



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

MAR 28 2016

REPLY TO THE ATTENTION OF

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

Dear Mr. Stuckey:

The U.S. Environmental Protection Agency has reviewed the draft part 70 operating permit renewal for ALCOA Power Generating, Inc. – Warrick Power, permit number 173-36540-00002. To ensure that the source meets Federal Clean Air Act requirements, that the permit will provide necessary information so that the basis of the permit decision is transparent and readily accessible to the public, and that the permit record provides adequate support for the decision, EPA has several comments.

On pages 26-27 of the technical support document, the Indiana Department of Environmental Management determined that the requirements of the Cross State Air Pollution Rule (CSAPR), also known as the Transport Rule (TR), apply to Unit 4, but the requirements are not included in the permit. Both CSAPR and Federal Implementation Plan (FIP) requirements¹ are applicable requirements² and, as such, must be included in the part 70 operating permit. We request that you add the CSAPR applicable requirements to the permit. To assist with incorporating the requirements into the permit, the May 13, 2015 memorandum from Anna Marie Wood, titled "Title V Permit Guidance and Template for the Cross-State Air Pollution Rule"³, provides additional guidance in how the CSAPR applicable requirements could be incorporated into the permit. The memorandum has been enclosed.

Additional comments on this permit are also enclosed.

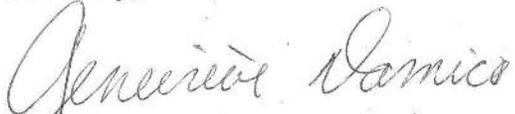
¹ 76 FR 48208. EPA also promulgated FIPs pursuant to its authority at CAA § 110(c)(1) regulating electric generating units in several states, including Indiana. The CSAPR rulemaking codified the requirements of the FIP at 40 C.F.R. §§ 52.38 and 52.39. Requirements were also codified in 40 C.F.R. 52, Subpart P, which identifies the CSAPR requirements in Indiana's implementation plan. Specifically, 40 C.F.R. §§ 52.789 and 52.790 require the facility to comply with the requirements of 40 C.F.R. Part 97, Subpart AAAAA (TR NO_x Trading Program), Subpart BBBBB (TR NO_x Ozone Season Trading Program), and Subpart CCCCC (TR SO₂ Group 1 Trading Program).

² 40 C.F.R. § 70.3(c)(1) and 326 IAC 2-7-2(d)(1).

³ The memorandum "Title V Permit Guidance and Template for the Cross State Air Pollution Rule" is available online at https://www3.epa.gov/airtransport/CSAPR/pdfs/CSAPR_Title_V_Permit_Guidance.pdf.

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

Sincerely,

A handwritten signature in cursive script that reads "Genevieve Damico".

Genevieve Damico
Chief
Air Permits Section

Enclosures

Additional Comments Based on Review of the Draft Permit
ALCOA Power Generating, Inc. – Warrick Power
Permit number 173-36540-00002

- 1.) Conditions D.1.1(c) and (d) and D.1.2 each require a monthly calculation to determine sulfuric acid (H_2SO_4) and particulate matter with an aerodynamic diameter of 10 micrometers (PM_{10}) and 2.5 micrometers ($PM_{2.5}$) emissions using, as an input, the monthly heat input to each boiler. Condition D.1.20 does not require the source to maintain records of the monthly heat input for each boiler. We request that you include a requirement to maintain records of the monthly heat input for each boiler.
- 2.) Condition D.1.8 allows the facility to discontinue natural gas co-fire for Boilers 1-3 with written notification and states that new source performance standards (NSPS) and new source review (NSR) requirements will not be applicable. It is not clear from the permit what the underlying applicable requirement is for this condition. While technical support document (TSD) page 27 reiterates this requirement as part of the state rule applicability discussion, it does not explain why removal of the natural gas co-fire system will not trigger additional NSPS or NSR requirements nor does it identify the underlying applicable requirement. Please clarify why NSPS or NSR requirements would not apply to the facility if it chooses to discontinue natural gas co-fire for boilers 1-3. We also request that you identify the underlying applicable requirement for this condition and include a citation to this permit condition's origin and authority of the applicable requirement.

In particular, would this change constitute a modification of the boilers under NSPS or NSR? Would discontinuing use of the natural gas co-fire involve a physical change or a change in the method of operation of the boilers? Which NSPS requirements would not be applicable if the facility chooses to discontinue natural gas co-fire?

- 3.) Condition D.1.18 incorporates various compliance assurance monitoring (CAM) requirements pursuant to 40 C.F.R. Part 64. We have the following comments:
 - a. For PM_{10} , $PM_{2.5}$, and H_2SO_4 emissions from Boilers 1-3 and 4, the CAM table requires proper operation of the electrostatic precipitators (ESPs) to be determined by the number of transformer-rectifier (TR) sets in operation, the primary and secondary ESP voltages, and the primary and secondary ESP current measurements. The CAM table identifies an indicator range for the number of TR sets in operation, but does not specify the indicator range for the primary and secondary voltages and currents. Please clarify whether an indicator range has been set for the primary and secondary voltages and currents. If so, please explain why the indicator range was not included in the permit.
 - b. For PM_{10} , $PM_{2.5}$, and H_2SO_4 emissions from Boilers 1-3 and 4, the CAM table requires proper operation of the wet scrubbers to be determined through measurement of liquid inlet rate and pump amperage. The CAM table does not identify the minimum liquid inlet rate and the pump amperage range that would

assure proper operation of the wet scrubber. Please clarify whether an indicator range has been set for the liquid inlet rate and the pump amperage. If so, please explain why the parameters were not included in the permit.

- c. The measurement approach relies on a monitoring plan approved pursuant to 40 C.F.R. § 63.7525(e), (f), and (h). Please clarify whether the monitoring plans have been approved. If so, please determine whether the requirements of the monitoring plans will be sufficient to fulfill the monitoring design requirements given in 40 C.F.R. § 64.3.
 - d. The permit specifies that requirements under 326 IAC 3, 40 C.F.R. 60 Subpart Db, and 40 C.F.R. 63 Subpart DDDDD would fulfill CAM performance criteria and data representativeness requirements. Please clarify which specific requirements fulfill the requirements given at 40 C.F.R. § 64.3.
 - e. Boiler 4's sulfuric acid mist monitoring approach identifies spreadsheet-predicted annual emissions based on calcium hydroxide hourly injection rates as a performance criteria. Please clarify how the predicted annual emissions will be calculated.
- 4.) Conditions D.2.2 and D.2.3 incorporate PM, PM₁₀, and PM_{2.5} emission limits for the unloading station spud hopper, truck loading hopper, and conveyance points. Each condition specifies that a baghouse is used to control emissions. TSD, Appendix A, page 1 states that the spud and truck hoppers PM, PM₁₀, and PM_{2.5} uncontrolled emissions are 398.58, 318.86 and 318.86 tons per year, respectively, and allowable emissions are 41.30 tons per year, each. Page 14-15 of the TSD concludes that CAM is not applicable to the unloading station for barges. The CAM applicability analysis does not address the truck loading hopper, spud hopper, and conveyance points. Based on the applicability requirements of 40 C.F.R. § 64.2(a), it appears that CAM may be applicable to the unloading station spud hopper, truck loading hopper, and conveyance points since the pre-control PM, PM₁₀, and PM_{2.5} emissions are over 100 tons per year, PM emissions are controlled via baghouse, and the emission limits are prevention of significant deterioration and nonattainment NSR minor limits. We request that you further evaluate CAM applicability for the unloading station for barges, spud hopper, truck loading hopper, and conveyance points. If you determine that CAM applies, we request that you revise the permit to incorporate CAM requirements.
- 5.) Conditions D.2.2(b), D.2.2(d)(1), and D.2.3(b) incorporate annual limits on the spud hopper, truck loading hopper, and conveyance points, frozen breaker, and coal transfer station's coal and calcined petroleum coke throughput on an annual basis. Condition D.2.9(d) requires the facility to record the coal usage through the facility, but it is not clear whether the coal usage record is sufficient to demonstrate compliance with the coal transfer station throughput limit. The permit does not appear to include monitoring or recordkeeping to determine the annual throughput for the spud hopper, truck loading hopper and conveyance points or the frozen breaker. Please either include monitoring

sufficient to determine compliance with the annual throughput limits or explain how the permit currently requires the source to demonstrate compliance with the limits.

- 6.) Condition D.2.9(d) refers to condition D.2.3(b)(2), but this condition does not exist in the permit. Please determine which condition D.2.9(d) is referring to when it refers to condition D.2.3(b)(2).
- 7.) Condition D.2.3(c) establishes a PM_{2.5} emission limit for the unloading station for barges spud hopper, truck loading hopper, and conveyance points, determined monthly. It's not clear from the permit how the facility will demonstrate compliance with this limit. Condition D.2.4(c) does not require periodic performance testing for this emission unit to demonstrate compliance with PM_{2.5} emission limits. Further, there does not appear to be other conditions requiring the source to demonstrate compliance with the limit. Please clarify whether periodic testing is required to demonstrate compliance with the limit in condition D.2.3(c). Please also explain how the source will demonstrate compliance with the limit in condition D.2.3(c).
- 8.) Condition D.2.5 requires the source to operate various control devices at all times when the associated emissions unit is operating except as otherwise provided by statute, rule, or in the permit. Please clarify which statutes, rules, or conditions in the permit would preclude operation of the control devices while the associated emissions unit is in operation.
- 9.) Condition D.2.8(b) requires weekly visible emission observations of the coal, limestone, and petroleum coke unloading station baghouse. This observation is included as a CAM requirement. 40 C.F.R. § 64.3(b)(4)(iii) requires the monitoring frequency to be at least once every 24 hours. It's not clear from the permit whether other performance criteria is being monitored at least once every 24 hours to determine proper operation of the baghouse. Please provide further justification explaining why a weekly visible emission observation satisfies CAM monitoring frequency requirements.
- 10.) Condition E.2.2 incorporates the requirements of 40 C.F.R. Part 60 Subpart OOO. We have the following comments:
 - a. Condition E.2.2 does not include 40 C.F.R. § 60.674. We request that you determine whether any specific monitoring requirements in 40 C.F.R. § 60.674 would apply for each affected facility and include those requirements that are applicable in the permit.
 - b. Condition E.2.2(6) incorporates the requirements of 40 C.F.R. § 60.672 in its entirety. However, 40 C.F.R. § 60.672 includes exemptions that may or may not apply to the affected facility. 40 C.F.R. § 60.672 also identifies requirements in tables 2 and 3 to 40 C.F.R. 60 Subpart OOO as applicable, but the permit does not list the tables as being applicable. We request that you identify which requirements at 40 C.F.R. § 60.672 would apply. We also request that you incorporate 40 C.F.R. 60 Subpart OOO, tables 2 and 3 into the permit.

- c. Condition E.2.2(13) incorporates 40 C.F.R. § 60.675(f), which refers to 40 C.F.R. § 60.676(d), a requirement applicable to wet scrubber operations. Based on the emissions unit description, it does not appear that there is a wet scrubber in operation. Please clarify whether 40 C.F.R. 60.675(f) and 60.676(f) apply.
 - d. Condition E.2.2(15) includes 40 C.F.R. § 60.675(h)(1), but this condition is currently reserved in the rule. Please verify whether this condition should be included in the permit.
- 11.) Condition E.6.2 incorporates the requirements of 40 C.F.R. 63 Subpart DDDDD. Conditions E.6.2(6), (10), (15), (17), and (19) incorporate requirements that refer to 40 C.F.R. 63 Subpart DDDDD, tables 1-3, 4, 5, 7, and 11-13, but condition E.6.2 does not include the relevant portions of these tables in the permit. We request that you incorporate into the permit the requirements given in the aforementioned tables. We also request that you verify that all other applicable tables are included in the permit.
- 12.) Condition E.7.2 incorporates the requirements of 40 C.F.R. 63 Subpart UUUUU. We have the following comments:
- a. Conditions E.7.2(6), (45), and (53) refer to requirements that reference 40 C.F.R. 63 Subpart UUUUU, tables 1-3, 8, and 9, but condition E.7.2 does not include these tables. We request that you incorporate into the permit the requirements given in the aforementioned tables. We also request that you verify that all other applicable tables are included in the permit.
 - b. Condition E.7.2(2) refers to 40 C.F.R. § 63.9982(a)(2)(d), but this requirement does not exist. We believe that this requirement should instead refer to 40 C.F.R. § 63.9982(d). Please verify and correct this permit condition as necessary.
 - c. Condition E.7.2(32) identifies 40 C.F.R. 63.10011(a)(4) as an applicable requirement, but this requirement does not exist. We request that you verify and correct this condition as necessary.
 - d. 40 C.F.R. §§ 63.10005(e), 63.10011(g), and 63.10032(i) are not included in the permit. We request that you determine whether these are applicable requirements that should be included in the permit.
- 13.) During our review, we also noted the following typographical errors:
- a. Condition E.3.2(6) cites 40 C.F.R. §63.66595(c), but this should instead refer to 40 C.F.R. § 63.6595(c).
 - b. Condition E.3.2(14) should read 40 CFR 63.6640(a), (b), (e), and (f).