

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR ENFORCEMENT DIVISION, OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE
BEFORE THE ADMINISTRATOR

In the Matter of:

Tennessee Valley Authority,

Respondent.

Administrative Compliance Order on Consent
AED-CAA-113(a)-2016-0003

ADMINISTRATIVE COMPLIANCE ORDER

A. PRELIMINARY STATEMENT

1. This Administrative Compliance Order (“Order”) is issued under the authority vested in the Administrator of the U.S. Environmental Protection Agency (“EPA”) by Section 113(a) of the Clean Air Act (“CAA” or the “Act”), 42 U.S.C. § 7413(a)(3) and (4).
2. On the EPA’s behalf, Phillip A. Brooks, Division Director of the Air Enforcement Division, Office of Civil Enforcement, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, is delegated the authority to issue this Order under Section 113(a) of the Act.
3. Respondent is Tennessee Valley Authority, a public power producer and federal agency doing business in the Commonwealth of Kentucky. Respondent is a “person” as defined in Section 302(e) of the Act, 42 U.S.C. § 7602(e). Respondent owns and/or operates Paradise Fossil Plant (hereafter, the “Facility”), located in the Commonwealth of Kentucky.
4. Respondent signs this Order on consent.

B. STATUTORY AND REGULATORY BACKGROUND

5. Section 112 of the CAA, 42 U.S.C. § 7412, authorizes the Administrator of EPA to regulate hazardous air pollutants (“HAPs”) which may have an adverse effect on health or the environment.

6. Pursuant to Section 112 of the CAA, the EPA finalized National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Subpart UUUUU on December 16, 2011, 77 FR 9304 (Feb. 16, 2012) (40 C.F.R. Part 63 Subpart UUUUU), commonly known as the “Mercury and Air Toxics Standards.” *Id.* (hereafter, “MATS”). The MATS adopt emission limits on mercury, acid gases and other toxic pollutants for affected coal and oil-fired electric utility generating units (“EGUs”).
7. Pursuant to 40 C.F.R. § 63.9981, the MATS applies to owners or operators of coal-fired EGUs or oil-fired EGUs as defined in 40 C.F.R. § 63.10042.
8. Pursuant to 40 C.F.R. § 63.2, “owner or operator” is defined as “any person who owns, leases, operates, controls, or supervises a stationary source.”
9. Section 111(a)(3) of the Act, 42 U.S.C. § 7411(a)(3), and 40 C.F.R. § 63.2 defines a “stationary source” as “any building, structure, facility, or installation which emits or may emit any air pollutant.”
10. Pursuant to 40 C.F.R. § 63.2, “affected source” is defined as ““the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a Section 112(c) source category or subcategory for which a Section 112(d) standard or other relevant standard is established pursuant to Section 112 of the Act.”
11. Pursuant to 40 C.F.R. § 63.9982, the affected source to which the provisions of the MATS, [40 C.F.R.] Part 63, Subpart UUUUU, applies is the “collection of all existing coal- or oil-fired EGUs, as defined in [40 C.F.R.] § 63.10042, within a subcategory, [and] ... each new or reconstructed coal- or oil-fired EGU, as defined in 40 C.F.R. § 63.10042.”
12. On December 16, 2011, in parallel with finalizing the MATS, the Office of Enforcement and Compliance Assurance issued a policy memorandum describing its intended approach regarding issuance of Section 113(a) administrative orders (“Orders”) to sources that are unable to comply

with the MATS but that may need to operate for up to a year to address a specific and documented reliability concern. See The Environmental Protection Agency's Enforcement Response Policy For Use Of Clean Air Act Section 113(a) Administrative Orders In Relation To Electric Reliability And The Mercury and Air Toxics Standard (hereafter, "2011 MATS Enforcement Policy"). The 2011 MATS Enforcement Policy is limited in application to units that are critical for reliability purposes.

13. In issuing the 2011 MATS Enforcement Policy, the EPA believed that there would be few, if any, cases in which affected sources would not be able to comply with the MATS within the compliance period specified by Section 112(i)(3) of the CAA (including, as applicable, any extensions permitted under Section 112(i)(3)(B)), which has proven to be the case. Nonetheless, the EPA acknowledged that there may be isolated instances in which the deactivation or retirement of a unit or a delay in installation of controls due to factors beyond the owner's/operator's control could have an adverse, localized impact on electric reliability that could not be timely predicted or planned for with specificity. In such instances, sources could find themselves in the position of either operating in noncompliance with the MATS or halting operations and thereby potentially impacting electric reliability. Thus, although the EPA generally does not speak publicly to the intended scope of its enforcement efforts in advance of the date when a violation may occur, the Agency issued the 2011 MATS Enforcement Policy to describe the EPA's intended enforcement response in such instances and to provide confidence with respect to electric reliability. The policy is informed, as are EPA's enforcement actions in general, by the need to find an appropriate balance between critical public interests, bearing in mind the resources and process time required for any enforcement response.
14. The 2011 MATS Enforcement Policy specifies that to qualify for an Order in connection with it, an owner/operator must, in summary, provide early written notice of its compliance plans to

the Planning Authority¹ for the area in which the source is located, timely request an Order and provide notice of such request to the EPA, FERC, its Planning Authority, any state public utility or service commission, and any state, tribal or local environmental agencies, with jurisdiction over the area in which the EGU is located, and submit a complete request for an Order.

15. A complete request pursuant to the 2011 MATS Enforcement Policy must include the following elements: copies of the early notice provided to the Planning Authority; written analysis of the reliability risk, which demonstrates that operation of the unit after the MATS Compliance Date is critical to maintaining electric reliability; written concurrence with the reliability analysis by the relevant Planning Authority (or a written explanation of why such concurrence cannot be provided); copies of any written comments received from third parties in favor of, or opposed to, operation of the unit after the MATS Compliance Date; a plan to achieve compliance with the MATS no later than one year after the MATS Compliance Date; and identification of the level of operation required to avoid the reliability risk and proposed operational limits and/or work practices to minimize or mitigate emissions to the extent practicable during non-compliant operation.
16. With respect to the demonstration of reliability risk, the 2011 MATS Enforcement Policy states that the analysis provided in an Order request should demonstrate that operation of the unit after the MATS Compliance Date is critical to maintaining electric reliability, and that failure to operate the unit would: (a) result in the violation of at least one of the reliability criteria required to be filed with the Commission, and, in the case of the Electric Reliability Council of

¹ Planning Authorities are the entities tasked, under NERC reliability standards, with addressing electric reliability through grid planning. In the 2011 MATS Enforcement Policy, Planning Authority was defined as “the entity defined as such in the “Glossary of Terms Used in NERC Reliability Standards,” available at: http://www.nerc.com/docs/standards/rs/Reliability_Standards_Complete_Set.pdf, or any successor term thereto approved by FERC, and includes, in relevant jurisdictions, RTOs and ISOs.”

Texas, with the Texas Public Utility Commission; or (b) cause reserves to fall below the required system reserve margin.

17. Although the EPA's issuance of an Order is not conditioned upon the approval or concurrence of any entity, in light of the complexity of the electric system and the local nature of many reliability issues, for purposes of using its Section 113(a) Order authority in connection with the 2011 MATS Enforcement Policy, the EPA has sought advice in the identification and/or analysis of reliability risks, as necessary and on a case-by-case basis from reliability experts, including, but not limited to, the Federal Energy Regulatory Commission ("FERC"), Regional Transmission Operators ("RTOs"), Independent System Operators and other Planning Authorities, as EPA indicated it would do in the 2011 MATS Enforcement Policy.
18. The 2011 MATS Enforcement Policy specifically stated that an owner/operator interested in receiving a Section 113(a) administrative order pursuant to the policy should provide FERC with a copy of its complete and timely written request to the EPA.
19. On May 17, 2012, FERC issued a policy statement explaining how it intended to provide advice to the EPA on requests for an administrative order pursuant to the 2011 MATS Enforcement Policy. See Policy Statement of the Commission's Role Regarding the Environmental Protection Agency's Mercury and Air Toxics Standards, 139 FERC ¶ 61,131 (2012) ("FERC Policy Statement"). The FERC Policy Statement provided that the Commission will advise the EPA by submitting written Commission comments to the EPA based on the Commission's review of the information provided in an informational filing containing the copy of the request for the administrative order provided to the Commission in an AD docket. *Id.* at Paragraph 21. Further, the FERC Policy Statement indicated that the Commission's comments would provide advice to the EPA on whether, based on the Commission's review of the informational filing, there might be a violation of a Commission-approved Reliability Standard, and may also identify issues

within its jurisdiction other than a potential violation of a Commission-approved Reliability Standard. *Id.*

C. FINDINGS

20. Respondent owns and/or operates an existing coal-fired electric utility steam generating unit, as defined in 40 C.F.R. § 63.10042.
21. Respondent's operation at the Facility is subject to the MATS.
22. On May 5, 2014 Respondent received a one year extension pursuant to 40 C.F.R. § 63.6(i)(4)(i)(A) from its permitting authority, extending the date by which it must comply with the MATS to April 15, 2016. *See* May 5, 2014 Letter from Sean Alteri, Kentucky Division of Air Quality, to Brenda Brickhouse.
23. On October 15, 2015, Respondent submitted a timely and complete request for an Order pursuant to the 2011 MATS Enforcement Policy to the EPA, with a copy to FERC. That request can be found in the FERC AD docket, AD16-10-000 (hereafter "Order Request").
24. Pursuant to the Order Request, Respondent seeks an Order from April 16, 2016 to April 15, 2017, on grounds that it will not be able to operate Units 1 and 2 of the Facility during this period without potentially operating in noncompliance with the MATS particulate matter standard of 0.03 lbs/MMBtu or halting operations and thereby potentially impacting electric reliability. *See* Order Request at 8 and 18. In addition to generating power necessary to maintain reliability of the transmission system, Units 1 and 2 also provide the steam necessary for the start-up of Unit 3 at the Facility, which operates in compliance with the MATS. *Id.* at 18. Unit 3 provides approximately 1,000 MW to the 500 kV transmission system. *Id.* at 11. Thus, Respondent asserts that Units 1 and 2 are needed to avert adverse consequences to reliability of the transmission system and to maintain adequate system reserve margin, until construction is completed on a new, natural gas-fired combined cycle combustion turbine ("NGCC Unit") at the

Facility. *Id.* at 8 and 18. In the Order request, Respondent claims that construction of the NGCC Unit was delayed due to factors outside of its control, including the need for it to conduct an environmental review of the NGCC Unit and a new gas pipeline under the National Environmental Procedure Act (“NEPA”), and for it to resolve a lawsuit alleging deficiencies in the NEPA review. *Id.* at 6 - 8. Respondent’s NEPA review was challenged in a lawsuit, which was ultimately decided in TVA’s favor.²

25. More specifically, the Order Request states that Respondent will be unable to avoid violations of Reliability Standards developed by the North American Electric Reliability Corporation (“NERC”) if Units 1 and 2 are deactivated before the NGCC Unit is completed. *Id.* at 11 - 12. Specifically, Respondent maintains that the retirement of Units 1 and 2 before the NGCC Unit becomes operational would result in violations of Reliability Standards TPL-002-1 and TPL-001-4 (i.e., Category B contingency). *Id.* at 11. With the loss of Units 1 and 2, “to operate within established system limits and maintain the stability of the transmission system, local area mitigation would include curtailment of firm load and firm transmission service to customers.” *Id.* (“The dropping of firm load is not allowed for single contingency events under TPL-002-1 or TPL-001-4 and correlates to loss of power for TVA customers in the affected areas.”). Additionally, TVA claims that without Units 1 and 2, it “loses a primary source of reactive power in the western Kentucky area,” which could create conditions where “voltage could drop below required criteria.” *Id.* at 12.

² On October 23, 2015, the U.S. Court of Appeals for the Sixth Circuit affirmed the decision of the District Court (W.D. KY) in the NEPA litigation and found that, “All perspectives considered, the TVA “adequately studied the issue and [took] a hard look at the environmental consequences of its decision.” *Save Our Cumberland Mountains v. Kempthorne*, 453 F.3d 334, 339 (6th Cir. 2006). As a matter of process and substance, the TVA did not act arbitrarily or capriciously in declining to undertake a full environmental impact statement. See *Klein*, 753 F.3d at 582.” *Kentucky Coal Ass’n, et al. v. TVA*, No. 15-5163 (6th Cir. 2015).

26. In its Order Request, Respondent provided concurrence from its Planning Authority with the reliability assessment. *See id.*, Attachment C (Written Concurrence of Planning Coordinator) at 2. In its concurrence, the Planning Authority states that it “concur[s] with TVA’s analysis of the reliability and reserve margin issues in the [administrative order] request.” *Id.*
27. FERC reviewed the reliability risk presented in the request in accordance with the FERC Policy Statement and on December 2, 2015 found that “the loss of Unit Nos. 1 and 2 prior to the completion of the new NGCC [Unit] might result in violations of NERC Reliability Standards.” *See* Commission Comments On Requests For EPA Administrative Order (December 2, 2015), at Paragraph 12, Docket No. AD16-10-000. Additionally, FERC found that “Unit Nos. 1 and 2 are needed during the administrative order period, as requested by TVA, to maintain electric reliability and to avoid possible NERC Reliability Standard violations.” *Id.*
28. Respondent proposes to minimize emissions by operating Units 1 and 2 only as needed in order to maintain electric reliability and to meet the NERC Reliability Standards and reserve capacity requirements discussed in Paragraphs 25 - 27 of this Order. In order to do so, Respondent asserts that it may need to operate one or both units on demand³ until the date when new Unit 3 auxiliary boilers become available in December 2016. *See* Order Request at 17 – 18. After the auxiliary boilers are available to supply steam to Unit 3, Respondent anticipates that only Unit 1 or 2 would need to operate at a given time, unless (a) system loads rise above 29,000 MW, (b) there is a system reserve capacity shortfall (which may be at a lower system load level), or (c) actual system conditions threaten the reliability of the TVA electric transmission system, in

³ Respondent asserts that operation on demand is required because frequent unit cycling and idling is detrimental to unit reliability and has previously resulted in forced outages, unit unavailability, and failures during startups. *See* Order Request at 17-18. In addition, large units like Units 1 and 2 cannot start up and shut down quickly and thus cycling on-and off-line to meet peak load demand is not practical and can have adverse environmental impacts, resulting in higher NOx emissions than would have occurred had the unit remained in operation. *Id.*

which case both units may need to be operated. *Id.* at 12 and 18. Respondent asserts that replacement of Units 1 and 2 with the NGCC Unit will result in significant environmental benefits beyond the emission reductions achieved by the MATS, including, but not limited to reduced emissions of sulfur dioxide, nitrogen oxides, particulate matter, and carbon dioxide, and reduced use of water and generation of solid waste. *Id.* at 9-10. Units 1 and 2 are already equipped with control technologies such as selective catalytic reduction systems to remove NOx, venturi-type wet flue gas desulfurization systems to remove SO₂ and particulate matter, and a hydrated lime injection system to remove sulfur trioxide emissions and reduce stack opacity. *Id.* at 9.

D. ORDER

29. Respondent is ordered to take the actions described in this section of this Order.
30. Between April 16, 2016 and April 15, 2017, Respondent shall comply with all aspects of the MATS at the Facility except for requirements relating to the particulate matter standard of 0.03 lbs/MMBtu at Units 1 and 2, and shall operate Units 1 and 2 only as needed in order to maintain electric reliability and to meet the NERC Reliability Standards and reserve capacity requirements discussed in Paragraphs 25 - 27 of this Order. In order to do so, until the date when the new Unit 3 auxiliary boilers are available for use, which is expected to be in December 2016, Respondent may operate one or both units on demand. After the auxiliary boilers are available to supply steam to Unit 3, however, only Unit 1 or 2 shall operate at a given time, unless (a) system loads rise above 29,000 MW, (b) there is a system reserve capacity shortfall (which may be at a lower system load level), or (c) actual system conditions threaten the reliability of the TVA electric transmission system, in which case both units may operate during such time.
31. By 11:59 pm April 15, 2017, Respondent shall achieve full compliance with the MATS at Units 1 and 2 at the Facility.

32. Within 30 days of the date when the new Unit 3 auxiliary boilers become operational and are available to supply steam to Unit 3, Respondent shall provide written notice to the EPA indicating the date on which the Unit 3 auxiliary boilers became available for use, pursuant to the process specified in paragraph 40 of this Order.
33. Within 30 days of achieving full compliance with the MATS at the Facility, Respondent shall provide written notice to the EPA indicating that compliance has been achieved and the date by which it was achieved, pursuant to the process specified in paragraph 40 of this Order.

E. OTHER TERMS AND CONDITIONS

34. Respondent admits the jurisdictional allegations contained in Sections A (Preliminary Statement) and B (Statutory and Regulatory Background) of this Order.
35. Respondent neither admits nor denies the findings in Section C (Findings) of this Order.

F. GENERAL PROVISIONS

36. Any violation of this Order may result in a civil administrative or judicial action for an injunction or civil penalties of up to \$37,500 per day per violation, or both, as provided in Sections 113(b)(2) and 113(d)(1) of the Act, 42 U.S.C. §§ 7413(b)(2) and 7413(d)(1), as well as criminal sanctions as provided in Section 113(c) of the Act, 42 U.S.C. § 7413(c). The EPA may use any information submitted under this Order in an administrative, civil judicial, or criminal action.
37. Nothing in this Order shall relieve Respondent of the duty of achieving and maintaining compliance with all applicable provisions of the Act or other federal, state or local laws or statutes, nor shall it restrict the EPA's authority to seek compliance with any applicable laws or regulations, nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state, or local permit.

38. Nothing herein shall be construed to limit the power of the EPA to undertake any action against Respondent or any person in response to conditions that may present an imminent and substantial endangerment to the public health, welfare, or the environment.
39. The provisions of this Order shall apply to and be binding upon Respondent and its officers, directors, employees, agents, trustees, servants, authorized representatives, successors, and assigns. From the Effective Date of this Order until the Termination Date as set out in paragraph 45 below, Respondent must give written notice and a copy of this Order to any successors in interest prior to any transfer of ownership or control of any portion of or interest in the Facility. Simultaneously with such notice, Respondent shall provide written notice of such transfer, assignment, or delegation to the EPA. In the event of any such transfer, assignment, or delegation, Respondent shall not be released from the obligations or liabilities of this Order unless the EPA has provided written approval of the release of said obligations or liabilities.
40. Unless this Order states otherwise, whenever, under the terms of this Order, written notice or other documentation is required to be given, it shall be directed to the individuals specified at the addresses below unless those individuals or their successors give notice of a change of address to the other party in writing:

Phillip A. Brooks
Division Director of the Air Enforcement Division, Office of Civil Enforcement, Office of Enforcement and Compliance Assurance, US Environmental Protection Agency
Mail Code 2242A, Room 1119
1200 Pennsylvania Ave, NW
Washington, DC 20460 mail or 20004 courier (note Room 1119 on courier packages)

Beverly H. Banister
Director of the Air, Pesticides and Toxics Management Division
US Environmental Protection Agency, Region 4
61 Forsyth Street, SW
Atlanta, GA 30303
banister.beverly@epa.gov

John J. McCormick Jr.
Vice President
Safety, River Management and Environment
Tennessee Valley Authority
1101 Market Street
Chattanooga, Tennessee 37402-2801

All notices and submissions shall be considered effective upon receipt.

41. To the extent this Order requires Respondent to submit any information to the EPA, Respondent may assert a business confidentiality claim covering part or all of that information, but only to the extent and only in the manner described in 40 C.F.R. Part 2, Subpart B. The EPA will disclose information submitted under a confidentiality claim only as provided in 40 C.F.R. Part 2, Subpart B. If Respondent does not assert a confidentiality claim, the EPA may make the submitted information available to the public without further notice to Respondent.
42. Each undersigned representative of the Parties certifies that he or she is authorized to enter into the terms and conditions of this Order to execute and bind legally the Parties to this document.

G. EFFECTIVE DATE AND OPPORTUNITY FOR A CONFERENCE

43. Pursuant to Section 113(a)(4) of the Act, an Order does not take effect until the person to whom it has been issued has had an opportunity to confer with the EPA concerning the alleged violations. By signing this Order, Respondent acknowledges and agrees that it has been provided an opportunity to confer with the EPA prior to issuance of this Order. Accordingly, this Order will take effect immediately upon signature by the latter of Respondent or the EPA.

H. JUDICIAL REVIEW

44. Respondent waives any and all remedies, claims for relief and otherwise available rights to judicial or administrative review that Respondent may have with respect to any issue of fact or law set forth in this Order, including any right of judicial review under Section 307(b)(1) of the Clean Air Act, 42 U.S.C. § 7607(b)(1).

I. TERMINATION

45. This Order shall terminate on the earlier of the following (the “Termination Date”) at which point Respondent shall operate in compliance with the Act:

- a. 11:59 pm April 15, 2017;
- b. The effective date of any determination by the EPA that Respondent has achieved compliance with all terms of this Order; or
- c. Immediately upon receipt by Respondent of notice from the EPA finding that an imminent and substantial endangerment to public health, welfare, or the environment has occurred.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR ENFORCEMENT DIVISION, OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE
BEFORE THE ADMINISTRATOR

In the Matter of:

Tennessee Valley Authority,

Respondent.

Administrative Compliance Order on Consent
AED-CAA-113(a)-2016-0003

For United States Environmental Protection Agency, Air Enforcement Division, Office of Enforcement and Compliance Assurance:

4/16/2016
Date



Phillip A. Brooks
Division Director of the Air Enforcement Division, Office of Civil Enforcement, Office of Enforcement and Compliance Assurance, US Environmental Protection Agency
Mail Code 2242A, Room 1119
1200 Pennsylvania Ave, NW
Washington, DC 20460 mail or 20004 courier (note Room 1119 on courier packages)

For Tennessee Valley Authority:



Signature

4/7/16
Date

Printed Name: Brenda E. Brickhouse
Title: Vice President, Environment & Energy Policy
Address: Tennessee Valley Authority
1101 Market Street
Chattanooga, Tennessee 37402-2801

CERTIFICATE OF SERVICE

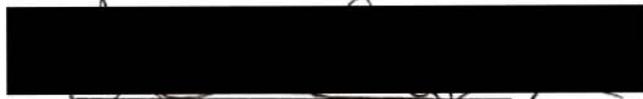
I certify that the foregoing "Administrative Compliance Order" in the Matter of Tennessee Valley Authority, Order AED-CAA-113(a)-2016-0003, was filed and copies of the same were mailed to the parties as indicated below.

Certified Mail

Sherry Quirk
Executive Vice President and General Counsel
Tennessee Valley Authority
Office of General Counsel
400 West Summit Hill Drive
Knoxville, TN 37902

Sean Alteri
Kentucky Division of Air Quality
200 Fair Oaks Lane
Frankfort, Kentucky 40601

4/18/16
Date


Tawanna Cathey