



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590



REPLY TO THE ATTENTION OF:

Matthew Stuckey  
Chief  
Permits Branch  
Office of Air Quality  
Indiana Department of Environmental Management  
100 North Senate Avenue  
Indianapolis, Indiana 46204

Dear Mr. Stuckey:

The U.S. Environmental Protection Agency has reviewed the draft Prevention of Significant Deterioration (PSD) and draft initial part 70 operating permit, permit number T181-32081-00054, for Magnetation, LLC, located in Reynolds, Indiana. To ensure that the source meets Federal Clean Air Act requirements, that the permit will provide necessary information so that the basis of the permit decision is transparent and readily accessible to the public, and that the permit record provides adequate support for the decision, EPA has the following comments:

1. The Particulate Matter (PM) Potential to Emit (PTE) from the furnace hood exhaust and furnace windbox exhaust is smaller than the PTE for PM<sub>10</sub> and PM<sub>2.5</sub> (Appendix A, pages 1, 2, and 5). PM, as defined at 326 IAC 1-2-52, is any airborne finely divided solid or liquid material, excluding uncombined water, with an aerodynamic diameter smaller than 100 microns. PM<sub>10</sub> and PM<sub>2.5</sub>, as defined at 326 IAC 1-2-52.1 and 1-2-52.2, are PM with an aerodynamic diameter smaller than 10 and 2.5 microns, respectively. By these definitions, PM should be equal to or larger than the amount of PM<sub>10</sub> and PM<sub>2.5</sub> emitted at the source. Please explain this discrepancy in the permit documents.
2. The Best Available Control Technology (BACT) determination for PM, PM<sub>10</sub>, and PM<sub>2.5</sub> requires a fugitive dust control plan for EU001b, EU002b, EU003b, EU002a, EU003a, and EU004a. However, a fugitive dust control plan was not included with the draft permit for review. Please clarify whether the fugitive dust control plan is available for review. If it hasn't been developed, please explain when a fugitive dust control plan will be developed and available for review, and how issues of adequacy of public notice and opportunity for comment are being addressed.
3. The Greenhouse Gas (GHG) BACT analysis (Appendix B, pages 149 and 152) says "carbon sequestration is not considered to be fully commercially available technology." This statement appears to be regarding the technical feasibility of carbon sequestration in general and not specific to this source. EPA does not agree with a general statement that

carbon sequestration is not commercially available, and indeed has stated in guidance that Carbon Capture and Sequestration (CCS) is typically available, at least “for industrial facilities with high-purity Carbon Dioxide (CO<sub>2</sub>) streams (e.g. hydrogen production, ammonia production, natural gas processing, ethanol production, ethylene oxide production, cement production, and iron and steel manufacturing).” “PSD and Title V Permitting Guidance for Greenhouse Gases” (March 2011) at 32. It may well be that CCS is not commercially available for this facility (perhaps, for example, due to lack of access to a geologic repository for captured CO<sub>2</sub>). In that case, the determination should be limited to this specific situation/circumstance. Please revise the BACT analysis to evaluate the technical or economic feasibility of carbon sequestration with respect to this specific source.

4. Compliance with the induration furnace CO<sub>2</sub> equivalent (CO<sub>2</sub>e) BACT limit is to be determined by an equation that includes GHG emission factors, fuel usage, and heat content (permit condition D.3.10). Continuous emissions monitoring systems (CEMS) or stack testing are not required to determine this BACT limit. Absent a CEMS requirement, EPA recommends that the permit require periodic stack testing to validate the emission factors used to determine compliance with the CO<sub>2</sub>e BACT limit.
5. The induration furnace CO<sub>2</sub>e BACT limit equation (permit condition D.3.10) includes usage of iron concentrate, limestone, dolomite, soda ash, and coke breeze. However, the record keeping requirements of condition D.3.16 do not require that the source track the amount of each of these materials. The permit should include a requirement to maintain records of iron concentrate, limestone, dolomite, soda ash, and coke breeze usage in order to document compliance with the CO<sub>2</sub>e BACT limit.
6. The Sulfur Dioxide (SO<sub>2</sub>) BACT analysis (Appendix B, page 91) explains that the induration furnace is designed to only fire natural gas in its burners. It also mentions adding coke breeze to the iron ore as it is being processed and further states that “coke breeze will be limited to 1.5%”. However, the amount of coke breeze used within the process does not appear to be limited as part of BACT for SO<sub>2</sub> from the furnace. Given that excessive coke breeze in the process may influence the source’s ability to comply with the SO<sub>2</sub> emission limit, please evaluate and add, as necessary, an enforceable condition that limits the amount of coke breeze added to the iron ore.
7. In the air quality analysis (Appendix D, page 4), the maximum modeled 24-hour SO<sub>2</sub> impact is listed as 8.38 µg/m<sup>3</sup>. The Significant Impact Level (SIL) for 24-hour SO<sub>2</sub> is listed as 5 µg/m<sup>3</sup>. Since the maximum modeled 24-hour SO<sub>2</sub> impact exceeds the SIL, further cumulative analysis is required to determine compliance with the 24-hour SO<sub>2</sub> standard as required in 326 IAC 2-2-5 and 2-2-6.
8. As part of this source’s part 70 operating permit requirements, the “Federal Rule Applicability Determination” section of the technical support document (pages 10-19) should include an explanation of why this source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for taconite iron ore processing (40 CFR Part 63, Subpart RRRRR).

We appreciate the opportunity to provide comments on this permit. If you have any questions, please feel free to contact Sam Portanova at (312) 886-3189 or Michael Langman at (312) 886-6867.

Sincerely,

A handwritten signature in cursive script that reads "Genevieve Damico". The signature is written in black ink and is positioned above the printed name and title.

Genevieve Damico  
Chief  
Air Permits Section