



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

REPLY TO THE ATTENTION OF:

MAY 19 2016

Ms. Kristin Hart  
Chief  
Permits and Stationary Source Modeling Section  
Bureau of Air Management  
Wisconsin Department of Natural Resources  
PO Box 7921  
Madison, Wisconsin 53707-7921

Dear Ms. Hart:

The U.S. Environmental Protection Agency has the following comments on the Wisconsin Department of Natural Resources' (WDNR) draft combined Prevention of Significant Deterioration (PSD) permit #15-DCF-014 and initial Title V permit # 816116730-P01 for Specialty Minerals Inc (SMI). The draft permit revises the original Best Available Control Technology (BACT) limits for Particulate Matter of less than 10 micrometers (PM<sub>10</sub>) and Particulate Matter of less than 2.5 micrometers (PM<sub>2.5</sub>), Nitrogen Oxides (NO<sub>x</sub>), Sulfur Dioxide (SO<sub>2</sub>), Carbon Monoxide (CO), and Volatile Organic Compounds (VOCs) for the carbonators. These revisions are intended to account for the fact that the facility did not construct one of the carbonators proposed in the original application and to account for higher than expected maximum kiln gas feed rates. In the draft permit WDNR finds BACT to be a consolidation of the original BACT limits for the carbonators into a single emission limit from all three carbonators combined and does not require the use of add-on controls.

In order to ensure that the project meets Federal Clean Air Act (CAA) requirements, the permit needs to provide the necessary information so that the basis for 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) Before requesting a revision of a BACT limit, the Permittee has an initial obligation to comply with the permit. At a minimum the source should investigate and report to the permitting agency all available options to keep emissions at the permitted level.<sup>1</sup> In the case of the increased emissions due to the higher than initially predicted kiln gas feed rates, it appears that Specialty Minerals did not evaluate all options to reduce emissions to their original BACT levels. For example, on page 34 of the preliminary determination document WDNR states, "The facility has not demonstrated that the capacity of the blowers cannot be reduced to the level identified in the original applications. SMI has

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<sup>1</sup> "Request for Determination on Best Available Control Technology Issues—Ogden Martin Tulsa Municipal Waste Incinerator Facility" from Gary McCutchen to J. David Sullivan. November 19, 1987.  
<https://www.epa.gov/sites/production/files/2015-07/documents/ogden.pdf>

not shown that changes in blower motors, pulleys, or other changes couldn't be implemented to provide a greater compliance margin... In actual operation it doesn't appear that they need to utilize the full capacities noted since the facility is meeting the current limit with a reasonable margin for kiln #5". EPA believes that SMI is obligated to investigate whether there are measures that can be taken to reduce emissions, including those measures identified by WDNR in the Preliminary Determination. At this time, EPA believes the permitting action to relax the BACT limit may be premature. EPA urges WDNR to request that SMI provide more detailed information on what other measures have been investigated to meet the initial BACT limits and to explain why they cannot be reasonably achieved before relaxing the current BACT limit.

- 2) On page 14 of the preliminary determination document WDNR states that in 2010 the Department determined that SMI was a single source with Graymont for PSD applicability. However, since Graymont is a major source of hazardous air pollutants (HAPs) and SMI is a minor source, it appears that they were not considered to be a single source for HAPs. Under 112(a) of the CAA, major source is defined as, "any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants." It appears that for the PSD determination, Graymont and SMI were determined to be under common control and contiguous, so it is unclear why they are not considered to be a single source for the purposes of HAPs. While EPA recognizes that there do not appear to be any additional requirements that would apply if the facility were a major source of HAPs, EPA suggests that it may be appropriate to clarify if SMI is a single source for HAPs with Graymont, and therefore a major source of HAPs.
- 3) In a PSD BACT analysis, the economic impact analysis for devices which can control multiple pollutants should consider the total pollutant removed in making a determination of cost effectiveness. The dollars per ton reduced should be the aggregate ton of both pollutants rather than each specific pollutant. The Regenerative Thermal Oxidizer, Simple Thermal Oxidizer, Recuperative Thermal Oxidizer, and Regenerative Catalytic Oxidizer control technologies identified for the reduction of VOC and CO should be looked at in terms of overall pollutant reduction. Please revise the economic analysis to include the combined reduction of VOC and CO.
- 4) Section G and Table 2 of the Air Dispersion Analysis for a PSD Permit for Specialty Minerals Incorporated – Superior (modeling analysis) both refer to the 24-hour and annual PM<sub>2.5</sub> Significant Impact Levels (SILs) of 1.2 and 0.3 µg/m<sup>3</sup>, respectively. However, the modeling analysis does not consider whether the difference between the PM<sub>2.5</sub> National Ambient Air Quality Standard and PM<sub>2.5</sub> monitored design value is greater than the selected SILs. As discussed in EPA's May 20, 2014 Guidance for PM<sub>2.5</sub> Permit Modeling, when using the same PM<sub>2.5</sub> SIL values from the 2010 EPA rule that were vacated by the court, there should be some discussion acknowledging whether the PM<sub>2.5</sub> SILs can be accommodated by this difference before it can be used in the significant impact analysis. Please provide additional justification to support the use of PM<sub>2.5</sub> SILs in this analysis.

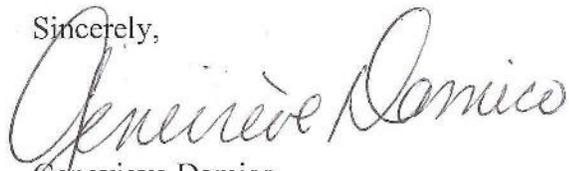
- 5) Section 2.1.5, Receptor Grids (Consideration in future modifications) - With this modification to the PSD permit, the PCC plant is being located on a small parcel of land southwest of the existing Graymont Plant. In the discussion, the facility modeling analysis showed the following receptor grid:
- Tier 1: 25 meter spacing from 0 - 1 km;
  - Tier 2: 50 meter spacing from 1 - 2 km;
  - Tier 3: 100 meter spacing from 2 - 3 km.

Though the receptor grid placement and spacing indicates that a conservative approach has been taken on the modeling analysis, the new facility *does not have a barrier to preclude access to this site*. Any future modifications at the facility should be mindful of the 1980 Costle memo which defines ambient air as: the atmosphere over land owned or controlled by the source and to which public access is precluded by a fence or other physical barriers.

- 6) To improve clarity and practical enforceability of terms, EPA has included additional suggestions in Attachment A to this letter.

We look forward to working with you to address all of our comments. If you have any further questions, please feel free to contact Andrea Morgan, of my staff, at (312) 353-6058.

Sincerely,

  
Genevieve Damico  
Chief  
Air Permits Section

## Attachment A

- 7) On page 5 of the draft permit condition I.A.1.c.(5) requires the facility to “keep records of all inspections, checks, and any maintenance or repairs performed on the baghouse....” However, the permit does not specify the frequency or specify what the inspection entails. EPA suggests adding additional detail to improve clarity and practical enforceability of this condition.
- 8) The permit contains a number of footnotes. In some cases where the footnote is purely informational, the use of a footnote may be appropriate. However, many of the footnotes included in the permit seem to contain language that is intended to be federally enforceable and should be contained in the body of the permit as an applicable requirement. For example, footnotes 9 and 13 clarify that the BACT limit for conventional limestone applies when the limestone has an organic carbon content of less than 0.05% weight. Similarly, footnote 2 seems more appropriate to include in the body of the permit. Please review all the footnotes in the permit and ensure that any footnote that contains requirements that are intended to be enforceable are included in the permit as permit conditions.
- 9) On page 8 of the draft permit, condition I.B.1.b.(3) requires that the facility operate an agitator which ensures, “good contact” between the lime gases and the hydrated lime solution. However, “good contact” does not appear to be defined in the draft permit. To improve clarity and practical enforceability, please consider clarifying the condition.
- 10) Condition I.B.1.c(10)(a) on page 9 of the draft permit requires the facility to “document the lime kiln being used to supply gases to the carbonators.” Please consider revising the draft permit to include the frequency that SMI should document the lime kiln being used.
- 11) Condition I.B.1.c.(10)(b) on page 9 of the draft permit requires the facility to “maintain records of the use of liquid carbon dioxide and when it is being used (i.e the lime kiln gases kilns #5 and #2 are not available or for operation testing).” From this condition it is unclear what exactly the facility is required to record. For example, should they maintain the number of hours liquid carbon dioxide is being used or the amount of liquid carbon dioxide used? To improve clarity, please consider revising the permit to specify the necessary records.
- 12) In multiple instances it is unclear whether the BACT limit applies to each carbonator or is the combined emission limit. Where appropriate, EPA suggests clarifying conditions I.B.3.a.(1), I.B.3.a.(2), I.B.4.a.(2), I.B.5.a.(2), and I.B.6.a.(2) to indicate that the numeric limit is for P21, P22 and P24 combined.
- 13) Conditions I.B.3.c.(2) and I.B.5.c.(2)(a) require the facility to maintain records of the kiln being used. From this condition it is unclear what the facility is required to record. For example, is the facility only required to document what that on a given day the carbonator was provided lime kiln gases from kiln #5? Or is the facility required to document the timeframe during which the facility received gas from kiln #5? EPA believes that to be able to determine compliance with the hourly BACT limits which differ depending on

whether gas is vented from kiln #5 or kiln #2 that it is most appropriate to require the facility to maintain records of the time that the kiln is used to provide kiln gases to each carbonator. For clarity and to improve practical enforceability, please consider revising the conditions.

- 14) Condition I.B.4.b.(2)(b) provides that rather than SMI installing their own continuous emissions monitoring system (CEMS), the facility supplying the lime kiln gas (Graymont) may install a NO<sub>x</sub> CEM on kiln #2 and provide that information to the facility to monitor NO<sub>x</sub> emissions. However, the condition does not specify the frequency at which SMI would be required to receive the CEMS data from Graymont. Please consider revising the permit to clarify the frequency at which SMI would be required to obtain the CEMS data.
- 15) There are multiple instances in the draft permit where “compliance shall be demonstrated using kiln #5 CEM concentration data, flowrates/blower operation, and other information to determine the emission rate from S20 or shall install a CEM on SMI stack S20.” EPA suggests that to improve practical enforceability of the BACT limits, this compliance demonstration be clarified to include the methodology that SMI should use to determine compliance. EPA noticed vague language as part of the compliance demonstration in the following conditions, I.B.3.b.(1), I.B.4.b.(1), I.B.5.b(1), I.B.6.b(1), and I.B.7.b(1).
- 16) Permit condition I.D.1.b(2)(b) requires that “the operating circulation pump capacity of each cooling tower may not exceed the gallons per minute rate identified in the application.” EPA suggests adding the values from the application into the permit to improve enforceability and clarify the requirement.
- 17) The compliance demonstration for the cooling tower P60 in conditions I.D.1.b.(3)-(4) and I.D.1.c.(4) cite to monitoring and recordkeeping requirements from section I.C which are the recordkeeping requirements for cooling tower P30. Since P30 is a different unit, EPA suggests it may be more appropriate to directly incorporate the monitoring and recordkeeping requirements for P60 into section I.D, rather than cite to I.C to indicate that the facility does indeed have to keep separate records for both units.
- 18) The fugitive dust requirements in conditions I.E.1.b.(2) and I.E.1.b(3) require that the facility clean, water sweep and remove dust material “as needed” and seal pneumatic lines and/or other controls “where practical.” EPA suggests that to improve clarity and enforceability the terms “as needed” and “where practical” be clarified. For example, it may be appropriate to say that the permittee shall clean, water, sweep and remove dust material if visible emissions are detected during the daily evaluations.
- 19) It is unclear from draft permit section I.Z.2 whether the facility is required to submit copies of the updated malfunction prevention and abatement plan to WDNR. If appropriate, please consider clarifying the permit conditions.
- 20) Permit condition I.ZZZ.4.(1) requires that the facility follow a fugitive dust plan. Please consider clarifying what elements should be included in the plan, how frequently the plan is required to be updated, and whether a copy of the plan is required to be sent to WDNR.

21) Condition I.B.2(c)(3) cites to the requirements of I.A.1.c. It appears that it may be more appropriate for I.B.2.(c)(3) to cite to I.B.1.c, as section I.A contains requirements for the lime storage silo, whereas section I.B contains requirements for the main carbonators and the finishing carbonators.