
Dunn Paper, Inc.

RESPONSE TO COMMENTS DOCUMENT

April 6, 2017

PERMIT No. 514-95B



Rick Snyder, Governor

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I. PUBLIC PARTICIPATION PROCESS

Permit to Install application No. 514-95B, for Dunn Paper, Inc., is for the paper mill located at 218 Riverview Street, Port Huron, Michigan. The purpose of the application is to establish federally enforceable emission limits for oxides of nitrogen (NO_x), sulfur dioxide (SO₂), and carbon monoxide (CO) to restrict the facility's potential to emit to less than the major source thresholds for the Renewable Operating Permit (ROP) Program. In other words, the purpose of the permit is to establish emission limits and corresponding operating restrictions ("opt-out" limits) to ensure that the facility remains a minor source with respect to Title V (Part 70) of the Clean Air Act. The draft permit was subject to the public participation process because the emission limits in the draft permit are greater than 90 percent of the major source threshold. The public participation process involved providing information for public review including a fact sheet and proposed permit terms and conditions, a public comment period, the opportunity to request a public hearing, and the receipt of written and verbal public comments on staff's analysis of the application and the proposed permit.

On February 9, 2017, copies of the Notice of Air Pollution Comment Period and Public Hearing, the Fact Sheet and the draft terms and conditions were placed on the Michigan Department of Environmental Quality (MDEQ or Department), Air Quality Division (AQD) Home Page (<http://www.michigan.gov/air>). In addition, a notice announcing the Public Comment Period and the opportunity to request a Public Hearing was placed in the Port Huron newspaper, *The Times Herald*. The notice provided pertinent information regarding the proposed action; the locations of available information; a telephone number to request additional information; the date, time, and location of the Public Hearing, if one was requested; the closing date of the Public Comment Period; and the address where written comments were being received.

During the Public Comment Period, no one requested a Public Hearing to be held. Five written comments from one commenter were received during the Public Comment Period.

The remainder of this document is a listing of the significant comments received during the public comment period regarding the proposed permit and the AQD's response. The first section discusses the AQD's response to significant comments that did not result in changes to the final permit terms and conditions. The last section discusses all other significant comments received that did result in changes to the final permit and the basis for each change.

II. SUMMARY OF SIGNIFICANT COMMENTS

Comment

Please supplement the permit record to provide information supporting the facility-wide potential to emit (PTE) limitations of 99.9 tons per year (12-month rolling average) for NO_x, CO, and SO₂, to demonstrate that the facility-wide emissions limitations are enforceable as a practical matter, in accordance with the "potential to emit" definition in 40 Code of Federal Regulations (CFR) 70.2. In particular, the permit record should address and account for all NO_x, CO, and SO₂ emissions from the facility and explain how the PTE limits in the permit are enforceable as a practical matter. Other than the specific production and operation limits on the two boilers, it is unclear how the facility-wide emission limits related to practically enforceable limits on individual emission units.

For further information, see Cash Creek Generation, LLC, Title V petition response Order, No. IV-2010-4, June 22, 2012; Hu Honua Bioenergy Facility Title V petition response Order, No. IX-2011-1, February 7, 2014; and Yuhuang Chemical Inc. Methanol Plant Title V petition response Order, No. VI-2015-03, August 31, 2016.

AQD Response

In accordance with our standard procedures, the AQD plans to include all relevant information in the permit record to support the facility-wide PTE limitations.

Most of the physical and operational limitations in this minor source permit apply to the two boilers at Dunn Paper. This is because these two emission units are the largest sources of NO_x, CO, and SO₂ emissions at the facility. They are also the only two emission units currently subject to the requirement to obtain a Permit To Install. The permit record will document the reasoning behind all physical and operational limitations in the permit, which include hours limitations, fuel restrictions, and fuel sulfur content restrictions.

There are natural gas-fired space heaters and process heaters at the Dunn Paper, Inc. plant that are exempt from obtaining a Permit To Install, pursuant to Michigan Rule 282(b)(i). For these emission units, the only operational restriction in the permit is the requirement to burn pipeline quality natural gas. The PTE calculation for these units was based on the maximum capacity of each unit, in accordance with CFR 70.2. (i.e., The PTE was based on operation of each unit at full capacity, every hour of the day and every day of the year.) The permit record will document the fact that the emissions from all equipment not subject to operational restrictions must be calculated at that equipment's unrestricted PTE.

The permit file will include the permit conditions, the permit application, all AQD correspondence and notes regarding the application, and the Evaluation Document. The Evaluation Document contains a full explanation of the permit review that was performed, including a description of the facility, a list of the operational restrictions in the permit that are related to the facility-wide opt-out emission limits, emission calculations, and a discussion of the applicable State and Federal air rules and regulations. The AQD will ensure that the permit file contains all the necessary information to support the facility-wide PTE limitations of 99.9 tons per year.

The AQD has reviewed the petition response Orders mentioned by the commenter, and found that many of the issues were related to start up, shut down, and malfunction emissions. The emission limits in the Dunn Paper, Inc. permit apply at all times. Some of the issues in the petition response Orders were regarding clarity about whether emission limits apply to all equipment. The AQD has addressed these issues in the following responses to comments.

Comment

Special Conditions for EU00001 and EU00017. Please revise the various lb/MMBtu NO_x, CO, and SO₂, emission limits as follows to ensure these limits are enforceable as a practical matter:

- 1) Replace the references to "test protocol" with the averaging period and any other operating scenario information necessary for determining compliance with each limit,
- 2) Identify the specific test methods for each limit, and
- 3) Include monitoring and recordkeeping provisions specifying how the source is to demonstrate compliance with each limit on an ongoing basis.

AQD Response

The Special Conditions for EU00001 and EU00017 were established in minor source Permits to Install 514-95 and 514-95A, which were issued on November 20, 1996, and January 6, 2006, respectively. These conditions were established as part of the Michigan's New Source Review process.

Application No. 514-95B was a request to establish federally enforceable emission limits for NO_x, CO, and SO₂ to restrict the facility's PTE to less than the major source thresholds, to opt-out of the Title V Renewable Operating Permit (ROP) Program. As such, Application No. 514-95B is not subject to New Source Review, and the previously established New Source Review conditions are not being reevaluated at this time.

The only changes that were made to the Special Conditions for EU00001 and EU00017 as a part of the review process for Application No. 514-95B are listed below. The reasons for these changes are explained.

EU00001:

- One new emission limit was added on page 5 of the permit: 0.37 lb SO₂ / MMBtu when burning No. 2 fuel oil. This was added to make the opt-out practically enforceable, because that value was used as the emission factor to calculate the ton per year (tpy) emissions from the boiler.
- On page 6 of the permit, there is a new sulfur content limit for No. 2 fuel oil of 0.36 percent, which corresponds with the new 0.37 lb SO₂ / MMBtu emission limit and makes that emission limit practically enforceable.
- The language used in the sulfur content limits on page 6 of the permit was modernized. The updated language is more restrictive than the previous language, but easier to demonstrate and check for compliance. This improves the practical enforceability of the sulfur content limits and sulfur emission limits.

EU00017:

- The NO_x limit on page 8 of the permit was changed from 0.041 lb/MMBtu to 0.042 lb/MMBtu, to correct an error from the previous permit.
- The language used in the sulfur content limit on page 8 of the permit was modernized. The updated language is more restrictive than the previous language, but easier to demonstrate and check for compliance. This improves the practical enforceability of the sulfur content limits and sulfur emission limits.

The AQD disagrees that the references to "test protocol" should be removed from the permit conditions, therefore, no changes will be made regarding this comment. The AQD is currently in the process of reevaluating flexible language that will include specific emission limit averaging times to address EPA's concerns about new source review permit conditions.

III. SUMMARY OF COMMENTS RESULTING IN CHANGES TO THE PERMIT

Comment

Special Conditions for FGBOILERS. This section of the permit includes blanket NO_x, CO, and SO₂ tons per year (12-month rolling average) emissions limits and general emissions calculation requirements for the two boilers. The draft permit does not specify how the emissions shall be calculated or what information such calculations would be based upon. To ensure these limits are enforceable as a practical matter, please specify how the emissions shall be determined or measured for assessing compliance with these limits. See the above referenced Title V permit petition responses for more information.

AQD Response

FGBOILERS is composed of the boilers EU00001 and EU00017. Some of the conditions that specify how Dunn Paper, Inc. must show compliance with the emission limits in FGBOILERS are under the EU00001 and EU00017 sections of the permit. Under Monitoring/Recordkeeping conditions for EU00001 and EU00017, Dunn Paper, Inc. is required to keep records of the amount of No. 2 fuel oil, No. 6 fuel oil, and natural gas burned in each boiler, and records of the sulfur content of the oil.

Under FGBOILERS, Dunn Paper, Inc. is required to keep monthly and 12-month rolling emission calculations of NO_x, CO, and SO₂. Appendix A of the permit has additional guidance procedures for how the emissions should be calculated. The AQD is modifying Special Condition VI.3 on page 12 of the permit under FGBOILERS, by adding a reference to Appendix A (see below). In addition, Appendix A is being modified as described below under Comment 5.

Like the Special Conditions for EU00001 and EU00017, the Special Conditions for FGBOILERS were also established in the previously issued permits 514-95 and 514-95A. Since the permit review for 514-95B does not include New Source Review, the existing New Source Review conditions were not reevaluated. However, a couple minor changes were made:

- In drafting Permit to Install 514-95B, a change was made from the previous 514-95A conditions for FGBOILERS: there was previously a limit that prohibited the use of sour gas in FGBOILERS. That condition was removed and replaced by a more stringent condition on page 13 under FGFACILITY that requires all natural gas to be “pipeline quality”.
- In drafting Permit to Install 514-95B, a new restriction was added on page 12, limiting the combined number of hours of operation of FGBOILERS to 8,760 hours per 12-month rolling time period. This new condition is related directly to the facility-wide opt-out emission limits, and is part of the package of operating restrictions that corresponds with the opt-out emission limits under FGFACILITY. The permit also requires monthly and 12-month rolling time period records of the combined hours of operation for FGBOILERS.

The permit does not list any fuel restrictions under FGBOILERS, however, the fuel restrictions on page 13 under FGFACILITY serve the dual purpose of ensuring that the PTE of the entire facility is below the emission limits in FGFACILITY, and also that the PTE of FGBOILERS is less than the limits under FGBOILERS.

Condition Change

Special Condition VI.3 under FGBOILERS on page 12 of the permit: The phrase “as required by Appendix A” was added to the Monitoring/Recordkeeping Special Condition VI.3, so that the condition now reads:

The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period SO₂, NO_x, and CO emission calculation records for FGBOILERS, as required by Appendix A. The permittee shall keep all records on file at the facility and make them available to the Department upon request.

Comment

Special Conditions for FGFACILITY. This section of the permit includes blanket NO_x, CO, and SO₂ facility-wide emission limits of 99.9 tons per year (12-month rolling average) and general emissions calculation requirements. Other than the two boilers, the draft permit does not address all the emissions units at the facility, nor does it specify how the emissions shall be calculated or what information such calculations would be based upon. To ensure these limits are enforceable as a practical matter, please specify how the facility’s emissions shall be determined or measured for assessing compliance with these limits. See the above referenced Title V permit petition responses for more information.

Please note that, while many of the units at the facility may have been exempt from obtaining a Permit To Install pursuant to Michigan Rule 282(b)(i), these units do emit NO_x, CO, and SO₂. As such, these emissions must be accounted for in the PTE limits established by this permit in order to avoid being considered a major source pursuant to the Title V Operating Permit Program.

AQD Response

The facility-wide opt-out emission limits for NO_x, CO, and SO₂ on page 13 of the permit apply to the flexible group, FGFACILITY. The permit defines FGFACILITY as “*All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.*” When crafting the conditions for FGFACILITY, the AQD took care to include emissions of all equipment at the facility, including emissions from exempt equipment.

The minor source permit 514-95B includes fuel use limits of 3,450,000 gallons per year No. 2 fuel oil and 754,000 gallons per year No. 6 fuel oil (12-month rolling average) that apply to FGFACILITY. All natural gas burned in FGFACILITY is required to be pipeline quality. The permit also prohibits Dunn Paper, Inc. from burning No. 2 fuel oil and No. 6 fuel in the same 12-month rolling time period, and this also applies to FGFACILITY. These conditions are all on page 13 of the permit. These conditions, combined with the other restrictions under EU00001, EU00017, and FGBOILERS, make the emission limits enforceable as a practical matter.

The two boilers are by far the largest sources of NO_x, CO, and SO₂ emissions at Dunn Paper, Inc. Therefore, most of the operational restrictions in the permit relate specifically to those two emission units. However, the two boilers are not the only sources of NO_x, CO, and SO₂ at Dunn Paper, Inc. The company also has natural gas-fired process heaters and space heaters that are exempt from the requirement to obtain a Permit To Install. These units were included in the PTE calculations for FGFACILITY. For the purpose of establishing this minor source Permit To Install, the potential emissions from the natural gas-fired exempt units were calculated based on each unit operating at its maximum capacity for all hours of the year. Since the newly established facility-wide opt-out emission limits were established taking into account the unrestricted PTE of the exempt emission units, this equipment does not require any operational restrictions in the permit. A footnote has been added to the emission limits table on page 13 of the permit to clarify how emissions from exempt equipment were calculated when establishing the PTE of the facility.

In Special Condition VI.2 on page 14 of the permit under FGFACILITY, the permit requires Dunn Paper, Inc. to keep fuel use records for No. 2 fuel oil, No. 6 fuel oil, and natural gas for FGFACILITY. Since the definition of FGFACILITY includes the exempt equipment, this requirement applies to the exempt process heaters and space heaters at Dunn Paper, Inc. The permit also requires NO_x, CO, and SO₂ emission calculation records for all equipment in FGFACILITY, per Special Condition VI.3 on page 14. Those calculations will be based on the fuel records, as outlined in Appendix A of the permit.

The AQD believes that the permit conditions limit the PTE of the equipment at the facility in a practical and enforceable manner. The PTE of the equipment that is currently at the facility is less than the emission limits in FGFACILITY, at 83.6 tpy of NO_x, 95.4 tpy of CO, and 89.2 tpy of SO₂. Since the emission limits for NO_x, CO, and SO₂ are close to the major source threshold of 100 tons per year, the AQD is adding another condition to FGFACILITY, requiring Dunn Paper, Inc. to keep a record of the facility-wide PTE. This will ensure that the facility remains a minor source, even though there may be changes to exempt equipment in the future.

Condition Changes

The following footnote has been added to the FGFACILITY emission limits table on page 13 of the permit to clarify how emissions from exempt equipment were calculated when establishing the PTE of the facility:

To establish the source-wide potential to emit of FGFACILITY for PTI 514-95B, emissions from all equipment in FGFACILITY were included in the calculations. For all exempt equipment, the potential emissions of SO₂, NO_x, and CO were calculated based on each piece of equipment operating at its maximum capacity for all hours of the year.

The permit conditions require the applicant to calculate actual emissions from all emission units at the facility. In order to demonstrate that the facility will remain a minor source with respect to the Title V Renewable Operating Permit program, the AQD has added Special Condition VI.4 to FGFACILITY, on page 14 of the permit:

The permittee shall keep, in a satisfactory manner, records showing the annual potential to emit calculations for SO₂, NO_x, and CO, in tons per year, for FGFACILITY. The permittee shall update the potential to emit calculation whenever a new permitted or exempt emission unit is installed, or whenever a permitted, exempt, or grandfathered emission unit is modified or removed. Potential to emit calculations shall be based on the maximum operational capacity of the equipment operated for the entire year, except that they may account for applicable permit requirements or applicable laws or rules limiting the potential to emit. The permittee shall keep all records on file at the facility and make them available to the Department upon request.

Comment

Appendix A. This section of the permit provides additional information regarding NO_x, CO, and SO₂ emission calculation procedures. To ensure these limits are enforceable as a practical matter, please specify how the emissions shall be determined or measured for all NO_x, CO, and SO₂ emitting units. In particular, please address all calculation requirements, including the emissions factors and heat content of the fuel. See the above referenced Title V permit petition responses for more information.

AQD Response

Appendix A is located on page 15 of the permit, and contains Procedures for Calculating Facility NO_x, CO, and SO₂ Emissions. The AQD has amended Appendix A by adding equations to ensure emission calculations are performed properly, while allowing Dunn Paper, Inc. to use the most accurate and recent information available for emission factors, fuel heat content, and fuel sulfur content.

The Appendix has been amended to be more specific about appropriate sources for emission factors and fuel heat contents. The Appendix requires approval from the AQD District Supervisor before Dunn Paper, Inc. would be allowed to use emission factors or fuel heat content information from any source that is not listed in the appendix.

The Appendix also clearly identifies that emission calculations must be performed for not only the boilers, but also all other fuel-burning equipment in FGFACILITY. The AQD believes that Appendix A contains sufficient guidance for performing emission calculations to ensure the emission limits are practically enforceable.

Condition Changes

The AQD has added separate equations to Appendix A for emission calculations for burning liquid fuel and natural gas.

The AQD has added two clear sections in the appendix: one for FGBOILERS and another for all other fuel-burning equipment in FGFACILITY. Both of these sections identify appropriate sources for emission factors and fuel heat contents, and require Dunn Paper, Inc. to receive approval from the AQD prior to using sources other than those listed in the appendix.