UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
EPA REGION 4

IN THE MATTER OF:	)	
	)	
	)	
TENNESSEE VALLEY AUTHORITY	)	Consent Agreement and Final Order
	)	
400 West Summit Hill Drive	)	
Knoxville, Tennessee 37092	)	
	)	
Allen, Bull Run, Colbert, Cumberland,	)	Docket No. CAA-04-2010-1528(b)
John Sevier, Kingston, Paradise,	)	
and Shawnee Fossil Plants	)	
	)	
Respondent.	)	
	)	

CONSENT AGREEMENT AND FINAL ORDER

I. Nature of the Action/Jurisdictional Statements

1. This is a civil administrative penalty proceeding pursuant to Section 113(d) of the Clean Air Act ("CAA" or "Act"), 42 U.S.C. § 7413(d), and the Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties and the Revocation/Termination or Suspension of Permits (Consolidated Rules), 40 C.F.R. Part 22, for alleged violations of (a) the Prevention of Significant Deterioration ("PSD") and Nonattainment New Source Review ("Nonattainment NSR") provisions of the Act, its implementing regulations, and the relevant portions of the federally approved PSD provisions in the State Implementation Plans ("SIPs") for Alabama, Kentucky, and Tennessee, (b) the New Source Performance Standards (NSPS), Section 111 of the Act, 42 U.S.C. § 7411, and (c) Title V of the Act, 42 U.S.C. § 7661-7661f, and the federally approved state regulations implementing the federal Title V program. Complainant is the Director, Air, Pesticides and Toxics Management Division, Region 4, United

States Environmental Protection Agency ("EPA"). Respondent is the Tennessee Valley Authority ("TVA"), which owns and operates facilities located in Region 4.

2. As further described herein, Complainant alleges that Respondent modified and thereafter operated, thirteen coal-fired electric generating units at eight facilities located in Alabama, Kentucky, and Tennessee without first obtaining appropriate permits authorizing the modification and subsequent operation of such units, and without installing and employing appropriate pollution control technology to control emissions of nitrogen oxides ("NO_x"), sulfur dioxide ("SO_2"), and particular matter ("PM"), as the Act requires.

3. Complainant and Respondent (collectively referred to herein as "the Parties") have conferred for the purpose of settlement pursuant to 40 C.F.R. § 22.18(b)(2) and desire to resolve this matter and settle the allegations described herein without further litigation or adjudication. Therefore, before the taking of any additional testimony or evidence, the making of any additional arguments, without further adjudication of any issue of fact or law in this matter, and upon consent and agreement of the Parties, this Consent Agreement and Final Order ("CAFO") will simultaneously commence and conclude this matter as authorized by 40 C.F.R. § 22.13(b)(2).

4. The authority to take action under Section 113(d) of the Clean Air Act, 42 U.S.C. § 7413(d), is vested in the Administrator. The Administrator has delegated this authority to the Regional Administrator, Region 4, by EPA Delegation 7-6-A. The Regional Administrator, Region 4, has redelegated this authority to the Director, Air, Pesticides and Toxics Management Division, by EPA Region 4 Delegation 7-6-A. Pursuant to that delegation, the Director of the Air, Pesticides and Toxics Management Division has the authority to commence an enforcement action as Complainant in this matter.

5. EPA has provided TVA and the States of Alabama, Kentucky, and Tennessee actual notice of the alleged violations in accordance with Section 113(a)(1) of the Clean Air Act, 42 U.S.C. § 7413(a)(1).

6. Consistent with Section 113(d) of the CAA, 42 U.S.C. § 7413(d), the requisite joint determination was made by EPA and the United States Department of Justice.

7. Respondent is a corporate agency and instrumentality of the United States, created and existing pursuant to the Tennessee Valley Authority Act of 1933, 16 U.S.C. §§ 831-831ee.

8. Respondent is a "person" within the meaning of Section 302(e) of the Act, 42 U.S.C. § 7602(e).

9. Respondent owns and operates 59 coal-fired electric generating units at eleven facilities located in Alabama, Kentucky, and Tennessee.

10. In 1999, EPA issued TVA an administrative compliance order alleging, inter alia, that TVA violated the PSD and Nonattainment NSR programs of the Clean Air Act, its implementing regulations, and the relevant SIPs. The administrative compliance order was subsequently amended several times, including on April 10, 2000.

11. On September 15, 2000, the United States Environmental Appeals Board ("EAB") issued a Final Order on Reconsideration, In re Tennessee Valley Auth., 9 E.A.D. 357 (EAB 2000), in which the EAB sustained in part and vacated in part the allegations in the amended administrative compliance order.

12. In that Final Order on Reconsideration, the EAB concluded that TVA had violated the PSD program for NO_x, SO_2, and/or PM at the following units: Allen Unit 3, located at the Allen Fossil Plant in Memphis, Tennessee; Bull Run Unit 1, located at the Bull Run Fossil Plant near Oak Ridge, Tennessee; Colbert Unit 5, located at the Colbert Fossil Plant in Tuscumbia,

Alabama; Cumberland Units 1 and 2, located at the Cumberland Fossil Plant in Cumberland City, Tennessee; John Sevier Unit 3, located at the John Sevier Fossil Plant near Rogersville, Tennessee; Kingston Units 6 and 8, located at the Kingston Fossil Plant near Kingston, Tennessee; Paradise Units 1, 2, and 3, located at the Paradise Fossil Plant in Drakesboro, Kentucky; and Shawnee Units 1 and 4, located at the Shawnee Fossil Plant near Paducah, Kentucky. See 9 E.A.D. at 451-52 (and 9 E.A.D. at 451, Chart No. 6).

13. In that Final Order on Reconsideration, the EAB concluded that Respondent had violated the federally approved and enforceable Nonattainment NSR provisions of the Alabama SIP for SO_2 and the NSPS program for NO_x, SO_2, and PM at Colbert Unit 5. See 9 E.A.D. at 451 n. 110; 9 E.A.D. at 452-58.

14. TVA petitioned for review of the administrative compliance order and the EAB's Final Order on Reconsideration in the United States Court of Appeals for the Eleventh Circuit, which concluded that EPA's administrative proceedings, and the CAA provisions under which the order was issued, violated due process. Tennessee Valley Auth. v. Whitman, 336 F.3d 1236, 1244, 1260 (11th Cir. 2003), cert. denied, 541 U.S. 1030 (2004). See Brief for Respondent in Opposition to a Writ of Certiorari ("Brief for Respondent") at 4, National Parks Conservation Ass'n, et al. v. Tennessee Valley Auth., 554 U.S. 917 (2008) (No. 07-867). The court then held that the unconstitutionality of the CAA provision meant that EPA's order was not a "final agency action" and that the court of appeals therefore lacked jurisdiction to review it. See Brief for Respondent at 4 (citing Whitman, 336 F.3d at 1248, 1260).

II. Legal Background

15. The Clean Air 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 population. 42 U.S.C. § 7401(b)(1).

The National Ambient Air Quality Standards

16. Section 109 of the Act, 42 U.S.C. § 7409, requires the Administrator to promulgate regulations establishing primary and secondary national ambient air quality standards ("NAAQS") for those air pollutants ("criteria pollutants") for which air quality criteria have been issued pursuant to Section 108 of the Act, 42 U.S.C. § 7408. The primary NAAQS are to be adequate to protect the public health with an adequate margin of safety, and the secondary NAAQS are to be adequate to protect the public welfare from any known or anticipated adverse effects associated with the presence of the air pollutant in the ambient air.

17. Under Section 107(d) of the Act, 42 U.S.C. § 7407(d), each state is required to designate those areas within its boundaries where the air quality is better or worse than the NAAQS for each criteria pollutant, or where the air quality cannot be classified due to insufficient data. An area that meets the NAAQS for a particular pollutant is termed an "attainment" area. An area that does not meet the NAAQS is termed a "nonattainment" area. An area that cannot be classified due to insufficient data is "unclassifiable."

18. Pursuant to Section 110 of the Act, 42 U.S.C. § 7410, each state must adopt and submit to EPA for approval a SIP that provides for the attainment and maintenance of the NAAQS. Under Section 110(a)(2), 42 U.S.C. § 7410(a)(2), each SIP must include a permit program to regulate the modification and construction of any stationary source of air pollution,

including stationary sources in attainment and nonattainment areas of the state, as necessary to assure the NAAQS are achieved.

19. Upon approval, state SIP requirements are federally enforceable under Section 113 of the Act, 42 U.S.C. § 7413.

The Prevention of Significant Deterioration Requirements

20. Part C of the Act, 42 U.S.C. §§ 7470-7492, sets forth requirements for the prevention of significant deterioration ("PSD") of air quality in those areas designated as either attainment or unclassifiable for purposes of meeting the NAAQS. These requirements are designed to protect public health and welfare, to assure that economic growth will occur in a manner consistent with the preservation of existing clean air resources, and to assure that any decision to permit increased air pollution is made only after careful evaluation of all the consequences of such decision and after public participation in the decision making process. These provisions are referred to herein as the "PSD program."

21. Section 161 of the Act, 42 U.S.C. § 7471, requires that each applicable SIP contain a PSD program.

22. Section 165 of the Act, 42 U.S.C. § 7475, among other things, prohibits the construction and operation of a "major emitting facility" in an area designated as attainment unless a permit has been issued that comports with the requirements of Section 165 of the Act, and the facility employs best available control technology ("BACT") for each pollutant subject to regulation under the Act that is emitted from the facility.

23. Section 169(1) of the Act, 42 U.S.C. § 7479(1), designates fossil fuel-fired steam electric plants of more than two hundred and fifty million British Thermal Units ("BTU's") per

hour heat input and that emit or have the potential to emit one hundred tons per year or more of any pollutant to be "major emitting facilities."

24. Section 169(2)(C) of the Act, 42 U.S.C. § 7479(2)(C), defines construction as including "modification" (as defined in Section 111(a) of the Act). "Modification" is defined in Section 111(a) of the Act, 42 U.S.C. § 7411(a), to be "any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted."

25. Applicable federal regulations codified at 40 C.F.R. Parts 51 and 52, as well as those in the federally approved SIPs for Alabama, Kentucky, and Tennessee (including Memphis/Shelby County) have at all times relevant to this CAFO prohibited a major stationary source from constructing a major modification in an area designated as attainment without, among other things, first obtaining a PSD permit, undergoing a BACT determination, and applying BACT pursuant to such determination for each relevant pollutant. The definitions contained in the federal PSD regulations and in the relevant SIPs have at all relevant times defined "construction" to include any physical change or change in the method of operation which would result in a change in actual emissions. These regulations have at all times relevant to this CAFO also defined "major modification" to include a physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act. These regulations have at all times relevant to this CAFO defined "major stationary source" to include fossil fuel-fired steam electric plants of more than 250 million BTUs per hour heat input. These regulations have at all times relevant to this CAFO defined "significant," in reference to a net emissions increase, to

mean a rate of emissions that would equal or exceed 40 tons per year each for NO_x and SO_2, and 25 tons per year of PM emissions.

Nonattainment New Source Review Requirements

26. Part D of Title I of the Act, 42 U.S.C §§ 7501-7515, sets forth provisions for new source review requirements for areas designated as being in nonattainment with the NAAQS. These provisions are referred to herein as the "Nonattainment NSR program." The Nonattainment NSR program is intended to reduce emissions of air pollutants in areas that have not attained the NAAQS, so that the areas make progress towards meeting the NAAQS.

27. Under Section 172(c)(5) of the Nonattainment NSR provisions of the Act, 42 U.S.C. § 7502(c)(5), each state is required to adopt Nonattainment NSR SIP rules that include provisions requiring permits to conform to the requirements of Section 173 of the Act, 42 U.S.C. § 7503, for the construction and operation of modified major stationary sources within nonattainment areas. Section 173 of the Act, in turn, sets forth a series of minimum requirements for the issuance of permits for major modifications to major stationary sources within nonattainment areas.

28. Section 173(a) of the Act, 42 U.S.C § 7503, provides that construction and operating permits my be issued if, among other things: (a) sufficient offsetting emission reductions have been obtained to reduce existing emissions to the point where reasonable further progress towards meeting the national ambient air quality standards is maintained; and (b) the pollution controls to be employed will reduce emissions to the "lowest achievable emission rate" ("LAER").

29. Applicable federal regulations codified at 40 C.F.R. Part 51, as well as the Nonattainment NSR program in the federally approved SIP for Alabama, have at all times

relevant to this CAFO prohibited a major stationary source from constructing a major modification in an area designated as nonattainment without, among other things, applying for and obtaining a Nonattainment NSR permit, obtaining sufficient offsetting emission reductions, and installing and operating state-of-the-art pollution control technology to comply with LAER. These regulations have at all times relevant to this CAFO also defined "major modification" to include "a physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under [the Clean Air Act]." These regulations have at all times relevant to this CAFO defined "major stationary source" to include fossil fuel-fired steam electric plants of more than 250 million BTUs per hour heat input.

The New Source Performance Standards

30. Section 111 of the Act, 42 U.S.C. § 7411, requires the Administrator to publish a list of categories of stationary sources that emit or may emit any air pollutant and to promulgate regulations establishing federal standards of performance for new sources ("NSPS") of air pollutants within each of these categories.

31. Section 111(a)(2), 42 U.S.C. § 7411(a)(2), defines new sources to include existing sources that are modified. Section 111(a)(4), 42 U.S.C. § 7411(a)(4), defines a modification as any physical or operational change that increases the amount of any air pollutant emitted by such source or results in the emission of any air pollutant not previously emitted.

32. Section 111(e), 42 U.S.C. § 7411(e), prohibits an owner or operator of a new or modified source from operating that source in violation of an NSPS after the effective date of the applicable NSPS to such source.

33. 40 C.F.R. § 60.1 states that the provisions of 40 C.F.R. Part 60 apply to the owner or operator of any stationary source that contains an affected facility, the construction or modification of which is commenced after the publication in Part 60 of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

34. 40 C.F.R. § 60.2 defines "affected facility" as any apparatus to which a standard is applicable.

35. The NSPS applicable to "electric utility steam generating units" is codified at 40 C.F.R. Part 60 subpart Da.

36. The "affected facility" to which subpart Da applies is an "electric utility steam generating unit" that is capable of combusting more than 73 megawatts (250 BTU/hour) heat input of fossil fuel (either alone or in combination with any other fuel) and for which construction or modification is commenced after September 19, 1978. 40 C.F.R. § 60.40Da.

37. An "electric utility steam generating unit" means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 megawatts electrical output to any utility power distribution system for sale. 40 C.F.R. § 60.41Da.

38. Pursuant to 40 C.F.R. § 60.14, upon modification, an existing facility becomes an "affected facility" for which the applicable NSPS must be satisfied.

Title V Requirements

39. Title V of the Act, 42 U.S.C. §§ 7661-7661f, establishes an operating permit program for certain sources, including "major sources." The purpose of Title V is, among other things, to ensure that all "applicable requirements" for compliance with the Act, including PSD, are collected in one place.

40. A "major source" for purposes of Title V is defined, among other things, as a source with a potential to emit greater than 100 tons per year of any air pollutant. 42 U.S.C. § 7661(2).

41. Pursuant to Section 502(b), 42 U.S.C. § 7661a(b), EPA promulgated regulations to implement the Title V program, which are codified at 40 C.F.R. Parts 70 and 71.

42. The Alabama Title V operating permit program was granted final approval by EPA on November 8, 2001, and is codified at Ala. Admin. Code ch. 335-3-16. The Kentucky Title V operating permit program was granted final approval by EPA on November 30, 2001, and is codified at 401 Ky. Admin. Regs. 52:020. The Tennessee Title V operating permit program was granted final approval by EPA on November 30, 2001, and is codified at Tenn. Comp. R. & Regs. R. 1200-3-9-.02.

43. Section 502(a) of the Act, 42 U.S.C. § 7661a(a), and the approved Title V programs for Alabama, Kentucky, and Tennessee, have at all relevant times made it unlawful for any person to operate a major source except in compliance with a permit issued by a permitting authority under Title V.

44. Section 503(c) of the Act, 42 U.S.C § 7661b(c), the Title V regulations codified at 40 C.F.R. §§ 70.5(a), (c), and (d), and the approved Title V programs for Alabama, Kentucky, and Tennessee, have at all relevant times required the owner or operator of a source to submit an application for a Title V permit that is timely and complete and includes, among other things: the citations and descriptions of all requirements applicable to the source (including any requirement to meet BACT pursuant to PSD); a description of, and compliance plan for, requirements for which the source is not in compliance; and a certification by a responsible official of the truth, accuracy, and completeness of the application.

45. Section 504(a), 42 U.S.C. § 7661c(a), 40 C.F.R. § 70.6(a)(1), and the approved Title V programs for Alabama, Kentucky, and Tennessee, have at all times relevant to this CAFO required that each Title V permit include, among other things, enforceable emission limitations and such other conditions as are necessary to assure compliance with applicable requirements of the Clean Air Act and the requirements of the applicable SIP, including any applicable PSD and Nonattainment NSR requirement to comply with an emission rate that meets BACT and LAER.

State Implementation Plan Requirements

46. A state may comply with sections 110, 161, and 172(c) of the Act, 42 U.S.C. §§ 7410, 7471, 7502(c), by having its own PSD and Nonattainment NSR regulations approved by EPA as part of its SIP, which must be at least as stringent as those set forth at 40 C.F.R. §§ 51.165 and 51.166, and Appendix S to Part 51.

47. EPA has promulgated two largely identical sets of regulations to implement the PSD program. One set, found at 40 C.F.R. § 52.21, contains EPA's own federal PSD program, which applies in areas without a SIP-approved state PSD program. The other set of regulations, found at 40 C.F.R. § 51.166, contains requirements that state PSD programs must meet to be approved as part of a SIP. EPA has promulgated one set of regulations to implement the Nonattainment NSR program, codified at 40 C.F.R. § 51.165, which contains requirements that state Nonattainment NSR programs must meet to be approved as part of a SIP.

48. Pursuant to the Act and federal regulations codified at 40 C.F.R. § 52.21, no construction or operation of a modification of a major stationary source can occur in an attainment area without first obtaining a permit. See 42 U.S.C. § 7475; 40 C.F.R. § 52.21.

49. Pursuant to the Act, and at all times relevant to this CAFO, the Alabama SIP requires that no construction or operation of a modification of a major stationary source occur in

an attainment or nonattainment area without first obtaining a permit. See Ala. Admin. Code r. 335-3-14-.04; Ala. Admin. Code r. 335-3-14-.05.

50. Pursuant to the Act, and at all times relevant to this CAFO, the Kentucky SIP requires that no construction or operation of a modification of a major stationary source occur in an attainment area without first obtaining a permit. See 401 Ky. Admin. Regs. 51:017.

51. Pursuant to the Act, and at all times relevant to this CAFO, the Tennessee SIP requires that no construction or operation of a modification of a major stationary source occur in an attainment area without first obtaining a permit. See Tenn. Comp. R. & Regs. R.1200-3-9-.01(4). With regard to the City of Memphis, Tennessee, and Shelby County, Tennessee, the State of Tennessee has issued a Certificate of Exemption to the local governments pursuant to Tenn. Code. Ann. § 68-201-115. During all times relevant to this CAFO, this Certificate of Exemption was recognized by EPA. 40 C.F.R. § 52.2220 (Table 2). This Certificate of Exemption (hereinafter referred to as "Memphis/Shelby County local program") incorporates all relevant provisions of the Tennessee SIP.

52. The SIP provisions identified in Paragraphs 49-51, above, are federally enforceable pursuant to Sections 110 and 113 of the Act, 42 U.S.C. §§ 7410 and 7413.

Enforcement Provisions

53. Sections 113(a)(1) and (3), 42 U.S.C. §§ 7413(a)(1) and (3), provide that the Administrator may bring an administrative penalty action pursuant to Section 113(d) of the Act, 42 U.S.C. § 7413(d), whenever, on the basis of any information available, the Administrator finds that any person has violated or is in violation of any requirement or prohibition of, inter alia, the Prevention of Significant Deterioration provisions of Section 165(a) of the Act, 42

U.S.C. § 7475(a); the federally approved PSD and Nonattainment NSR provisions of the relevant SIP; and Title V of the Act, 42 U.S.C. §§ 7661 -7661f, or any rule or permit issued thereunder.

54. Section 113(d), 42 U.S.C. § 7413(d), authorizes the Administrator to assess a civil administrative penalty against any person of up to $25,000 per day for each violation occurring before January 31, 1997; $27,500 per day for each such violation occurring on or after January 31, 1997; $32,500 per day for each such violation occurring after March 15, 2004; and $37,500 per day for each such violation occurring after January 12, 2009. See 40 C.F.R. Part 19.

III. Factual Allegations

The Allen Fossil Plant and Allen Unit 3

55. At all times relevant to this CAFO, Respondent was the owner and operator of the Allen Fossil Plant, a fossil fuel-fired electric utility steam generating plant located in Shelby County, Memphis, Tennessee. At all times relevant to this CAFO, the Allen Fossil Plant was located in an area classified as attainment for NO_2, SO_2, and PM_{10}. At all times relevant to this CAFO, the Allen Fossil Plant was within the jurisdiction of the Memphis/Shelby County local program. At all times relevant to this CAFO, the Allen Fossil Plant was a "major emitting facility" and a "major stationary source" within the meaning of the Act, its implementing regulations, and the applicable PSD provisions of the Memphis/Shelby County local program.

56. During a three-month period from 1992 through 1993, Respondent performed the following project at Allen Unit 3: replaced several boiler components, including the existing horizontal reheater with a redesigned reheater.

The Bull Run Fossil Plant and Bull Run Unit 1

57. At all times relevant to this CAFO, Respondent was the owner and operator of the Bull Run Fossil Plant, a fossil fuel-fired electric utility steam generating plant located in

Anderson County, Clinton, Tennessee. At all times relevant to this CAFO, the Bull Run Fossil Plant was located in an area classified as attainment for NO_2, SO_2, and PM_{10}. At all times relevant to this CAFO, Tennessee had a SIP-approved PSD program governing PSD permitting. At all times relevant to this CAFO, the Bull Run Fossil Plant was a "major emitting facility" and "major stationary source" within the meaning of the Act, its implementing regulations, and the applicable PSD provisions of the Tennessee SIP.

58. During a three-month period in 1988, Respondent performed the following project at Bull Run Unit 1: removed and replaced over 67 miles of tubing from the economizer and removed and replaced over 58,000 feet of tubing from the secondary superheater.

The Colbert Fossil Plant and Colbert Unit 5

59. At all times relevant to this CAFO, Respondent was the owner and operator of the Colbert Fossil Plant, a fossil fuel-fired electric utility steam generating plant located in Colbert County, Tuscumbia, Alabama. At all times relevant to this CAFO, the Colbert Fossil Plant was located in an area classified as attainment for NO_2 and TSP/PM_{10}. At all times relevant to this CAFO, the Colbert Fossil Plant was located in an area classified as nonattainment for SO_2. At all times relevant to this CAFO, Alabama had a SIP-approved PSD and Nonattainment NSR program governing PSD and Nonattainment NSR permitting respectively. At all times relevant to this CAFO, the Colbert Fossil Plant was a "major emitting facility" and a "major stationary source," and Colbert Unit 5 was an "electric utility steam generating unit," within the meaning of the Act, its implementing regulations, and the applicable PSD and Nonattainment NSR provisions of the Alabama SIP.

60. During a thirteen-month period from 1982 through 1983, Respondent performed the following project at Colbert Unit 5: replaced the waterwalls and horizontal reheater, modified

the startup system, modified the superheater by adding wingwalls in the furnace, replaced the gas proportioning dampers, replaced the windbox, redesigned and replaced the control system, and converted the unit from forced draft to balanced draft operation.

The Cumberland Fossil Plant and Cumberland Units 1 and 2

61. At all times relevant to this CAFO, Respondent was the owner and operator of the Cumberland Fossil Plant, a fossil fuel-fired electric utility steam generating plant located in Stewart County, Cumberland City, Tennessee. At all times relevant to this CAFO, the Cumberland Fossil Plant was located in an area classified as attainment for NO_2, SO_2, and PM_{10}. At all times relevant to this CAFO, Alabama had a SIP-approved PSD program governing PSD permitting. At all times relevant to this CAFO, the Cumberland Fossil Plant was a "major emitting facility" and "major stationary source" within the meaning of the Act, its implementing regulations, and the applicable PSD provisions of the Alabama SIP.

62. During a three-month period in 1994, Respondent performed the following project at Cumberland Unit 2: replaced and redesigned the secondary superheater outlet headers, replaced the secondary superheater pendant elements, and replaced the lower slope and lower waterwalls. During a three-month period in 1996, Respondent performed the following project at Cumberland Unit 1: replaced and redesigned the secondary superheater outlet headers, replaced the secondary superheater pendant elements, and replaced the lower slope and lower waterwalls.

The John Sevier Fossil Plant and John Sevier Unit 3

63. At all times relevant to this CAFO, Respondent was the owner and operator of the John Sevier Fossil Plant, a fossil fuel-fired electric utility steam generating plant located in Hawkins County, Rogersville, Tennessee. At all times relevant to this CAFO, the John Sevier

Fossil Plant was located in an area classified as attainment for NO_2, SO_2, and PM_{10}. At all times relevant to this CAFO, Tennessee had a SIP-approved PSD program governing PSD permitting. At all times relevant to this CAFO, the John Sevier Fossil Plant was a "major emitting facility" and "major stationary source" within the meaning of the Act, its implementing regulations, and the applicable PSD provisions of the Tennessee SIP.

64. During a two-month period in 1986, Respondent performed the following project at John Sevier Unit 3: replaced the superheater platen elements, replaced all burner tube panels, and replaced the waterwalls in the front, rear, and sidewalls.

The Kingston Fossil Plant and Kingston Units 6 and 8

65. At all times relevant to this CAFO, Respondent was the owner and operator of the Kingston Fossil Plant, a fossil fuel-fired electric utility steam generating plant located in Roane County, Kingston, Tennessee. At all times relevant to this CAFO, the Kingston Fossil Plant was located in an area classified as attainment for NO_2, SO_2, and PM_{10}. At all times relevant to this CAFO, Tennessee had a SIP-approved PSD program governing PSD permitting. At all times relevant to this CAFO, the Kingston Fossil Plant was a "major emitting facility" and "major stationary source" within the meaning of the Act, its implementing regulations, and the applicable PSD provisions of the Tennessee SIP.

66. During a two-month period in 1989, Respondent performed the following project at Kingston Unit 6: replaced all reheater and superheater intermediate pendant elements, and replaced the waterwalls of the superheater and reheater. During a three-month period from 1989 through 1990, Respondent performed the following project at Kingston Unit 8: replaced all reheater and superheater intermediate pendant elements, and replaced the waterwalls of the superheater and reheater.

The Paradise Fossil Plant and Paradise Units 1-3

67. At all times relevant to this CAFO, Respondent was the owner and operator of the Paradise Fossil Plant, a fossil fuel-fired electric utility steam generating plant located in Muhlenburg County, Drakesboro, Kentucky. At all times relevant to this CAFO, the Paradise Fossil Plant was located in an area classified as attainment for NO_2. At all times relevant to this CAFO, Kentucky did not have a SIP-approved PSD program governing PSD permitting. At all times relevant to this CAFO, the federal PSD regulations codified at 40 C.F.R. § 52.21 governed PSD permitting in Kentucky. At all times relevant to this CAFO, the Paradise Fossil Plant was a "major emitting facility" and "major stationary source" within the meaning of the Act, its implementing regulations, and the applicable federal PSD provisions codified at 40 C.F.R. § 52.21.

68. During a 6 month-period in 1985, Respondent performed the following project at Paradise Unit 1: replaced all 14 cyclone burners, and cut out and replaced the lower waterwall below 465 feet, including the lower headers and floor. During a four-month period from 1985 through 1986, Respondent performed the following project at Paradise Unit 2: replaced all 14 cyclone burners, and cut out and replaced the lower waterwall below 465 feet, including the lower headers and floor. During a six-month period from 1984 through 1985, Respondent performed the following project at Paradise Unit 3: replaced all 23 cyclone burners, and cut out and replaced the waterwalls between 418 feet and 501 feet.

The Shawnee Fossil Plant and Shawnee Units 1 and 4

69. At all times relevant to this CAFO, Respondent was the owner and operator of the Shawnee Fossil Plant, a fossil fuel-fired electric utility steam generating plant located in McCracken County, Paducah, Kentucky. At all times relevant to this CAFO, the Shawnee Fossil

Plant was located in an area classified as attainment for NO_2 and SO_2. At all times relevant to this CAFO, Kentucky had a SIP-approved PSD program governing PSD permitting. At all times relevant to this CAFO, the Shawnee Fossil Plant was a "major emitting facility" and "major stationary source" within the meaning of the Act, its implementing regulations, and the applicable PSD provisions of the Kentucky SIP.

70. During a two-month period from 1989 through 1990, Respondent performed the following project at Shawnee Unit 1: replaced the secondary superheater and reheater pendant elements and crossover elements, including the header stubs. During a four-month period in 1990, Respondent performed the following project at Shawnee Unit 2: replaced the secondary superheater and reheater pendant elements and crossover elements, including the header stubs.

IV. Alleged Violations

Alleged PSD Violations

71. The projects identified in Paragraphs 56, 58, 60, 62, 64, 66, 68, and 70 pertaining to Allen Unit 3, Bull Run Unit 1, Colbert Unit 5, Cumberland Units 1 and 2, John Sevier Unit 3, Kingston Units 6 and 8, Paradise Units 1, 2, and 3, and Shawnee Units 1 and 4, are physical changes in and/or changes in the method of operation of these coal-fired electric generating units. Each such project identified in Paragraphs 56, 58, 60, 62, 64, 66, 68, and 70 at the aforementioned units resulted in a significant net emissions increase, as defined by the relevant PSD regulations, in NO_x, SO_2, and/or PM. With respect to Allen Unit 3, the project identified in Paragraph 56 resulted in a significant net emissions increase in NO_x and SO_2. With respect to Bull Run Unit 1, the project identified in Paragraph 58 resulted in a significant net emissions increase in NO_x and SO_2. With respect to Colbert Unit 5, the project identified in Paragraph 60 resulted in a significant net emissions increase in NO_x and PM. With respect to Cumberland

Units 1 and 2, the projects identified in Paragraph 62 resulted in a significant net emissions increase in NO_x. With respect to John Sevier Unit 3, the project identified in Paragraph 64 resulted in a significant net emissions increase in SO_2. With respect to Kingston Units 6 and 8, the projects identified in Paragraph 66 resulted in a significant net emissions increase in NO_x and SO_2. With respect to Paradise Units 1, 2, and 3, the projects identified in Paragraph 68 resulted in a significant net emissions increase in NO_x. And with respect to Shawnee Units 1 and 4, the projects identified in Paragraph 70 resulted in a significant net emissions increase in NO_x and SO_2.

72. Accordingly, the projects identified in Paragraphs 56, 58, 60, 62, 64, 66, 68, and 70 are major modifications within the meaning of the Act and the applicable PSD provisions, including the federal PSD requirements codified at 40 C.F.R. § 52.21 and the SIP-approved PSD programs for Alabama, Kentucky, and Tennessee (including the Memphis/Shelby County local program).

73. Respondent did not comply with the applicable PSD requirements in the relevant SIPs (for the projects identified in Paragraphs 56, 58, 60, 62, 64, 66, and 70) or the federal PSD program (for the projects identified in Paragraph 68) with respect to the major modifications at Allen Unit 3, Bull Run Unit 1, Colbert Unit 5, Cumberland Units 1 and 2, John Sevier Unit 3, Kingston Units 6 and 8, Paradise Units 1, 2, and 3, and Shawnee Units 1 and 4. Among other things, Respondent failed to obtain a PSD permit as required by the Act, the federal PSD program, and the Alabama SIP, the Kentucky SIP, and the Tennessee SIP (including the Memphis/Shelby County local program), prior to commencing construction and operation of the major modifications at the aforementioned units. Respondent did not undergo a BACT determination in connection with these major modifications. Respondent failed to install and

operate BACT for control of NO_x, SO_2, and/or PM, pursuant to such determination, as required by the Act, the federal PSD program, and the PSD-approved SIPs for Alabama, Kentucky, and Tennessee (including the Memphis/Shelby County local program).

74. Accordingly, Respondent has violated Section 165 of the Act, 40 C.F.R. § 52.21, the Alabama SIP, the Kentucky SIP, the Tennessee SIP, and the Memphis/Shelby County local program.

Alleged Nonattainment NSR and NSPS Violations at Colbert Unit 5

75. The project identified in Paragraph 60 is a physical change in and/or change in the method of operation of Colbert Unit 5. The project identified in Paragraph 60 resulted in a significant net emissions increase in SO_2. The project identified in Paragraph 60 increased the hourly emission rate of NO_x, SO_2, and PM from Colbert Unit 5 above the maximum hourly emissions previously achieved.

76. The project identified in Paragraph 60 is a major modification within the meaning of the Act and the SIP-approved Nonattainment NSR program for Alabama.

77. Respondent did not comply with the applicable Nonattainment NSR requirements in the Alabama SIP. Among other things, Respondent failed to obtain a Nonattainment NSR permit as required by the Act and the Alabama SIP prior to commencing construction and operation of the major modification at Colbert Unit 5. Respondent did not undergo a LAER determination in connection with this major modification. Respondent failed to install and operate LAER for control of SO_2 pursuant to such determination, as required by the Act and the Alabama SIP.

78. Accordingly, Respondent violated the Act and the Alabama SIP.

79. The project identified in Paragraph 60 is a modification of an affected facility within the meaning of the Act and 40 C.F.R. Part 60.

80. Respondent failed to comply with the requirements of 40 C.F.R. Part 60 subparts A and Da for Colbert Unit 5 as an affected facility.

81. Accordingly, Respondent violated the Section 111(e) of the Act and 40 C.F.R. Part 60 subparts A and Da.

Alleged Title V Violations

82. As set forth above, Respondent commenced major modifications at Allen Unit 3, Bull Run Unit 1, Colbert Unit 5, Cumberland Units 1 and 2, John Sevier Unit 3, Kingston Units 6 and 8, Paradise Units 1, 2, and 3, and Shawnee Units 1 and 4. As a result, these modifications triggered the requirements to, inter alia, undergo a BACT/LAER determination, to obtain a PSD/Nonattainment NSR permit establishing emission limitations that meet BACT/LAER pursuant to such a determination, and to operate in compliance with such limitations. Respondent failed to satisfy these requirements.

83. Respondent failed to submit a complete application for a Title V operating permit for the Allen Fossil Plant, the Bull Run Fossil Plant, the Colbert Fossil Plant, the Cumberland Fossil Plant, the John Sevier Fossil Plant, the Kingston Fossil Plant, the Paradise Fossil Plant, and the Shawnee Fossil Plant and identify all applicable requirements, accurately certify compliance with such requirements, and contain a compliance plan for all applicable requirements for which Respondent's units were not in compliance with the Act (including the requirement to meet BACT/LAER pursuant to a BACT/LAER determination under PSD and Nonattainment NSR, and the applicable NSPS requirements of 40 C.F.R. Part 60 subpart A and Da for Colbert Unit 5). Respondent failed to obtain a proper or adequate Title V operating permit for the aforementioned facilities that contained emission limitations for NO_x, SO_2, and/or PM that met BACT/LAER pursuant to a BACT/LAER determination and the applicable

emission limitations in the NSPS for Colbert Unit 5. Respondent thereafter operated the modified units without meeting such limitations and without having a valid operating permit that required compliance with such limitations or that contained a compliance plan for all applicable requirements for which Respondent's units were not in compliance. Respondent's conduct violated Sections 502, 503, and 504 of the Act, 42 U.S.C. §§ 7661a, 7661b and 7661c; the regulations codified at 40 C.F.R. Part 70, including, but not limited to, 40 C.F.R. §§ 70.1(b), 70.5(a), (b) and (c), 70.6 and 70.7(b); and the federally approved Title V programs of Alabama, Kentucky, and Tennessee.

84. As provided in Section 113(d) of the Act, the violations set forth in Paragraphs 71-83 subject Respondent to civil administrative penalties of up to $25,000 per day for each violation occurring before January 31, 1997; $27,500 per day for each such violation occurring on or after January 31, 1997; $32,500 per day for each such violation occurring after March 15, 2004; and $37,500 per day for each such violation occurring after January 12, 2009.

V. Consent Agreement

85. Solely or purposes of this CAFO, and for no other purpose, as required by 40 C.F.R. § 22.18(b)(2), Respondent admits the jurisdictional allegations set forth in Paragraphs 1-14, above.

86. Solely for purposes of this CAFO, and for no other purpose, as required by 40 C.F.R. § 22.18(b)(2), Respondent neither admits nor denies the factual allegations set forth in Paragraphs 55-70, above.

87. Solely for purposes of this CAFO, and as referenced in the Federal Facilities Compliance Agreement Between the United States Environmental Protection Agency and the Tennessee Valley Authority, Docket No. CAA-04-2010-1760 ("Compliance Agreement")

(attached hereto as Exhibit A), and for no other purpose, as required by 40 C.F.R. § 22.18(b)(2), Respondent waives any right to contest the factual and legal allegations set forth above (although TVA in fact denies such factual and legal allegations), its right to appeal the proposed final order accompanying this agreement, and its right to request a conference with the Administrator.

88. Respondent consents to the assessment of and agrees to pay the civil penalty as set forth in this CAFO. Based upon an analysis of the penalty assessment criteria in Section 113(e) of the Act, 42 U.S.C. § 7413(e), Complainant has determined that an appropriate civil penalty to settle this matter is $8,000,000.

89. Except as otherwise provided in Section V.H (Resolution of Claims) of the Compliance Agreement, payment of the civil administrative penalty set forth in this CAFO shall resolve the alleged violations and factual issues contained herein, and EPA hereby releases Respondent from liability for the facts and violations alleged herein. This CAFO shall not otherwise affect any liability of Respondent, if any, to the United States. Other than as expressed herein, pursuant to 40 C.F.R. § 22.18(c), settlement of this matter shall not affect the right of EPA or the United States to pursue appropriate injunctive or other equitable relief or criminal sanctions for any violations of law. Neither EPA nor Complainant waives any right to bring an enforcement action against Respondent for violation of any federal or state statute, regulation, or permit, to initiate an action for imminent and substantial endangerment, or to pursue criminal enforcement for allegations of violations not contained in this CAFO.

90. Complainant and Respondent agree to settle this matter by their execution of this CAFO. The Parties agree that the settlement of this matter is in the public interest and that this CAFO, together with the Compliance Agreement, are consistent with the requirements of the Act.

VI. Final Order

91. Respondent shall pay a civil administrative penalty of EIGHT MILLION DOLLARS (**$8,000,000**) **within 30 days** of the effective date of the Compliance Agreement by wire transfer to the Federal Reserve Bank of New York with the following wire transfer content:

Federal Reserve Bank of New York
ABA: 021030004
Account Number: 68010727
SWIFT address: FRNYUS33
TIN: 52-0852695
33 Liberty St.
New York NY 10045

Field Tag 4200 of the Fedwire message should read: "D 68010727 Environmental Protection Agency"

92. At the time of payment, Respondent shall send a copy of the wire transfer authorization form and transaction record, together with a transmittal letter which shall state that the payment is for the civil administrative penalty owed pursuant to the Consent Agreement and Final Order in In re Tennessee Valley Authority, Docket No. CAA-04-2010-1528(b), to the following persons at the following addresses:

Regional Hearing Clerk
U.S. EPA – Region 4
61 Forsyth Street
Atlanta, Georgia 30303

Mr. Jason Dressler
Air, Pesticides and Toxics Management Division
Air and EPCRA Enforcement Branch
U.S. EPA - Region 4
61 Forsyth Street
Atlanta, Georgia 30303

Ms. Saundi Wilson (OEA)
U.S. EPA – Region 4
61 Forsyth Street
Atlanta, Georgia 30303

Ms. Ilana Saltzbart
U.S. EPA – Headquarters
Mail Code 2242A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

93. Pursuant to 31 U.S.C. § 3717, EPA is entitled to assess interest and penalties on debts owed to the United States and a charge to cover the cost of processing and handling a delinquent claim. Interest will therefore begin to accrue on the civil administrative penalty from the effective date of this CAFO, if the penalty is not paid by the date required. Interest will be assessed at the rate established by the Secretary of Treasury, pursuant to 31 U.S.C. § 3717. A charge will be assessed to cover the costs of debt collection, including processing and handling costs and attorney fees. In addition, a penalty charge of up to six percent per year compounded annually may be assessed on any portion of the debt that remains delinquent more than ninety (90) days after payment is due.

94. The penalty described in Paragraph 91, shall represent civil penalties assessed by Complainant within the meaning of Section 162(f) of the Internal Revenue Code, 26 U.S.C. § 162(f), and is not a tax-deductible expenditure for purposes of federal law. Respondent, as an agency and instrumentality of the United States, is not subject to federal or state taxation.

95. Complainant and Respondent shall bear their own costs and attorney fees in this matter.

96. This CAFO shall be binding upon Respondent, its successors and assigns.

97. The following individual is authorized to receive service for EPA in this proceeding:

Ms. Beverly A. Spagg, Chief
Air Enforcement and EPCRA Branch
Air, Pesticides and Toxics Management Division
U.S. EPA – Region 4
61 Forsyth Street
Atlanta, Georgia 30303

98. Each undersigned representative of the Parties to this CAFO certifies that he or she is fully authorized by the party represented to enter into this CAFO and legally bind that party to it.

99. This CAFO shall not relieve Respondent of its obligation to comply with all applicable provisions of federal, state, or local law, nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state, or local permit.

VII. Effective Date

100. The effective date of this CAFO shall be the date on which the Final Order is filed.

AGREED AND CONSENTED TO:

FOR COMPLAINANT:

_____
Beverly H. Banister, Director
Air, Pesticides and Toxics
Management Division
U.S. Environmental Protection
Agency, Region 4

Date: _____

FOR RESPONDENT:

_____
Anda Ray, Senior Vice President
Environment and Technology
Tennessee Valley Authority

Date:_____

APPROVED AND SO ORDERED this _____ day of _____, 2011.

_____
Susan B. Schub
Regional Judicial Officer
EPA, Region 4