



Indiana Department of Environmental Management

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June 30, 2016

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

Re: Rounds 3 and 4 Designations for the
2010 Primary 1-Hour Sulfur Dioxide
National Ambient Air Quality Standard and
Air Quality Characterization Under the
Data Requirements Rule

Dear Mr. Kaplan:

This letter is in response to United States Environmental Protection Agency's (U.S. EPA's) *Data Requirements Rule (DRR) for the 2010 1-hour Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard (NAAQS)*, which was published in the *Federal Register* on August 21, 2015 (80 FR 51052). The DRR was created in order to further implement the 2010 primary 1-hour SO₂ NAAQS.

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.

Round 2 designations addressed two groups of areas: areas with newly monitored violations based on the most recent three calendar years of certified monitored ambient air quality data; and previously undesignated areas that contain any stationary source not announced for retirement as of March 2, 2015 that according to U.S. EPA's Air Markets Database emitted in 2012 (a) more than 16,000 tons of SO₂ or (b) more than 2,600 tons of SO₂ and had an average emission rate of at least 0.45 lbs of SO₂/mmBtu. Round 3 designations address previously undesignated areas not addressed in Round 2 where modeling will be used to characterize air quality as well as other areas without ambient air monitors. Round 4 designations address all remaining areas of the country where ambient air monitors will be used to characterize air quality.

Schedules are in place for states to provide U.S. EPA with information for each round of designations. The final DRR contains requirements for the characterization of air quality near sources with SO₂ emissions at or greater than 2,000 tons per year (tpy) and guidance for Rounds 3 and 4 designations.

On September 16, 2015, Indiana provided initial recommendations for the two groups of areas being addressed in Round 2. Attainment was recommended for all monitored areas based on 2012-2014 ambient air monitoring data showing that no new areas of Indiana monitored concentrations above the standard. Attainment was also recommended for areas around five sources identified by U.S. EPA as meeting Round 2 criteria. These sources are referred to as "consent decree sources" and include Gibson Generating Station in Gibson County, Clifty Creek Generating Station in Jefferson County, Michigan City Generating Station in LaPorte County, A.B. Brown Generating Station in Posey County, and Rockport Generating Station in Spencer County.

On January 7, 2016, Indiana submitted to U.S. EPA a list of 11 stationary sources for air quality characterization under the DRR thus beginning the Round 3 designation process. Air dispersion modeling and ambient air monitoring are both considered appropriate ways to assess local SO₂ concentrations and the DRR gives states flexibility to select the approach for each listed source. The DRR also provides states with a third option of establishing a permanent and federally enforceable limit for emissions from a listed source to below 2,000 tpy resulting in the source not being subject to requirements for air quality characterization. In addition to sources with emissions above the 2,000 tpy threshold, the state air agency and/or U.S. EPA may also require air quality characterization around a source or sources with emissions below 2,000 tpy if it is believed that the source(s) may be contributing to a violation of the NAAQS. The list is a permanent list of prioritized sources that excludes sources in areas designated as nonattainment before January 2016 and shall not be altered by designations after January 2016.

On March 25, 2016, U.S. EPA identified six additional sources as being subject to the DRR. Five of these sources are consent decree sources previously addressed during Round 2 designations. U.S. EPA also listed Isolatek (U.S. Minerals) in Huntington County. U.S. EPA added this source based on stack testing and production data obtained by the agency's Office of Air Enforcement and Compliance Assurance and preliminary modeling, conducted by U.S. EPA, indicating a need for further characterization.

It should be noted that Indiana and U.S. EPA have been working closely together to complete assessments for the five consent decree sources and U.S. EPA's final Round 2 designations for the source areas should be issued by July 2, 2016. In a February 16, 2016, letter to the Indiana Department of Environmental Management (IDEM) concerning Indiana's initial Round 2 recommendations, U.S. EPA stated its intention to designate Gibson County, LaPorte County and Ohio Township in Spencer County as attainment/unclassifiable. U.S. EPA also noted that emission limits for Clifty Creek Generating Station and A.B. Brown Generating Station must be made permanent and federally enforceable to support a designation of attainment/unclassifiable for the

relevant portions of Jefferson and Posey counties. IDEM issued Commissioner's Orders for A.B. Brown Generating Station on January 11, 2016, and Clifty Creek Generating Station on February 1, 2016, making the emission limits for both sources permanent and enforceable. On May 6, 2016, U.S. EPA finalized approval of revisions to Indiana's State Implementation Plan (81 FR 27330) making federally enforceable the emission limits in the Commissioner's Orders for both sources.

By July 1, 2016, states must inform U.S. EPA which of the three approaches are selected for characterizing air quality around the sources that are subject to the DRR: 1) conducting new modeling to characterize the ambient air quality in the area of the source; 2) conducting ambient monitoring to characterize ambient air quality in the area of the source; or 3) providing federally enforceable and permanent emission limits of less than 2,000 tpy or documentation of a permanent shut down for the source.

Table 1 provides a complete list of sources identified as being subject to the DRR and Indiana's selected approach for characterizing air quality in the vicinity of the source.

- Air dispersion modeling is selected for 11 sources. Indiana is following guidance in U.S. EPA's SO₂ NAAQS Designations Modeling Technical Assistance Document (TAD) for model selection, receptor grid and modeling domain, meteorological data, background concentrations, emission sources, and analysis. U.S. EPA granted Indiana approval to process meteorological data with the latest version of the AERMOD meteorological data preprocessor program AERMET (version15181). IDEM may request U.S. EPA's approval at a later date to use the adjusted U* Beta option for certain sources to address underprediction of the surface friction velocities that could lead to overprediction of ambient air impacts of SO₂.
- Ambient air monitoring is selected for one source: the ArcelorMittal – Burns Harbor facility in Northwest Indiana. Indiana is following guidance in U.S. EPA's SO₂ NAAQS Source-Oriented Monitoring TAD as well as U.S. EPA's SO₂ NAAQS Designations Modeling TAD for model selection, receptor grid and modeling domain, meteorological data, background concentrations, emission sources, and analysis to assist with the selection of the number and location of monitoring sites to characterize air quality surrounding ArcelorMittal – Burns Harbor.
- Selected approaches are not indicated for the five consent decree sources addressed in the Round 2 process because U.S. EPA's final designations for these sources will be issued by July 2, 2016.

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

Facility	County	2014 SO ₂ Emissions (Tons)	Selected Approach
Duke – Gallagher	Floyd	3,524	Modeling
Duke – Gibson	Gibson	22,055	Consent decree source ^a
Isolatek (U.S. Minerals)	Huntington	< 2,000 ^b	Modeling
NIPSCO – R.M. Schahfer	Jasper	8,412	Modeling
Indiana-Kentucky Electric Corporation - Clifty Creek	Jefferson	3,731	Consent decree source ^a
ArcelorMittal – Indiana Harbor	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	Consent decree source ^a
ArcelorMittal – Burns Harbor	Porter	12,189	Monitoring
SABIC Innovative Plastics	Posey	4,030	Modeling
Vectren – A.B. Brown	Posey	8,080	Consent decree source ^a
AEP – Rockport	Spencer	54,979	Consent decree source ^a
Hoosier Energy – Merom	Sullivan	3,318	Modeling
Duke – Cayuga	Vermillion	3,448	Modeling
Alcoa – Warrick Power Plant	Warrick	4,993	Modeling
Alcoa – Warrick Operations	Warrick	3,500	Modeling

^a IDEM has completed a characterization for this source under Round 2 designation requirements. Designation by U.S. EPA is pending (81 FR 27330).

^b Added by U.S. EPA.

States must include with their notification appropriate modeling protocols and plans for new ambient air monitoring. Information provided with this letter includes modeling protocols for DRR sources that remain to be characterized under Round 3 designation requirements, details about ambient monitoring planned around one source, ArcelorMittal—Burns Harbor, for designations under Round 4, and proposed changes to Indiana’s 2017 ambient monitoring network for the characterization of air quality under the requirements of the DRR. The following documents are enclosed:

- Enclosure 1 – Indiana’s Air Quality Modeling Protocol – Data Requirements Rule for the 2010 1-hour Sulfur Dioxide Primary NAAQS
- Enclosure 2 – ArcelorMittal – Burns Harbor Modeling Protocol to Support Monitoring Approach for the Data Requirements Rule
- Enclosure 3 – Appendix C SO₂ DRR – Data Requirements Rule from the Proposed Indiana 2017 Ambient Air Monitoring Network Plan¹.

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. 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. Where permanent and enforceable emission limitations are selected to

¹ The Proposed Indiana 2017 Ambient Air Monitoring Network Plan is available in its entirety at http://www.in.gov/idem/airquality/files/monitoring_network_review_2017.pdf

limit source(s) emissions below the DRR 2,000 tpy threshold, states must ensure the limits are adopted and effective by January 13, 2017.

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 Indiana's modeling and monitoring protocols for Rounds 3 and 4 air quality designations for the 2010 primary 1-hour SO₂ NAAQS. If you have any questions or need additional information, please contact Brian Callahan, Chief, Air Quality Standards and Implementation Section, Office of Air Quality, at (317) 232-8244 or bcallaha@idem.IN.gov.

Sincerely,



Keith Baugues
Assistant Commissioner
Office of Air Quality

KB/sd/bc/gf/as
Enclosures

cc: Chris Panos, U.S. EPA Region 5 (no enclosures)
John Summerhays, U.S. EPA Region 5 (no enclosures)
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