when fossil fuel alone is combusted. [§60.44b(a)]
c) NOx not to exceed 0.5 pounds per million Btu of heat input when fossil fuel and chemical by-product waste are simultaneously combusted. [§60.49b(x)(1)(ii)]
d) While firing fuel oil, opacity not to exceed 20 percent. [§60.43b(f)]

In order to demonstrate compliance with these requirements, IP-NBM must operate a CEMS for NOx and CO_2 or O_2 and keep records showing that all fuels meet the definition of "very low sulfur fuel". Normally a continuous opacity monitoring system (COMS) is also required, but 40.48b(j) allows for several exceptions. (j)(2) allows for only recordkeeping provided that the boiler fires low-sulfur fuel and does not use any post combustion control. The facility can use this option provided no waste gasses are being fired, because the facility only uses the control devices while waste gasses are being fired. (j)(7) allows for surrogate parametric monitoring provided that the boiler only fires low-sulfur fuel. The facility will use this option any time waste gasses are being fired. The surrogates are scrubber flow rate and exit temperature. The VE requirements only apply when burning fuel oil.

The rule requires recordkeeping of all monitoring activities, and regular reporting of all recordkeeping activities.

Continued compliance with this rule will be determined with subsequent inspections and reports.

2. *Subpart Dc "Small Industrial-Commercial-Institutional Steam Generating Units"*

This rule applies to boilers with a heat input between 10 and 100 MMBtu/hr and constructed/modified after 1989. However, 40 CFR 60.40c(i) specifically exempts temporary boilers.

The only boiler at this facility that could be subject to the rule is the optional temporary boiler. In order to avoid the requirements of this rule, the facility must keep records demonstrating that any temporary boiler meets the definition of "temporary" in the rule.

3. *Subpart BB "Kraft Pulp Mills"*

This rule applies to all kraft pulp mills that were constructed/modified after September 24, 1976. All sources related to the kraft process at this facility are subject to the rule.

Subpart BBa applies to kraft pulp mills constructed/modified after May 23, 2013. None of the sources at this facility meet that definition.

This rule sets emission limits for PM and total reduced sulfur (TRS). In general, the facility controls TRS by sending TRS-laden gasses to one of the boilers or the lime kiln, and controls PM emissions using PM control devices, such as an electrostatic precipitator.

Compliance with this rule is linked to the compliance methods of MACT Subparts S and MM.

4. *Subpart IIII "Stationary Compression Ignition Internal Combustion Engines"*

This rule applies to all stationary reciprocating internal combustion engines constructed/modified after April 2006. There are two such engines at this facility: ES 100-004 and ES 185-118.

The requirements of the rule change based on the size, fuel, and use-type of the engine. Both engines at this facility are <500 horsepower, diesel-fired, and emergency-use.

In general, the requirements for these engines are:

1. Be certified to comply with the emission standards in 60.4202;
2. Use fuel with less than 15ppm of sulfur;
3. Install a non-resettable hour meter;
4. Operate only during emergency-use scenarios or maintenance (with minor exceptions);
5. Operate and maintain the engine according to the manufacturer's recommendations.

Continued compliance with this rule will be determined with subsequent inspections and reports.

b. 40 CFR Part 63: Maximum Available Control Technology (MACT)

This facility is considered a Major Source for HAP emissions. Therefore, rules that apply specifically to Area Sources (e.g. Subpart JJJJJJ) do not apply to this facility.

1. *Subpart S "Pulp and Paper Industry"*

   This rule applies to specific pulp-making sources at pulp and paper factories. Specifically, the affected source is "…the total of all HAP emission points in the pulping and bleaching systems". The requirements of the rule change based on the facility being "existing" or "new". All of the sources at this facility are considered existing.

   While the rule applies all emission points in the pulping and bleaching systems, some sources have no requirements under the rule because they are either a) not specifically named or b) have emission rates lower than certain thresholds. For instance, the primary rejects tank (ES 420-123) has potential emissions less than 0.2 pounds per oven-dried ton of pulp (ODTP).

   The rule sets emission limits on HAPs from the affected sources. In order to comply, the emissions from the subject sources need to be conveyed via a "closed-vent system" to a control device. The control devices used are the Lime Kiln, #2 Power Boiler, and the Recovery Boiler. For the bleaching system, the facility uses a wet scrubber as the control device.

   Most of the monitoring requirements are targeted at the wet scrubber and verifying that the closed-vent systems are operating properly. The facility must perform emission testing on the wet scrubber once every five years.

   The permit condition for MACT Subpart S has been rewritten to reflect regulatory updates (namely the five-year testing) and to match DAQ formatting.

2. *Subpart MM "Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills"*

   This rule applies to HAP-Major chemical recovery systems at kraft pulp mills. All of the subject sources at this facility are considered "existing".

   The rule targets HAP emissions, but in general uses PM as a surrogate. As such, the rule sets emission limits on PM from the recovery boiler, lime kiln, and smelt dissolving tank.

   In order to demonstrate compliance, the facility operates COMS on the boiler and kiln, and a CPMS for the scrubber. The CPMS only needs to be operated during the alternate operating scenario (AOS) where scrubber exhaust is not being directed to the boiler or kiln. Additionally, during the AOS, the maximum firing rate of black liquor solids is reduced by about 50%.

   The facility must keep records of all monitoring activities, and report all recordkeeping twice per year.

   On October 19, 2017, EPA promulgated several updates to this rule. The general changes include initial and subsequent performance testing and a reduction in allowable excess VE. The updated requirements take effect on October 11, 2019.

   The permit condition for MACT Subpart MM has been rewritten to reflect regulatory updates and correct references to specific paragraphs within Subpart MM.

3. *Subpart ZZZZ "Stationary Reciprocating Internal Combustion Engines"*

This rule applies to all stationary reciprocating internal combustion engines. The requirements of the rule change based on the age of the engine, the use-type, size, etc. All of the engines at this facility can be classified as:

- Emergency-use
- <500 horsepower
- Diesel-fired
- Subject OR NOT Subject to NSPS Subpart IIII

For the engines subject to the NSPS, the only requirement under the MACT is compliance with the NSPS.

For the engines not subject to the NSPS, the requirements in general are:

1. Operate according to manufacturer's specifications;
2. Install a non-resettable hour meter;
3. Minimize idle and startup time;
4. Regularly change belts, filters, and oil;
5. Operate only for emergency or maintenance (with minor exceptions)

The facility must keep records of all monitoring activities, and report all recordkeeping twice per year. Continued compliance will be determined with subsequent inspections and reports.

4. *Subpart DDDDD "Industrial, Commercial, and Institutional Boilers and Process Heaters"*

This rule applies to most boilers at HAP-Major sources. After this rule was initially vacated in 2008, North Carolina developed a Case-by-Case MACT (CBCM) for boilers as required by Section 112(j) of the Clean Air Act. All boilers at this facility (except the Temporary Boiler) are subject to the CBCM. EPA promulgated a new version of MACT Subpart DDDDD in November 2015. All boilers subject to the CBCM will eventually comply with MACT Subpart DDDDD. The transition date is May 19, 2019.

However, as a result of the December 2016 court case American Chemistry Council v. EPA, portions of this rule have been remanded back to EPA for further review. Therefore, in the future, portions of this rule and permit stipulation are subject to change.

According to 40 CFR 63.7491(h), this rule does not apply to "Any boiler or process heater that is part of the affected source subject to another subpart of this part, such as boilers and process heaters used as control devices…". The Lime Kiln is subject to MACT Subpart MM, so this source is not subject to this rule.

According to 40 CFR 63.7491(b), this rule does not apply to recovery boilers that are covered by MACT Subpart MM. Therefore, the Recovery Boiler is not subject to this rule.

The temporary boiler currently has an avoidance condition for the Case-by-Case MACT. This will be replaced with one for MACT Subpart DDDDD. The requirements for avoiding this condition will be effectively the same. Provided the temporary boiler meets the definition of "temporary", it will not be subject to this rule.

Ultimately, the only sources at this facility that will eventually be subject to this rule is the #1 and #2 Power Boilers.

Based on the age of the boilers, they will be considered existing under the rule. According to information received by email on February 7, 2018, the boilers will only burn oil during periods allowed by the definition of "units designed to burn gas 1 fuels" in 40 CFR 63.7575. Additionally, both boilers are equipped with O_2 trim systems. However, IP-NBM requested that the permit be written to allow for flexibility in operating the O_2 trim system.

For this category of source, the rule requires a tune-up every five years, a one-time initial energy assessment, and good work practices. IP-NBM must continue to operate the O_2 trim system and keep records of fuel use that show the boilers meet the definition of "units designed to burn gas 1 fuels".

Compliance with this rule will be determined after the initial compliance date.

5. Case-by-Case MACT for Boilers and Process Heaters

North Carolina implemented the Case-by-Case MACT [CBCM] provisions under Section 112(j) of the Clean Air Act after MACT Subpart DDDDD (5D) was initially vacated on July 30, 2008. The CBCM rule takes the place of 5D until that rule has been implemented again. EPA promulgated a new version of MACT 5D in November 2015. Based on the promulgation date, the CBCM will remain in effect until May 19, 2019. A paragraph has been added to the permit that deals with the applicability dates of the CBCM and 5D.

Note that the CBCM applies to all boilers at this facility, but MACT 5D does not.

The CBCM for this facility has two separate scenarios: #1, with >10% of the heat input coming from residual oil, and #2, with <10% of the heat input coming from residual oil. Based on the information received February 7, 2018, residual oil will no longer be used in any source subject to the CBCM. Therefore, references to scenario #1 have been removed from the permit.

As now written in the permit, the CBCM only requires work practice standards, tune-ups and maintenance, and subsequent monitoring.

Continued compliance will be determined with subsequent inspections and reports.

c. Prevention of Significant Deterioration (PSD)

This facility is a PSD-Major source. Best Available Control Technology (BACT) limits have been incorporated into the permit for the recovery boiler. Additionally, the facility is avoiding a new PSD review for several sources by complying with various emission limits.

1. Recovery Boiler

The only BACT limit for this source is for CO. In order to demonstrate compliance, the facility must perform an annual CO emission test. In addition, in order to avoid a new PSD review, the facility must limit hours of operation under the alternate operating scenario. This AOS allows the boiler to be operated with only half of the ESP operating.

2. PSD Avoidance

In order to avoid a new PSD review, the following sources have annual emission limits: Power Boiler No 1, Temporary Boiler, the non-NSPS emergency engines, and smelt dissolving tank. The facility must keep records of operation and emissions for these sources in order to demonstrate compliance with the PSD avoidance limits.

3. Use of Projected Actual Emissions

In the past, IP-NBM has made modifications to the permit and used projected actual emissions in order to demonstrate that these modifications did not trigger a PSD review. For each of these modifications, the facility must keep records of the actual emissions for these sources for five years following the date the modifications were physically implemented. The records must be reported on an annual basis.

The permit has been updated to include the end-date of each report. In addition, former conditions 2.2 D.2 and 3 have been removed because the five-year reporting period has been completed.

d. Section 112(r) of the Federal Clean Air Act

The facility does not appear to store any 112(r)-subject materials above their respective thresholds. Therefore, the facility does not have any increased requirements under Section 112(r) of the Clean Air Act.

e. Reasonably Available Control Technology (RACT)

The facility is not located in an area of ozone nonattainment, therefore RACT does not apply.

f. Compliance Assurance Monitoring (CAM)

CAM applies to a control device if the following criteria are met:

1. The unit being controlled is subject to a non-exempt emission standard (as defined by 2D .0614(b)(1)),
2. The control device is being used to comply with the emission standard, and
3. The unit being controlled has potential emissions of the pollutant subject to the emission standard of greater than major source thresholds.

IP-NBM uses control devices in order to comply with several regulations, but most are exempt from CAM:

Regulation	Pollutant	Triggers CAM?	Notes
02D .0503	PM	No	Sources subject to this rule do not have PM potential emissions greater than the major source threshold.
02D .0508	PM	Yes	*
02D .1100	TAPs	No	TAPs do not have a major source threshold.
MACT Subpart MM	PM	No	02D .0614(b)(1)(A)
MACT Subpart S	HAPs	No	02D .0614(b)(1)(A)

Regulation	Pollutant	Triggers CAM?	Notes
NSPS Subpart BB (PM specifically)	PM	Yes	*
NSPS Subpart BB (total reduced sulfur specifically)	TRS	No	Sources that use control devices to comply with these limits do not have potential emissions greater than the major source threshold.

* Only for sources that also have potential PM10 emissions greater than 100 ton/yr

Ultimately, the only CAM-applicable sources at this facility are the Recovery Boiler and Lime Kiln. because:

a) The facility uses control devices to comply with particulate emission limits.
b) The sources have potential PM emissions greater than 100 ton/yr; and
c) The facility does not have any other compliance method that qualifies as a continuous compliance demonstration method (CCDM) for this source.

Notably, based on the emission calculations submitted with the renewal application, the smelt tank does not have potential emissions of PM or TRS greater than 100 ton/yr. Therefore, CAM is not required for this source.

Previously, the facility had relied on a continuous opacity monitor system (COMS) as a CCDM. However, COMS generally cannot be used as a CCDM because a COMS does not output data directly correlated to an emission standard. Therefore, as part of this renewal application, DAQ requested a CAM plan be submitted for the Recovery Boiler and Lime Kiln.

As part of the renewal application, IP-NBM proposed a CAM plan for the above sources. The plan relies on COMS and corrective action is required if opacity is recorded as outside the acceptable range.

The application also originally included a CAM plan for the #2 Power Boiler. This was based on the boiler firing No. 6 fuel oil. As part of the changes made during the renewal process, IP-NBM decided to remove No. 6 fuel oil from this boiler. Making this change removed the need for a CAM plan, and therefore no CAM plan for the #2 Power Boiler is included in the permit.

The proposed CAM plans were incorporated into the permit. Continued compliance will be determined during subsequent inspections.

8. Toxic Air Pollutants

IP-NBM has performed TAP emission modeling on this facility (most recently on July 20, 2011 for the T46 permit). The emission rates used in the modeling demonstration are listed in the permit as emission limits. This modeling also included an analysis of TAP emission sources which are also subject to a MACT, per Session Law 2012-91. The conclusion of that analysis showed no unacceptable risk to human health, and therefore the MACT-subject sources were exempted from TAP emission limits.

This permit renewal does not require a new TAP emission rate review. This renewal is not expected to change TAP emission rates.

9. Facility Emissions Review

For a historical review of emissions from this facility, see the table on the first page of this review.

This renewal is not expected to change potential emissions from this facility.

10. Compliance Status

a. Notices of Violation/Recommendation for Enforcement since the previous renewal

- March 23, 2011 NRE issued because IP-NBM failed to submit a permit application on time.
- March 18, 2010 NOV issued because IP-NBM submitted a late report.

b. Inspection status

This facility was most recently inspected on October 10, 2016 by Betsy Huddleston. IP-NBM appeared to be in compliance with the Title V permit at the time of that inspection.

11. Other Regulatory Concerns

A PE seal was not required for this permit renewal.

A zoning consistency form was not required for this permit renewal.

12. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also, pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521 above. There are no affected state/local programs within 50 miles of the facility

13. Recommendations

Issue permit 02590T54.

ATTACHMENT 1 to Review of Application 2500104.16B
International Paper – New Bern Mill

Change List

Insert list from final permit

* This refers to the current permit unless otherwise stated.

ATTACHMENT 2 to Review of Application 2500104.16B
International Paper – New Bern Mill

Comments Received on Initial Draft

- Samir Parekh, by email on May 3, 2017

  1. The review indicates that the facility is using a continues opacity monitor as a CCDM, and thus avoiding CAM. A COMS cannot be used as a CCDM, and therefore the following sources need a CAM plan: Recovery Boiler, Smelt Dissolving Tank, and Lime Kiln.

     Response: After discussing this issue with Samir, I agree that this facility needs to submit a CAM plan for these sources. I forwarded this request to the facility, and received a CAM plan by email on November 16, 2017.

     Samir indicated that the Smelt Dissolving Tank should have a CAM plan. However, I disagree because, based on the emission data submitted by the facility, this source does not have potential emissions of any pollutant greater than Major Source thresholds.

  2. The averaging time for the #2 power boiler plan should be 1-hour, not 3-hour.

     Response: I have made this change.

  3. The CAM plan for the #2 power boiler should include a QIP threshold.

     Response: I have made this change.

- Jeff Twisdale, by email on May 12, 2017

  Jeff pointed out typos in the permit and review.

  Response: The indicated issues have been fixed.

- Betsy Huddleston, by email on May 18, 2017

  1. The following sources can be removed from the permit: IES-155-078, IES 445-202.

     Response: I confirmed with the facility, then removed these sources.

  2. The facility may be applying for removal of some fuel oils. Fuel oils are now used as backups for most sources.

     Response: Until they do so, I don't see a need to change the permit.

  3. Should the CAM plans include a QIP threshold trigger?

     Response: Based on Samir's comment, I have added a QIP threshold to the CAM plan for the #2 Power Boiler.

4. The gasified and preheater mentioned in 2.2 D.1. no longer exist.

   Response: They were included in the analysis that showed that PSD did not apply. I feel it is appropriate to keep it here.

5. The draft permit does not contain any mention of MACT Subpart 5D. Was this intentional?

   Response: When the initial draft was sent for review, DAQ was not putting a reference to the transition from the CBCM to MACT 5D due to legal challenges to the rule. At this point in time, DAQ is now putting the transition language in permits. Therefore, I have added this to the permit, and a discussion thereof to the review.

6. Betsy pointed out typos in the permit and review.

   Response: The indicated issues have been fixed.

- Treva Maxwell-Anderson and Paul Rodock, by email on August 18 and August 29, 2017

1. The following sources can be removed from the permit: ES 425-005, ES-425-032, and ES-425-118.

   Response: I have removed these sources.

2. Can the fuel sulfur content monitoring requirements be removed? Sulfur content of oils is regulated by law.

   Response: I have removed this for No. 2 oil. DAQ still feels that monitoring sulfur content for heavier oils (e.g. No. 4, 6) is warranted.

3. Is there an end-date for the PSD Avoidance condition under Section 2.1 A.5?

   Response: No. PSD Avoidance is ongoing and does not have an end-date. This is different from 02D .0530(u).

4. Is it necessary to specify annual testing as "(no more than 12 months since the previous)"?

   Response: It is DAQ policy to specify that "annual" means 12 months. It should be noted that testing in January 1 of one year allows for testing on January 31 of the following year. In this way, DAQ does not believe that this will drastically change testing schedules.

5. Section 2.2 A.1.d.ii. should specify the difference between dilute and concentrated gasses.

   Response: Fixed.

6. Treva and Paul pointed out typos in the permit.

   Response: I have fixed the indicated issues.

ATTACHMENT 3 to Review of Application 2500104.16B
International Paper – New Bern Mill

Comments Received on Second Draft

- Paul Rodock, by email on February 2, 2018

The following is a summary of comments received on the second draft:

1. Remove residual oil and biofuel from the list of fuels for the power boilers.

   Response: Done.

2. Add new insignificant sources, and a permitted emission source for haul roads.

   Response: Done.

3. Changes regarding MACT Subpart DDDDD and the Case-by-Case Boiler MACT:

   a. #2 Power Boiler is not part of the affected source of MACT Subpart S, and therefore should be subject to MACT Subpart DDDDD.

   b. The #1 and #2 power boilers only burn oil such that they meet the definition of "gas 1-fired unit" under MACT Subpart DDDDD. Furthermore, both of these boilers are equipped with O2 trim systems. The MACT Subpart DDDDD permit conditions should be updated to reflect this.

   c. Residual oils and biofuel should be removed from the list #1 and #2 power boilers. Based on this change, requirements related to residual oils should be removed from the permit conditions for the #1 and #2 power boilers.

   Response: After discussions with Betsy Huddleston, I agree that I had initially misinterpreted MACT Subpart S. I agree that MACT Subpart DDDDD applies to the #2 power boiler. I have made these changes.

4. The permit should clarify the difference between filterable and condensable particulate limits, where applicable.

   Response: Done.

5. With residual fuel oils removed, the #2 power boiler does not require a CAM plan.

   Response: I agree. I have removed the CAM plan from the permit.

6. Changes regarding NSPS Subpart Db:

   a. With residual fuel oils removed, the #2 power boiler only burns "very low sulfur fuel" as defined by NSPS Subpart Db. The permit condition should be updated to reflect this.

   b. The opacity limit under NSPS Subpart Db no longer applies to the #2 power boiler. It should be replaced with 02D .0521.

Response: Per 40 CFR 60.43b(f), the opacity requirement will apply during any period where the boiler burns liquid fuel. Given that the boiler normally does not burn liquid fuel, this standard will rarely apply. I agree that a permit condition for 02D .0521 should apply, but only for periods of time where non-liquid fuel is being burned.

I have made other changes to the permit condition to reflect the requirements of very low sulfur fuel (e.g. removing the SO2 CEMS requirement).

7. The permit condition for MACT Subpart MM should be updated to include the regulatory updates of October 2017.

   Response: Done.

8. The Lignin Solids Recovery sources should be removed from the permit.

   Response: Done.

9. The permit should indicate that initial testing for MACT Subpart S has been completed.

   Response: Done.

10. The draft permit contains several typos that should be corrected (e.g. the equipment list states that the temporary boiler is subject to the Case-by-Case MACT)

    Response: Done

    .

ATTACHMENT 4 to Review of Application 2500104.16B
International Paper – New Bern Mill

Comments Received on Third Draft

- Amy Marshall, by email on March 19, 2018

  The following is a summary of comments received on the third draft:

  1. Minor typos in the permit
  2. Add IES-CT for the cooling towers
  3. Questioned why the draft contains opacity monitoring for NSPS Db
  4. Why are the Lime Kiln and Recovery Boiler subject to CAM?
  5. The MACT DDDDD permit condition should include the oxygen trim system as optional

  Response:

  1. *I have fixed the indicated typos*
  2. *I have added IES-CT*
  3. *During a phone call on March 22, 2018, I explained why the opacity monitoring condition applies to this boiler.*
  4. *NSPS BB and 02D .0508 both trigger CAM requirements. The monitoring for MACT Subpart MM does not constitute a "continuous compliance demonstration method" and therefore cannot be used as an exemption from CAM.*
  5. *I have changed the MACT DDDDD condition to allow the oxygen trim system to be optional.*