



STATE OF INDIANA
OFFICE OF THE GOVERNOR
State House, Second Floor
Indianapolis, Indiana 46204

Eric Holcomb
Governor

March 9, 2018

**VIA FEDERAL EXPRESS AND
ELECTRONIC MAIL: Pruitt.scott@epa.gov**

The Honorable Scott Pruitt
Administrator
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 1101A
Washington, DC 20460

**RE: Petition for Reconsideration and Request for Agency Stay Pending
Reconsideration of Final Rule Designating Huntington Township,
Huntington County, Indiana, Nonattainment under Air Quality Designations
for the 2010 Sulfur Dioxide (SO₂) Primary National Ambient Air Quality
Standard—Round 3**

EPA Docket ID No. EPA-HQ-OAR-2017-0003

Dear Administrator Pruitt:

On behalf of the State of Indiana, by and through Governor Eric J. Holcomb, and the Indiana Department of Environmental Management (IDEM), the undersigned petitions the U.S. Environmental Protection Agency (“EPA” or the “Agency”) to reconsider the final rule that designated Huntington Township, Huntington County, Indiana as nonattainment in the Air Quality Designations for the 2010 Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard—Round 3 (“2018 Designations”). 83 Fed. Reg. 1098, (pp. 1121-1122), (January 9, 2018). This rule becomes effective on April 9, 2018, 90 days after the January 9, 2018 Federal Register publication date. Therefore, this petition for reconsideration is timely. 42 U.S.C. § 7607(b)(1).¹

¹ Concurrent with the filing of this petition for reconsideration, pursuant to §7607(b), on March 9, 2018, the State of Indiana, by and through the Indiana Office of Attorney General, filed for judicial review of EPA’s nonattainment designation for Huntington Township in Huntington County, Indiana in the Court of Appeals for the District of Columbia Circuit.

I. INTRODUCTION

On January 9, 2018, EPA published the 2018 Designations. 83 Fed. Reg. 1098. *See* Exhibit 1. This rule establishes air quality designations under the revised Primary National Ambient Air Quality Standard for Sulfur Dioxide (“2010 SO₂ NAAQS”)(75 Fed. Reg. 35,520) for areas under Round 3 scrutiny. Of the areas considered in Round 3, six areas were designated as nonattainment and twenty-three areas were designated as unclassifiable; the rest of the areas covered in Round 3 were designated as attainment/unclassifiable. One of the six areas designated as nonattainment is Huntington Township, a political subdivision of Huntington County, Indiana. The Indiana Department of Environmental Management (“IDEM”) is the state agency in Indiana that must develop and submit to EPA a State Implementation Plan (“SIP”) within 18 months of the effective date of the 2018 Designations that meets the requirements of §§ 172(c) and 191-192 (42 U.S.C. §§ 7502 and 7514-7514a) of the Clean Air Act (“CAA”) and provide for attainment of the NAAQS in Huntington Township, Huntington County, Indiana (“Huntington Township”) as expeditiously as practicable, but not later than 5 years from the effective date of the 2018 Designations. 83 Fed. Reg. 1098 at 1100. IDEM submits this Petition for Reconsideration (“Petition”) pursuant to § 307(d)(7)(B) (42 U.S.C. § 7607) of the CAA of EPA’s designation of Huntington Township as nonattainment for the 2010 SO₂ NAAQS. *Id.* at 1122.

Huntington Township was the only area in Indiana that was designated as nonattainment in the 2018 Designations. IDEM requests that EPA reconsider the nonattainment designation of Huntington Township and instead designate the area as unclassifiable because EPA abused its discretion in its designation of a small SO₂ source located in Huntington Township as a “source of concern” by using a justification based on inappropriate considerations and *invalid* data concerning the source’s emissions.

The State of Indiana and IDEM maintain that the small source of SO₂ in Huntington Township should have never been designated as a “source of concern” in the first instance and that EPA can justify a reversal of its designation of nonattainment by treating the information it has for the source in Huntington Township in the same manner that it has for other similarly situated demographic areas with sources that emit as much or more SO₂. That is, EPA should make the determination without consideration of faulty data that is derived as part of an unresolved EPA Region V enforcement action.

The reconsideration and reversal of the Huntington Township nonattainment designation under the 2010 SO₂ NAAQS is supported for the following reasons:

- (1) EPA, by and through its Office of Enforcement and Compliance Assurance (“OECA”) was arbitrary and capricious, and abused its discretion in identifying a mineral wool manufacturing plant, U.S. Minerals Products d/b/a Isolatek International (“Isolatek”), as a “source of concern” to be characterized under the Data Requirements Rule at 40 CFR 51, Subpart BB (“DRR”) for the 2010 1-Hour SO₂ NAAQS designations;
- (2) EPA’s decision to select Isolatek as a “source of concern” and subject to scrutiny under the DRR was the result of impermissible commingling of EPA’s enforcement and regulatory functions that result in a deprivation of due process for both the State of Indiana and Isolatek;
- (3) EPA did not consistently and uniformly apply the approach taken with Isolatek to other similarly situated sources and demographic areas in area designations using the DRR and, in fact, did not deem other similar or larger sources within Indiana as “sources of concern” even though emission dispersion modeling would indicate that emissions from these similar or larger sources affect much larger populations than the relatively rural area within Isolatek’s area of emission dispersion;
- (4) EPA’s nonattainment designation was based on the type of modeling data that is more appropriate for New Source Review permitting purposes and is in direct conflict with the DRR. Additionally, the data used was based on “in-house” stack testing done by Isolatek performed during a period of abnormal operations. The result is that the modeling conducted by EPA and used for DRR purposes was not representative of Isolatek’s operations due to the use of inaccurate assumptions and inputs;
- (5) EPA was arbitrary, capricious and abused its discretion in designating an area as nonattainment when the source (Isolatek) should not have been included in the DRR

process to begin with and the modeling data used was inappropriate, misleading and in direct conflict with EPA's expressed intent of the purpose of the DRR at the onset and during the rulemaking process; and

- (6) The result of EPA's egregious actions in this case will likely result in Isolatek permanently shutting down its operations in Indiana or Huntington Township being permanently designated as nonattainment for SO₂.

II. SOURCE DESCRIPTION AND HISTORY

Isolatek is a manufacturer of acoustic and thermal mineral fiber insulation. Isolatek's process uses slag produced from steel-making that is melted at over 2,500 degrees in two blast furnace-like cupolas that are fueled using coke. Once melted, the molten slag is dropped into a spinning device that separates the slag into thin fibers as it cools. The fibers are bound together using substances like cement and plaster, packaged into large blocks and shipped for use in large steel-framed building construction projects. Sulfur dioxide emissions from the cupolas are created by the melting of the slag using coke as fuel.

In 1982, Isolatek took over the manufacturing operations in Huntington Township, Indiana from Guardian Industries (also owned by U.S. Minerals). Because the mineral wool manufacturing operation had existed prior to 1980, the operation was considered "grandfathered" with respect to Clean Air Act New Source Review. However, because Isolatek, using IDEM's emission data, had and has an unrestricted potential to emit 380 tons per year of SO₂, the operation is considered a major existing source of SO₂ for purposes of Prevention of Significant Deterioration (PSD) permitting. As such, any construction or modification that Isolatek proposed or proposes to make at its facility must be permitted with federally enforceable limits that restrict the modifications' potential to emit to SO₂ to below 40 tons per year or the modification must undergo PSD review that includes a top-down analysis to determine Best Available Control Technology ("BACT").

Isolatek timely filed an application for a Title V Operating Permit in April of 1996 and IDEM, Office of Air Quality issued Isolatek's initial Title V Operating Permit on December 28, 1999. In November 2011, Isolatek submitted a construction permit application to IDEM, Office of Air Quality for two natural gas-fired mineral wool melters at the Huntington plant. Isolatek

accepted federally enforceable limitations in order to stay below the SO₂ significance threshold (PSD avoidance limits) and the construction approval required that Isolatek, within 180 days of startup of the second of the two natural gas-fired mineral wool melters, decommission and permanently shut down the two cupolas. *See* Title V Permit Significant Source Modification No. 069-30891-00021, Condition D.1.4(b)(5), Page 30 of 52. Permit available [here](#).

Ultimately Isolatek constructed only one melter which was never operated because of startup issues. Isolatek's current Title V Operating Permit acknowledges the decommissioning of the wool melter project and Isolatek's resumed sole use of the two long-existing cupolas. *See* Title V Operating Permit No. 069-38295-00021, Technical Support Document, Page 2 of 32. Permit available [here](#)

III. EPA ENFORCEMENT AND ISOLATEK

Amidst this historical backdrop, on or around May 3, 2010 Isolatek received a Request for Information from EPA Region 5 that was issued pursuant to section 114(a) of the CAA, 42 U.S.C. § 7414(a) (Request). *See* Attachment 1. Isolatek provided the information listed in the Request and on February 7, 2011 EPA Region V issued a Notice of Violation and Finding of Violation (2011 NOV) to Isolatek's Huntington Township facility. *See* Attachment 2. The 2011 NOV stated that Isolatek had failed to apply and obtain a PSD permit prior to the construction and operation of an oxygen enrichment system at both its cupolas in 2005 because the project caused a "significant net emissions increase" at the Isolatek facility of SO₂, Total Reduced Sulfur and Carbon Monoxide (CO). *Id.* Later, on February 27, 2013 EPA Region V issued another Notice of Violation (2013 NOV) alleging that Isolatek's wool melter project that had been permitted by IDEM caused a "significant net emissions increase" of SO₂ in violation of PSD because Isolatek had failed to provide IDEM with facility specific SO₂ information for its emissions calculations and instead provided AP-42 emission factors. *See* Attachment 3. EPA based its allegation on "in-house" stack testing that Isolatek had conducted in December of 2007. *Id.* To date, the Region V enforcement actions against Isolatek have not been resolved by way of either an evidentiary hearing or Consent Agreement.

IV. EPA ENFORCEMENT INVOLVEMENT WITH DRR PROGRAMMATIC DECISION-MAKING

The air quality designations that are made pursuant to a change of a National Ambient Air Quality Standard are considered to be “nationally applicable regulations” under the oversight and purview of EPA Office of Air and Radiation’s Office of Air Quality Planning and Standards (“OAQPS”) at Research Triangle Park, North Carolina. 83 Fed. Reg. 1098, 1104 (January 9, 2018). However, implementation of the work to support the designations is performed by the EPA Regional Offices. This is also the case with respect to the promulgation versus implementation of the DRR. The EPA Regional Offices serve as the chief, and perhaps only, conduit to the states with respect to the development of a particular state’s air quality designations as well as the implementation of the DRR in achieving its intended role with respect to that state’s SO₂ area designations. For the State of Indiana, the EPA Region V Air Programs Branch acted either for or on behalf of OAQPS with respect to both the implementation of the DRR and in making the 2018 Designations.

In accordance with the requirements of the DRR, IDEM submitted a list to EPA before the deadline of January 15, 2016 that identified eleven sources in Indiana that had SO₂ emissions exceeding the 2,000 tons per year (tpy) annual threshold for the most recent years for which emissions data was available. *See* Attachment 4 (January 7, 2016 Letter to Hedman). On February 29, 2016 IDEM Office of Air Quality, Program Branch representatives received an email from John Summerhays, EPA Region V Air Programs Branch stating that EPA envisioned making additions to the list of sources subject to DRR—one of those additional sources being Isolatek.² *See* Attachment 5 (2-29-2016 Summerhays email with attachment). EPA Region V provided a separate attachment to the email which provided “more details” on why Isolatek warranted listing for DRR air quality characterization. *Id.* A close reading of this attachment indicates that the listing “recommendation” for Isolatek was provided by the Region V Air

² The other sources added to the list were five coal-fired electric utility sources subject to permanent SO₂ limits by virtue of a federal Consent Decree and two coal-fired utility sources that either shut down or converted to natural gas prior to the listing deadline. EPA asked that all the omitted utilities be added to the list even though IDEM had already provided EPA with DRR air quality characterizations for the “CD sources” and two of the utilities emissions were less than 2,000 tpy at the time of listing. Isolatek was the only source listed in the email that had never exceeded the 2,000 tpy threshold.

Enforcement and Compliance Assurance Branch, rather than OAQPS or the Region V Air Program Branch. *Id.*

The inclusion of Isolatek on the DRR list as a discretionary “source of concern” was based solely on information obtained by EPA Region V Enforcement as part of an enforcement initiative that has not been adjudicated. Beyond even that, the EPA’s attachment raises unsubstantiated claims with respect to Isolatek’s production rates, and thus SO₂ emissions. However, even with the inclusion of the unsubstantiated information provided by Region V Enforcement and characterized by Region V Enforcement, the SO₂ emissions of Isolatek (as alleged by EPA) totaled about 800 tons per year, or less than half of the threshold set out in the DRR. *See* 40 CFR 51.1202.

Representatives of IDEM told EPA that the inclusion of Isolatek on the DRR list for air quality characterization was inappropriate and that EPA should instead address its concerns with Isolatek through appropriate enforcement action. *See* Attachment 6 (March 4, 2016 email to John Summerhays with attachment). IDEM also pointed out that the inclusion of Isolatek was contrary to the express intent of the DRR to “prioritize the resources that will be devoted to air characterizations near SO₂ sources nationally” and that the 2,000 tpy threshold for air characterization “strikes a reasonable balance between the need to characterize air quality near sources that have a higher likelihood of contributing to a NAAQS violation and the analytical burden on air agencies.” 80 Fed.Reg. 51061 (August 21, 2015). Then, on March 25, 2016 IDEM’s Office of Air Quality received a letter from the EPA Region V Acting Regional Administrator, Robert Kaplan that formally responded to Indiana’s January 7, 2016 list of sources to be characterized under the DRR.³ *See* Attachment 7 (3-25-16 Letter from Kaplan to Baugues with Attachment).

Finally, in spite of IDEM’s protestations,⁴ EPA used the air quality characterization of Isolatek that was performed by the Region V Office of Enforcement and Compliance Assurance to make the SO₂ designation for Huntington Township and informed Indiana Governor Eric Holcomb of its intent to designate Huntington Township, Indiana as nonattainment for the 2018

³ The attachment that discusses Isolatek is almost identical to the attachment to the February 29, 2016 email sent by John Summerhays to IDEM representatives but characterizes the preliminary modeling done by Region V Office of Enforcement and Compliance as “Modeling Evidence.”

⁴ *See generally* Attachment 11 (IDEM Letter to Kaplan, dated January 17, 2017 with Letter Attachment 3).

Designations by letter (120 day letter) dated August 22, 2017.⁵ The 120 day letter was accompanied by a Technical Support Document, of which the portion pertinent to Isolatek and Huntington Township is attached (Isolatek TSD). *See* Attachment 8 (120 day letter with Isolatek TSD).

In the introduction to the Isolatek TSD the EPA states:

The EPA exercised its discretion to list the Isolatek source as subject to the DRR. Indiana did not agree with the emissions or reasoning for listing the source as subject to the DRR. The state did not submit a modeling analysis for the area nor did the state install a new monitoring network to characterize air quality in the area. In the absence of a new monitoring network, the EPA must designate the Huntington County area by December 31, 2017. *Regardless of whether Isolatek was listed as subject to the DRR, this designation must reflect the best available information regarding air quality in this area.* At this time, the best available information regarding Huntington County air quality is the modeling that led the EPA to list Isolatek as subject to DRR requirements. Much of the following discussion reviews this modeling information that underpinned the EPA's decision to list Isolatek as subject to the DRR.

Isolatek TSD p.29 (emphasis added).

In its discussion on air quality modeling analysis, the Isolatek TSD states:

For this area, the EPA received no modeling assessments from Indiana or from any other party. *Thus, the only modeling presently available to the EPA for Huntington County is modeling which the EPA had already conducted during the course of enforcement action regarding the source.* The remainder of this section 4.3.2 describes and reviews this modeling.

Id. (emphasis added).

Later in this discussion the EPA says:

The EPA conducted the modeling of Isolatek in 2015 (*in conjunction with an enforcement investigation involving the source*), using AERMOD and AERMET versions 14134.

Id. at 31 (emphasis added).

⁵ EPA also informed Governor Holcomb that six counties or portions thereof would be designated as unclassifiable/attainment and that EPA had not completed review of a recently shared modeling protocol for Warrick County. While EPA approved of the Warrick County modeling protocol, EPA designated it as nonattainment until results from a modeling submittal could be reviewed to determine attainment.

A final pertinent comment in the Isolatek TSD is as follows:

For the Huntington County area, the EPA only modeled the DRR source. The closest sources with SO₂ emissions greater than 100 tpy are approximately 30-35 km away and *include Thermafiber, Inc. with about 500 tpy*, and Steel Dynamics Incorporated with about 150 tpy. These sources are judged to have sufficiently low emissions that are sufficiently distant from the area of maximum concentrations so as to be likely to cause minimal concentration gradients in the area of interest.

Id. at 32 (emphasis added).

Thermafiber, Inc., like Isolatek, is a mineral wool manufacturer with reported emissions of SO₂ (500 tpy) *higher* than the 444 tpy⁶ of SO₂ emissions that EPA found “represents the most reliable estimate of current emissions at Isolatek.” *Id.* at 32, 36. The only critical difference between these two mineral wool manufacturers is that Isolatek had the misfortune of having two unresolved and, as yet, not adjudicated Notices of Violation issued by EPA Region V Office of Enforcement and Compliance Assurance.

V. ARGUMENT

A. THE LISTING OF ISOLATEK AS A “SOURCE OF CONCERN” FOR PURPOSES OF DRR CHARACTERIZATION WAS ARBITRARY, CAPRICIOUS AND AN ABUSE OF DISCRETION

EPA conceived of the DRR in conjunction with the promulgation of the 2010 SO₂ NAAQS. The DRR addressed how the designations for areas would be implemented based on the fact that the national ambient SO₂ monitoring network had declined in numbers since its peak of approximately 1500 monitors in 1980 to the current size of 450 (as of June 2013). 79 Fed. Reg. 27446, 27449 (May 13, 2014). EPA pointed out that the reduction of the national monitoring network was due, in part, to the increasingly limited resources at the local, state and federal levels. *Id.* The DRR approach was developed to allow for a combination of monitoring and modeling of SO₂ emissions as was suggested in the preamble to the 2010 SO₂ NAAQS. *Id.*

⁶ Given what information it had received from Region V enforcement staff, EPA finally decided on annual SO₂ emissions of 444 tpy. However, depending on the underlying assumptions used in the calculations, the Isolatek emissions could be 164 tpy, 444 tpy, 800 tpy or 1393 tpy. *See* Attachment 5 and Attachment 8 Isolatek TSD p.36.

Further, EPA recognized that the characterization of air quality in areas around more than 20,000 SO₂ sources nationally would not be feasible. *Id.* at 27450. Consequently, due to the still limited resources at the local, state and federal levels, the DRR provided a “threshold” approach for the inclusion of sources for modeling and/or monitoring in a manner that would achieve the “biggest bang for the buck” by focusing the limited resources “toward characterizing air quality in areas having the largest SO₂ emitting sources (and greater potential for relatively higher SO₂ concentrations) but may be lacking sufficient air quality data. *Id.* at 27453. Thus, the final DRR required each air agency to submit a list to EPA by January 15, 2016 that identified all sources within its jurisdiction that have SO₂ emissions that exceeded the 2,000 tpy annual threshold. 80 Fed. Reg. 51052 at 51053 (August 21, 2015). As is usually the case, the DRR also provided the requisite discretion for the air agency OR EPA to include on this list “additional sources and their associated areas” that also “warrant” air quality characterization. *Id.* This “discretion” to list sources below the threshold was discussed briefly in the preamble to the DRR where EPA stated:

[T]he EPA recognizes that a variety of factors other than emission levels can influence the likelihood of NAAQS violations. As one example, source characteristics such as stack height⁷ and plume buoyancy can significantly affect source impacts. As another example, clusters of multiple smaller sources that are in close proximity can cause as much impact as a single larger source. Finally, the EPA recognizes that a variety of other reasons may exist that may warrant further characterizing air quality in particular areas, which supports maintaining state and EPA Regional Administrator discretion to require air quality characterization in the area.

Id. at 51059 (citing 79 Fed. Reg. 27455 (May 13, 2014)).

There is nothing to suggest in the preambles to the proposed and final DRR that the discretion of the EPA Regional Administrator would extend so far as to include on the list for characterization a single SO₂ source in an area characterized as rural with emissions between one-fourth and one-fifth of the threshold solely due to unresolved and still unproven allegations put forth in Notices of Violation issued by the prosecutorial branch of EPA. The decision to include Isolatek seems particularly arbitrary in light of the fact that Indiana had ten SO₂ sources with higher annual SO₂ emissions; three located in significantly denser, “urban” population areas

⁷ The Technical Support Document for EPA’s 120 Day Letter stated that Isolatek’s relatively short stack height was a concern. EPA also referred to Thermafiber, Inc. on page 36 (a mineral wool manufacturer with higher annual emissions than Isolatek) but did not make a similar observation despite the fact that the stacks at Thermafiber, Inc. were only nine feet taller than Isolatek’s.

of which EPA did not require air characterization.⁸ See Attachment 9. Yet, to IDEM's knowledge, there is no evidence that EPA Region V conducted its own modeling to characterize the air surrounding any of the other, larger SO₂ sources located in Indiana. This was only done for Isolatek and the modeling was conducted by Region V EPA enforcement personnel during an active enforcement case.

B. THE LISTING OF ISOLATEK AS A "SOURCE OF CONCERN" FOR PURPOSES OF DRR CHARACTERIZATION WAS THE RESULT OF INAPPROPRIATE COMMINGLING OF EPA'S PROSECUTORIAL AND REGULATORY FUNCTIONS AND CONSTITUTED A DENIAL OF DUE PROCESS

Since the early 1980s the EPA has been mindful of the concept of "commingling" of Agency functions. This was due primarily to an appeal by Bethlehem Steel Corporation ("Bethlehem") of the disapproval by EPA of a delayed compliance order ("DCO") that had been issued by the Indiana Pollution Control Board. *Bethlehem Steel Corp. v. United States Environmental Protection Agency*, 638 F.2d 994, 996 (7th Cir. 1980). The DCO would have allowed Bethlehem an extended period of time to comply with Indiana's state implementation plan. *Id.* Bethlehem contended that EPA's commingling of functions violated the Administrative Procedures Act and applicable provisions of due process. *Id.* at 1008. The court vacated EPA's disapproval of the DCO and stated that while review of Bethlehem's due process claim was "affected by the difficulty this court has encountered in obtaining Agency record," the practices used by EPA "cast a shadow over the appearance of fairness in EPA's review procedures utilized in the case" because enforcement attorneys with substantial and significant input into EPA's decision on the DCO were at the relevant time engaged in litigation with Bethlehem over the same issues.⁹ *Id.* at 1009-1010.

After the *Bethlehem* decision, EPA General Counsel Robert M. Perry addressed the issue of "commingling" in a Memorandum dated March 29, 1982 to William A. Sullivan, Jr., EPA

⁸ IDEM conducted modeling and analysis of seven sources listed in Table 1 of Attachment 9 due to their close proximity to DRR sources (over 2000 tpy SO₂). Modeling and analysis of SO₂ sources in this category was clearly contemplated within the clear language of the DRR.

⁹ See *al so Marine Shale Processors v. United States EPA*, 81 F.3d 1371 (5th Cir. 1996). The court cites to Bethlehem for the required elements of inappropriate commingling.

Enforcement Counsel (“1982 Memorandum”). *See* Attachment 10. Perry stated in the 1982 Memorandum that:

The goal of the separation of functions doctrine is to ensure fairness in decision-making by maintaining a distinction between adversarial advocacy functions, such as enforcement, and essentially “neutral” decision-making functions, such as agency adjudications and rulemaking. The enforcement function is prosecutorial: it involves asserting a position in an effort to obtain compliance with the law or to impose a sanction for violating the law. 5 U.S.C. §§ 551(10), 554(d). By contrast, the regulatory function involves essentially objective effort to “implement, interpret, or prescribe law or policy.” 5 U.S.C. § 551(4).

1982 Memorandum at 8

Perry observed that steel “stretch out extensions” should be seen as an exercise of EPA’s enforcement authority (and to be granted only through consent decrees) and he further noted that:

Bethlehem involved a narrowly defined administrative regulatory function under §113(d)^[10]; *the Agency’s enforcement function was not part of the mandated review process*, and the court reacted strongly against what it perceived to be an *unfair commingling of enforcement and regulatory functions in which the Agency’s regulatory decisions were improperly influenced by the desire to preserve the enforcement case*.

Id at 12. (emphasis added).

The involvement of Region V enforcement staff in the listing of Isolatek as a DRR source rises to, and likely exceeds the level of commingling of agency functions in *Bethlehem*. The Isolatek situation presents a clear inappropriate commingling of EPA Region V enforcement staff function and EPA Region V program staff function. The Region V enforcement staff had substantial and significant input in the decision by Region V program staff who were performing the rulemaking function of the application of the DRR with respect to source characterizations in conjunction with SO₂ air quality designations for areas on a nationwide basis. Region V enforcement staff were still engaged in its prosecutorial function with respect to Notices of

¹⁰ It is understandable that Perry would describe the regulatory function as “narrowly defined” within the context of §113 since that section of the CAA is entitled “Federal Enforcement.”

Violation issued to Isolatek alleging violations of PSD for significant increases in SO₂. The facts presented show that Region V enforcement is using the DRR to force Isolatek to install expensive SO₂ controls in lieu of taking its enforcement case to an evidentiary hearing before a trier of fact and law. To use the information that was gathered for enforcement purposes without the benefit of a hearing to properly adjudicate the facts constitutes a denial of due process for Isolatek to defend EPA's allegations of noncompliance. Further, because neither IDEM nor the State of Indiana were a party to the enforcement action, the imposition of an SO₂ nonattainment designation based on facts neither agreed to nor adjudicated amounts to a constitutional denial of due process to the State of Indiana with respect to the source listing process for the DRR as well as the designation process for the 2010 SO₂ NAAQS.

C. MODELING CONDUCTED BY REGION V EPA ENFORCEMENT AND SUBMITTED FOR DRR PURPOSES WAS NOT REPRESENTATIVE OF ISOLATEK'S OPERATIONS

As argued above, the State of Indiana and IDEM take the position that Isolatek should not have been placed on the DRR list for characterization of its emissions on air quality and that EPA's decision to make Isolatek a DRR source, through its enforcement branch, was arbitrary, capricious, an abuse of discretion and constituted a denial of due process for Isolatek and the State of Indiana. This being the case, EPA heaps insult to injury by using data inputs for its DRR modeling that were based on, at best, inadequate assumptions as well as the acceptance of an air quality characterization that does not comply with EPA's own DRR Modeling Guidance.

First, the data used by EPA Region V enforcement was based on information derived from a 2007 in-house stack test¹¹ that was performed as part of an engineering study done by Isolatek and performed under conditions that did not represent Isolatek's normal operational

¹¹ The stack test protocol was neither reviewed by IDEM Office of Air Quality, Compliance Data staff, nor was the test performed to demonstrate compliance with an SO₂ emission limitation. Subsequent in-house SO₂ stack testing at Isolatek indicates that the emissions are very close to the emission factor initially used in IDEM's permitting of the source and is in line with IDEM's estimate that Isolatek's annual actual emissions were much closer to 164 tpy than EPA's estimate of 444 tpy. *See* Attachment 12, Letter Attachment 3 at page 2 of 5.

conditions. *See* Attachment 11, (January 13, 2017 letter to Kaplan with Attachment 3 to letter); Attachment 3 p.2 of 5. IDEM had informed EPA of the inadequacy of the 2007 stack test data and pointed out the problems with the 2007 stack test conditions such as the idling of the cupola for 3 hours prior to the test, abnormal increased coke consumption and slower melt rate. *Id.* IDEM also pointed out that the stack test protocol had not been reviewed and approved by IDEM OAQ Compliance Data Section and that IDEM had not been given the opportunity to observe the test. *Id.* In short, if the findings of the 2007 stack test would have been reviewed by IDEM OAQ's Compliance Data Section, the testing would have been considered invalid for either compliance determination purposes or the establishment of an SO₂ emission rate to determine annual SO₂ emissions for Isolatek due to the inadequacies of the process on the front end, prior to the testing.

Second, the EPA Region V enforcement modeling does not comply with the guidance that is specific for DRR sources in several ways. *See* SO₂ NAAQS Designations Modeling Technical Assistance Document, August 2016 (<https://www.epa.gov/sites/production/files/2016-06/documents/so2modelingtad.pdf>) and Clarification on the AERMOD Modeling System Version for Use in SO₂ Implementation Efforts and Other Regulatory Actions, March 8, 2017 (https://www3.epa.gov/ttn/scram/guidance/clarification/SO2_DRR_Designation_Modeling_Clarification_Memo-03082017.pdf) (Collectively, the "DRR Modeling Guidance"); *see also* EPA, OAQPS PowerPoint presentation for air agencies: https://www.epa.gov/sites/production/files/2017-02/documents/overview_webinar_drr_final_rule.pdf.

EPA Region V enforcement used an older version of AERMOD (14134) instead of the most current version (v16216r) and used an older version of AERMET (14134) instead of the most current version (v16216). The DRR Modeling Guidance required use of the most current version of AERMOD and AERMET. EPA Region V enforcement used five years of meteorological data spanning 2008-2012 along with non-concurrent emissions data,¹² which is inconsistent with

¹² The data inputs and modeling conducted was more akin to that associated with analysis in New Source Review in that some of the modeling data inputs and time period selected was for the five years prior to a 2012 modification by Isolatek that EPA alleged violated PSD.

DRR Modeling Guidance stating that three years of meteorological data *concurrent* with emissions should be used in order to agree with the three-year average form of the SO₂ NAAQS. Under the DRR, modeling should have been performed using meteorological data from 2013-2015 (inclusive) or 2014-2016 (inclusive). Further, the EPA enforcement modeling did not characterize the three most recent years of operation that is required in the DRR Modeling Guidance and reflects the intent to capture, through modeling, what monitoring data would have had a monitoring network been present in the area. Additional inadequacies of the EPA Region V enforcement modeling and analysis that are contrary to either requirements or recommendations in the DRR Modeling Guidance are: 1) including source characteristics that are inconsistent with actual source characteristics,¹³ 2) not using readily available adjusted hourly seasonal SO₂ background for Isolatek as the DRR Modeling Guidance had recommended for DRR sources, and 3) not using an adjusted surface friction velocity (ADJ_U*).¹⁴ IDEM had informed EPA of the technical inadequacies of the EPA Region V enforcement modeling on several occasions, culminating in a final plea by IDEM that Isolatek was inappropriately listed as a DRR source in the first instance and that the source analysis input data and associated modeling was egregiously flawed. *See* Attachment 12 (IDEM October 18, 2017 response to 120 day letter/Isolatek TSD).

IDEM and the State of Indiana believe that the EPA Region V enforcement modeling simply does not provide data of a quality upon which to base an area air quality designation. In fact, if Indiana had submitted modeling that is comparable to the enforcement modeling used for Isolatek as support for any other Indiana area designation as “attainment” under the DRR, EPA would have been obligated to find such modeling inadequate to support a determination because the modeling was not performed in accordance with the DRR Modeling Guidance. And in spite

¹³ This included the characteristics of Isolatek’s blow chambers/screenhouses and the release heights and vertical/horizontal dimensions of each blow chamber/screenhouse.

¹⁴ This option was not available at the time of EPA Region V enforcement’s modeling which underscores the fact that it was conducted prior to the proposed DRR.

of this irony, EPA made a *nonattainment* designation for SO₂ for Huntington Township based on outdated modeling and meteorological computer programs using faulty data inputs and conducted in a mode and manner that is contrary to DRR Guidance.

Finally, EPA's explanation for its designation of Huntington Township is as follows:

The EPA exercised its discretion to list the Isolatek source as subject to the DRR. Indiana did not agree with the emissions or reasoning for listing the source as subject to the DRR. The state did not submit a modeling analysis for the area nor did the state install a new monitoring network to characterize air quality in the area. In the absence of a new monitoring network, the EPA must designate the Huntington County area by December 31, 2017.

Attachment 8, Isolatek TSD p.29

Even though the suggestion that Indiana prioritize its limited resources to conduct modeling or set up a new monitoring network in order to rebut inappropriately used and faulty data flies in the face of the intent of the DRR, EPA goes on to state:

Regardless of whether Isolatek was listed as subject to the DRR, this designation must reflect the best available information regarding air quality in this area. At this time, the *best available information* regarding Huntington County air quality is the modeling that led the EPA to list Isolatek as subject to the DRR requirements.

Id. (emphasis added)

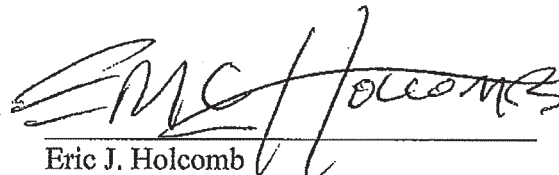
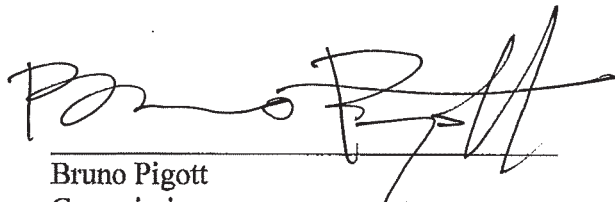
EPA's approach in making a designation of nonattainment based on the EPA Region V enforcement modeling is clearly erroneous and appears to derive from a tortured construction of "weight of evidence" as used in its scientific or technical determinations. The "best available information" can also be "critically flawed" information that does not, in fact inform. EPA should look at the information presented to it by EPA Region V enforcement, consider the rebuttal arguments of IDEM as to its inappropriate use and flawed content and make the correct determination that Huntington Township be designated as unclassifiable.

VI. CONCLUSION

The EPA's decision to identify Isolatek, a single SO₂ source located in a rural area and with emissions between one-fourth and one-fifth of the threshold 2,000 tpy, as a "source of concern" under the DRR was arbitrary and capricious and an abuse of its discretion. This approach was not consistently applied by EPA to other similarly situated sources, including similar or larger sources located in Indiana. The data used by EPA in making this decision was based on modeling data that is more appropriate for NSR, was based on testing performed during abnormal operating conditions, and was therefore not representative of Isolatek's operations. The empirical evidence demonstrates that EPA's decision to rely on this flawed data was the result of impermissible commingling of its enforcement and regulatory functions, depriving both Isolatek and the State of Indiana of due process. This decision will likely result in Isolatek, a longstanding business, to permanently shut down or for Huntington Township be permanently designated as nonattainment for SO₂.

For all of the reasons stated above, the State of Indiana and IDEM respectfully request that you reconsider the decision to designate Huntington Township, Huntington County, Indiana as nonattainment for the 2010 SO₂ NAAQS and instead direct that this Indiana township be designated as unclassifiable. The State of Indiana and IDEM also respectfully request that the current designation of nonattainment be stayed as to its effective date, April 9, 2018, pending reconsideration.

Respectfully submitted,


Eric J. Holcomb
Governor
Bruno Pigott
Commissioner
Indiana Department of Environmental
Management

This page left intentionally blank.

Attachment 1

This page left intentionally blank.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

del
ESH
F.I.C

IN THE MATTER OF:

U.S. Mineral Products Company (d/b/a Isolatek International)
701 North Broadway Street
Huntington, Indiana 46750

RECEIVED
State of Indiana

MAY 03 2010

Attention: Environmental Manager

Department of Environmental Management
Office of Air Quality

Request to Provide Information Pursuant to the Clean Air Act

The U.S. Environmental Protection Agency is requiring U.S. Mineral Products Company (d/b/a Isolatek International) (Isolatek or you) to submit certain information about your facility (Facility). Appendix B provides the instructions and definitions. Appendix C specifies the information that you must submit.

We are issuing this information request under section 114(a) of the Clean Air Act (the Act), 42 U.S.C. § 7414(a). Section 114(a) authorizes the Administrator of the EPA to require the submission of information. The Administrator has delegated this authority to the Director of the Air and Radiation Division, Region 5.

Isolatek owns and operates an emission source or sources at its facility in Huntington, Indiana. We are requesting the information identified in Appendix C to determine whether emission sources at the facility are complying with the Indiana State Implementation Plan and the Clean Air Act.

You must send all required information to:

Attn: Compliance Tracker, AE-17J
Air Enforcement and Compliance Assurance Branch
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

You may consider the information that you submit to us to be confidential. You may assert a claim of business confidentiality for any portion of the submitted information under 40 C.F.R. Part 2, Subpart B. Appendix A specifies the assertion and substantiation requirements for business confidentiality claims.

Submit all requested information under an authorized signature with the following certification:

I certify under penalty of law that I have examined and am familiar with the information in the enclosed documents, including all attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines or imprisonment pursuant to section 113(c)(2) of the Act, and 18 U.S.C. §§ 1001 and 1341.

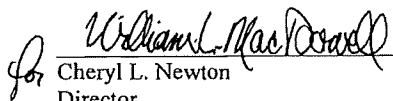
We may use any information submitted in response to this request in an administrative, civil, or criminal action.

This request is not subject to the Paperwork Reduction Act, 44 U.S.C. § 3501 et seq., because it seeks collection of information from specific individuals or entities as part of an administrative action or investigation. To aid in our electronic record keeping efforts, please provide your response to this request for information without staples. Paper clips, binder clips, and 3-ring binders are acceptable.

Failure to comply fully with this request for information may subject Isolatak to an enforcement action under section 113 of the Act, 42 U.S.C. § 7413.

You should direct any questions about this request for information to Daniel Schaufelberger at (312) 886-6814.

4/29/10
Date


for Cheryl L. Newton
Director
Air and Radiation Division

Appendix A

Confidential Business Information (CBI) Assertion and Substantiation Requirements

A. Assertion Requirements

You may assert a business confidentiality claim covering all or part of the information requested in the attached letter, as provided in 40 C.F.R. § 2.203(b). To make a confidentiality claim, submit the requested information and indicate that you are making a claim of confidentiality. Any document over which you make a claim of confidentiality should be marked by attaching a cover sheet stamped or typed with a legend to indicate the intent to claim confidentiality. The stamped or typed legend, or other suitable form of notice, should employ language such as "trade secret" or "proprietary" or "company confidential" and indicate a date if any when the information should no longer be treated as confidential. Information covered by such a claim will be disclosed by the U.S. Environmental Protection Agency (EPA) only to the extent permitted and by means of the procedures set forth by Section 114(c) of the Clean Air Act (the Act), and 40 C.F.R. Part 2. Allegedly confidential portions of otherwise non-confidential documents should be clearly identified. EPA will construe the failure to furnish a confidentiality claim with your response to the attached letter as a waiver of that claim, and the information may be made available to the public without further notice to you.

Please segregate personnel, medical and similar files from your responses and include that information on separate sheet(s) marked as "Personal Privacy Information" given that disclosure of such information to the general public may constitute an invasion of privacy.

B. Substantiation Requirements

All confidentiality claims are subject to EPA verification and must be made in accordance with 40 C.F.R. § 2.208 which provides in part that you satisfactorily show that you have taken reasonable measures to protect the confidentiality of the information and that you intend to continue to do so; and that the information is not and has not been reasonably obtainable by legitimate means without your consent.

Pursuant to 40 C.F.R. Part 2, Subpart B, EPA may at any time send you a letter asking you to substantiate fully your CBI claim. If you receive such a letter, you must provide EPA with a response within the number of days set forth in the EPA request letter. Failure to submit your comments within that time would be regarded as a waiver of your confidentiality claim or claims, and EPA may release the information. If you receive such a letter, EPA will ask you to specify which portions of the information you consider confidential. **You must be specific by page, paragraph, and sentence when identifying the information subject to your claim.** Any information not specifically identified as subject to a confidentiality claim may be disclosed to the requestor without further notice to you. For each item or class of information that you identify as being subject to CBI, you must answer the following questions, giving as much detail as possible:

1. For what period of time do you request that the information be maintained as confidential, e.g., until a certain date, until the occurrence of a specified event, or permanently? If the occurrence of a specific event will eliminate the need for confidentiality, please specify that event.
2. Information submitted to EPA becomes stale over time. Why should the information you claim as confidential be protected for the time period specified in your answer to question #1?
3. What measures have you taken to protect the information claimed as confidential? Have you disclosed the information to anyone other than a governmental body or someone who is bound by an agreement not to disclose the information further? If so, why should the information still be considered confidential?
4. Is the information contained in any publicly available material such as the Internet, publicly available databases, promotional publications, annual reports, or articles? Is there any means by which a member of the public could obtain access to the information? Is the information of a kind that you would customarily not release to the public?
5. Has any governmental body made a determination as to the confidentiality of the information? If so, please attach a copy of the determination.
6. For each category of information claimed as confidential, explain with specificity why release of the information is likely to cause substantial harm to your competitive position. Explain the specific nature of those harmful effects, why they should be viewed as substantial, and the causal relationship between disclosure and such harmful effects. How could your competitors make use of this information to your detriment?
7. Do you assert that the information is submitted on a voluntary or a mandatory basis? Please explain the reason for your assertion. If you assert that the information is voluntarily submitted information, explain whether and why disclosure of the information would tend to lessen the availability to EPA of similar information in the future.
8. Any other issue you deem relevant.

Please note that emission data provided under Section 114 of the Act, 42 U.S.C. § 7414, is not entitled to confidential treatment under 40 C.F.R. Part 2. "Emission data" means, with reference to any source of emission of any substance into the air:

Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of any emission which has been emitted by the source (or of any pollutant resulting from any emission by the source), or any combination of the foregoing;

Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of the emissions which, under an applicable standard or limitation, the source was authorized to emit (including, to the extent necessary for such purposes, a description of the manner and rate of operation of the source); and

A general description of the location and/or nature of the source to the extent necessary to identify the source and to distinguish it from other sources (including, to the extent necessary for such purposes, a description of the device, installation, or operation constituting the source). 40 C.F.R. §§ 2.301(a)(2)(i)(A), (B) and (C).

Emission data includes, but is not limited to, service records stating the amount of refrigerant added to a unit or reclaimed from a unit.

If you receive a request for a substantiation letter from the EPA, you bear the burden of substantiating your confidentiality claim. Conclusory allegations will be given little or no weight in the determination. In substantiating your CBI claim(s), you must bracket all text so claimed and mark it "CBI." Information so designated will be disclosed by EPA only to the extent allowed by, and by means of the procedures set forth in, 40 C.F.R. Part 2, Subpart B. If you fail to claim the information as confidential, it may be made available to the public without further notice to you.

Appendix B

A. INSTRUCTIONS:

- 1) Please provide a separate narrative response to each question and subpart of a question set forth in this Information Request and precede each answer with the number of the question to which it corresponds.
- 2) For each question, identify each person responding to any question contained in this Information Request on your behalf, as well as each person consulted in the preparation of a response.
- 3) For each question, identify each document consulted, examined, or referred to in the preparation of the response or that contains information responsive to the question, and provide a true and correct copy of each such document if not provided in response to another specific question. Indicate on each document produced in response to this Information Request the number of the question to which it corresponds.
- 4) If requested information or documents are not known or are not available to you at the time of your response to this Information Request, but later become known or available to you, you must supplement your response to EPA. Moreover, should you find at any time after submission of your response that any portion is or becomes false, incomplete, or misrepresents the facts; you must provide EPA with a corrected response as soon as possible.
- 5) Requested information can be submitted in electronic form if applicable.

For purposes of this information request, the definitions set forth in Section B shall apply and should be considered carefully by you in preparing your responses.

B. DEFINITIONS:

- 1) "Document" means written documentation of any kind, including documentation solely in electronic form. It includes any document in the possession or control of Isolatek or the possession or control of any person or entity hired by Isolatek. A copy of a document rather than the original may be provided.
- 2) The terms "person" or "persons" shall have the meaning set forth in Section 302(e) of the Act, 42 U.S.C. § 7602(e), and include an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent or employee thereof.
- 3) The terms "relate to" or "pertain to" (or any form thereof) shall mean constituting, reflecting, representing, supporting, contradicting, referring to, stating, describing, recording, noting, embodying, containing, mentioning, studying, analyzing, discussing, evaluating or relevant to.

4) The terms "you" or "your", as used in each of the questions set forth in the attached Section 114 letter, refer to, and shall mean, the company or corporation with which each addressee of the attached Section 114 letter is affiliated, including its subsidiaries, divisions, affiliates, predecessors, successors, assigns, and its former and present officers, directors, agents, employees, representatives, attorneys, consultants, accountants and all other persons acting on its behalf.

Appendix C

Isolatek must submit the following information requested for its facility in Huntington, Indiana, pursuant to Section 114 of the Clean Air Act (CAA or the Act), 42 U.S.C. Section 7414, within **thirty (30) calendar days** from receipt of this letter.

1. Provide the name and address of the original owner and/or operator of the facility. Specify when Isolatek acquired or otherwise became the owner or operator of the facility, and identify the individual(s), corporation(s) or other entities from whom the facility was acquired. Explain if Isolatek has any corporate, partnership or other business relationship or affiliation with any previous owner or operator of the facility, and if so, provide a complete description of such relationship or affiliation.
2. Provide the following information for the facility currently owned or operated by Isolatek:
 - a. Actual annual emissions reported to the Indiana Department of Environmental Management (IDEM) for the years 1990 - 2009, inclusive. Provide the method by which the annual emissions were calculated, including the basis of any emission factors used, and provide a true, accurate and complete copy of each emissions report. Your response to this request should include all pollutants reported; and
 - b. A description of the process at the facility, including all air emission sources, any binders that are used, air pollution control equipment, and the final product(s).
3. Provide a complete and accurate list identifying all cupolas at the facility. Include in the list the type and size of the cupola, the date the cupola was initially constructed, and the date the cupola initially began operation. Also indicate whether the cupola is currently operating or if it has been shut down (temporarily or permanently) or decommissioned, including the date(s) on which it was shut down or decommissioned.
4. For each cupola listed in response to request #3, provide, for the years 1990 to present, an electronic (Microsoft Excel compatible) copy of the following information:
 - a. Monthly fuel (i.e., metallurgical coke) usage (tons/month);
 - b. Average fuel heat content (BTU/hr);
 - c. Sulfur content of the fuel(s) used (wt %);
 - d. Monthly raw materials (i.e., slag) used (tons/month);
 - e. Sulfur content of the raw material(s) used (wt %);
 - f. Monthly mineral wool production rate (tons/month); and
 - g. Sulfur content of the mineral wool from each cupola (wt %).

5. Provide a complete and accurate list of all capital expenditures greater than \$25,000 during the period from January 1990 through the present date, inclusive. This list must include the approximate date of each project, a brief description of each project, and the fixed capital cost of each project in nominal dollars.
6. Please state the capacity of the each cupola in the ways listed below, and provide a detailed explanation of how each capacity value was calculated:
 - a) Maximum design rated capacity (in tons/day) of the cupola alone;
 - b) Actual maximum capacity of the cupola (in tons/day), taking into account any physical or operational constraints and restrictions;
 - c) Holding capacity (in tons);
 - d) Physical size of the cupola (length x width x depth in feet); and
 - e) Melting capacity (in tons/hr).
7. If any cupola (listed in response to request #3), ancillary equipment (i.e., skip hoists), or blow chambers were altered or changed at any time, provide the date for each such alteration or change; provide true, accurate and complete copies of all capital expenditure requests, justifications, and authorizations associated with such alteration or change, including all attachments and addenda; and provide a complete description of the alteration or change (qualitatively and quantitatively), and the effect the alteration or change had on each cupolas capacity measurements or calculations provided in response to request #6, above.
8. Identify and describe each piece of air emission control equipment and/or each air pollution reduction practice currently used or ever used at each facility. In addition, provide the date of installation of the control equipment or implementation of the practice, the date of initial operation, and the date(s) of shutdown or decommissioning, if applicable. Describe in detail how each existing and former air emission control equipment or reduction practice limits air emissions from each source, and how effectively (in terms of removal efficiency, capture efficiency, distribution efficiency, etc.) each air emission is limited by the corresponding equipment or practice. Please provide true, accurate and complete copies of all data to support your answers.
9. Provide a list of the dates on which any and all air emissions testing occurred, including partial tests, on the cupolas for nitrogen oxides, sulfur oxides, particulate matter (including filterable and condensable particulate), hydrogen sulfide, volatile organic compounds, any hazardous air pollutant, and carbon monoxide. Emissions' testing includes, but is not limited to, compliance testing, engineering testing, and testing for general information. Also provide true, accurate and complete copies of all reports that resulted from the emissions tests which meet the above criteria. Indicate whether such report was shared with IDEM. A true, accurate and complete copy of the summary pages from each report is sufficient so long as the summary provides emission rates as well as all the operating parameters recorded during the tests.

10. Provide true, accurate and complete copies of all air permit applications, correspondence, and supporting documentation, including all new source review analyses submitted to IDEM.
11. Provide true, accurate and complete copies of all approved alternatives for monitoring, reporting, recordkeeping or testing requests that were approved by EPA or IDEM. Also provide true, accurate and complete copies of all correspondence concerning the approved alternative requests.
12. Provide true, accurate and complete copies of all written correspondence, determinations, documents, or communications with IDEM concerning the applicability of PSD and major non-attainment NSR rules regarding the construction or modification of equipment at the plant.

CERTIFICATE OF MAILING

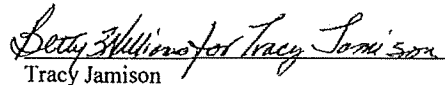
I, Tracy Jamison, hereby certify that the attached Request for Information Pursuant to the Clean Air Act was sent by Certified Mail, Return Receipt to:

Environmental Manager
U.S. Mineral Products Company (d/b/a Isolatek International)
701 North Broadway Street
Huntington, Indiana 46750

I also certify that a copy of the Request for Information pursuant to the Clean Air Act was sent by First Class Mail to:

Phil Perry, Chief
Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, Indiana 46206-2251

on the 30th day of April 2010.


Tracy Jamison
Office Automation Assistant
AECAS (MI/WI)
(312) 886-6086

Certified Mail Receipt Number: 7009 1680 0000 7666 5674



United States
Environmental Protection
Agency
Region 5
77 West Jackson Blvd.
Chicago, IL 60604

AE-17J

Official Business
Penalty For Private Use
\$300



045J244FNT
\$0.1392
PC 12012510
CLASS CODE: 00004
US POSTAGE

Phil Perry, Chief
Compliance and Enforcement Branch
Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue / Room IGCN 1003
Indianapolis, Indiana 46204-2231



Printed On Recycled Paper

Attachment 2

This page left intentionally blank.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

FEB 7 2011

RECEIVED
State of Indiana

REPLY TO THE ATTENTION OF:

AE-17J

FEB 11 2011
Department of Environmental Management
Office of Air Quality

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Tom Lund, Branch Manager
U.S. Mineral Products Company (d/b/a Isolatek International)
701 North Broadway Street
Huntington, Indiana 46750

Re: Notice of Violation and Finding of Violation

Dear Mr. Lund:

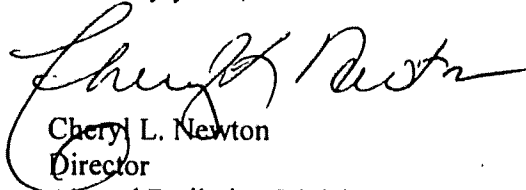
The U.S. Environmental Protection Agency is issuing the enclosed Notice of Violation and Finding of Violation (NOV/FOV) to U.S. Mineral Products Company (d/b/a Isolatek International) (Isolatek or you). This NOV/FOV is issued in accordance with Section 113(a) of the Clean Air Act (the Act), 42 U.S.C. § 7413(a).

EPA has determined that Isolatek is violating the Prevention of Significant Deterioration (PSD) requirements under Section 165 of the Act, 42 U.S.C. § 7475, the implementing regulations of Title V set forth at 40 C.F.R. Part 70, and the Indiana State Implementation Plan at its Huntington, Indiana facility.

EPA is offering you an opportunity to confer with us about the violations cited in the NOV/FOV. The conference will give you an opportunity to present information on the specific findings in the NOV/FOV, and the steps you will take to bring the facilities into compliance. Please plan for your technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

You may contact Daniel Schaufelberger at (312) 886-6814 to request a conference. You should make the request for a conference no later than 10 calendar days after receipt of this letter, and we should hold any conference within 30 calendar days of your receipt of this letter.

Sincerely yours,



Cheryl L. Newton
Director
Air and Radiation Division

Enclosure

cc: Phil Perry, Indiana Department of Environmental Management
Anthony J. Reitano, Herold Law

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:

)	Notice of Violation and
)	Finding of Violation
)	
U.S. Mineral Products Company)	Proceedings Pursuant to
(d/b/a Isolatek International))	Sections 113(a)(1) and (a)(3) of the
Huntington, Indiana)	42 U.S.C. §§ 7413(a)(1) and (a)(3)
)	
)	EPA-5-11-01

NOTICE AND FINDING OF VIOLATION

The U.S. Environmental Protection Agency (EPA) is issuing this Notice of Violation and Finding of Violation (NOV/FOV or Notice) to U.S. Mineral Products Company (d/b/a Isolatek International) (Isolatek), for violations of the Clean Air Act (the Act), 42 U.S.C. §§ 7401 et seq., at its mineral wool production facility at 701 North Broadway Street, Huntington, Indiana.

This Notice is issued pursuant to Sections 113(a)(1) and (a)(3) of the Act, 42 U.S.C. 7413(a)(1) and (3). The authority to issue this Notice has been delegated to the Regional Administrator of EPA Region 5 and redelegated to the Director, Air and Radiation Division.

STATUTORY AND REGULATORY BACKGROUND

1. The Act is designed to protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its populations. Section 101(b)(1) of the Act, 42 U.S.C. § 7401(b)(1).

Prevention of Significant Deterioration

2. When the Act was passed in 1970, Congress exempted existing facilities, such as the mineral wool plant that is the subject of this Notice, from many of its requirements. However, Congress also made it quite clear that this exemption would not last forever. As the United States Court of Appeals for the D.C. Circuit explained, "[t]he statutory scheme intends to 'grandfather' existing industries; but...this is not to constitute a perpetual immunity from all standards under the PSD program." *Alabama Power v. Costle*, 636 F.2d 323, 400 (D.C. Cir. 1979). Rather, when a grandfathered facility intends to perform modifications at the facility that may significantly increase emissions, the Act requires the company to install modern pollution control devices.

3. The Prevention of Significant Deterioration (PSD) provisions of Part C of Title I of the Act, 42 U.S.C. §§ 7470-7492, and their implementing regulations at 40 C.F.R. § 52.21 (collectively "the PSD Program"), establish specific pre-construction requirements applicable to the construction and modification of "major emitting facilities" located in areas designated as

either attainment or unclassifiable for purposes of meeting the National Ambient Air Quality Standards.

4. The PSD Program prohibits, among other things, a "major emitting facility" from constructing a "major modification" unless it has obtained a PSD permit that applies "Best Available Control Technology" (BACT) to control emissions from the proposed modified emissions unit, and conducts an analysis to determine the air quality impacts of the modification. Sections 165(a) and 169(2)(C) of the Act, 42 U.S.C. §§ 7475(a) and 7479(2)(C), and 40 C.F.R. § 52.21(i).

5. Pursuant to Section 169 of the Act, 42 U.S.C. § 7479(1), a "major emitting facility" is defined to include, among others, any stationary source which emits, or has the potential to emit, 250 tons per year or more of any regulated PSD pollutant.

6. Sections 110(a) and 161 of the Act, 42 U.S.C. §§ 7410(a) and 7471, require each state to adopt a state implementation plan (SIP) containing regulations implementing the PSD Program.

7. A state may comply with Sections 110(a) and 161 of the Act, 42 U.S.C. §§ 7410(a) and 7471, by having its own PSD regulations approved by EPA as part of its SIP, provided that the state PSD regulations are at least as stringent as those set forth at 40 C.F.R. § 51.166.

8. Pursuant to 40 C.F.R. § 52.21(a), if a state does not have PSD regulations that EPA has approved and incorporated into its SIP, EPA may incorporate the federal PSD regulations set forth at 40 C.F.R. § 52.21 into the SIP.

9. Pursuant to 40 C.F.R. § 52.23, any person failing to comply with an approved regulatory provision of a SIP is subject to an enforcement action under Section 113 of the Act, 42 U.S.C. § 7413.

10. On August 7, 1980, EPA disapproved Indiana's proposed PSD program, and incorporated by reference the PSD regulations of 40 C.F.R. § 52.21(b) through (w) into the Indiana SIP. 45 Fed. Reg. 52676, 52741. On September 30, 1980, EPA delegated to the Indiana Department of Environmental Management (IDEM) certain authorities of the federal PSD program. 46 Fed. Reg. 9580, 9583. On March 3, 2003, EPA conditionally approved Indiana's PSD regulations at 326 IAC 2-2. 68 Fed. Reg. 9892 (effective April 2, 2003). On May 20, 2004, EPA provided final approval of 326 IAC Rule 2-2 into the Indiana SIP. 69 Fed. Reg. 29071 (effective July 19, 2004). On June 18, 2007, EPA partially approved revisions to 326 IAC 2-2 related to EPA's NSR Reform regulations. 72 Fed. Reg. 33395 (effective July 18, 2007).

11. The PSD regulations included as part of Indiana's federally approved SIP at the time of the project identified in Paragraph 41 are the regulations that are applicable and federally enforceable for that project.

12. 326 Indiana Administrative Code (IAC) 2-1-3(a) of the Indiana SIP prohibits any person from commencing construction or modification of any air pollution source without first applying for and obtaining a construction permit from the commissioner of IDEM.

13. 326 IAC 2-1-3(b)(2) requires any person proposing the construction or modification of a major stationary PSD source or major PSD modification, which is or which will be located in an attainment area or unclassified area, to comply with the requirements of 326 IAC 2-2 of the Indiana SIP.
14. 326 IAC 2-2-2 of the Indiana SIP states that new or modified major stationary sources or major modifications, constructed in an area designated as attainment, are subject to 326 IAC 2-2, which contains the PSD provisions of the Indiana SIP.
15. 326 IAC 2-2-1(gg)(2) of the Indiana SIP defines a "major stationary source" in an attainment area as any stationary source with the potential to emit, 250 tons per year or more of a regulated NSR pollutant.
16. 326 IAC 2-2-1(ee) of the Indiana SIP defines a "major modification" as any physical change in or change in the method of operation of a major stationary source that would result in a significant emissions increase and a significant net emission increase of a regulated NSR pollutant from the major stationary source.
17. 326 IAC 2-2-1(jj) of the Indiana SIP defines "net emissions increase" as the amount by which the sum of the increase in emissions from a physical change or change in the method of operation and any other contemporaneous increases or decreases in emissions exceeds zero.
18. In reference to sulfur dioxide (SO₂), 326 IAC 2-2-1(xx)(1)(C) of the Indiana SIP defines "significant" with regard to a net emissions increase as a rate of emissions that would equal or exceed 40 tons per year.
19. In reference to total reduced sulfur (TRS) (including H₂S), 326 IAC 2-2-1(xx)(1)(O) of the Indiana SIP defines "significant" with regard to a net emissions increase as a rate of emissions that would equal or exceed 10 tons per year.
20. In reference to carbon monoxide (CO), 326 IAC 2-2-1(xx)(1)(A) of the Indiana SIP defines "significant" with regard to a net emissions increase as a rate of emissions that would equal or exceed 100 tons per year.
21. 326 IAC 2-2-3(3) of the Indiana SIP requires that owners or operators making a major modification apply best available control technology (BACT) for each regulated NSR pollutant for which the modification would result in a significant net emissions increase.
22. 326 IAC 2-2-1(i) of the Indiana SIP defines "BACT" as an emissions limitation based on the maximum degree of reduction for each regulated NSR pollutant that would be emitted from any proposed major modification while taking into account energy, environmental, and economic impacts and other costs.
23. 326 IAC 2-2-5 of the Indiana SIP requires that owners or operators of a proposed major modification demonstrate that allowable emission increases, in conjunction with all other applicable emission increases or reductions, will not cause or contribute to air pollution in violation of any ambient air quality standard or applicable maximum allowable increase over the

baseline concentration in any area.

Title V Requirements

24. Section 502(a) of the Act, 42 U.S.C. § 7661a(a), provides that no person may operate a major source without a Title V permit after the effective date of any permit program approved or promulgated under Title V of the Act. EPA first promulgated regulations governing state operating permit programs on July 21, 1992. *See* 57 Fed. Reg. 32295; 40 C.F.R. Part 70. EPA promulgated regulations governing the federal operating permit program on July 1, 1996. *See* 61 Fed. Reg. 34228; 40 C.F.R. Part 70.

25. Section 503 of the Act, 42 U.S.C. § 7661b, sets forth the requirement to submit a timely, accurate, and complete application for a permit, including information required to be submitted with the application.

26. Section 504(a) of the Act, 42 U.S.C. § 7661c(a), requires that each Title V permit include enforceable emission limitations and standards, a schedule of compliance, and other conditions necessary to assure compliance with applicable requirements, including those contained in a state implementation plan. 42 U.S.C. § 7661c(a).

27. 40 C.F.R. § 70.1(b) provides that: "All sources subject to these regulations shall have a permit to operate that assures compliance by the source with all applicable requirements." *See* 326 IAC 2-7-2.

28. 40 C.F.R. § 70.2 defines "applicable requirement" to include, "(1) Any standard or other requirement provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under title I of the Act that implements the relevant requirements of the Act, including revisions to that plan promulgated in part 52 of this chapter . . ."

29. 40 C.F.R. § 70.7(b) provides that no source subject to 40 C.F.R. Part 70 requirements may operate without a permit as specified in the Act. *See also* 326 IAC 2-7-2.

30. 40 C.F.R. § 70.5(a) and (c) require timely and complete permit applications for Title V permits with required information that must be submitted and 40 C.F.R. § 70.6 specifies required permit content. *See also* 326 IAC 2-7-2.

31. 40 C.F.R. § 70.5(b) provides that: "Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit." *See also* 326 IAC 2-7-2.

Indiana's Title V Requirements

32. EPA promulgated interim approval of the Indiana Title V program on November 14, 1995. *See* 60 Fed. Reg. 57188 (effective on December 14, 1995). EPA fully approved the Indiana Title V program on December 4, 2001. *See* 66 Fed. Reg. 62969 (effective on November 30, 2001). The Indiana regulations governing the Title V permit program are codified at 326 IAC 2-7 and are federally enforceable pursuant to Section 113(a)(3) of the Act.
33. 326 IAC 2-7-3 provides that it is unlawful to violate any requirement of a permit issued under Title V or to operate a major source except in compliance with a permit issued by a permitting authority under Title V.
34. 326 IAC 2-7-5 provides that each Title V permit must include, among other things, enforceable emission limitations and standards as are necessary to assure compliance with applicable requirements of the Act and the requirements of the applicable SIP.
35. 326 IAC 2-7-4 requires that a source submit a complete permit application which, among other things, identifies all applicable requirements and certifies compliance with all applicable requirements.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

36. Isolatek is a corporation authorized to do business in Indiana.
37. Isolatek is a "person," as that term is defined in Section 302(e) of the Act, 42 U.S.C. § 7602(e).
38. At all times relevant to this Notice, Isolatek owned and operated emission units at its mineral wool production facility at 701 North Broadway Street, Huntington, Huntington County, Indiana ("Huntington plant").
39. Isolatek's Huntington plant is a "major stationary source," as that term is defined in the Indiana SIP at 326 IAC 2-3-1(q), in that it emits, or has the potential to emit several regulated NSR pollutants in excess of 250 tons per year.
40. Isolatek's Huntington plant is located in Huntington County Indiana, which at all times relevant to this Notice was classified as attainment for SO₂ and CO.
41. In 2005, Isolatek completed physical changes subject to the PSD regulations at the Huntington plant including construction and operation of an oxygen enrichment system at both of the cupolas at the Huntington plant. Isolatek failed to obtain the required permits, conduct any modeling, or undergo any other sort of pre-construction review for these physical changes.

NOTICE AND FINDING OF VIOLATIONS

Violations of PSD

42. The project described in Paragraph 41 caused a "significant net emissions increase" of SO₂, TRS, and CO as defined in 326 IAC 2-2-1(jj).
43. The project described in Paragraph 41 constituted a "major modification," as that term is defined at 326 IAC 2-2-1(ee).
44. Isolatek failed to apply for and/or obtain a PSD permit prior to beginning actual construction of the activities described in paragraph 41, and failed to install and operate BACT for SO₂, TRS, and CO.
45. Therefore, Isolatek violated and continues to violate the PSD requirements found at Section 165 of Act, 42 U.S.C. § 7475, and the Indiana SIP, for constructing the major modification, as identified at paragraph 41, to an existing major source at its Huntington plant, without applying for or obtaining the PSD permit and operating the modified facility without installing the BACT or going through PSD review, and installing appropriate emissions control equipment in accordance with a BACT analysis.

Violations of the Title V Permit Program

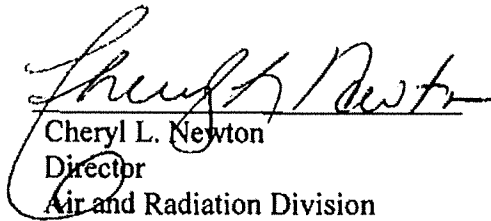
46. Isolatek is in violation of the Title V permitting requirements at Section 503 of the Act, 40 C.F.R. Part 70, because it has failed and continues to fail to submit a timely and complete application for a Title V operating permit for the Huntington plant that: (i) includes information pertaining to the construction and operation of the project described in paragraph 41; (ii) identifies all applicable requirements including, but not limited to the requirement to apply, install and operate BACT for SO₂, TRS, and CO; (iii) accurately certifies compliance with such requirements; and (iv) contains a compliance plan for all applicable requirements for which it is not in compliance.

ENFORCEMENT AUTHORITY

47. Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1), provides that at any time after the expiration of 30 days following the date of the issuance of a notice of violation, the Administrator may, without regard to the period of violation, issue an order requiring compliance with the requirements of the applicable SIP, issue an administrative penalty order pursuant to Section 113(d), or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.

48. Section 113(a)(3) of the Act, 42 U.S.C. § 7413(a)(3), provides in part that if the Administrator finds that a person has violated, or is in violation of any requirement or prohibition of any rule promulgated under Title V of the Act, the Administrator may issue an administrative penalty order under Section 113(d), issue an order requiring compliance with such requirement or prohibition, or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.

2/7/11
Date


Cheryl L. Newton
Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Tracy Jamison, certify that I sent a Notice and Finding of Violation,
No. **EPA-5-11-01** by Certified Mail, Return Receipt Requested, to:

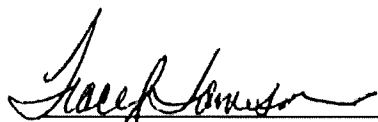
Tom Lund, Branch Manager
U.S. Mineral Products Company (d/b/a Isolatek International)
701 North Broadway Street
Huntington, Indiana 46750

I also certify that I sent copies of the Finding of Violation and Notice of Violation
by first class mail to:

Phil Perry, Chief
Compliance and Enforcement Branch
Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, Room IGCN 1003
Indianapolis, Indiana 46204-2251

Anthony J. Reitano, Esq.
Herold Law, P.A.
25 Independence Boulevard
Warren, New Jersey 07059

on the 8 day of February 2011.



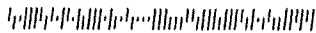
Tracy Jamison
Office Automation Assistant
Planning and Administration Section

CERTIFIED MAIL RECEIPT NUMBER: 7009 1680 0000 7660 8459



United States
Environmental Protection
Agency
Region 5 *AE-ITS*
77 West Jackson Blvd.
Chicago, IL 60604

Official Business
Penalty for Private Use
\$300

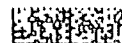


neopost

02/05/2011

US POSTAGE

\$01.22⁹



ZIP 60604
041111215632

Phil Perry, Chief
Indiana Department of Environmental Management
Compliance and Enforcement Branch
Office of Air Quality
100 North Senate Avenue, Room IGCN 1003
Indianapolis, Indiana 46204-2251



Printed on Recycled Paper

This page left intentionally blank.

Attachment 3

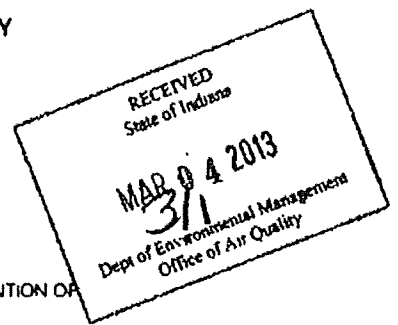
This page left intentionally blank.



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

FEB 27 2013

REPLY TO THE ATTENTION OF



CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Tom Lund, Branch Manager
U.S. Mineral Products Company (d/b/a Isolatek International)
701 North Broadway Street
Huntington, Indiana 46750

Re: Notice of Violation
U.S. Mineral Products Company (d/b/a Isolatek International)
Huntington, Indiana

Dear Mr. Lund:

The U.S. Environmental Protection Agency is issuing the enclosed Notice of Violation (NOV) to U.S. Mineral Products Company (d/b/a Isolatek International) (Isolatek or you) under Section 113(a)(1) of the Clean Air Act, 42 U.S.C. § 7413(a)(1). We find that you have violated the Indiana State Implementation Plan (SIP) at your Huntington, Indiana facility.

Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order, and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the NOV. The conference will give you an opportunity to present information on the specific findings in the NOV, any efforts you have taken to comply, and the steps you will take to prevent future violations.

Please plan for your technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

The EPA contact in this matter is Daniel Schaufelberger. You may call him at (312) 886-6814 to request a conference. You should make the request as soon as possible, but no later than 10 calendar days after you receive this letter. We should hold any conference within 30 calendar days of your receipt of this letter.

Sincerely,



George T. Czerniak
Director
Air and Radiation Division

Enclosure

cc: Phil Perry, Indiana Department of Environmental Management
Anthony J. Reitano, Herold Law

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:

U.S. Mineral Products Company
(d/b/a Isolatek International)
Huntington, Indiana

Proceedings Pursuant to
Section 113(a)(1) of the
42 U.S.C. § 7413(a)(1)

NOTICE OF VIOLATION

EPA-5-13-IN-06

NOTICE VIOLATION

The U.S. Environmental Protection Agency (EPA) is issuing this Notice of Violation (NOV or Notice) to U.S. Mineral Products Company (d/b/a Isolatek International) (Isolatek), for violations of the Clean Air Act (the Act), 42 U.S.C. §§ 7401 *et seq.*, at its mineral wool production facility at 701 North Broadway Street, Huntington, Indiana.

This Notice is issued pursuant to Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1). The authority to issue this Notice has been delegated to the Regional Administrator of EPA Region 5 and redelegated to the Director, Air and Radiation Division.

Statutory and Regulatory Background

1. The Act is designed to protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its populations. Section 101(b)(1) of the Act, 42 U.S.C. § 7401(b)(1).

Prevention of Significant Deterioration and Indiana SIP

2. When the Act was passed in 1970, Congress exempted existing facilities, such as the mineral wool plant that is the subject of this Notice, from many of its requirements. However, Congress also made it quite clear that this exemption would not last forever. As the United States Court of Appeals for the D.C. Circuit explained, "[t]he statutory scheme intends to 'grandfather' existing industries; but...this is not to constitute a perpetual immunity from all standards under the PSD program." *Alabama Power v. Costle*, 636 F.2d 323, 400 (D.C. Cir. 1979). Rather, when a grandfathered facility intends to perform modifications at the facility that may significantly increase emissions, the Act requires the company to install modern pollution control devices.
3. The Prevention of Significant Deterioration (PSD) provisions of Part C of Title I of the Act, 42 U.S.C. §§ 7470-7492, and their implementing regulations at 40 C.F.R. § 52.21 (collectively "the PSD Program"), establish specific pre-construction requirements

applicable to the construction and modification of "major emitting facilities" located in areas designated as either attainment or unclassifiable for purposes of meeting the National Ambient Air Quality Standards.

4. The PSD Program prohibits, among other things, a "major emitting facility" from constructing a "major modification" unless it has obtained a PSD permit that applies "Best Available Control Technology" (BACT) to control emissions from the proposed modified emissions unit, and conducts an analysis to determine the air quality impacts of the modification. Sections 165(a) and 169(2)(C) of the Act, 42 U.S.C. §§ 7475(a) and 7479(2)(C), and 40 C.F.R. § 52.21(i).
5. Pursuant to Section 169 of the Act, 42 U.S.C. § 7479(1), a "major emitting facility" is defined to include, among others, any stationary source which emits, or has the potential to emit, 250 tons per year or more of any regulated PSD pollutant.
6. Sections 110(a) and 161 of the Act, 42 U.S.C. §§ 7410(a) and 7471, require each state to adopt a state implementation plan (SIP) containing regulations implementing the PSD Program.
7. A state may comply with Sections 110(a) and 161 of the Act, 42 U.S.C. §§ 7410(a) and 7471, by having its own PSD regulations approved by EPA as part of its SIP, provided that the state PSD regulations are at least as stringent as those set forth at 40 C.F.R. § 51.166.
8. Pursuant to 40 C.F.R. § 52.21(a), if a state does not have PSD regulations that EPA has approved and incorporated into its SIP, EPA may incorporate the federal PSD regulations set forth at 40 C.F.R. § 52.21 into the SIP.
9. Pursuant to 40 C.F.R. § 52.23, any person failing to comply with an approved regulatory provision of a SIP is subject to an enforcement action under Section 113 of the Act, 42 U.S.C. § 7413.
10. On August 7, 1980, EPA disapproved Indiana's proposed PSD program, and incorporated by reference the PSD regulations of 40 C.F.R. § 52.21(b) through (w) into the Indiana SIP. 45 Fed. Reg. 52676, 52741. On September 30, 1980, EPA delegated to the Indiana Department of Environmental Management (IDEM) certain authorities of the federal PSD program. 46 Fed. Reg. 9580, 9583. On March 3, 2003, EPA conditionally approved Indiana's PSD regulations at 326 Indiana Administrative Code (IAC) 2-2. 68 Fed. Reg. 9892 (effective April 2, 2003). On May 20, 2004, EPA provided final approval of 326 IAC Rule 2-2 into the Indiana SIP. 69 Fed. Reg. 29071 (effective July 19, 2004). On June 18, 2007, EPA partially approved revisions to 326 IAC 2-2 related to EPA's New Source Review (NSR) Reform regulations. 72 Fed. Reg. 33395 (effective July 18, 2007).
11. The PSD regulations included as part of Indiana's federally approved SIP at the time of the project identified in Paragraph 27 are the regulations that are applicable and federally enforceable for that project.

12. 326 IAC 2-1-3(a) of the Indiana SIP prohibits any person from commencing construction or modification of any air pollution source without first applying for and obtaining a construction permit from the commissioner of IDEM.
13. 326 IAC 2-1-3(c) requires any person proposing the construction or modification of a major stationary PSD source or major PSD modification, which is or which will be located in an attainment area or unclassified area, to comply with the requirements of 326 IAC 2-2 of the Indiana SIP.
14. 326 IAC 2-2-2 of the Indiana SIP states that new or modified major stationary sources or major modifications, constructed in an area designated as attainment, are subject to 326 IAC 2-2, which contains the PSD provisions of the Indiana SIP.
15. 326 IAC 2-2-1(ff)(2) of the Indiana SIP defines a "major stationary source" in an attainment area as any stationary source with the potential to emit 250 tons per year or more of a regulated NSR pollutant.
16. 326 IAC 2-2-1(dd) of the Indiana SIP defines a "major modification" as any physical change in or change in the method of operation of a major stationary source that would result in a significant emissions increase and a significant net emission increase of a regulated NSR pollutant from the major stationary source.
17. 326 IAC 2-2-1(ii) of the Indiana SIP defines "net emissions increase" as the amount by which the sum of the increase in emissions from a physical change or change in the method of operation and any other contemporaneous increases or decreases in emissions exceeds zero.
18. In reference to sulfur dioxide (SO₂), 326 IAC 2-2-1(ww)(1)(C) of the Indiana SIP defines "significant" with regard to a net emissions increase as a rate of emissions that would equal or exceed 40 tons per year.
19. 326 IAC 2-2-3(3) of the Indiana SIP requires that owners or operators making a major modification apply BACT for each regulated NSR pollutant for which the modification would result in a significant net emissions increase.
20. 326 IAC 2-2-1(i) of the Indiana SIP defines "BACT" as an emissions limitation based on the maximum degree of reduction for each regulated NSR pollutant that would be emitted from any proposed major modification while taking into account energy, environmental, and economic impacts and other costs.
21. 326 IAC 2-2-5 of the Indiana SIP requires that owners or operators of a proposed major modification demonstrate that allowable emission increases, in conjunction with all other applicable emission increases or reductions, will not cause or contribute to air pollution in violation of any ambient air quality standard or applicable maximum allowable increase over the baseline concentration in any area.

Isolatek's Facility

22. Isolatek is a corporation authorized to do business in Indiana.
23. Isolatek is a "person," as that term is defined in Section 302(e) of the Act, 42 U.S.C. § 7602(e).
24. At all times relevant to this Notice, Isolatek owned and operated emission units at its mineral wool production facility at 701 North Broadway Street, Huntington, Huntington County, Indiana ("Huntington plant").
25. Isolatek's Huntington plant is a "major stationary source," as that term is defined in the Indiana SIP at 326 IAC 2-3-1(ff)(2), in that it emits, or has the potential to emit several regulated NSR pollutants in excess of 250 tons per year.
26. Isolatek's Huntington plant is located in Huntington County Indiana, which at all times relevant to this Notice was classified as attainment for SO₂.
27. In December 2007, Isolatek's contractor, Air Analysis, Inc., performed an engineering study of air emissions at the cupola baghouse stack and downdraft ducts at the Huntington plant. Air Analysis, Inc. reported an SO₂ emission rate of 162 pounds per hour while the cupolas were operating at a total melt rate of 7.5 tons per hour. The resulting emission factor is 21.6 pounds of SO₂ per ton of melt (lbs/ton).
28. In November 2011, Isolatek submitted a construction permit application request (Application) to IDEM for the construction of two natural gas-fired mineral wool melters, EU-1A and EU-2A, at the Huntington plant. In the Application's calculations of the project's potential to emit SO₂, Isolatek used an emission factor of 7.33 lbs/ton (based on an AP-42 factor) rather than the 21.6 lbs/ton emission factor (based on the December 2007 testing) for SO₂ at the Huntington plant. In the Application, Isolatek accepted federally enforceable limitations so that it would not exceed the SO₂ significant threshold for PSD.
29. In the 2011 Application, Isolatek failed to submit facility specific SO₂ information for its emissions calculations and failed to apply for a PSD permit.
30. In 2012, Isolatek initiated physical changes subject to the PSD regulations at the Huntington plant including construction of two natural gas fired mineral wool melters at the Huntington plant. Isolatek failed to obtain the required PSD permit, or to undergo PSD pre-construction review for these physical changes.

Violations

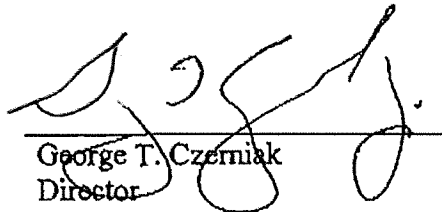
Violations of PSD

31. The project described in Paragraph 30 will cause a "significant net emissions increase" of SO₂ as defined in 326 IAC 2-2-1(ww)(1)(C).
32. The project described in Paragraph 30 constitutes a "major modification," as that term is defined at 326 IAC 2-2-1(dd).
33. Isolatek failed to apply for and/or obtain a PSD permit prior to beginning actual construction of the activities described in Paragraph 30, and failed to install and operate BACT for SO₂ as required by 326 IAC 2-1-3(c).
34. Therefore, Isolatek violated and continues to violate the PSD requirements found at Section 165 of Act, 42 U.S.C. § 7475, and the Indiana SIP, for constructing the major modification, as identified at Paragraph 30, to an existing major source at its Huntington plant, without applying for or obtaining the PSD permit and operating the modified facility without installing the BACT or going through PSD review, and installing appropriate emissions control equipment in accordance with a BACT analysis.

Enforcement Authority

35. Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1), provides that at any time after the expiration of 30 days following the date of the issuance of a notice of violation, the Administrator may, without regard to the period of violation, issue an order requiring compliance with the requirements of the applicable SIP, issue an administrative penalty order pursuant to Section 113(d), or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.

2/27/13
Date


George T. Czerniak
Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Notice of Violation, No. EPA-5-11-06 by Certified Mail, Return Receipt Requested, to:

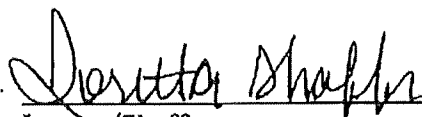
Tom Lund, Branch Manager
U.S. Mineral Products Company (d/b/a Isolatek International)
701 North Broadway Street
Huntington, Indiana 46750

I also certify that I sent copies of the Notice of Violation by first class mail to:

Phil Perry, Chief
Compliance and Enforcement Branch
Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, Room IGCN 1003
Indianapolis, Indiana 46204-2251

Anthony J. Reitano, Esq.
Herold Law, P.A.
25 Independence Boulevard
Warren, New Jersey 07059

on the 28 day of Feb, 2013.



Loretta Shaffer
Planning and Administration Section

CERTIFIED MAIL RECEIPT NUMBER: 7009 16X0 0000 7674 1057



United States
Environmental Protection
Agency
Region 5 *AE-17*
77 West Jackson Blvd.
Chicago, IL 60604

Official Business
Penalty For Private Use
\$300

no090817

03/01/2013

POSTAGE

FIRST-CLASS MAIL

\$01.12⁰

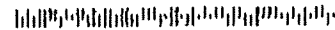


ZIP 60604
041111215632

Phil Perry, Chief
Air Compliance and Enforcement Branch
Indiana Dept. of Environmental Management
100 N. Senate Ave., - MC 61-53 KGCN 1003
Indianapolis, Indiana 46204-2251



Printed On Recycled Paper



This page left intentionally blank.

Attachment 4

This page left intentionally blank.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Carol S. Comer
Commissioner

January 7, 2016

Ms. Susan Hedman
Regional Administrator
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3950

Re: Indiana Sources Subject to Air Quality
Characterization under Round 3
Designations for the 2010 Primary 1-Hour
Sulfur Dioxide National Ambient Air Quality
Standard

Dear Ms. Hedman:

This letter is in response to United States Environmental Protection Agency's (U.S. EPA's) Data Requirements Rule (DRR) that was finalized on August 10, 2015 (80 FR 51052). The DRR was created in order to further implement the 2010 primary 1-hour SO₂ National Ambient Air Quality Standard (NAAQS). Implementation of the 2010 SO₂ NAAQS was initiated in 2013 when U.S. EPA established nonattainment areas based on monitoring data above the 2010 SO₂ standard (Round 1 Designations). Subsequently, in 2015, U.S. EPA entered into a consent decree with the Sierra Club and Natural Resources Defense Council (NRDC) to characterize SO₂ air quality, and establish attainment/nonattainment designations, in the vicinity of specific high-emitters of SO₂ (Round 2 Designations). Commonly referred to as "Round 3 Designations", the DRR is the next step in implementing the 2010 SO₂ NAAQS by establishing minimum criteria for identifying the emission sources and associated areas for which each state air agency is required to characterize SO₂ air in order to support designations under Round 3.

By January 15, 2016, the DRR requires each air agency to submit a list to U.S. EPA that identifies all sources within its jurisdiction around which SO₂ air quality must be characterized. This characterization will be performed for sources that exceeded 2,000 tons of SO₂ emissions per year (tpy) during the most recent year for which emissions data for the applicable sources are available. In addition, SO₂ characterization must be performed for areas identified by the air agency or by U.S. EPA as also warranting air quality characterization (ex. clusters of sources where no single source emits greater than 2,000 tpy of SO₂). This is considered a permanent list of sources that excludes sources in areas designated as nonattainment before January 2016 and shall not be altered by designations after January 2016.



A State that Works

Based on annual SO₂ emissions data for the year 2014, IDEM identified the following eleven facilities in Indiana as being subject to air quality characterization in conjunction with the Round 3 designation process for the 2010 primary 1-hour SO₂ standard:

**Table 1:
Indiana SO₂ Sources Subject to Air Quality Characterization
for the Round 3 Designation Process**

County	Facility Name	2014 SO₂ Emissions (tons)
Floyd	Gallagher Generating Station	3,524
Jasper	Schahfer Generating Station	8,412
Lake	Coke Energy LLC	4,952
Lake	U.S. Steel – Gary Works	3,285
Lake	Arcelormittal USA	2,163
Porter	Arcelormittal Burns Harbor LLC	12,189
Posey	SABIC Innovative Plastics	4,030
Sullivan	Merom Generating Station	3,318
Vermillion	Cayuga Generating Station	3,448
Warrick	ALCOA – Warrick Power Plant	4,993
Warrick	ALCOA – Warrick Operations	3,500

Note that this table represents those sources around which SO₂ air quality will be characterized. Additional sources of SO₂ emissions in close proximity to the listed source will be included in the characterization.

Two additional sources were initially identified as being subject to the DRR: ESSROC Cement Corporation (ESSROC) in Cass County and Tate & Lyle Ingredients Americas LLC – South Plant (Tate & Lyle – South) in Tippecanoe County. Each source initially reported 2014 SO₂ emissions greater than the DRR threshold of 2,000 tpy. Further analysis showed that annual SO₂ emissions for ESSROC for the year 2014 and Tate & Lyle – South for the years 2010 – 2014 were calculated incorrectly. ESSROC recalculated 2014 SO₂ emissions to account for revisions made to emission calculations for Kilns 1 and 2. Tate & Lyle recalculated 2010 – 2014 SO₂ emissions to account for SO₂ control of emissions not previously taken into account. Table 2 shows that recalculated 2014 and historical SO₂ emissions for ESSROC and recalculated 2010 – 2014 SO₂ emissions for Tate & Lyle – South are well below 2,000 tpy and, therefore, are not subject to air quality characterization under the DRR. Correspondence from ESSROC and Tate & Lyle – South explaining the reasons for recalculating these emissions, as well as revised annual emission statements and Air Emission Statement Certifications for these years are enclosed with this letter (Enclosures 1 and 2).

Table 2:
ESSROC and Tate & Lyle Annual SO₂ Emissions (tons)

County	Facility Name	2010	2011	2012	2013	2014
Cass	ESSROC	677	635	602	743	270
Tippecanoe	Tate & Lyle - South	1,351	1,370	1,309	1,323	1,612


By July 1, 2016, each air agency is required to notify U.S. EPA, for each source-area identified on its list, the approach (ambient monitoring or air quality modeling) it will use to characterize air quality. In lieu of characterizing areas around listed sources, air agencies may indicate by July 1, 2016, that they will adopt permanent and enforceable emission limitations that will limit those source(s) emissions below the DRR 2,000 tpy threshold. These limits must be adopted and effective by January 13, 2017. A modeling protocol must be provided to U.S. EPA by July 1, 2016, for source-areas in which modeling will be used to characterize air quality. The modeling analysis must be submitted to U.S. EPA by January 13, 2017. If ambient monitoring is chosen for source-areas to characterize air quality, relevant information concerning monitoring sites must be submitted to U.S. EPA by July 1, 2016, to ensure ambient monitors are operational by January 1, 2017.

An electronic version of this letter, in PDF format, has been transmitted to Doug Aburano of U.S. EPA Region 5. IDEM looks forward to continued coordination with Region 5 staff as the Round 3 designation process moves forward.

I would like to thank you for this opportunity to provide feedback to U.S. EPA regarding Round 3 air quality designations for the 2010 primary 1-hour SO₂ NAAQS. We look forward to working with your staff as U.S. EPA moves forward with the designation process.

If you have any questions regarding Indiana's list of identified sources subject to air quality characterization for the Round 3 designation process for the 2010 primary 1-hour SO₂ standard, please feel free to contact me at (317) 232-8611 or by email at ccomer@idem.IN.gov or Keith Baugues, Assistant Commissioner, Office of Air Quality, at (317) 232-8222 or by e-mail at kbaugues@idem.IN.gov.

Sincerely,



Carol S. Comer
Commissioner

Ms. Susan Hedman
Page 4 of 4

CSC/kb/sd/bc/gf
Attachments

cc: George Czerniak, U.S. EPA Region 5
Chris Panos, U.S. EPA Region 5
John Summerhays, U.S. EPA Region 5
Doug Aburano, U.S. EPA Region 5
Keith Baugues, IDEM-OAQ
Scott Deloney, IDEM-OAQ
Brian Callahan, IDEM-OAQ
Mark Derf, IDEM-OAQ
Gale Ferris, IDEM-OAQ
File Copy

Attachment 5

This page left intentionally blank.

From: Summerhays, John [mailto:Summerhays.John@epa.gov]

Sent: Monday, February 29, 2016 1:47 PM

To: DELONEY, SCOTT; DERF, MARK

Cc: Arra, Sarah; Aburano, Douglas

Subject: Potential EPA Revisions to Source list for SO2 Data Requirements Rule

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

We have been reviewing your list of sources to be subject to the requirements of the SO2 Data Requirements Rule. We are envisioning making three types of additions to the list:

- 1) "CD Sources," i.e. sources subject to designation by July 2, 2016, for which Indiana has already satisfied applicable initial air quality characterization requirements but which are nevertheless to be listed,
- 2) Sources that emitted over 2,000 tpy in 2014 but which were not listed by the state, and
- 3) A source that emitted less than 2,000 tpy in 2014 but which EPA nevertheless believes warrants listing.

We are especially interested in your feedback on sources in the second and third categories.

- 1) We intend to add the following "CD sources" to the list:

A.B. Brown (Posey County)

Clifty Creek (Jefferson County)

Gibson (Gibson County)

Michigan City (LaPorte County)

Rockport (Spencer County)

- 2) Using data from the draft 2014 NEI, we have identified the following facilities that in 2014 emitted over 2,000 tpy but which were not included in your list of DRR sources:

Tanner's Creek (Dearborn Co.) – 18,109 tons

IPL – Hardin (Marion Co.) – 29,855

We would like to know your rationale for not listing these sources. Note that as a general matter, we consider the DRR to require listing sources with emissions in the most recent year exceeding 2,000 tons, even if a federally enforceable requirement for shutdown or fuel switch, satisfying the DRR requirements, is in place. In any case, we would like to understand the situation at these plants better.

- 3) We have identified U.S. Mineral Products (Isolatek, Marion Co.) as emitting less than 2,000 tons per year but nevertheless warranting listing as subject to DRR requirements. A separate attachment provides

more details on why we believe this facility warrants listing. We welcome any comments you have on this rationale.

EPA is aiming to make the DRR source list as final as possible by around March 15. For that purpose, we would appreciate any feedback you have on the information in this email by a week from today, i.e. by March 7.

Review of List of Indiana Sources Subject to
Sulfur Dioxide (SO₂) Data Requirements Rule (DRR)

As required by the DRR, on January 7, 2016, Indiana submitted a list of sources to be subject to provisions of the DRR for air quality characterization or otherwise addressing nearby air quality. All of the sources listed by Indiana were listed because their recent emissions exceeded 2,000 tons per year (tpy).

The DRR provides that, in addition to sources emitting over 2,000 tpy, sources emitting less than 2,000 that nevertheless have high potential for causing violations of the SO₂ air quality standard may also be listed at the discretion of the state and EPA. EPA is concerned about the potential for violations in the vicinity of the U.S. Mineral Products, known as Isolatek, a mineral wool manufacturer located near Huntington, Indiana. The following sections describe the evidence regarding recent emissions at Isolatek and the reasons that EPA believes that Isolatek warrants listing as subject to the DRR.

Emissions from Isolatek

A critical challenge in assessing emissions from Isolatek is addressing the emissions arising from sulfur contained in the slag that the company processes. Emissions for this facility have been estimated by using the AP-42 emission factor for SO₂ emissions, which for cupolas at mineral wool manufacturing facilities is 8.0 pounds of SO₂ per ton of feed charged. However, the rating of this emission factor is D, and actual emissions from a mineral wool manufacturer can be highly dependent on the sulfur content of the slag.

A better estimate of the emissions from this facility is obtained by applying the results of a stack test conducted on December 18, 2007. This stack test indicated emissions of 21.6 pounds of SO₂ per ton of charged material.

The emissions rate reported for 2014 in the draft 2014 National Emissions Inventory was 164 tons. We believe a more appropriate emission estimate for this facility would be based on a cupola emission factor of 21.6 pounds per ton rather than 8.0 pounds per ton. Thus, we believe that a more appropriate estimate of 2014 emissions from this facility would be approximately 444 tons of SO₂.

Furthermore, based on production data obtained by Region 5's Air Enforcement and Compliance Assurance Branch, 2014 seems to have been a year with unusually low production, with production at about 36 percent of capacity. Available evidence indicates that the company produced as much mineral wool in the first half of 2015 as it produced in all of 2014. Production in 2015 appears more representative of normal production. Thus, emissions during times of normal production appear to be over 800 tons per year.

Other Factors

According to information that EPA obtained from the state, the stack at Isolatek is relatively short, having a height of 14.6 meters, or 48 feet. As a result, preliminary review of this facility indicates the likelihood

of nearby concentrations exceeding multiple times the air quality standard slightly east of the city of Huntington, where the facility is located.

Conclusion

Isolatek has significant potential for causing violations of the SO₂ standard. Further review is warranted to determine whether violations are in fact occurring near this facility. Thus, this facility appears to warrant listing as a source subject to the requirements of the DRR.

Attachment 6

This page left intentionally blank.

CALLAHAN, BRIAN

From: DELONEY, SCOTT
Sent: Friday, March 04, 2016 12:37 PM
To: Summerhays, John; DERF, MARK
Cc: Arra, Sarah; Aburano, Douglas; CALLAHAN, BRIAN
Subject: RE: Potential EPA Revisions to Source list for SO2 Data Requirements Rule
Attachments: EPADRRlistresponse.docx

John, we have prepared the attached in response to your proposed alterations. We would be happy to discuss further if you wish as well.

From: Summerhays, John [mailto:Summerhays.John@epa.gov]
Sent: Monday, February 29, 2016 1:47 PM
To: DELONEY, SCOTT; DERF, MARK
Cc: Arra, Sarah; Aburano, Douglas
Subject: Potential EPA Revisions to Source list for SO2 Data Requirements Rule

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

We have been reviewing your list of sources to be subject to the requirements of the SO2 Data Requirements Rule. We are envisioning making three types of additions to the list:

- 1) "CD Sources," i.e. sources subject to designation by July 2, 2016, for which Indiana has already satisfied applicable initial air quality characterization requirements but which are nevertheless to be listed,
- 2) Sources that emitted over 2,000 tpy in 2014 but which were not listed by the state, and
- 3) A source that emitted less than 2,000 tpy in 2014 but which EPA nevertheless believes warrants listing.

We are especially interested in your feedback on sources in the second and third categories.

- 1) We intend to add the following "CD sources" to the list:

A.B. Brown (Posey County)

Clifty Creek (Jefferson County)

Gibson (Gibson County)

Michigan City (LaPorte County)

Rockport (Spencer County)

- 2) Using data from the draft 2014 NEI, we have identified the following facilities that in 2014 emitted over 2,000 tpy but which were not included in your list of DRR sources:

Tanner's Creek (Dearborn Co.) – 18,109 tons

IPL – Hardin (Marion Co.) – 29,855

We would like to know your rationale for not listing these sources. Note that as a general matter, we consider the DRR to require listing sources with emissions in the most recent year exceeding 2,000 tons, even if a

federally enforceable requirement for shutdown or fuel switch, satisfying the DRR requirements, is in place. In any case, we would like to understand the situation at these plants better.

3) We have identified U.S. Mineral Products (Isolatek, Marion Co.) as emitting less than 2,000 tons per year but nevertheless warranting listing as subject to DRR requirements. A separate attachment provides more details on why we believe this facility warrants listing. We welcome any comments you have on this rationale.

EPA is aiming to make the DRR source list as final as possible by around March 15. For that purpose, we would appreciate any feedback you have on the information in this email by a week from today, i.e. by March 7.

Below are the Indiana Department of Environmental Management's (IDEM's) responses to United States Environmental Protection Agency's (U.S. EPA's) suggested additions/revisions to Indiana's list of sources subject to sulfur dioxide (SO₂) air quality characterization under the Data Requirements Rule (DRR), i.e. Round 3, for the 2010 primary 1-hour SO₂ National Ambient Air Quality Standard (NAAQS) submitted to your agency for review/consideration on January 7, 2016. The DRR was established, through a process with limited State consultation, to further implement the 1-hour SO₂ NAAQS in an expedited and timely manner. U.S. EPA suggested the following three types of sources be added to Indiana's list of sources subject to Round 3 designations:

- 1) "Consent Decree" sources, i.e. sources subject to designation by July 2, 2016, for which Indiana has already satisfied applicable initial air quality characterization requirements. These sources include five coal-fired electric power plants in Indiana: Rockport Generating Station, Spencer County; Clifty Creek Generating Station, Jefferson County; Gibson Generating Station, Gibson County; Michigan City Generating Station, LaPorte County; and A.B. Brown Generating Station, Posey County.

U.S. EPA previously notified Indiana on February 16, 2016, that it intends to designate Gibson, LaPorte, and Spencer (partial) counties as unclassifiable/attainment and Jefferson (Madison Township) and Posey (Marrs Township) counties as nonattainment under Round 2 Designations for the 2010 1-hour primary SO₂ NAAQS. In the case of Jefferson and Posey counties, U.S. EPA also notified Indiana that it will continue to work with the State to establish federally enforceable emission limits that would support designations of unclassifiable/attainment for the relevant portions of these counties. IDEM has no objections to U.S. EPA adding these five facilities to the list of sources subject Round 3 Designations based on the understanding that your agency remains committed to promulgating final designations for these areas by no later than July 2, 2016.

- 2) Sources that emitted over 2,000 tons of SO₂ in 2014 not previously included on Indiana's list of sources subject to Round 3 designations. Two additional sources were identified by U.S. EPA as being subject to the DRR: Harding Street Station in Marion County and Tanners Creek Generating Station in Dearborn County, which emitted 29,855 and 18,109 tons of SO₂, respectively, in 2014.

Harding Street Station

IDEM did not include the Harding Street Station on its list of sources subject to Round 3 designations because it resides in a portion of Marion County previously designated nonattainment under Round 1 area designations for the 1-hour SO₂ NAAQS (see 78 FR 47191, page 47199). The DRR defines applicable sources as stationary sources "[n]ot located in a designated nonattainment area." 40 CFR § 51.1202(1).

Pursuant to Section 191 of the Clean Air Act (CAA), IDEM was required to submit an attainment demonstration consistent with the requirements of Section 172 of the CAA demonstrating how the plan would provide for attainment of the 2010 1-hour primary

SO₂ NAAQS as expeditiously as possible, but no later than five years after the effective date of nonattainment designation, i.e., no later than October 4, 2018. IDEM submitted revisions to Indiana's State Implementation Plan (SIP) for SO₂ and the Final 1-Hour SO₂ Attainment Demonstration and Technical Support Document for Central, West Central, and Southwest Indiana Nonattainment Areas to U.S. EPA for review and approval on October 2, 2015. U.S. EPA issued a completeness finding for this submittal on February 25, 2016, based on your agency's determination that the submittal satisfies the completeness criteria set forth in 40 Code of Federal Regulations (CFR) 51, Appendix V. As such, this submittal satisfies Indiana obligation under Section 172(c) of the CAA to demonstrate how these areas, including the portion of Marion County, Indiana where the Harding Street Station resides, will attain the 2010 1-hour primary SO₂ NAAQS by the attainment date. IDEM does not believe U.S. EPA should add the Harding Street Station to Indiana's list of sources subject to Round 3 Designations under the 2010 1-hour primary SO₂ NAAQS.

Tanners Creek Generating Station

Indiana did not include the Tanners Creek Generating station on its list of sources affected under the DRR because all coal-fired electric generating units at the facility have been retired. As the result of a settlement with U.S. EPA to resolve violations of the CAA's New Source Review (NSR) requirements, Indiana Michigan Power permanently retired its entire Tanners Creek Generating Station located in Lawrenceburg Township, Dearborn County (i.e. all four coal-fired electric generating units) on June 1, 2015. IDEM issued a permit revocation (#029-36135-00002) on October 19, 2015, revoking the facility's Acid Rain Permit (#029-30002-00002), as requested. IDEM also issued an Administrative Amendment (#022-36008-00002) to the facility's Part 70 Permit (#T-029-34394-00002), on January 29, 2016, changing the status of the facility's electric generating units from operating units to retired units under the Acid Rain Permit and Transport Rule Programs, as requested. As a result of the closure of this facility, Indiana did not include the Tanners Creek Generating Station on its list of sources subject to Round 3 designations. Indiana does not believe U.S. EPA should add Tanners Creek to Indiana's list of sources subject to Round 3 designations under the 2010 1-hour primary SO₂ NAAQS.

- 3) U.S. EPA has identified U.S. Mineral Products (i.e. Isolatek), a mineral wool manufacturer near Huntington, Indiana in Huntington County, as a source potentially subject to SO₂ air quality characterization under the DRR.

Indiana strongly objects to the inclusion of Isolatek as an affected source under the DRR. The DRR defines applicable sources as stationary sources that had actual SO₂ emissions in 2014 of 2,000 tons or more, or have been identified by IDEM or EPA "as requiring further air quality characterization." 40 CFR § 51.1202. Indiana did not include Isolatek on its list of sources subject to the DRR because its reported actual SO₂ emissions in 2014 were 164 tons, less than one tenth of the DRR threshold of 2,000 tons or more. According to U.S. EPA's calculations (based on a 2007 stack test),

Isolatek's actual annual SO₂ emissions are approximately 800 tons in 2014, which is still less than half the DRR threshold.

In Isolatek's most recent permit, the potential to emit (PTE) SO₂ was 888.2 tons per year (TPY) unrestricted and 819.1 TPY restricted. 069-31651-00021, TSD app. A at 1 and 2. Even recalculating the PTE using an emission factor of 21.6 pounds per ton for the appropriate emission units, the PTE SO₂ is 1,746 TPY unrestricted and 1,677 TPY restricted. Isolatek's total potential to emit remains below the 2,000 ton threshold

EPA identified the 2,000 ton threshold as an important indicator of the need for prioritized air quality characterization. EPA set the threshold at a level "that prioritizes the resources that will be devoted to characterizing air quality near SO₂ sources nationally." 80 FR 51061. The threshold is already on "the lower end of the range of thresholds" of sources that have the potential to contribute to violations of the NAAQS. 80 FR 51061. And that threshold "strikes a reasonable balance between the need to characterize air quality near sources that have a higher likelihood of contributing to a NAAQS violation and the analytical burden on air agencies." 80 FR 51061. EPA did not characterize the 2,000 ton threshold as an arbitrary number, but rather an indicator of sources warranting prioritization of state and federal resources.

Because Isolatek's total potential to emit remains below the 2,000 ton threshold, it is unreasonable to place it among the sources that should be prioritized to determine if it contributes to violations of the NAAQS. Including sources with actual SO₂ emissions of approximately one-half the 2,000 ton threshold represents a misapplication of the intent of the DRR to prioritize sources and resources. Indiana believes that this reinterpretation of the DRR inappropriately broadens the scope and purpose of this phase of the DRR and has the potential to turn the prioritized consideration of sources into a burdensome and protracted effort to implement the 1-hour SO₂ NAAQS. There are numerous sources across the United States that fall into a similar category as Isolatek. Hand-picking a source in this manner will likely result in broadening the group of sources that the DRR prioritized for consideration. Due to the time constraints that U.S. EPA has placed on states to implement the DRR, broadening the applicability of the DRR's phased approach thwarts the rule's intent to prioritize state and federal resources.

The circumstances surrounding Isolatek appear to be enforcement related. As such, U.S. EPA should address its concerns surrounding this source through appropriate enforcement action. Again, Indiana does not believe U.S. EPA should add Isolatek to its list of sources subject to the Round 3 designation process under the DRR.

This page left intentionally blank.

Attachment 7

This page left intentionally blank.



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

MAR 25 2016

REPLY TO THE ATTENTION OF

Keith Baugues
Assistant Commissioner, Office of Air Quality
Indiana Department of Environmental Quality
100 N. Senate Avenue
Indianapolis, Indiana 46204

Dear Mr. Baugues:

On behalf of the U.S. Environmental Protection Agency, I would like to thank you for your January 7, 2016 submittal identifying sources to be characterized under the sulfur dioxide (SO₂) Data Requirements Rule (DRR).¹ I am writing to respond to your submittal, to include additional sources to be characterized under this rule, and to provide additional information about the next steps in this source characterization effort, which will result in important data that states and EPA will use to protect public health.

EPA has reviewed your agency's submittal and is identifying six additional sources that the DRR requires to be characterized (i.e., "applicable sources"). The available information indicates that your submittal did not include five sources of SO₂ with emissions at or in excess of 2,000 tpy that are not located in a nonattainment area. These sources, which are subject to the current round of designations ("consent decree sources"), meet the criteria for listing under the DRR and thus must be listed, notwithstanding the information your state has already provided and notwithstanding the degree to which you may already have satisfied initial air quality characterization requirements of the DRR. Accordingly, EPA is adding the following five sources to your state's list of applicable sources under the DRR:

Source(s)	County	2014 Emissions
A.B. Brown Generating Station	Posey	8,080 tons
Clifty Creek Generating Station	Jefferson	3,731 tons
Gibson Generating Station	Gibson	22,055 tons
Michigan City Generating Station	LaPorte	15,991 tons
Rockport Generating Station	Spencer	54,979 tons

The DRR also requires characterization of certain sources with annual emissions below 2,000 tpy as applicable sources. EPA has identified and is adding the following such source to your state's list of applicable sources under the DRR:

¹ "Data Requirements Rule for the 2010 1-Hour Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard (NAAQS); Final Rule," 80 *Federal Register* 51052, August 21, 2015.

Source(s)	County	Estimated typical emissions
U.S. Mineral Products ("Isolatch")	Huntington	800 to 900 tpy

Although this source emits less than 2,000 tpy, we have sufficient concerns about air quality in the vicinity of this source to warrant listing this source as subject to the air quality characterization requirements of the DRR. Further information on this source is provided in the attachment to this letter.

Under the DRR implementation schedule, state air agencies were required to submit to EPA by January 15, 2016 a list that identifies all sources within the state's jurisdiction with SO₂ emissions of 2,000 tpy or more during the most recent year for which emissions data are available. The DRR also provided for air agencies or EPA to include sources with SO₂ emissions below 2,000 tpy on a state's source list where characterization of air quality around the sources is warranted.

Once sources are listed, the DRR requires state air agencies to characterize ambient SO₂ levels in the areas near the sources. The DRR provides that this air quality characterization may be accomplished either by modeling or by monitoring air quality around the listed sources. Alternatively, for a source listed because it emitted more than 2,000 tpy, an air agency may avoid this requirement by adopting federally enforceable emission limits by January 13, 2017 that ensure that the source will emit less than 2,000 tpy of SO₂.

The next key milestone for purposes of DRR implementation is July 1, 2016, the date by which each air agency must identify, for each listed source, the approach it will use to characterize air quality in the respective area (air quality modeling, ambient monitoring, or establishment of a federally enforceable emission limit).

For sources that an air agency decides to evaluate through air quality modeling, the DRR requires the air agency to submit a modeling protocol to the EPA Regional Administrator by July 1, 2016, and the completed modeling analysis by January 13, 2017. For sources that an air agency decides to evaluate through ambient monitoring, the air agency will need to identify appropriate sites to characterize peak 1-hour SO₂ concentrations, and may need to relocate existing monitors or install new monitors at such sites. As further required under the DRR, the air agency must submit information about monitoring sites to the EPA Regional Administrator by July 1, 2016, as part of its annual monitoring network plan and in accordance with EPA's monitoring requirements specified in 40 CFR part 58. The air agency must also ensure that ambient monitors will be operational by January 1, 2017.

As noted earlier, in lieu of characterizing air quality around a source with SO₂ emissions that are at or above 2,000 tpy, air agencies may indicate by the July 1, 2016, deadline that they will adopt federally enforceable emissions limitations that will limit the SO₂ emissions of a source to a suitable level below 2,000 tpy. Such limits must be adopted and effective by January 13, 2017. The DRR requires that an air agency provide a description of the requirements and emission limits that the air agency intends to apply for the affected sources in their July 1, 2016, submittal.

Review of List of Indiana Sources Subject to
Sulfur Dioxide (SO₂) Data Requirements Rule (DRR)

As required by the DRR, on January 7, 2016, Indiana submitted a list of sources to be subject to provisions of the DRR for air quality characterization or otherwise addressing nearby air quality. All of the sources listed by Indiana were listed because their recent emissions exceeded 2,000 tons per year (tpy).

The DRR provides that, in addition to sources emitting over 2,000 tpy, sources emitting less than 2,000 that nevertheless have high potential for causing violations of the SO₂ air quality standard may also be listed at the discretion of the state and EPA. EPA is concerned about the potential for violations in the vicinity of the U.S. Mineral Products, known as Isolatek, a mineral wool manufacturer located near Huntington, Indiana. The following sections describe the evidence regarding recent emissions at Isolatek and the reasons that EPA believes that Isolatek warrants listing as subject to the DRR.

Emissions from Isolatek

A critical challenge in assessing emissions from Isolatek is addressing the emissions arising from sulfur contained in the slag that the company processes. Emissions for this facility have been estimated by using the AP-42 emission factor for SO₂ emissions, which for cupolas at mineral wool manufacturing facilities is 8.0 pounds of SO₂ per ton of feed charged. However, the rating of this emission factor is D, and actual emissions from a mineral wool manufacturer can be highly dependent on the sulfur content of the slag.

A better estimate of the emissions from this facility is obtained by applying the results of a stack test conducted on December 18, 2007. This stack test indicated emissions of 21.6 pounds of SO₂ per ton of charged material.

The emissions rate reported for 2014 in the draft 2014 National Emissions Inventory was 164 tons. We believe a more appropriate emission estimate for this facility would be based on a cupola emission factor of 21.6 pounds per ton rather than 8.0 pounds per ton. Thus, we believe that a more appropriate estimate of 2014 emissions from this facility would be approximately 444 tons of SO₂.

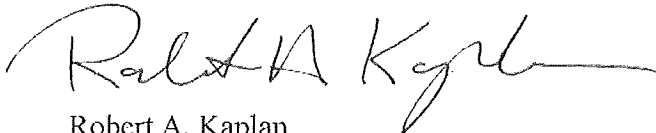
Furthermore, based on production data obtained by Region 5's Air Enforcement and Compliance Assurance Branch, 2014 seems to have been a year with unusually low production, with production at about 36 percent of capacity. Available evidence indicates that the company produced as much mineral wool in the first half of 2015 as it produced in all of 2014. Production in 2015 appears more representative of normal production. Thus, emissions during times of normal production appear to be over 800 tons per year.

We look forward to a continued dialogue with you and your staff as you prepare the required submittals that are due on July 1, 2016. To assist in this process, we are available to discuss any technical issues that you may have concerning either modeling or monitoring in order to assist you in meeting this requirement.

Please note that a copy of each state air agency's submittal and a compiled national list of sources subject to DRR requirements are posted on EPA's SO₂ implementation website at www3.epa.gov/airquality/sulfurdioxide/implement.html. We also plan to post this letter on that site and to update the compiled national list with the sources added by this letter as described above in the near future.

Again, thank you for your letter and for your efforts to implement this important standard. For additional information concerning the DRR, please visit our SO₂ implementation website listed above. For additional information regarding designations under the SO₂ standard, please visit our website at www.epa.gov/so2designations. Should you have any questions, please do not hesitate to call me or contact George Czerniak, Air and Radiation Division Director, at 312-353-2212 or czerniak.george@epa.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read "Robert A. Kaplan", with a long horizontal flourish extending to the right.

Robert A. Kaplan
Acting Regional Administrator

Attachment

Modeling Evidence

Preliminary modeling conducted by EPA estimated concentrations well over the SO₂ standard, with a design value (without background) estimated to be 6,337 ppb. These results are consistent with information that EPA obtained that the stack at Isolatek is relatively short, having a height of 14.6 meters, or 48 feet. This modeling indicates the need for further air quality characterization of this source pursuant to the data requirements rule to determine whether in fact violations of the SO₂ standard are occurring near this source.

Conclusion

Isolatek has significant potential for causing violations of the SO₂ standard. Further review is warranted to determine whether violations are in fact occurring near this facility. Thus, this facility appears to warrant listing as a source subject to the requirements of the DRR.

This page left intentionally blank.

Attachment 8

This page left intentionally blank.



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

AUG 22 2017

The Honorable Eric J. Holcomb
Governor
Office of the Governor, State of Indiana
200 West Washington Street
Indianapolis, Indiana 46204

REPLY TO THE ATTENTION OF:

Dear Governor Holcomb:

The purpose of this letter is to inform you of the U.S. Environmental Protection Agency's intended designations for certain areas in Indiana for the 2010 Primary National Ambient Air Quality Standard (NAAQS) for sulfur dioxide (SO₂). The designations for this NAAQS are an important part of EPA's commitment to a clean, healthy environment. These intended designations are a response to designations-related recommendations and information your state submitted in letters dated May 11, 2011, January 2012, April 2012, January 2013, March 2013, September 2015, and, more recently, January 13, 2017.¹

On July 25, 2013, EPA designated certain areas in 16 states as nonattainment,² but did not at that time designate other areas. Additional areas were designated on June 30, 2016,³ and November 29, 2016.⁴ In Indiana, the following areas were designated in these previous actions: Gibson County, LaPorte County, and portions of Daviess, Jefferson, Marion, Morgan, Pike, Posey, Spencer, and Vigo Counties. Pursuant to a March 2, 2015, court-ordered schedule,⁵ the agency must complete the remaining SO₂ designations by two specific deadlines: December 31, 2017, and December 31, 2020. Accordingly, pursuant to section 107(d)(1)(B)(ii) of the Clean Air Act, this letter is to notify you of EPA's assessment of your state's recommended designations for all remaining undesignated areas in Indiana except areas that are associated with sources for which Indiana elected to install and begin operating a new SO₂ monitoring network. While we are in agreement with your recommendation for many of these areas, some warrant further discussion as explained below and in the accompanying technical support document. We stand ready to assist and hope to resolve any differences regarding the proper designation for these areas within this 120-day period provided by the Clean Air Act.

To this end, if you or your staff have additional information that EPA should consider prior to finalizing the designations, please submit it as soon as possible but no later than October 23, 2017. You may submit additional information by sending it to EPA's public docket for these designations, EPA-HQ-

¹ Indiana also provided information relevant to these designations on May 10, 2017 (addressing Lake County) and on June 23, 2017 (addressing Warrick County).

² The Indianapolis area (including portions of Marion County), the Morgan County area (including portions of Morgan County), the Southwest Indiana area (including portions of Daviess and Pike Counties), and the Terre Haute area (including portions of Vigo County) were designated as nonattainment in this action.

³ In this action, EPA designated Gibson and LaPorte Counties and portions of Jefferson, Posey and Spencer Counties as unclassifiable/attainment.

⁴ This action only affected Texas.

⁵ *Sierra Club v. McCarthy*, No. 3-13-cv-3953 (SI) (N.D. Cal. Mar. 2, 2015).

OAR-2017-0003, located at www.regulations.gov, and sending a copy to EPA Region 5. The EPA also will publish a notice in the *Federal Register* announcing a 30-day comment period for the public to provide input on EPA's intended designations.

Indiana has recommended a designation of unclassifiable for Huntington County and attainment for Warrick County. EPA regulations for implementing the SO₂ NAAQS require Indiana to characterize SO₂ air quality in these areas. In considering your recommendation, we have taken into account all available information, including any current (2014-2016) air monitoring data, and any available air dispersion modeling analyses. The air dispersion modeling data, however, show either that these areas may be violating the 2010 primary SO₂ NAAQS or contain sources that may be contributing to air quality in a nearby area that may be violating the 2010 primary SO₂ NAAQS, which would require a modification of the recommended designation. We invite Indiana to review the available information and further discuss this issue with EPA in order to inform an appropriate final designation. EPA intends to designate each listed area as a separate area, as indicated.

Area	Included Counties
Huntington County*	Huntington (p)
Warrick*	Warrick (p)

(p) indicates portion of county

An asterisk (*) indicates that EPA's review of the available information is not consistent with your recommendation for a portion of this county.

Your staff has recently shared a protocol for modeling relevant to the Warrick County area. We have not completed our review of this protocol, but we will continue to consult with your staff as our review proceeds, and we will evaluate any appropriate and timely additional information that would inform our final designation.

Indiana has recommended a designation of attainment for the areas indicated below. EPA regulations for implementing the SO₂ NAAQS require Indiana to characterize SO₂ air quality in each listed area. In considering your recommendation, we have taken into account all available information, including any current (2014-2016) air monitoring data, and any air dispersion modeling analyses provided by Indiana or by a third party. Our review of this information indicates that it is consistent with your recommendation. EPA intends to designate each listed area as a separate unclassifiable/attainment area, as indicated.

Unclassifiable/Attainment Area	Included Counties
Floyd County	Entirety of Floyd County
Jasper County	Entirety of Jasper County
Lake County	Entirety of Lake County
Posey County (p)	Posey County(p)
Sullivan County	Entirety of Sullivan County
Vermillion County (p)	Vermillion County (p)

(p) indicates portion of county

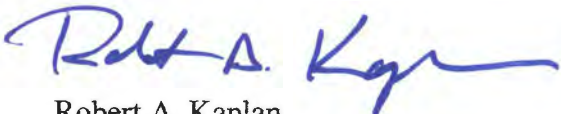
The enclosure to this letter provides the information that supports the intended designation decisions for these areas in Indiana.⁶

Finally, we intend to designate as unclassifiable/attainment all remaining areas of Indiana that were not required to be characterized and for which EPA does not have information that suggests the area may not be meeting the NAAQS or contributing to air quality in a nearby area that does not meet the NAAQS. A list of these remaining areas is included in the last section of the enclosure.

The EPA will promulgate the final designations for the areas identified in this letter by December 31, 2017. We are prepared to work with you to resolve any disagreements with respect to the available information or information gaps. We are then required to designate the last remaining undesignated area in Indiana, in Porter County, by December 31, 2020, consistent with the prescribed timing of the court order.

We share your goal to provide cleaner air for citizens in your state. We look forward to a continued dialogue with you and your staff as we work together to complete the area designations and implement the 2010 primary SO₂ NAAQS. For additional information regarding designations under the SO₂ NAAQS, please visit our website at <https://www.epa.gov/sulfur-dioxide-designations>. Should you have any questions, please do not hesitate to call me, or have your staff contact Ed Nam of my staff at 312-353-2192 or Nam.Ed@epa.gov.

Sincerely,



Robert A. Kaplan
Acting Regional Administrator

Enclosures

Cc Bruno Pigott, Commissioner, Indiana Department of Environmental Management
Keith Baugues, Assistant Commissioner, Office of Air Quality, Indiana Department of Environmental Management

⁶ Enclosure 1 is Chapter 13 of the Technical Support Document for the designations EPA plans to complete by December 31, 2017, that addresses areas in Indiana. The Technical Support Document is also available at <https://www.epa.gov/sulfur-dioxide-designations>

[illegible]

4.1. Introduction

The EPA exercised its discretion to list the Isolatek source as subject to the DRR. Indiana did not agree with the emissions or reasoning for listing the source as subject to the DRR. The state did not submit a modeling analysis for the area nor did the state install a new monitoring network to characterize air quality in the area. In the absence of a new monitoring network, the EPA must designate the Huntington County area by December 31, 2017. Regardless of whether Isolatek was listed as subject to the DRR, this designation must reflect the best available information regarding air quality in this area. At this time, the best available information regarding Huntington County air quality is the modeling that led the EPA to list Isolatek as subject to DRR requirements. Much of the following discussion reviews this modeling information that underpinned the EPA's decision to list Isolatek as subject to the DRR.

4.2. Air Quality Monitoring Data for the Huntington County Area

This factor considers the SO₂ air quality monitoring data in the area of Huntington County. No monitors are located in or sufficiently near to Huntington County to inform the characterization of SO₂ air quality in the county.

4.3. Air Quality Modeling Analysis for the Huntington County Area Addressing Isolatek

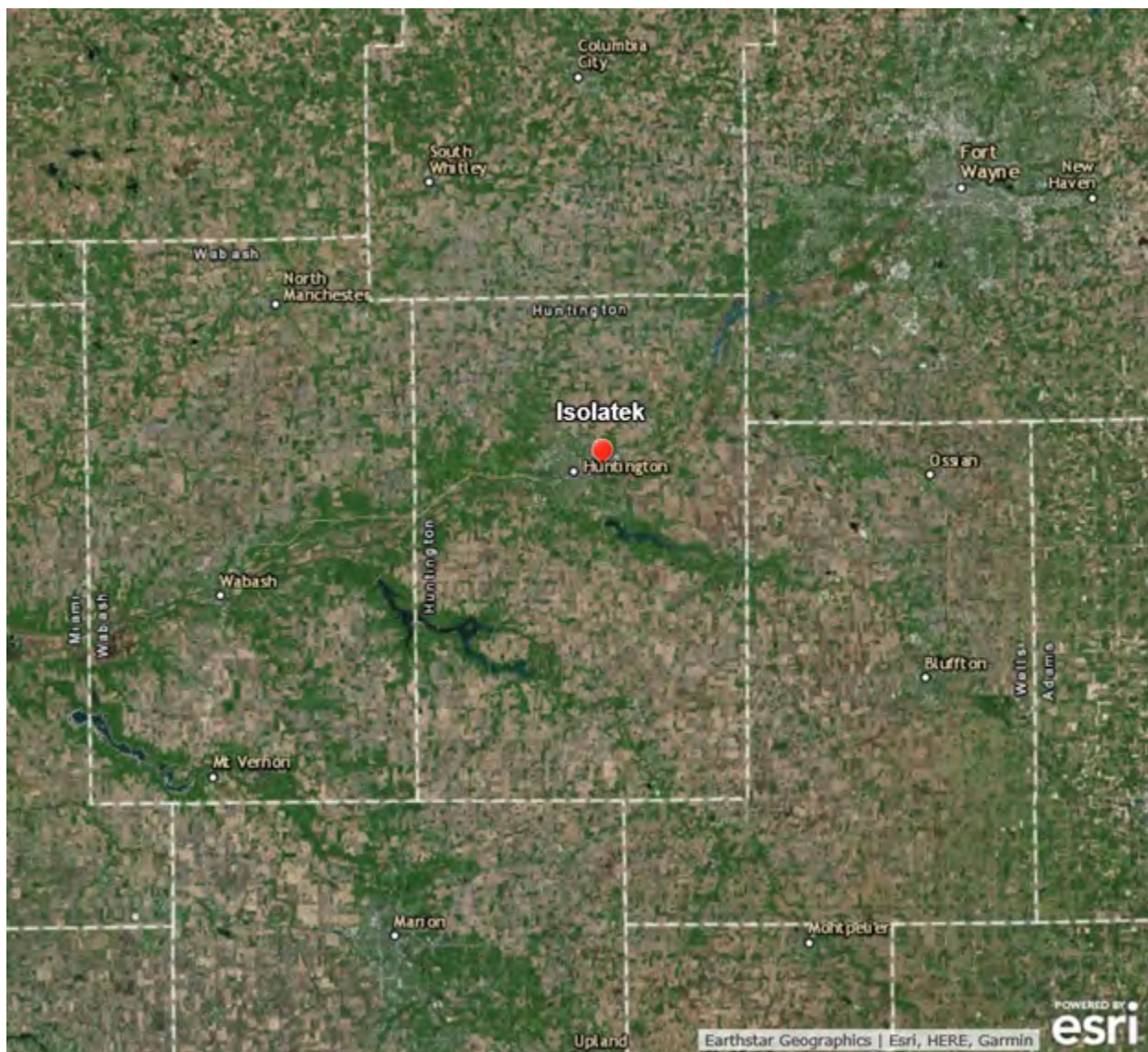
4.3.1. Introduction

This section 4.3 presents all the available air quality modeling information for Huntington County. This area contains Isolatek, which is the only source in Huntington County listed under the DRR. Isolatek does not emit 2,000 tons or more annually, but the EPA added this source on the basis of modeling in its possession indicating concentrations in the area well over the 2010 SO₂ standard. No other sources in Huntington County emit over 100 tons per year of SO₂.

For this area, the EPA received no modeling assessments from Indiana or from any other party. Thus, the only modeling presently available to the EPA for Huntington County is modeling which the EPA had already conducted during the course of enforcement action regarding the source. The remainder of this section 4.3.2 describes and reviews this modeling.

As seen in Figure 9 below, Isolatek is located near the center of Huntington County, just east of the City of Huntington. Figure 9 also shows the broad area included in the EPA's modeling analysis. This figure also shows county boundaries, including the boundaries for Huntington County, the county that contains Isolatek. In its January 2017 recommendation, Indiana did not expressly recommend a designation for Huntington County, and so no recommended designation area is shown in Figure 9. Indiana did recommend an unclassifiable designation for Huntington County in its May 11, 2011, recommendations.

Figure 9. Map of the Huntington County Area Addressing Isolatek



The discussion and analysis that follows below will reference the Modeling TAD and the factors for evaluation contained in the EPA's July 22, 2016, guidance and March 20, 2015, guidance, as appropriate.

4.3.2. Model Selection and Modeling Components

The EPA's Modeling TAD notes that for area designations under the 2010 SO₂ NAAQS, the AERMOD modeling system should be used, unless use of an alternative model can be justified. The AERMOD modeling system contains the following components:

- AERMOD: the dispersion model
- AERMAP: the terrain processor for AERMOD
- AERMET: the meteorological data processor for AERMOD

- BPIPPRM: the building input processor
- AERMINUTE: a pre-processor to AERMET incorporating 1-minute automated surface observation system (ASOS) wind data
- AERSURFACE: the surface characteristics processor for AERMET
- AERSCREEN: a screening version of AERMOD

The EPA conducted the modeling of Isolatek in 2015 (in conjunction with an enforcement investigation involving the source), using AERMOD and AERMET versions 14134. A discussion of the approach to the individual components is provided in the corresponding discussion that follows, as appropriate.

There have been three revisions to AERMOD and two revisions to AERMET since the 14134 version. The changes have mostly consisted of bug fixes and enhancements that would not be expected to significantly change the concentrations produced by the 14134 versions in regulatory default mode. One change from the 14134 version of the models to the current version is the use of the adjusted surface friction velocity parameter (ADJ_U*) in AERMET. The ADJ_U* parameter was a beta option and not recommended for regulatory use when the modeling was conducted in 2015. The option was made a regulatory option in late 2016 in version 16216 and, if implemented, could change concentrations, though any reduction in concentration estimates resulting from use of this modification would likely be relatively modest.

4.3.3. Modeling Parameter: Rural or Urban Dispersion

For any dispersion modeling exercise, the determination of whether a source is in an “urban” or “rural” area is important in determining the boundary layer characteristics that affect the model’s prediction of downwind concentrations. For SO₂ modeling, the urban/rural determination is also important because AERMOD invokes a 4-hour half-life for urban SO₂ sources. Section 6.3 of the Modeling TAD details the procedures used to determine if a source is urban or rural based on land use or population density.

For the purpose of performing the modeling for the area of analysis, the EPA determined that the area should be modeled as rural based on a visual inspection of the land use surrounding the facility using satellite imagery. The facility is located on the eastern edge of the small town of Huntington, Indiana, located in the northeast quadrant of the state.

4.3.4. Modeling Parameter: Area of Analysis (Receptor Grid)

The TAD recommends that the first step towards characterization of air quality in the area around a source or group of sources is to determine the extent of the area of analysis and the spacing of the receptor grid. Considerations presented in the Modeling TAD include but are not limited to: the location of the SO₂ emission sources or facilities considered for modeling; the extent of significant concentration gradients due to the influence of nearby sources; and sufficient receptor coverage and density to adequately capture and resolve the model predicted maximum SO₂ concentrations.

The source of SO₂ emissions subject to the DRR in this area is described in the introduction to

this section. For the Huntington County area, the EPA only modeled the DRR source. The closest sources with SO₂ emissions greater than 100 tpy are approximately 30-35 km away and include Thermafiber, Inc. with about 500 tpy, and Steel Dynamics Incorporated with about 150 tpy. These sources are judged to have sufficiently low emissions that are sufficiently distant from the area of maximum concentrations so as to be likely to cause minimal concentration gradients in the area of interest.

The grid receptor spacing for the area consisted of several nests with decreasing resolution further away from the facility.

- 50 m spacing around the facility property boundary
- 100 m spacing out 500 m
- 250 m spacing out 1 km
- 500 m spacing transitioning to 2.5 km spacing out to 50 km.

. The receptor network contained 2,364 receptors, and the network covered all or parts of 14 counties, including most of the area shown in Figure 9 above. However, the source and the concentrations of interest are all contained in Huntington County.

Figure 10 shows the EPA's chosen area of analysis surrounding Isolatek as well as the receptor grid in the immediate area of the source. Figure 11 shows the full extent of the receptor grid used in the analysis for Isolatek.

Figure 10: Receptor Grid for the Immediate Area Around the Isolatek Facility in the Huntington County Area



Figure 11. Full Receptor Grid for the Area Around the Isolatek Facility in the Huntington County Area



The receptor grid used in the EPA assessment adequately addresses whether peak concentrations caused by emissions from the facility are violating the NAAQS. Although it is unclear if a fence exists around the property, the placement of receptors just outside a facility structure to the north, where the peak values were modeled, show concentrations well above the standard, so that the addition of receptors within plant property would not alter the conclusion that the source is causing violations of the NAAQS.

4.3.5. Modeling Parameter: Source Characterization

Section 6 of the Modeling TAD offers recommendations on source characterization including source types, use of accurate stack parameters, inclusion of building dimensions for building downwash (if warranted), and the use of actual stack heights with actual emissions or following GEP policy with allowable emissions.

The EPA generally characterized this source in accordance with standard modeling practices. However, since the work was conducted for enforcement purposes, emissions were estimated based on the latest stack test data for the cupola, maximum charge rate assumptions, continuous operation throughout the year, and state emission data for the two blow chambers. No other sources or background concentrations were added. Actual stack heights were modeled along with building downwash. For this source, emissions from the cupola are emitted through a stack. The

emissions from the blow chambers were characterized as volume sources.

4.3.6. Modeling Parameter: Emissions

The EPA's Modeling TAD notes that for the purpose of modeling to characterize air quality for use in designations, the recommended approach is to use the most recent 3 years of actual emissions data and concurrent meteorological data. However, the TAD also indicates that it would be acceptable to use allowable emissions in the form of the most recently permitted (referred to as PTE or allowable) emissions rate that is federally enforceable and effective.

The EPA believes that CEMS data provide acceptable historical emissions information, when they are available. These data are available for many electric generating units. In the absence of CEMS data, the EPA's Modeling TAD highly encourages the use of AERMOD's hourly varying emissions keyword HOUREMIS, or the use of AERMOD's variable emissions factors keyword EMISFACT. When choosing one of these methods, the EPA recommends using detailed throughput, operating schedules, and emissions information from the impacted source(s).

In certain instances, states and other interested parties may find that it is more advantageous or simpler to use PTE rates as part of their modeling runs. For example, where a facility has recently adopted a new federally enforceable emissions limit or implemented other federally enforceable mechanisms and control technologies to limit SO₂ emissions to a level that indicates compliance with the NAAQS, the state may choose to model PTE rates. These new limits or conditions may be used in the application of AERMOD for the purposes of modeling for designations, even if the source has not been subject to these limits for the entirety of the most recent 3 calendar years. In these cases, the Modeling TAD notes that a state should be able to find the necessary emissions information for designations-related modeling in the existing SO₂ emissions inventories used for permitting or SIP planning demonstrations. In the event that these short-term emissions are not readily available, they may be calculated using the methodology in Table 8-1 of Appendix W to 40 CFR Part 51 titled, "Guideline on Air Quality Models."

As previously noted, the EPA used emissions representing recent stack test data, maximum charge rates, and continuous operations for the cupola process. Emissions for the two blow chambers were generated by the state, using a maximum feed rate of 4.0 tons of slag per hour and an AP-42 emission factor of 0.87 pounds SO₂ per ton of slag. The cupola emissions were generated based on a 2007 stack test at the facility. The resulting emission factor of 21.6 pounds of SO₂ per ton of slag was used, along with a potential charge rate of 126,144 tons of slag per year to produce annual emissions of 1,362 tons of SO₂ per year. Total annual emissions, as reflected in the modeling, are presented in Table 8 below.

Table 8. SO₂ Emissions Used to Model the Isolatek Facility in the Huntington County Area

Facility Name	SO ₂ Emissions
	(tpy)
Isolatek - Cupola (point source)	1,362
Isolatek - 2 blow chambers (volume sources)	30
Total Emissions from All Modeled Facilities in the Area of Analysis	1,393

While the emissions used in the EPA modeling do not represent actual emissions from the most recent three years of operation, they do represent a conservative assessment of emissions from the facility.

In its rationale for listing Isolatek under the DRR, the EPA discussed estimates of actual emissions, which would support a better assessment of current air quality. Specifically, in its rationale, the EPA estimated actual emissions for 2014. In this estimate, the EPA relied on the production data underlying the emission estimate that Indiana provided for the National Emissions Inventory (NEI), but adjusted the estimate to reflect a more source-specific, more reliable emission factor. Whereas Indiana's emission estimate relied on the AP-42 emission factor of 8.0 pounds of emissions per ton of slag being processed, the EPA found that information from a stack test at the facility yielded an emission factor of 21.6 pounds of emissions per ton of slag. Mass balance calculations for the facility also yielded an emission factor estimate quite similar to the estimate based on the stack test (approximately 22 pounds per ton of slag), providing further support for that estimate. Adjusting the NEI emission estimate (164 tons in 2014) times the ratio of the stack-test-based emission factor versus the AP-42 emission factor (21.6/8.0) yields a 2014 emission estimate of 444 tons.

Indiana's submittal on January 13, 2017, provided information supporting lower emission estimates for Isolatek. Indiana cited a stack test supporting an emission factor of 9.3 pounds per ton of throughput. On this basis, Indiana recommended continued use of the 8.0 pound per ton emission factor from AP-42. The submittal also presented arguments that the prior stack test may have produced an unrepresentative emission factor, insofar as the test was conducted during a time with a deviation "from standard coke consumption and melt rate in the 10% - 20% order of magnitude." Also, although the EPA had judged that 2014 appeared to be a low production year, and that normal production (and therefore normal emissions) might be twice as high, Indiana provided a level of production "over the last few years" that it said "should be considered the current normal production at the facility."

Based on this information, the EPA finds that 444 tons per year represents the most reliable estimate of current emissions at Isolatek. The emission factor derived from the more recent stack test differs from the emission factor derived from the prior stack test substantially, by more than 10 to 20 percent. Since the emission factor estimate of 21.6 pounds per ton is consistent with the results of mass balance calculations (suggesting an emission factor of approximately 22 pounds

of SO₂ per ton of slag), this emission factor is likely more representative of typical emissions at the facility. The information on production that Indiana provided supports the conclusion that basing an emission estimate on 2014 production is an appropriate means of assessing current emission levels. Nevertheless, given the range in plausible emission factors, the EPA considered evidence as to air quality near Isolatek under a range of potential Isolatek emission levels. The EPA evaluated air quality based on an emission level of 444 tons per year. As an alternative, the EPA also evaluated air quality based on an emission rate of 191 tons per year, based on use of 2014 slag processing rates multiplied by the emission factor derived from the more recent stack test (9.29 pounds per ton of slag). A third basis for air quality evaluation was an emission rate of 164 tons per year, an estimate based on the AP-42 emission factor. Discussion of these evaluations is provided below.

The production rates underlying these three emission estimates may or may not be below normal production rates. Nevertheless, the available evidence suggests that the 2014 production rate, on which the above three emission estimates are based, is reasonably representative of production rates for the most recent three years and may be considered representative of current emission rates. Therefore, the EPA concluded that evaluation of air quality based on these 2014 production rates provides an appropriate basis for evaluating current air quality.

Section 4.3.10 discusses the consequences of these emission estimates, based primarily on the estimate that Isolatek currently emits 444 tons per year but also evaluating the impacts that would be estimated if alternate emission estimates were used.

4.3.7. Modeling Parameter: Meteorology and Surface Characteristics

As noted in the Modeling TAD, the most recent 3 years of meteorological data (concurrent with the most recent 3 years of emissions data) should be used in designations efforts. The selection of data should be based on spatial and climatological (temporal) representativeness. The representativeness of the data is determined based on: 1) the proximity of the meteorological monitoring site to the area under consideration, 2) the complexity of terrain, 3) the exposure of the meteorological site, and 4) the period of time during which data are collected. Sources of meteorological data include National Weather Service (NWS) stations, site-specific or onsite data, and other sources such as universities, Federal Aviation Administration (FAA), and military stations.

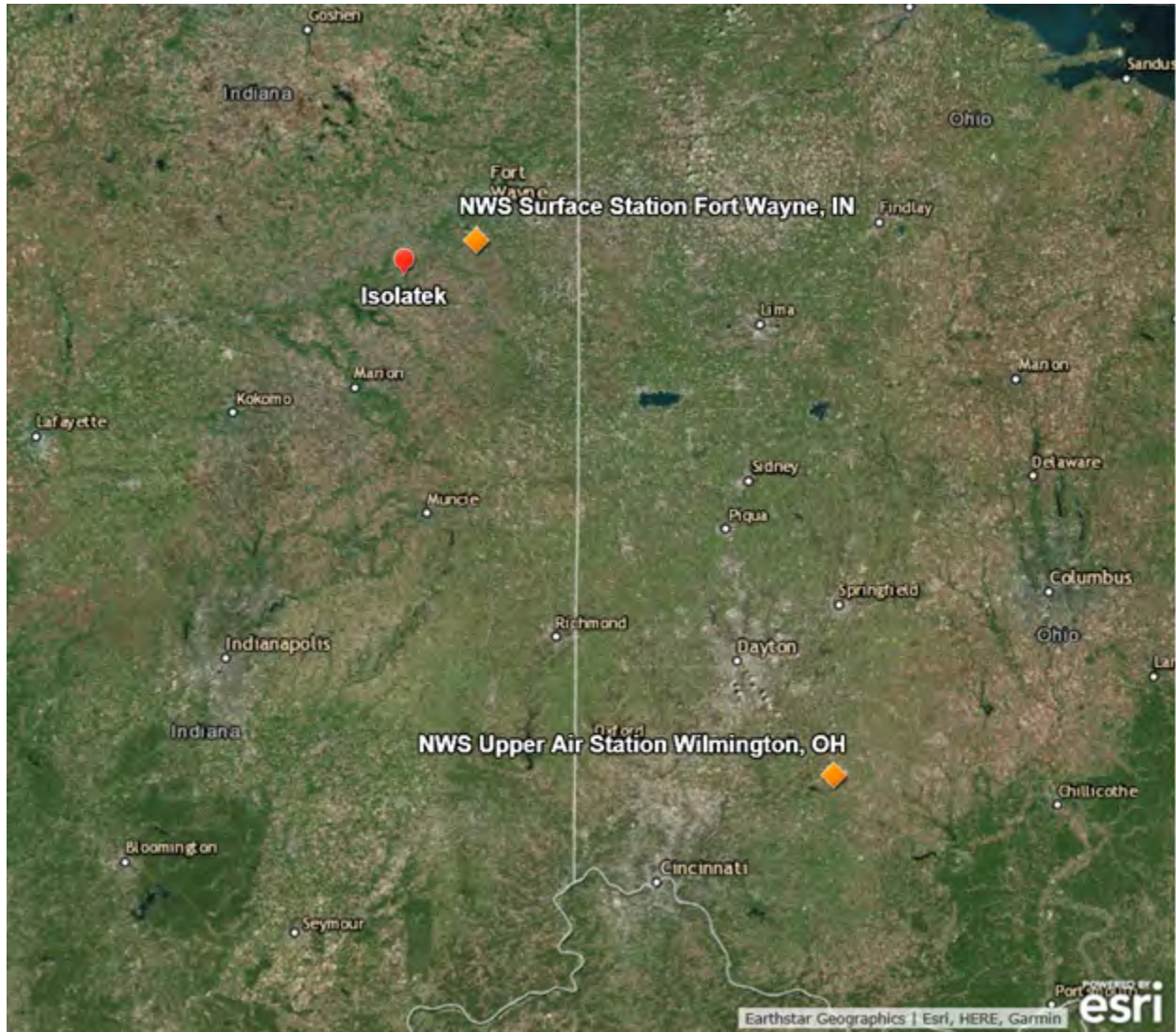
For the area of analysis around Isolatek, the EPA used five years of meteorological data supplied by the state of Indiana. The years covered were 2008 to 2012. Surface data were collected from the Fort Wayne International Airport (KFWA) in Fort Wayne, Indiana, located at 40.97 N and 85.21 W, roughly 25 km northwest of the facility. Upper air data were collected from the Wilmington Airborne Park (KILN) in Wilmington, Ohio, NWS station, located at 39.42 N and 83.82 W roughly 220 km southeast of the facility. These stations were selected as being the most representative of meteorological conditions within the area of analysis.

The meteorological surface and upper air data files were acquired from the state. Input files for the meteorological modeling are not available but the EPA believes that the state used

AERSURFACE (version 13016) to process the land use characteristics for the meteorological modeling.

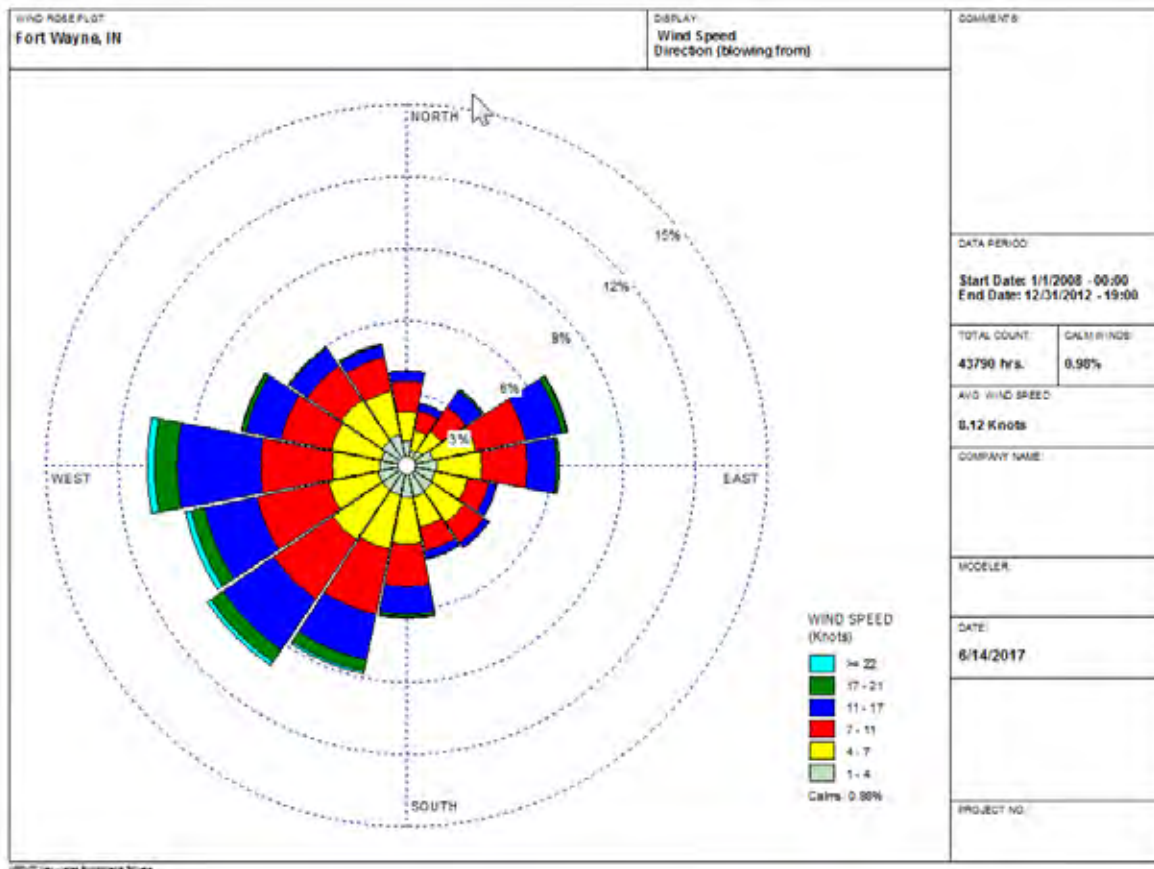
In figure 12 below, generated by the EPA, the location of this NWS surface station is shown relative to the area of analysis.

Figure 12. Area of Analysis and the NWS station used for the Huntington County, Indiana, Area



Below is a wind rose of the surface wind data collected at the Fort Wayne, Indiana, NWS station for 2008 to 2012.

Figure 13: Fort Wayne, Indiana, Cumulative Annual Wind Rose for Years 2008 – 2012



The wind rose shows that winds blow from all directions throughout the year, however, predominant wind directions are from the west and southwest. Typical wind speeds range from 7 to 17 mph with a higher frequency of winds from the west and southwest.

Meteorological data from the above surface and upper air NWS stations were used in generating AERMOD-ready files with the AERMET (version 14134) processor. The output meteorological data created by the AERMET processor is suitable for being applied with AERMOD input files for AERMOD modeling runs.

Hourly surface meteorological data records are read by AERMET, and include all the necessary elements for data processing. However, wind data taken at hourly intervals may not always portray wind conditions for the entire hour, which can be variable in nature. Hourly wind data may also be overly prone to indicate calm conditions, which are not modeled by AERMOD. In order to better represent actual wind conditions at the meteorological tower, wind data of 1-minute duration was provided from the Fort Wayne NWS station, but in a different formatted file to be processed by a separate preprocessor, AERMINUTE. These data were subsequently integrated into the AERMET processing to produce final hourly wind records of AERMOD-

ready meteorological data that better estimate actual hourly average conditions and that are less prone to over-report calm wind conditions. This allows AERMOD to apply more hours of meteorology to modeled inputs, and therefore produce a more complete set of concentration estimates. As a guard against excessively high concentrations that could be produced by AERMOD in very light wind conditions, the state set a minimum threshold of 0.5 meters per second in processing meteorological data for use in AERMOD. In setting this threshold, no wind speeds lower than this value would be used for determining concentrations. This threshold was specifically applied to the 1-minute wind data.

The EPA used the meteorological data available at the time generated by the state. It's not clear what version of AERMINUTE was used. The surface and upper air meteorological data used by the EPA in this assessment were deemed to be adequately representative of the dispersive conditions around the Isolatek facility. Although this assessment used five years of meteorological data rather than three, the EPA believes that modeling using three years of meteorological data would have yielded very similar results.

4.3.8. Modeling Parameter: Geography, Topography (Mountain Ranges or Other Air Basin Boundaries) and Terrain

The terrain in the area of analysis is best described as very gently rolling. Increases of about 20 m in elevation occur to the north and west. However, overall the terrain is relatively flat. To account for any terrain changes, the AERMAP (Version 11103) terrain program was used to specify terrain elevations for all the receptors.

The terrain was appropriately characterized in the modeling conducted by the EPA.

4.3.9. Modeling Parameter: Background Concentrations of SO₂

For the EPA's assessment of SO₂ emissions from the Isolatek facility, no background values were used. Using the average of the by-season by-hour background concentrations that Indiana determined for the Jasper County area, inclusion of background would likely have yielded concentration estimates about 6 ppb higher. Since, as discussed below, the modeled concentration is well above the standard, the precise magnitude of background concentrations will not affect the determination of whether the area is attaining the standard and will not materially affect the boundaries of the area that warrants being designated as nonattainment.

4.3.10. Summary of Modeling Inputs and Results

The AERMOD modeling input parameters for the Huntington County area of analysis are summarized below in Table 9.

Table 9: Summary of AERMOD Modeling Input Parameters for the Area of Analysis for the Huntington County Area

Input Parameter	Value
AERMOD Version	14134 (regulatory options)
Dispersion Characteristics	Rural
Modeled Sources	1
Modeled Stacks	1 stack / 2 volume sources
Modeled Structures	6
Modeled Fencelines	1
Total receptors	2,364
Emissions Type	Conservative actuals based on stack test and max feed rates/continuous operation.
Emissions Years	Derived 2014
Meteorology Years	2008-2012
NWS Station for Surface Meteorology	Fort Wayne, IN (KFWA)
NWS Station Upper Air Meteorology	Wilmington, OH (KILN)
NWS Station for Calculating Surface Characteristics	Fort Wayne, IN (KFWA)
Methodology for Calculating Background SO ₂ Concentration	Background value not used.
Calculated Background SO ₂ Concentration	Not applicable

The results presented below in Table 10 show the magnitude and geographic location of the highest predicted modeled concentration based on the initial input parameters.

Table 10. Maximum Predicted 99th Percentile Daily Maximum 1-Hour SO₂ Concentration Averaged Over Five Years for the Area of Analysis for the Huntington County Area

Averaging Period	Data Period	Receptor Location UTM Zone 16		99 th percentile daily maximum 1-hour SO ₂ Concentration (µg/m ³)	
		UTM Easting (m)	UTM Northing (m)	Modeled concentration (excluding background)	NAAQS Level
99th Percentile 1-Hour Average	2008-2012	629021	4527383	16,594	196.4*

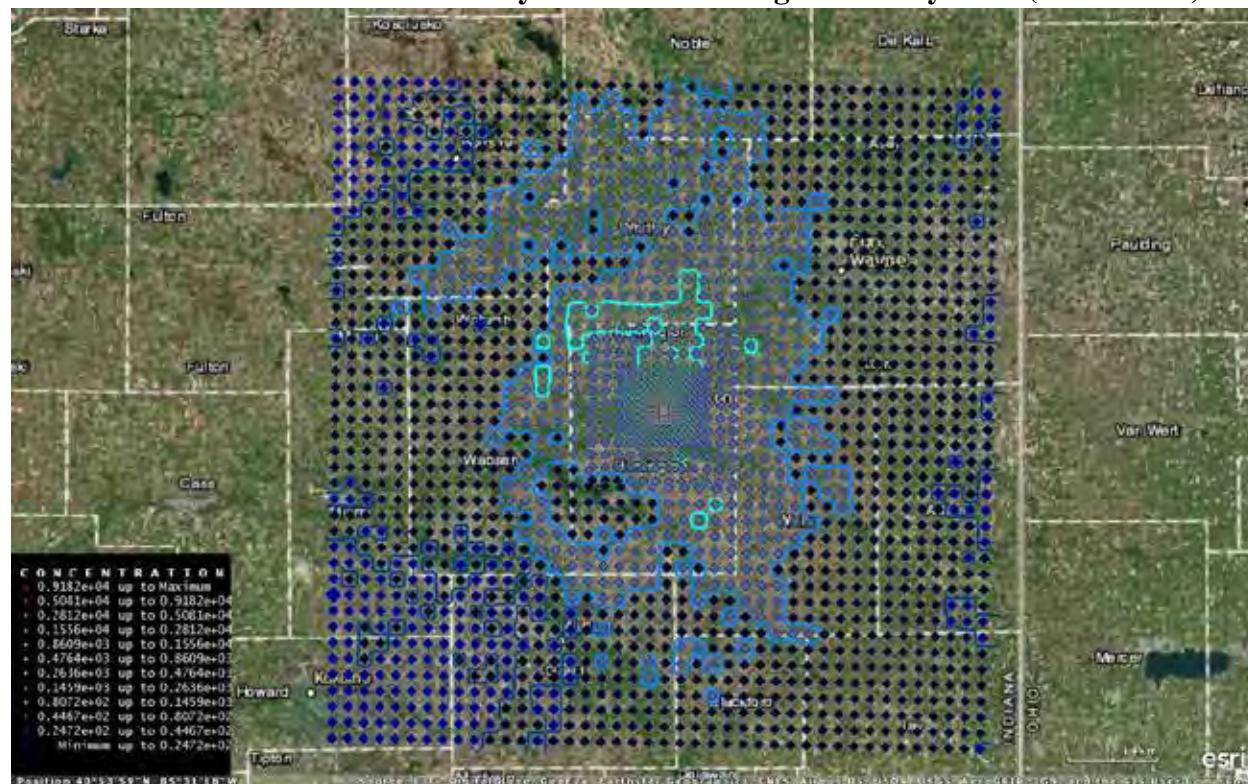
*Equivalent to the 2010 SO₂ NAAQS of 75 ppb

The EPA's enforcement modeling indicates that the highest predicted 99th percentile daily maximum 1-hour concentration within the chosen modeling domain is 16,594 µg/m³, equivalent to 6,336 ppb. This predicted concentration occurs just meters on the downwind side of a significant downwash structure at the facility. The majority of the concentration is attributed to the two volume source blow chambers. However, the design value for the cupola stack alone is 3,187 µg/m³, occurring at the same location. Figure 14 below shows the location of the peak concentration, indicated by the red star.

Figure 14: Predicted 99th Percentile Daily Maximum 1-Hour SO₂ Concentrations Averaged Over Five Years for the Area of Analysis for the Huntington County Area (Zoomed)



Figure 15. Predicted 99th Percentile Daily Maximum 1-Hour SO₂ Concentrations Averaged Over Five Years for the Area of Analysis for the Huntington County Area (Full Extent)



For each emission point, air quality impacts are directly proportional to emissions. In addition, it is appropriate here to assume that the factors yielding different emission estimates will have similar effects on the emissions for all of the emission points at Isolatek, so that changing the plant total emission estimate by a given percentage would have the same percentage effect on the plant total air quality impact.

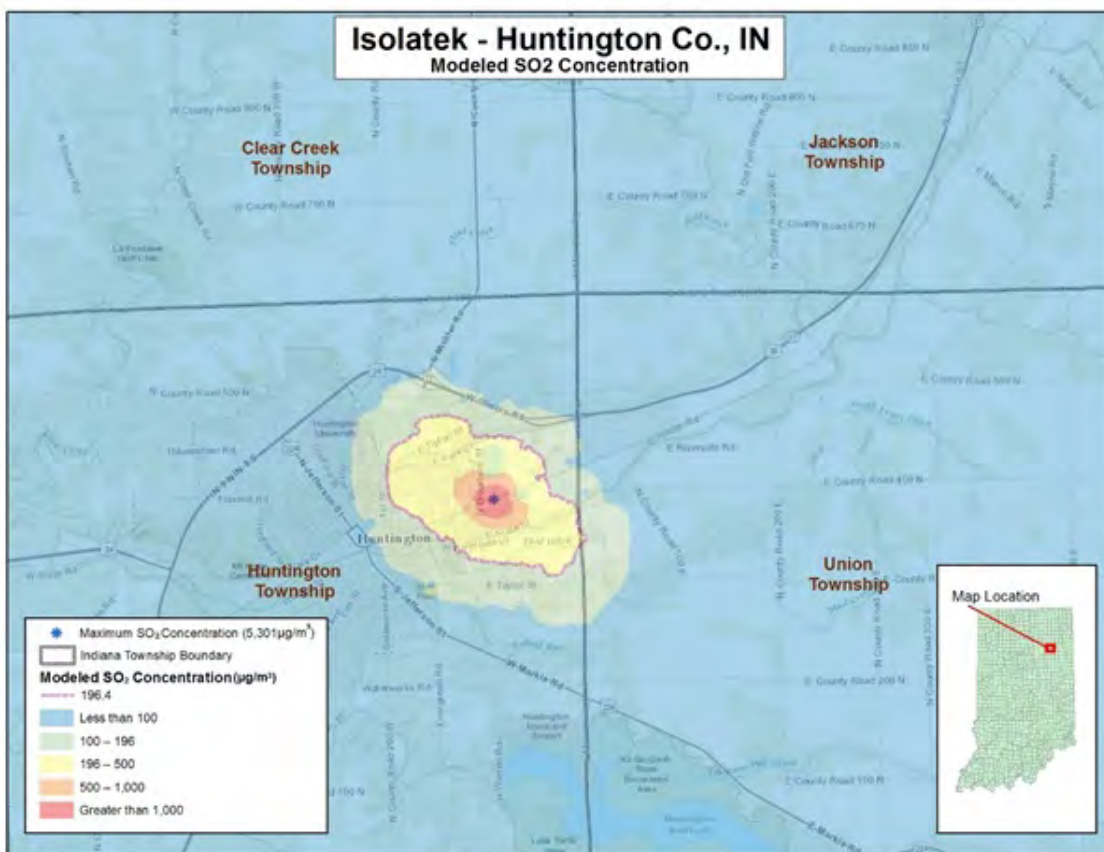
The modeled concentration listed above was based on an emission rate assuming maximum feed rates combined with stack test results. A more appropriate basis for designating this area would be modeled concentrations based on current actual emissions. As discussed above, the EPA finds that 444 tons per year, rather than 1,393 tons per year, represents the most reliable estimate of current emissions. That is, the EPA finds that the best estimate of current air quality near Isolatek would have a design value reflecting 32 percent of the maximum production-based design concentration noted above, which with the addition of background concentrations would be a design value of 5,300 $\mu\text{g}/\text{m}^3$ or 2,024 ppb.

Alternative emission estimates also yield estimated design concentrations well above the standard. For example, the lowest emission estimate recommended by Indiana, 164 tons per year (12 percent of the modeled emission rate) still yields a design concentration (including background) of 1,973 $\mu\text{g}/\text{m}^3$ (753 ppb). Similarly, modeling using the emission factor Indiana derived from the more recent facility stack test (9.3 pounds per ton of throughput), and the

resulting emission estimate of 191 tons per year (14 percent of the modeled emission rate) is estimated to yield a design concentration of $2,288 \mu\text{g}/\text{m}^3$ or 874 ppb. While there is some uncertainty about whether blow chamber emission estimates and cupola emission estimates should be adjusted by the same percentage, which results in some uncertainty in the impact estimate, even the most extreme revision to the distribution of emissions (treating blow chamber emissions as zero, i.e. disregarding blow chamber impacts) still yields concentration estimates well over the standard. That is, within the plausible range of emission levels for each emission unit at Isolatek and for plant total emissions, SO_2 concentrations near Isolatek are clearly many times higher than the air quality standard.

Figure 16 shows a map of the area estimated to have a violation. This map reflects concentrations scaled to reflect the EPA's best estimate of current emissions, with addition of a background concentration of 6.3 ppb ($16.6 \mu\text{g}/\text{m}^3$). The modeling indicates that the 1-hour SO_2 NAAQS is violated. This map illustrates that peak concentrations are estimated to occur very near to the facility, however, concentrations above the NAAQS also occur a couple kilometers away. This figure indicates the expected violations (shown by the area within red dashed lines) extend to the boundary of Union Township, however, the primary source and overwhelming majority of estimated violations are contained within Huntington Township.

Figure 16. Map of Area in Huntington County Estimated to be Violating the SO_2 Standard



4.3.11. The EPA's Assessment of the Available Modeling

In most respects the EPA modeling is fully in accordance with the recommendations of the modeling TAD. Nevertheless, this modeling, conducted for enforcement purposes, uses inputs that in a few cases deviate from the recommendations in the SO₂ Modeling TAD guidance. Thus, the EPA must weigh how the uncertainties introduced by these deviations from optimal inputs compares to the margin by which the model results exceed the standard, to evaluate the degree of confidence the EPA can have in using these model results to determine the attainment status of Huntington County.

No hourly emission data were available, and Indiana and the EPA have differing views as to annual emissions at Isolatek. However, use of hourly emissions data could lead either to higher or to lower concentration estimates, and use of an annual average emission rate provides a reasonable approximation of the results that would be obtained using hourly emissions data. The effect of using differing annual emission estimates is discussed above, with the conclusion that any plausible estimate of emissions at this facility would yield concentration estimates well above the level of the standard.

The TAD recommends modeling three years of meteorology with concurrent actual emissions data, partly to consider relatively recent emissions information. The EPA's modeling used five years of meteorology, using a fixed emission rate for each emission release that appears to represent current emission rates; the EPA has no information indicating any changes in control levels at the facility or other changes in emission rates other than in accordance with fluctuations in production rates. Therefore, the use of five years of meteorology in this case introduces no biases and is likely to yield concentration estimates that are very similar to those that would be estimated using three years of meteorology.

The TAD recommends using hourly flows and stack temperatures where available. This information is not available here. Nevertheless, the use of average flows and stack temperatures is expected to yield reasonably reliable concentration estimates.

The TAD recommends using either a constant background concentration or a background concentration that varies by hour of the day and season of the year. The EPA's modeling did not include a background concentration. Using the information that Indiana developed for nearby Jasper County, the effect of this omission may be reasonably estimated to understate overall concentrations by approximately 6 ppb.

Nevertheless, the EPA finds that this modeling is a suitable basis for determining whether this portion of Huntington County violates the SO₂ standard. The selection of model, meteorological data, source building and release characteristics, and a range of other model inputs are fully in accordance with the recommendations of the Modeling TAD. Although emission estimates for the facility are subject to some uncertainty, the EPA has examined the effect of this uncertainty

on concentration estimates and found that concentrations would be estimated to be well over the standard for the full range of plausible emission estimates. Indeed, adjusting model results to reflect the most reliable estimate of plant total emissions yields a design value of 5,300 $\mu\text{g}/\text{m}^3$, significantly higher than the standard. Therefore, the EPA finds the modeling to provide adequately conclusive evidence that the area near Isolatek is violating the air quality standard.

4.4. Emissions and Emissions-Related Data, Meteorology, Geography, and Topography for the Huntington County Area

These factors have been incorporated into the air quality modeling efforts and results discussed above. The EPA is giving consideration to these factors by considering whether they were properly incorporated and by considering the air quality concentrations predicted by the modeling.

4.5. Jurisdictional Boundaries in the Huntington County Area

The EPA's goal is to base designations on clearly defined legal boundaries, and to have these boundaries align with existing administrative boundaries when reasonable. In 2011, Indiana recommended that the EPA designate the entirety of Huntington County as attainment but did not provide any supplemental analyses or recommendations for Huntington County in its January 13, 2017, submittal. The boundaries of Huntington County are well established and well known, so that these boundaries provide a good basis for defining the area being designated. This county also has well-defined township boundaries, which would also provide a good basis for defining designated areas.

4.6. Other Information Relevant to the Designations for the Huntington County Area

The EPA has received no third party modeling for this area, and the EPA has no additional monitoring or other evidence indicative of air quality in Huntington County.

4.7. The EPA's Assessment of the Available Information for the Huntington County Area

The EPA must consider all available evidence in determining the appropriate designation for Huntington County. The state did not provide modeling or other air quality characterization information, and no monitoring data are available that are indicative of SO_2 air quality in Huntington County. However, the EPA has available the results of modeling it performed for enforcement purposes that the EPA considered when determining that Isolatek needed to be listed under the DRR.

Based on the EPA's assessment of the modeling that it conducted for enforcement purposes, discussed in section 4.3.11 above, the EPA concludes that the area in Huntington County near Isolatek is violating the SO_2 standard. The purpose of this TSD chapter is to evaluate available

information to determine the appropriate designation for areas such as Huntington County. The modeling that the EPA conducted in most respects is fully in accordance with the recommendations in the Modeling TAD. While the treatment of emissions in this modeling does not provide an optimally reliable assessment of air quality in the area, particularly given the uncertainties in emission levels, the EPA has concluded that the degree of uncertainty in this analysis is considerably smaller than the margin by which the area is estimated to be violating the standard. Therefore, the EPA's technical analysis allows the EPA to reach a reliable conclusion as to whether relevant portions of Huntington County are violating the primary SO₂ standard.

The EPA has examined the area estimated to have violations of the primary SO₂ standard. The area with estimated violations appears to be entirely within Huntington Township. No other sources above 10 tpy are located in Huntington County or nearby. Therefore, the EPA concludes that a nonattainment area that includes Huntington Township in Huntington County suffices to include the entire area violating the standard or contributing to these violations.

The EPA believes that our intended nonattainment area, including Huntington Township within Huntington County, will have clearly defined legal boundaries, and we find these boundaries to be a suitable basis for defining our intended nonattainment area.

4.8. Summary of Our Intended Designation for the Huntington County Area

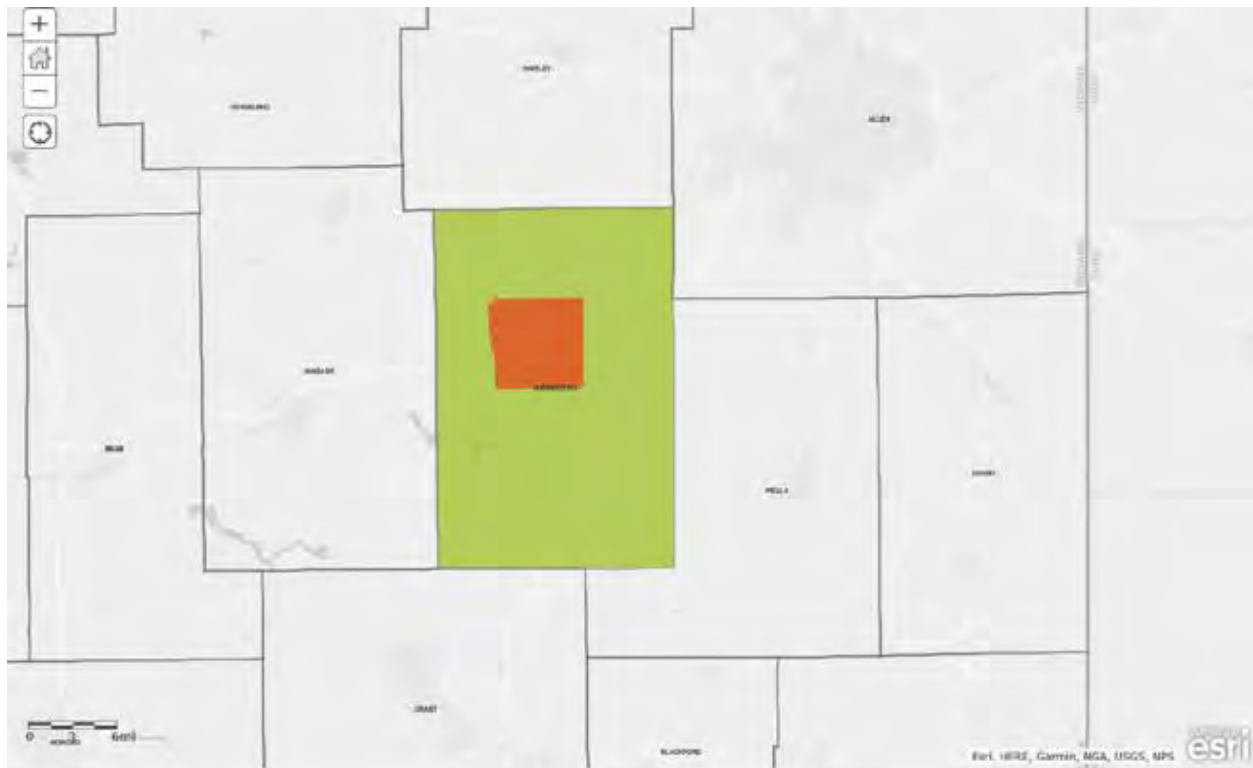
After careful evaluation of the state's recommendation and supporting information, as well as all available relevant information, the EPA intends to modify the state's recommendation and intends to designate Huntington Township in Huntington County as nonattainment for the primary 2010 SO₂ NAAQS. Since the remainder of the county has no sources emitting over 10 tpy, and in particular because the remainder of the county has no sources that were subject to a requirement for air quality characterization and the EPA has no evidence that the remainder of the county is violating the standard, and because no other nonattainment area is nearby for the area to be considered to be contributing, the EPA intends to designate the remainder of Huntington County as unclassifiable/attainment. The remainder of Huntington County meets the EPA's definition of an unclassifiable/attainment area in that it was not required to be characterized under 40 CFR 51.1203(c) or (d) and the EPA does not have available information including (but not limited to) appropriate modeling analyses and/or monitoring data that suggests that the area may (i) not be meeting the NAAQS, or (ii) contribute to ambient air quality in a nearby area that does not meet the NAAQS.

Figure 16 shows the boundary of this intended designated areas in Huntington County. In this figure, the area in red shows the EPA's intended nonattainment area, and the area in green is intended to be designated unclassifiable/attainment.

Indiana has recommended a designation of unclassifiable for Huntington County. EPA regulations for implementing the SO₂ NAAQS require Indiana to characterize SO₂ air quality in this area. In considering the state's recommendation, we have taken into account all available information, including any current (2014-2016) air monitoring data, and any air dispersion

modeling analyses provided by Indiana or by a third party. The air dispersion modeling data, however, shows either that this area may be violating the 2010 primary SO₂ NAAQS or contains sources that may be contributing to air quality in a nearby area that may be violating the 2010 primary SO₂ NAAQS, which would require a modification of the recommended designation. We invite Indiana to review the available information and further discuss this issue with the EPA in order to inform an appropriate final designation.

Figure 16. Boundaries of the Intended Huntington County Nonattainment and Unclassifiable/Attainment Areas



Attachment 9

This page left intentionally blank.

TABLE 1: ALL INDIANA SO₂ SOURCES WITH ANNUAL EMISSIONS GREATER THAN ISOLATEK BUT LESS THAN DRR THRESHOLD

County	Facility Name	2014 SO ₂ Emissions	Note
Vermillion	Eli Lilly & Company	1851	Included in analysis of Duke Cayuga DRR source.
Lake	Indiana Harbor Coke Company LP	1838	Included in analysis of other Lake County DRR sources.
Monroe	Indiana University	1740	
Cass	Logansport Municipal Utilities	1715	
Warrick	Sigeco Culley Newburgh	1647	Included in analysis of ALCOA DRR source.
Tippecanoe	Tate & Lyle LLC (South Plant)	1612	
Lake	Arcelormittal Indiana Harbor LLC	1587	Included in analysis of other Lake County DRR sources.
Wayne	Indiana Municipal Power Agency	1158	
Tippecanoe	Purdue University	1118	
Porter	NIPSCO Bailly Station	1117	Included in analysis of Porter County DRR source, which opted for monitoring.
Marion	Citizens Thermal	811	Included in analysis of Marion County, Round 1 designations.
Montgomery	Crawfordsville Energy LLC	714	
Tippecanoe	Tate & Lyle LLC (North Plant)	657	
Lawrence	Lehigh Cement Company LLC	569	
Wabash	Thermafiber Incorporated	534	
Saint Joseph	University of Notre Dame	523	
Posey	Countrysmark Refining and Logistics LLC	476	Included in analysis of SABIC DRR source.

TABLE 2: DRR SOURCES WITH NO AIR QUALITY CHARACTERIZATION CONDUCTED BY IDEM OR EPA

County	Facility Name	2014 SO ₂ Emissions
Monroe	INDIANA UNIVERSITY	1740
Cass	Logansport Municipal Utilities	1715
Tippecanoe	Tate & Lyle LLC (South Plant)	1612
Wayne	Indiana Municipal Power Agency	1158
Tippecanoe	PURDUE UNIVERSITY	1118
Montgomery	Crawfordsville Energy LLC	714
Tippecanoe	Tate & Lyle LLC (North Plant)	657
Lawrence	LEHIGH CEMENT COMPANY LLC	569
Wabash	THERMAFIBER INCORPORATED	534
Saint Joseph	UNIVERSITY OF NOTRE DAME DU LAC	523

This page left intentionally blank.

Attachment 10

This page left intentionally blank.

March 29, 1982

MEMORANDUM

SUBJECT: Insulation of Enforcement Attorneys From
Review of Steel "Stretch-Out" Applications

FROM: Robert M. Perry
General Counsel

TO: William A. Sullivan, Jr.
Enforcement Counsel

Issue

Must enforcement attorneys who are involved in enforcement actions against steel facilities be insulated from review and recommendations on applications for steel stretch-out extension involving the same facilities?

Answer

No. Steel stretch-out extensions may only be granted through consent decrees entered in a Federal court. Accordingly, review of stretch-out applications should be seen as an exercise of the Environmental Protection Agency's (EPA's) enforcement function, and there is no constitutional or applicable statutory prohibition against the same person working on more than one enforcement action involving the same facility.

Background

Congress amended the Clean Air Act in July 1981 by adding a new § 113(e). Pub.L. 97-23 (July 17, 1981). This section allows the Administrator to agree to schedules in Federal court consent decrees that may extend until December 31, 1985, the deadline by which iron- and steel-producing operations must comply with emission requirements.

In light of the Seventh Circuit's decision in *Bethlehem Steel Corp. v. EPA*, 638 F.2d 994 (1980), you have asked whether enforcement attorneys involved in pending or proposed enforcement actions against steel companies must be insulated from the review of applications under § 113(e) for extensions of time for the facilities involved. In *Bethlehem*, the Seventh Circuit ruled that EPA's action allowing review of a State-approved delayed compliance order (DCO) for a Bethlehem facility under § 113(d) by enforcement attorneys who were then litigating an

enforcement action against Bethlehem over the same facility "raise[d] significant questions" about the "fundamental fairness" of the review process, and vacated the Agency's disapproval of the DCO.¹ The court emphasized the similarity of the issues involved in the two actions, the Agency's refusal to include certain internal memoranda in the record supporting the disapproval, and indications that the enforcement attorneys had effectively influenced the Agency to disapprove the regulatory § 113(d) extension in order to preserve their enforcement action.

Discussion

A. *Commingling of Functions Generally*

The goal of the separation of functions doctrine is to ensure fairness in decisionmaking by maintaining a distinction between adversarial advocacy functions, such as enforcement, and essentially "neutral" decisionmaking functions, such as agency adjudication and rulemaking. The enforcement function is prosecutorial: it involves asserting a position in an effort to obtain compliance with the law or to impose a sanction for violating the law. *See, e.g.,* Davis, *Administrative Law Treatise*, § 13.07 (1958), 5 U.S.C. §§ 551(10), 554(d). By contrast, the regulatory function involves an essentially objective effort to "implement, interpret, or prescribe law or policy." 5 U.S.C. § 551(4). In practice the distinction between functions is generally maintained by the use of different personnel to perform the tasks related to each function. Review of stretch-out applications by enforcement attorneys may appear to be a commingling of functions when those attorneys are involved in enforcement actions against the applicant because they are advocates engaged in what appears to be a regulatory function: implementing or interpreting § 113(e) with respect to the applicant by determining eligibility.

The general rule is that "the combination of investigative [prosecutorial] and adjudicative functions does not, without more, constitute a due process violation"; rather, such a finding rests on "special facts and circumstances presented in a case."

¹ The Court held that the Administrative Procedure Act, 5 U.S.C. §§ 553, 554, 556 did not apply to EPA actions under § 113. This result appears to be sound; and as no other specific statutory separation of functions requirements apply, the analysis in this memorandum addresses only the due process issue raised by *Bethlehem*.

Withrow v. Larkin, 421 U.S. 35, 58 (1975). "The incredible variety of administrative mechanisms in this country will not yield to any single organizing principle." 421 U.S. at 52. And in reviewing particular circumstances, a presumption of honesty and integrity must be overcome before a due process violation may be found.

1. Specific applications of the doctrine

The combination of adjudicative and regulatory functions with discretionary investigative or prosecutorial functions has been upheld in most of the statutory and factual situations in which the question has been presented.² Indeed, the courts have never in recent years struck down in the abstract—as applied to all cases—any administrative review system on the grounds of commingling of functions. In both of the leading cases in which agency rulings were overturned because commingled prosecutorial and adjudicative functions violated due process, *Amos Treats & Co. v. Securities Exchange Commission*, 306 F.2d 260 (D.C. Cir. 1962) and *American Cyanamid Co. v. Federal Trade Commission*, 363 F.2d 757 (6th Cir. 1966), individuals who had been so actively involved in investigating and prosecuting violations as to have "prejudged" the merits subsequently became members of the adjudicatory board that ultimately ruled on the merits of each case. Neither of these cases found the statutory scheme inherently violated due process.

2. The relevance of *Bethlehem*

Bethlehem also turns on the specific circumstances involved, and should not be viewed as establishing any general principles for § 113(d). It is evidently the only case to date in which the actions of agency personnel other than the ultimate decision-makers have been the basis of a finding of fundamentally unfair commingling of functions. In *Bethlehem*, the Agency did not act on the State-issued order within the 90-day period allowed by § 113(d)(2), but did pursue its enforcement case against the facility covered by the order during that time. Memoranda from attorneys involved in the enforcement case

² See, e.g., *Withrow*, *supra* (medical examining board may constitutionally initiate investigation of misconduct, suspend license, and press criminal charges); *Martin-Trigona v. Underwood*, 529 F.2d 33 (7th Cir. 1975) (State bar committee may investigate, advocate, and conclusively determine lack of fitness for admission); *Richardson v. Perales*, 402 U.S. 389, 91 S.Ct. 1420 (1971) (Social Security hearing examiner may investigate and determine eligibility for benefits).

outlined objections to the order based on the impact the order would have on the case; some of these materials were withheld from the rulemaking docket.

The court's emphasis on facts and precedent related to "ex parte" communications, the strategic timing of Agency actions to synchronize with the enforcement litigation, and the Administrator's use of language "substantially identical" to language found in one memorandum from the lead enforcement attorney, 638 F.2d at 1008-1010, reveal the court's reliance on a unique combination of factors to reach its conclusion; the opinion comes very close to stating that the enforcement attorneys improperly made the final decision. Even under § 113(d), therefore, the *Bethlehem* case seems considerably removed from the customary review of DCOs by enforcement personnel, which involves only a review of the provisions of the order to ensure that statutory requirements are met.

B. Application to Section 113(e)

1. Statutory differences

Several significant differences between § 113(d) and § 113(e) suggest that as a general rule, review of § 113(e) applications by enforcement attorneys should not give rise to improper commingling of functions.

In contrast with § 113(d), which is regulatory in nature, § 113(e) can only be construed as an enforcement function in which the Agency's enforcement personnel are necessarily involved at several important steps. Under § 113(e), the sole means of implementing an extension of time is the entry or modification of a consent decree in a Federal court. Since the entry of such a decree must be preceded by the filing of a complaint, it is clear that enforcement attorneys must be involved. Moreover, the decree granting the extension must establish or incorporate schedules of compliance for all the applicant's iron- and steel-producing operations and facilities. § 113(e)(1)(C). The broad scope of this undertaking plainly calls for participation by enforcement attorneys familiar with any previous violations, agreements, or negotiations involving the facilities in question. Similarly, certain factual findings must be made before the Administrator may agree to an extension, in-

cluding a finding that the applicant is in compliance³ with all existing judicial decrees concerning air pollution from its iron- and steel-producing facilities. All of these factors indicate that Congress viewed § 113(e) extensions of time as a part of the Federal enforcement process, rather than a quasi-adjudicatory administrative action.

The provisions for judicial review support this conclusion. Judicial review of any finding or other action on an extension application may be had only in a district court enforcement action brought against the applicant (§§ 113(e)(7), 113(b)), not in the courts of appeals as for review of § 113(d) and other administrative regulatory actions. § 307(b). Moreover, § 113(e) explicitly contemplates extension orders as a means of resolving pending enforcement litigation, and incorporates judicial review of extension-related decisions into those same proceedings. § 113(e)(7)(B).

Conclusion

These contrasts in statutory provisions indicate that the *Bethlehem* holding should not be applied to the review of § 113(e) applications. *Bethlehem* involved a narrowly defined administrative regulatory function under § 113(d); the Agency's enforcement function was not a part of the mandated review process, and the court reacted strongly against what it perceived to be an unfair commingling of enforcement and regulatory functions in which the Agency's regulatory decisions were improperly influenced by the desire to preserve the enforcement case. Section 113(e), by contrast, authorizes the Administrator to negotiate a certain type of settlement in certain disputes. It creates a discretionary extension mechanism which is part of the enforcement process. Neither logic nor case law requires the use of different personnel for different portions of the same enforcement action. Indeed, Congress in § 113(e) explicitly required findings and procedures that critically depend on the participation of personnel familiar with all other present and proposed enforcement proceedings against the company or the specific facilities involved.

³ *De minimis* violations may be allowed at the discretion of the Administrator; the determination that a given violation is *de minimis* would seem to be within the scope of enforcement attorney's expertise.

This page left intentionally blank.

Attachment 11

This page left intentionally blank.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno Pigott
Commissioner

January 13, 2017

Mr. Robert A. Kaplan
Acting Regional Administrator
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3950

Re: Preliminary Recommendations Concerning
Round 3 Air Quality Designations for the
2010 Primary 1-Hour Sulfur Dioxide National
Ambient Air Quality Standard

Dear Mr. Kaplan:

This letter is in response to United States Environmental Protection Agency's (U.S. EPA's) July 22, 2016, memorandum *Area Designations for the 2010 Primary Sulfur Dioxide National Ambient Air Quality Standard-Round 3* and prior guidance on area designations issued by U.S. EPA on March 20, 2015. The letter's primary purpose is to provide information for U.S. EPA's evaluation prior to Round 3 designations. As required, the Indiana Department of Environmental Management (IDEM) is providing new modeling analyses for areas where modeling is being used to characterize air quality around certain sulfur dioxide (SO₂) sources, as well as preliminary recommendations for Round 3 designations. IDEM is also including information about newly installed air monitors where air monitoring is being used to characterize air quality around certain SO₂ sources for Round 4 designations.

Implementation of the 2010 primary 1-hour SO₂ standard began in 2013 when U.S. EPA established nonattainment areas based on 2010-2012 monitoring data. Subsequently, on March 2, 2015, U.S. EPA entered into a consent decree with the Sierra Club and Natural Resources Defense Council (NRDC) establishing a timeline for the completion of air quality characterizations and designations in all remaining areas of the country. The court order directed U.S. EPA to complete the designations in three additional rounds: Round 2 by July 2, 2016, Round 3 by December 31, 2017, and Round 4 by December 31, 2020.

On June 30, 2016, U.S. EPA completed designations for all Round 2 sources. U.S. EPA has designated all of Indiana's Round 2 sources as unclassifiable/attainment. The final rule was published in the Federal Register on July 12, 2016 (81 FR 45039).



A State that Works

On August 10, 2015, U.S. EPA announced the Data Requirements Rule (DRR), which requires the characterization of air quality near sources with SO₂ emissions at or greater than 2,000 tons per year (tpy) or have been identified by IDEM or U.S. EPA “as requiring further air quality characterization.” Under the DRR, states must submit air quality information to U.S. EPA according to timeframes that coincide with the court-ordered dates for designations in all remaining areas under Rounds 3 and 4.

IDEM has been working with U.S. EPA to identify all sources in Indiana that are subject to the DRR and provide data for the characterization of nearby air quality. As required, on January 7, 2016, IDEM submitted a list of 11 stationary sources identified for air quality characterization under the DRR, thus beginning the Round 3 designation process. On March 26, 2016, U.S. EPA added six sources to the list, including: five Round 2 sources that U.S. EPA identified as also meeting DRR characterization requirements; and one source, U.S. Mineral Products (Isolatek), for which U.S. EPA believed further study was necessary. IDEM disagrees with U.S. EPA’s addition of U.S. Mineral Products to the list of Indiana sources subject to the DRR, as further explained in Attachment 3. Table 1 contains an up-to-date list of DRR sources identified by U.S. EPA and IDEM, along with the selected approaches for air quality characterization for each source area.

Table 1: Indiana SO₂ Sources Subject to the Data Requirements Rule

Facility	County	2014 SO ₂ Emissions (Tons)	Selected Approach for Characterization
Duke – Gallagher	Floyd	3,524	Modeling
Duke – Gibson	Gibson	22,055	Round 2 Source ^a
U.S. Mineral Products (Isolatek) ^b	Huntington	< 2,000	See Attachment 3
NIPSCO – R.M. Schahfer	Jasper	8,412	Modeling
Indiana-Kentucky Electric Corporation - Clifty Creek	Jefferson	3,731	Round 2 Source ^a
ArcelorMittal USA	Lake	2,163	Modeling
Coke Energy	Lake	4,952	Modeling
U.S. Steel – Gary Works	Lake	3,285	Modeling
NIPSCO – Michigan City	LaPorte	15,991	Round 2 Source ^a
ArcelorMittal – Burns Harbor	Porter	12,189	Monitoring See Attachment 5
SABIC Innovative Plastics	Posey	4,030	Modeling
Vectren – A.B. Brown	Posey	8,080	Round 2 Source ^a
AEP – Rockport	Spencer	54,979	Round 2 Source ^a
Hoosier Energy – Merom	Sullivan	3,318	Modeling
Duke – Cayuga	Vermillion	3,448	Modeling
Alcoa Warrick Power Plant	Warrick	4,993	See Attachment 4
Alcoa Warrick Operations	Warrick	3,500	See Attachment 4

^a IDEM completed a characterization for this source under Round 2 designation requirements. U.S. EPA issued final Round 2 designations on June 30, 2016 (81 FR 45039).

^b Added by U.S. EPA.

By January 1, 2017, each state air agency must ensure that new ambient air monitors are operational where air monitoring is selected to inform Round 4 designations. Only one DRR source, ArcelorMittal – Burns Harbor, opted for ambient monitoring of SO₂ to characterize air quality. See Attachment 5 for information regarding the operation of SO₂ monitors at the ArcelorMittal – Burns Harbor facility. U.S. EPA will evaluate three complete years of air monitoring data from these monitors for the completion of Round 4 designations by the court-ordered date of December 31, 2020.

By January 13, 2017, each state air agency must provide to U.S. EPA its modeling analysis for source-areas where modeling is used to determine Round 3 designations. Table 2 contains IDEM's Round 3 designation recommendations, based on new air quality modeling analyses for the source areas.

Table 2: Indiana's Round 3 Designation Recommendations

Source	County	Boundary/Area	Recommendation
Duke Energy Gallagher	Floyd	County	Attainment
U.S. Mineral Products (Isolatek)	Huntington	See Attachment 3	See Attachment 3
NIPSCO R.M. Schahfer	Jasper (P)	Kankakee Township	Attainment
ArcelorMittal USA, Coke Energy, U.S. Steel Gary Works	Lake (P)	Calumet Township North Township	Attainment
SABIC Innovative Plastics	Posey (P)	Black Township	Attainment
Hoosier Energy Merom	Sullivan (P)	Gill Township	Attainment
Duke Energy Cayuga	Vermillion (P)	Eugene Township Vermillion Township	Attainment
Alcoa Warrick Power Plant, Alcoa Warrick Operations Plant	Warrick (P)	Anderson Township	Attainment See Attachment 4

(P) denotes partial county recommendation

IDEM is attaching new modeling analyses, as required, and several additional documents listed here, to provide U.S. EPA with detailed information for review prior to completing Round 3 designations.

Attachment 1: Indiana's Preliminary Recommendations Concerning Round 3 Designations for the 2010 Primary 1-Hour Sulfur Dioxide (SO₂) National Ambient Air Quality Standards (NAAQS)

Attachment 2: Indiana's Air Quality Modeling Technical Support Document Preliminary Designation Recommendations Data Requirements Rule (Round 3) for the 2010 Primary 1-Hour Sulfur Dioxide (SO₂) National Ambient Air Quality Standards (NAAQS)

Attachment 3: U.S. Mineral Products (Isolatek) Discussion

Attachment 4: Alcoa Warrick Attainment Discussion

Attachment 5: ArcelorMittal - Burns Harbor SO₂ Air Quality Monitor System
Documentation

This submittal consists of one (1) hard copy of the required documentation. An electronic version of the submittal in PDF format that is identical to the hard copy has been sent to Doug Aburano, Chief of U.S. EPA Region 5's Attainment Planning and Maintenance Section and Chris Panos of U.S. EPA Region 5.

Thank you for this opportunity to submit information, including Indiana's new modeling analyses and preliminary recommendations, for Round 3 designations under the 2010 primary 1-hour SO₂ NAAQS. If you have any questions or need additional information, please contact Keith Baugues, Assistant Commissioner, Office of Air Quality, at (317) 232-8222 or kbaugues@idem.IN.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bruno Pigott', with a long horizontal stroke extending to the right.

Bruno Pigott
Commissioner

BP/kb/sd/bc/gf/as
Attachments

cc: Chris Panos, U.S. EPA Region 5 (no enclosures)
John Summerhays, U.S. EPA Region 5 (no enclosures)
Doug Aburano, U.S. EPA Region 5 (no enclosures)
Keith Baugues, IDEM-OAQ (no enclosures)
Scott Deloney, IDEM-OAQ (no enclosures)
Brian Callahan, IDEM-OAQ (w/ enclosures)
Mark Derf, IDEM-OAQ (w/ enclosures)
Gale Ferris, IDEM-OAQ (w/ enclosures)
Amy Smith, IDEM-OAQ (w/ enclosures)
File Copy

Attachment 3

U.S. Mineral Products (Isolatek) Discussion

This page left intentionally blank.

U.S. Mineral Products (Isolatek - Source ID: 069-00021)

The Indiana Department of Environmental Management (IDEM) excluded U.S. Mineral Products (USM) d/b/a Isolatek International, a mineral wool manufacturer near Huntington, Indiana in Huntington County, from its January 7, 2016 list of affected sources to be characterized under the Data Requirements Rule (DRR). Per the thresholds established within the DRR, USM's most current reported sulfur dioxide (SO₂) emissions were well below levels required for the rule to be applicable. However, United States Environmental Protection Agency (U.S. EPA) identified USM as an additional source to be characterized in its March 25, 2016 response to IDEM.

Indiana strongly objects to the inclusion of USM as an affected source under the DRR. The DRR defines applicable sources as stationary sources that had actual SO₂ emissions in 2014 of 2,000 tons or more, or have been identified by IDEM or U.S. EPA "as requiring further air quality characterization." (40 CFR § 51.1202). Indiana did not include USM on its list of sources subject to the DRR because its reported actual SO₂ emissions in 2014 were 164 tons, less than one tenth of the DRR threshold of 2,000 tons or more. According to U.S. EPA's calculations (based on an informal in-house 2007 stack test), USM's actual annual emissions would have been "approximately 444 tons of SO₂" in 2014. U.S. EPA also determined that 2014 was an abnormally low year for production and estimated 800 tons of SO₂ per year during normal production years, which is still less than half the DRR emission threshold. USM has seen a downturn since 2013 in its wool production (approximately 40,000 tons/year could be considered a prior normal), with a slight bounce back to 28,000 to 30,000 tons per year production over the last few years. This is still much lower than historic production, but should be considered the current normal production at the facility based upon current economic factors with the economy.

USM has operated the same equipment at its Huntington facility since 1982. In its March 25, 2016, letter, U.S. EPA indicated an emission factor of 21.6 lb SO₂ per ton of melt was appropriate for the USM cupola emissions. USM has historically used an emission factor of 8 lbs/ton based upon U.S. EPA's Compilation of Air Pollutant Emission Factors, AP-42.¹ As a result of a Clean Air Act (CAA) §114 information request, USM submitted to U.S. EPA, a summary sheet from stack tests previously conducted which included some engineering studies from 2007 and several pages from the 2007 study report for in-house testing of particulate matter (PM), nitrogen oxides (NO_x) and SO₂ at the facility. That study included an informational emission test for SO₂ for the cupola that was only performed in the downdraft ducts. The results were reported in the summary sheet and in the study report. USM does not consider 21.6 lbs/ton

¹ An emission factor of 0.2 lbs/hr was used from 2000 through 2005 as a result of an error in the data used for the annual emission calculation. When the correction was made in 2005, IDEM advised USM that it was not necessary to correct the prior emission statements.

to be a valid SO₂ emission factor due to problems with the cupola operation at the time of the informal test. It should be noted that IDEM did not review or approve of an SO₂ stack test protocol in 2007 for USM and had no compliance inspector present at the informal SO₂ test. According to production records available for the time period on and around the stack testing days in December 2007, the following may be concluded as summarized by USM:

On Dec 17th, the first day of the testing, both cupolas were idled in the morning for a period exceeding 2 hours each due to an electrical problem with a charge hoist. In addition, #1 cupola idled for 3 hours directly preceding the hoist issue due to a spinner motor failure. Typically, following an idle period of time, the cupola operating conditions take some time (could easily be several hours) to stabilize. Thus, the testing period started with less than normal conditions.

On Dec 18th, during the period of the testing for SO₂ data collection, #1 cupola went through a period of increased coke consumption and reduced melt rate. Both indicators were showing a variation from standard coke consumption and melt rate in the 10% - 20% order of magnitude. USM standard coke consumption is expected to be at ~320 – 340 lbs / ton of charge and the avg. melt rate at ~4.2 tons / hr. At the time of the stack test USM recorded an avg. of 360 – 380 lbs of coke / charge and a melt rate of ~3.9 tons / hr respectively. These variations are considered significant and clearly not normal operations. Those conditions are related and indicate that the operator was attempting to overcome the slower melt rate by adding additional coke to the charge. Based upon the increased coke consumption and slower melt rate, general operating conditions at the time of testing are best described as poor. The raw material receivers from that period of time indicate a higher than normal moisture content in received coke (10%-15% vs. standard of <7%) explaining the need for additional BTUs with every charge to evaporate the excess moisture. The low moisture content of coke is a critical factor to the cupola performance. During the period of time in 2007 around when the testing was performed, the USM coke supplier was struggling to provide a product with acceptable quality. The coke quality issues were caused by operational issues at the source. USM had no viable, alternative supply options at the time.

In order to resolve the emission factor issue, in 2016, USM conducted an engineering study of the cupola emissions. This consisted of an informational emission test that included SO₂ measured in the baghouse. That test indicated an SO₂ emission factor range of 9.22 to 9.36 lbs/ton. The results of the 2016 test confirm that the emission factor from AP-42 is appropriate to use for the USM mineral wool cupola operation. Additionally, the 164 tons of SO₂ reported as actual emissions for USM should be considered valid for DRR purposes. This is significantly lower than what U.S. EPA is attempting to rely upon in its analysis.

U.S. EPA identified the 2,000 ton threshold as an important indicator of the need for prioritized air quality characterization under the DRR. U.S. EPA set the threshold at a level “that prioritizes the resources that will be devoted to characterizing air quality near SO₂ sources nationally.” (80

FR 51061). That threshold is already on “the lower end of the range of thresholds” of sources that have the potential to contribute to violations of the National Ambient Air Quality Standard (NAAQS) (80 FR 51061). Furthermore, that threshold “strikes a reasonable balance between the need to characterize air quality near sources that have a higher likelihood of contributing to a NAAQS violation and the analytical burden on air agencies.” (80 FR 51061). U.S. EPA did not characterize the 2,000 ton threshold as an arbitrary number, but rather as an indicator of sources warranting prioritization of state and federal resources.

Because USM’s actual SO₂ emissions and total potential-to-emit SO₂ emissions remain well below the 2,000 ton applicability threshold, it is unreasonable to place it among the sources that should be prioritized to determine if it contributes to violations of the NAAQS. Including sources with actual SO₂ emissions of less than one-tenth the 2,000 ton threshold represents a misapplication of the intent of the DRR to prioritize sources and resources. Indiana believes that this reinterpretation of the DRR inappropriately broadens the scope and purpose of this phase of the DRR. There are numerous sources across the United States that fall into a similar category as USM. In Indiana alone, there are thirty five (35) sources with reported actual emissions between that of USM and the 2,000 ton threshold. Among these is a manufacturer of mineral wool, with very similar operational characteristics, with reported actual emissions greater than that of USM, and sources located in densely populated areas with as much as ten times the reported emissions of USM, which happens to be located in a sparsely populated rural area. Based on familiarity with how the dispersion model handles certain operations, it is safe to assume that some of these sources would clearly pose a greater threat to the NAAQS and human health than USM. Therefore, U.S. EPA’s identification of USM is clearly arbitrary and capricious.

Due to the time constraints that U.S. EPA has placed on states to implement the DRR, broadening the applicability of the DRR’s phased approach thwarts the rule’s intent to prioritize state and federal resources. IDEM does not question whether the DRR provides states or U.S. EPA the authority to identify sources with actual emissions below the 2,000 ton threshold as requiring further air quality characterization. However, if this is done, it should be done consistently and not arbitrarily. U.S. EPA did not use a systematic approach to identify sources below 2,000 tons that have the greatest probability to pose a risk to exceeding the NAAQS and threaten human health. Therefore, IDEM disagrees that USM should be arbitrarily subjected to further characterization under the DRR.

Table 1: U.S. Mineral Products (Isolatek) 2016 Stack Test Data

EQM Quality Management Environmental, Inc.

Isolatek International
050668.0003 Engineering Test Report

Table 1. Measured & Calculated Data-Melters' Process Line EU#1 & EU#2 CE#1 Baghouse

Summary of Stack Gas Parameters and Test Results				
50568.0003				
Isolatek				
Baghouse				
Page 1 of 2				
RUN NUMBER	1-02	2-02	O2	
RUN DATE	4/28/2016	4/28/2016	Average	
RUN START	11:30	12:50		
RUN STOP	12:18	13:48		
MEASURED DATA				
P _{static}	Stack Static Pressure, Inches H ₂ O	0.00	0.00	0.00
y	Meter Box Correction Factor	0.976	0.976	0.976
P _{bar}	Barometric Pressure, Inches Hg	29.95	29.95	29.95
V _m	Sample Volume, ft ³	48.165	49.453	48.809
Dp ^{1/2}	Average Square Root Dp, (In. H ₂ O) ^{1/2}	1.0548	1.1172	1.106
DH	Avg Meter Orifice Pressure, In. H ₂ O	3.271	3.402	3.336
T _m	Average Meter Temperature, °F	86.3	86.5	86.4
T _s	Average Stack Temperature, °F	230.3	231.3	230.8
V _c	Condensate Collected, ml	16.0	13.0	14.50
CO ₂	Carbon Dioxide content, % by volume	0.0	0.0	0.00
O ₂	Oxygen content, % by volume	20.8	20.8	20.8
N ₂	Nitrogen content, % by volume	79.2	79.2	79.2
C ₀	Pilot Tube Coefficient	0.84	0.84	0.84
AS	Circular Stack? 1=Y, 0=N:	1	1	
AS	Diameter or Dimensions, Inches:	37.00	37.00	37.00
Q	Sample Run Duration, minutes	48	48	48
D ₀	Nozzle Diameter, Inches	0.238	0.238	0.238
CALCULATED DATA				
A ₀	Nozzle Area, ft ²	0.000309	0.000309	0.000309
V _{std}	Standard Meter Volume, ft ³	45.62	47.05	46.44
V _{std}	Standard Meter Volume, m ³	1.299	1.332	1.315
Q _m	Average Sampling Rate, dscfm	0.965	0.980	0.967
P _s	Stack Pressure, Inches Hg	29.95	29.95	29.95
B _{ws}	Moisture, % by volume	1.6	1.3	1.5
B _{std}	Moisture (at saturation), % by volume	142.1	145.0	143.6
V _{std}	Standard Water Vapor Volume, ft ³	0.753	0.612	0.683
1-B _{std}	Dry Mole Fraction	0.584	0.987	0.985
M ₁	Molecular Weight (d.b.), lb/lb-mole	28.83	28.83	28.83
M ₁	Molecular Weight (w.b.), lb/lb-mole	28.66	28.69	28.67
V _s	Stack Gas Velocity, ft/s	70.5	72.0	71.2
A	Stack Area, ft ²	7.5	7.5	7.5
Q _s	Stack Gas Volumetric flow, acfm	31,587	32,238	31,912
Q _s	Stack Gas Volumetric flow, dscfm	23,765	24,320	24,053
Q _s	Stack Gas Volumetric flow, dscmm	674	689	681
I	Isokinetic Sampling Ratio, %	97.0	97.4	97.2

Table 2. PM, NO_x, CO, & SO₂ Emissions Test Results- Melters' Process Line EU#1 & EU#2 CE#1 Baghouse

Summary of Stack Gas Parameters and Test Results				
50668.0003				
Isolatek				
US EPA Test Method 5 (PM), 6C (SO ₂), 7E (NO _x), 10 (CO), 15/16 (H ₂ S/COS), & 26A (HCL/HF)				
Baghouse				
Page 2 of 2				
RUN NUMBER	1-02	2-02	O2	
RUN DATE	4/26/2016	4/26/2016	Average	
RUN START	11:30	12:50		
RUN STOP	12:18	13:48		
EMISSIONS DATA				
Throughput (tons/hr)	10.135	9.564	9.85	
SO ₂	Sulfur Dioxide			
E SO ₂	Concentration PPM Dry	383.67	368.85	381.26
E SO ₂	Emission Rate, lb/hr	93.40	89.48	91.44
E SO ₂	Emission Rate, lb/ton	9.22	9.36	9.29

May 2016

This page left intentionally blank.

Attachment 12

This page left intentionally blank.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

October 18, 2017

Mr. Robert A. Kaplan
Regional Administrator
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3950

Re: Indiana's Response to U.S. EPA's 120-Day Letter Concerning Intended Round 3 Area Designations for the 2010 1-Hour Primary Sulfur Dioxide (SO₂) National Ambient Air Quality Standard (NAAQS)

Dear Mr. Kaplan:

This letter is in response to United States Environmental Protection Agency's (U.S. EPA's) 120-day letter on August 22, 2017, concerning the 2010 1-hour primary sulfur dioxide (SO₂) national ambient air quality standard (NAAQS) and the designation of areas in Indiana under Round 3.

Implementation of the 2010 primary 1-hour SO₂ standard began in 2013 when U.S. EPA established nonattainment areas based on 2010-2012 monitoring data. U.S. EPA entered into a consent decree with the Sierra Club and Natural Resources Defense Council (NRDC) in 2015, which established a timeline for designations in all remaining areas of the country in three additional rounds.

Under the court order, U.S. EPA was required to address areas around certain large SO₂ sources and areas with new monitored violations in Round 2 by July 2, 2016. U.S. EPA must designate remaining areas where modeling will be used to characterize air quality in Round 3 by December 31, 2017, and all remaining areas where states have elected to install and operate new air monitors in Round 4 by December 31, 2020.

U.S. EPA's Data Requirements Rule (DRR), which was finalized in 2015, directs U.S. EPA and states to characterize air quality around sources that emit 2,000 tons per year (TPY) or more of SO₂ according to timelines that coincide with Round 3 and 4 designations. The DRR provides U.S. EPA and states discretion in identifying SO₂ sources that have emissions below 2,000 tons per year but may be contributing to a violation of the SO₂ NAAQS.

Indiana has worked closely with U.S. EPA to ensure the appropriate and timely designation of areas under the first two rounds¹ and has provided data and information to help inform U.S. EPA's designations under Rounds 3 and 4². Indiana acknowledges U.S. EPA's agreement with its recommendations of attainment for many of the areas being addressed in Round 3. The purpose of this letter is to provide additional data and information concerning U.S. EPA's proposed revisions to Indiana's recommendations of unclassifiable for Huntington County and attainment for an affected portion of Warrick County as well as to provide clarification regarding U.S. EPA's analysis for Floyd County.

Huntington County

U.S. EPA has applied the DRR to U.S. Mineral Products (USM) dba Isolatek. USM is a mineral wool manufacturer located in Huntington Township in Huntington County. Indiana did not include USM on its list of sources that are subject to the DRR because USM's reported actual SO₂ emissions in 2014 were 164 tons. Indiana believes that U.S. EPA has arbitrarily applied DRR requirements to USM for the following reasons:

- There are numerous sources across the United States, and within Indiana, whose SO₂ emissions are in a range similar to, or greater than, the USM SO₂ emissions but are not identified as DRR sources.

In Indiana alone, there were 30 sources with reported actual SO₂ emissions greater than USM's actual reported emissions for 2014 and less than the 2,000 ton threshold that were not already accounted for in earlier rounds of designations.

Specific to USM, in its Technical Support Document, U.S. EPA discusses, at great length, the annual SO₂ emissions for USM. SO₂ emissions were estimated to be either 164 TPY (as reported for 2014), 191 TPY, 444 TPY, or 1,393 TPY depending on the underlying assumption used in the calculations³.

Clearly, even the most conservative estimate of SO₂ emissions does not approach the 2,000 TPY threshold that U.S. EPA set for determining sources subject to the DRR; a threshold set by U.S. EPA that "prioritizes the resources that will be devoted to characterizing air quality near SO₂ sources nationally" (80 FR 51061); a threshold that is already on "the lower end of the range of thresholds" of sources that have the potential to contribute to violations of the NAAQS (80 FR 51061), and a threshold that "strikes a reasonable balance between the need to characterize air quality near sources that have a higher likelihood of contributing to a NAAQS violation and the

¹ U.S. EPA issued designations in its initial round on July 25, 2013. U.S. EPA issued designations in Round 2 on June 30, 2016.

² Indiana submitted a list of 11 DRR sources on January 7, 2016. U.S. EPA added six sources to the list on March 26, 2016, including five sources that were already being addressed in Round 2 designations and U.S. Minerals (dba Isolatek) in Huntington County. Indiana submitted elected approaches for air quality characterization for all identified DRR sources on June 30, 2016; submitted updates on September 26, 2016; and submitted Round 3 designation recommendations on January 13, 2017, for areas near DRR sources and all other remaining areas in Indiana except a portion of Porter county where new monitors have been installed for the area's designation in Round 4.

³ U.S. EPA's technical support document for Indiana (<https://www.epa.gov/sulfur-dioxide-designations/so2-designations-round-3-state-recommendations-and-epa-responses>) contains a discussion of the agency's emissions calculations.

analytical burden on air agencies” (80 FR 51061). U.S. EPA did not characterize the 2,000 TPY threshold as an arbitrary number, but rather as an indicator of sources warranting prioritization of state and federal resources.

U.S. EPA has more traditional means of collecting emissions related data to verify emissions, yet none of those were explored for USM or similar sources prior to identifying USM as an affected source.

- U.S. EPA has excluded sources that have similar, and potentially greater ambient impacts than USM. For example,
 - A manufacturer of mineral wool located in a rural Indiana county that has operational characteristics similar to USM. This source operates with additional controls but reported comparatively higher actual SO₂ emissions of 534 tons in 2014 (vs 164 tons for USM). Initial air dispersion modeling conducted in 2011 and 2012 using versions of AERMOD and AERMET that were current at that time, and 2008-2011 emissions data showed an air quality impact from the facility well above how U.S. EPA modeling has characterized impacts associated with USM.
 - A small power plant for an Indiana university reported 1,740 tons of SO₂ emissions in 2014, more than 10 times USM's reported emissions. As with the mineral wool manufacturer, initial air dispersion modeling was conducted in 2011 and 2012 that indicated an air quality impact from the source could be well above the standard. In addition, the plant is located in a community of more than 80,000 persons. Conversely, USM is located in an area with less than 20,000 persons, less than ¼ of the population in the vicinity of power plant.
- Indiana believes U.S. EPA's modeling does not provide sufficient data to make a nonattainment designation. More importantly, the modeling conducted by U.S. EPA does not comply with guidance specific to characterizing sources under the DRR.

Indiana observed several differences between the U.S. EPA's modeling analysis and Indiana's modeling analysis for affected DRR sources. For example,

- U.S. EPA used an older version of AERMOD (14134) instead of the most current version (v16216r). This is inconsistent with DRR Modeling Guidance which states that the most current version of AERMOD is required⁴.
- U.S. EPA used an older version of AERMET (14134) instead of the most current version (v16216). This is inconsistent with DRR Modeling Guidance which states that the most current version of AERMET is required.

⁴ U.S. EPA Modeling Guidance, “SO₂ NAAQS Designations Modeling Technical Assistance Document (TAD), dated August 2016” (<https://www.epa.gov/sites/production/files/2016-06/documents/so2modelingtad.pdf>) and U.S. EPA memo (Clarification on the AERMOD Modeling System Version for Use in SO₂ Implementation Efforts and Other Regulatory Actions), dated March 8, 2017” (https://www3.epa.gov/ttn/scram/guidance/clarification/SO2_DRR_Designation_Modeling_Clarification_Memo-03082017.pdf)

- U.S. EPA used five years (2008 – 2012) of meteorological data as well as non-concurrent emissions data. This is inconsistent with DRR Modeling Guidance which states that three years of meteorological data concurrent with emissions data should be used in order to agree with the three-year average form of the SO₂ NAAQS. Under the DRR, modeling should have been conducted using meteorological data from 2013 - 2015 or 2014 - 2016.
- U.S. EPA's modeling analysis did not use readily-available adjusted hourly-seasonal SO₂ background for all DRR sources.
- U.S. EPA's modeling analysis did not utilize an adjusted surface friction velocity (ADJ_U*). This became a regulatory option after U.S. EPA's analysis was conducted.
- U.S. EPA's modeling analysis included source characteristics of the blow chambers/screenhouses, including release heights and vertical/horizontal dimensions of each blow chamber/screenhouse, which are inconsistent with actual source characteristics.
- U.S. EPA's modeling did not characterize the three most recent years of operation. The intent of the DRR as it relates to modeling is to characterize what the three most recent years of monitoring data would represent if a network was present during that time. This is important given the variability of operations, meteorology, etc.

Indiana firmly believes that U.S. EPA's modeling does not provide sufficient data on which to base a designation. Furthermore, had Indiana submitted modeling comparable to the analysis on which U.S. EPA is relying to determine the status of USM, it is highly likely that U.S. EPA would have found the modeling inadequate for the purpose of rulemaking under the DRR because the modeling was not performed in accordance with DRR Modeling Guidance.

Indiana does not question whether the DRR provides states or U.S. EPA the authority to identify sources with actual emissions below the 2,000 ton threshold as requiring further air quality characterization. U.S. EPA's 2,000 ton threshold is an important indicator of the need for prioritized air quality characterization under the DRR. Arbitrarily and inconsistently including a source such as USM with reported emissions less than one tenth of the DRR's 2,000 ton threshold while excluding sources with similar, or greater, emissions and a potential for elevated air quality impacts represents a misapplication of the intent of the DRR to prioritize sources and resources. For these reasons, Indiana believes a designation of unclassifiable is appropriate for Huntington Township.

Warrick County

U.S. EPA and Indiana have identified an aluminum manufacturing facility and an adjacent power plant operated by the Aluminum Manufacturing Company of America (ALCOA) in Anderson Township, Warrick County, Indiana, as DRR sources. Indiana informed U.S. EPA on June 30, 2016 that air quality in the area of these sources would be characterized using air dispersion modeling. Indiana submitted monitoring data to support a recommendation of attainment on January 13, 2017, followed by a modeling protocol on June 23, 2017 prepared by ALCOA to describe procedures for the area's further characterization.

U.S. EPA indicated in its 120-day letter that the monitoring data submitted by Indiana was insufficient for use in an attainment designation and that staff was working to complete a review of the modeling protocol that adequately characterizes all SO₂ emission sources for the Alcoa Power Plant and the Alcoa Warrick Operations facility.

Indiana has since received and reviewed a final modeling analysis from ALCOA that demonstrates the area surrounding ALCOA as attaining the SO₂ NAAQS. Discussion with modeling staff from U.S. EPA – Region 5 and the Office of Air Quality Planning and Standards resulted in acceptance of Alcoa's modeling approach. This approach, described in more detail in the enclosed technical support document, is more representative of air quality characterization required by DRR guidance than the modeling results referenced by U.S. EPA in its initial designation recommendation. As such, Indiana believes a designation of attainment is appropriate for Anderson, Boon and Ohio Townships.

Indiana is enclosing the modeling analysis and an updated technical support document for U.S. EPA's consideration prior to the area's final designation by December 31, 2017.

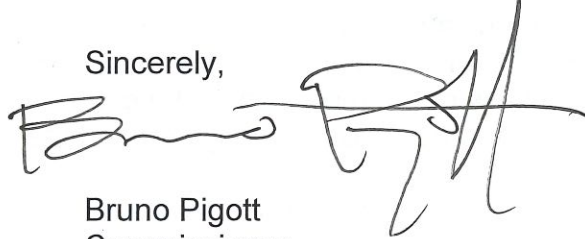
Floyd County

U.S. EPA indicated, in its Technical Support Document, Indiana did not follow the SO₂ nonattainment planning guidance for 30-day average limitations for Louisville Gas and Electric – Mill Creek Generating Station located in Kentucky, for the Floyd County (Gallagher) DRR modeling. This guidance recommends a comparably stringent, upward adjusted 1-hour emission limit be applied to the modeling in place of the permitted 30-day averaging emission limit. In the case of Mill Creek, the Louisville Metro Air Pollution Control District air permitting staff provided the permitted 30-day average emission rate (0.17 lb of SO₂/MMBtu) as well as the conversion to a 1-hour emission rate (0.24 lb of SO₂/MMBtu). The 1-hour emission rate for Mill Creek was modeled by Indiana for its air quality characterization of the surrounding area. Therefore, Indiana believes the characterization of the Mill Creek facility is consistent with the SO₂ nonattainment planning guidance and is representative of relevant emissions in the Floyd County area.

This submittal consists of one (1) hard copy of the required documentation. An electronic version of the submittal in PDF format that is identical to the hard copy has been sent to Doug Aburano, Chief of U.S. EPA Region 5's Attainment Planning and Maintenance Section and Chris Panos of U.S. EPA Region 5.

Thank you for this opportunity to submit information and a new modeling analyses and update to Indiana's technical support document for preliminary recommendations for Round 3 designations under the 2010 primary 1-hour SO₂ NAAQS. If you have any questions or need additional information, please contact Keith Baugues, Assistant Commissioner, Office of Air Quality, at (317) 232-8222 or kbaugues@idem.IN.gov.

Sincerely,



Bruno Pigott
Commissioner

BP/kb/sd/bc/md/gf/as
Enclosures

1. ALCOA Warrick Power Plant and Warrick Operations Modeling Data and Update to the Technical Support Document for Indiana's Preliminary Recommendations Concerning Round 3 Designations for the 2010 Primary 1-Hour Sulfur Dioxide (SO₂) National Ambient Air Quality Standard (NAAQS)

cc: Chris Panos, U.S. EPA Region 5 (no enclosures)
John Summerhays, U.S. EPA Region 5 (no enclosures)
Doug Aburano, U.S. EPA Region 5 (no enclosures)
Keith Baugues, IDEM-OAQ (no enclosures)
Scott Deloney, IDEM-OAQ (no enclosures)
Brian Callahan, IDEM-OAQ (w/ enclosures)
Mark Derf, IDEM-OAQ (w/ enclosures)
Gale Ferris, IDEM-OAQ (w/ enclosures)
Amy Smith, IDEM-OAQ (w/ enclosures)
File Copy