

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF INDIANA

---

UNITED STATES OF AMERICA,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No.
	)	
SOUTHERN INDIANA GAS AND	)	
ELECTRIC COMPANY,	)	
	)	
Defendant.	)	
	)	
	)	

---

COMPLAINT

The United States of America, by authority of the Attorney General of the United States and through the undersigned attorneys, acting at the request of the Administrator of the United States Environmental Protection Agency ("EPA"), alleges:

NATURE OF THE ACTION

1. This is a civil action brought against Southern Indiana Gas and Electric Company ("the Defendant") pursuant to Sections 113(b)(2) and 167 of the Clean Air Act ("the Act"), 42 U.S.C. § 7413(b)(2) and 7477, for injunctive relief and the assessment of civil penalties for violations of the Prevention of Significant Deterioration ("PSD") provisions and New Source Performance Standards ("NSPS") of the Act, 42 U.S.C. §§ 7470-92 and 7411, respectively. Numerous times, Defendant modified, and thereafter operated, its electric generating units at F. B. Culley Station coal-fired electricity generating power plant in Warrick County, Indiana without first obtaining appropriate permits authorizing construction of modifications at these

units and without installing the best available control technology to control emissions of nitrogen oxides, sulfur dioxide, and particulate matter, as the Act requires.

2. As a result of Defendant's operation of the power plant following these unlawful modifications and the absence of appropriate controls, massive amounts of sulfur dioxide, nitrogen oxides, and particulate matter have been, and still are being, released into the atmosphere aggravating air pollution locally and far downwind from this plant. Defendant's violations, alone and in combination with similar violations at other coal-fired electric power plants, have been significant contributors to some of the most severe environmental problems facing the nation today. An order of this Court directing this Defendant, forthwith, to install and operate the best available technology to control these pollutants, in conjunction with orders being sought in similar cases involving other coal-fired electric power plants in the midwest and southern United States being filed by the United States concurrent with the filing of this complaint, will produce an immediate, dramatic improvement in the quality of air breathed by millions of Americans. It will reduce illness, protect lakes and streams from further degradation due to the fallout from acid rain, and allow the environment to restore itself following years, and in some cases decades, of illegal emissions.

3. Sulfur dioxide, nitrogen oxides, and particulate matter when emitted into the air can each have adverse environmental and health impacts. Electric utility plants collectively account for about 70 percent of annual sulfur dioxide emissions and 30 percent of nitrogen oxides emissions in the United States. Sulfur dioxide ("SO<sub>2</sub>") interacts in the atmosphere to form sulfate aerosols, which may be transported long distances through the air. Most sulfate aerosols are particles that can be inhaled. In the eastern United States, sulfate aerosols make up about 25

percent of the inhalable particles and, according to recent studies, high levels of sulfate aerosols are associated with increased sickness and mortality from lung disorders, such as asthma and bronchitis. Lowering sulfate aerosol emissions from electric utility plants may significantly reduce the incidence and the severity of asthma and bronchitis and associated hospital admissions and emergency room visits.

4. Nitrogen oxides ("NO<sub>x</sub>") are major producers of ground level ozone, which scientists have long recognized as being harmful to human health. NO<sub>x</sub>, transformed into ozone, may cause decreases in lung function (especially among children who are active outdoors) and respiratory problems leading to increased hospital admissions and emergency room visits. Ozone may inflame and possibly cause permanent damage to people's lungs. NO<sub>x</sub> is also transformed into nitrogen dioxide ("NO<sub>2</sub>"), a dangerous pollutant that can cause people to have difficulty breathing by constricting lower respiratory passages; it may weaken a person's immune system, causing increased susceptibility to pulmonary and other forms of infections. While children and asthmatics are the primary sensitive populations, individuals suffering from bronchitis, emphysema, and other chronic pulmonary diseases have a heightened sensitivity to NO<sub>2</sub> exposure. NO<sub>x</sub> also reacts with other pollutants and sunlight to form photochemical smog, which in turn contributes to haze and reduces visibility.

5. SO<sub>2</sub> and NO<sub>x</sub> interact in the atmosphere with water and oxygen to form nitric and sulfuric acids, commonly known as acid rain. Acid rain, which also comes in the form of snow or sleet, "acidifies" lakes and streams, making them uninhabitable for aquatic life, and it contributes to damage of trees at high elevations. Acid rain accelerates the decay of building materials and paints, including irreplaceable buildings, statues, and sculptures that are part of our

nation's cultural heritage. SO<sub>2</sub> and NO<sub>x</sub> gases and their particulate matter derivatives, sulfates and nitrates, contribute to visibility degradation and impact public health. In this civil action, and in other civil actions filed concurrent with it, the United States intends to reduce dramatically the amount of SO<sub>2</sub> and NO<sub>x</sub> that certain electric utility plants have been illegally releasing into the atmosphere. If the injunctive relief requested by the United States is granted in this case, and in others being filed concurrent with it, many acidified lakes and streams will improve so that they may once again support fish and other forms of aquatic life. Visibility will improve, allowing for increased enjoyment of scenic vistas throughout the eastern half of our country. Stress to our forests from Maine to Georgia will be reduced. Deterioration of our historic buildings and monuments will be slowed. In addition, reductions in SO<sub>2</sub> and NO<sub>x</sub> will reduce sulfates, nitrates, and ground level ozone, leading to improvements in public health.

6. Particulate matter is the term for solid or liquid particles found in the air. Smaller particulate matter of a diameter of 10 micrometers or less is referred to as PM 10. Power plants are a major source of particulate matter (“PM”). Breathing PM at concentrations in excess of existing ambient air standards may increase the chances of premature death, damage to lung tissue, cancer, or respiratory disease. The elderly, children, and people with chronic lung disease, influenza, or asthma, tend to be especially sensitive to the effects of PM. PM can also make the effects of acid rain worse, reducing visibility and damaging man-made materials. Reductions in PM illegally released into the atmosphere by the Defendant and others will significantly reduce the serious health and environmental effects caused by PM in our atmosphere.

#### JURISDICTION AND VENUE

7. This Court has jurisdiction of the subject matter of this action pursuant to Sections 113(b) and 167 of the Act, 42 U.S.C. §§ 7413(b) and 7477, and pursuant to 28 U.S.C. §§ 1331, 1345, and 1355.

8. Venue is proper in this District pursuant to Sections 113(b) of the Act, 42 U.S.C. §§ 7413(b), and 28 U.S.C. §§ 1391(b), (c) and 1395(a), because the Defendant resides in this District, the violations occurred in this District, and the F. B. Culley Station facility is located in this District.

#### NOTICES

9. The United States is providing notice of the commencement of this action to the State of Indiana as required by Section 113(b) of the Act, 42 U.S.C. § 7413(b).

#### THE DEFENDANT

10. Defendant, Southern Indiana Gas and Electric Company (“SIGECO”), owns and is an operator of the F. B. Culley Station (“Culley Station”) coal fired electric generation plant in Warrick County, Indiana. Culley Station generates electricity from three steam generating boilers which are designated F. B. Culley Unit 1 (“Unit 1”), F. B. Culley Unit 2 (“Unit 2”) and F. B. Culley Unit 3 (“Unit 3”).

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

#### STATUTORY BACKGROUND

12. 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.

Section 101(b)(1) of the Act, 42 U.S.C. § 7401(b)(1).

#### The National Ambient Air Quality Standards

13. Section 109 of the Act, 42 U.S.C. § 7409, requires the Administrator of EPA to promulgate regulations establishing primary and secondary national ambient air quality standards ("NAAQS" or "ambient air quality standards") for those air pollutants ("criteria pollutants") for which air quality criteria have been issued pursuant to section 108, 42 U.S.C. § 7408. The primary NAAQS are to be adequate to protect the public health, 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.

14. 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 an "attainment" area. An area that does not meet the NAAQS is a "nonattainment" area. An area that cannot be classified due to insufficient data is "unclassifiable."

15. At times relevant to this complaint, Culley Station was located in an area that had been classified as attainment or unclassifiable for one or more of the following pollutants: NO<sub>x</sub>, SO<sub>2</sub>, PM 10 and PM.

#### The Prevention of Significant Deterioration Requirements

16. 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 standards. 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 a decision and after public participation in the decision making process. These provisions are referred to herein as the "PSD program."

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

18. 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.”

#### New Source Performance Standards

19. Section 111(b)(1)(A) of the Act, 42 U.S.C. § 7411(b)(1)(A), requires the Administrator of U.S. EPA to publish a list of categories of stationary sources that emit or may emit any air pollutant. The list must include any categories of sources which are determined to cause or significantly contribute to air pollution which may endanger public health or welfare.

20. Section 111(b)(1)(B) of the Act, 42 U.S.C. § 7411(b)(1)(B), requires the Administrator of U.S. EPA to promulgate regulations establishing federal standards of performance for new sources of air pollutants within each of these categories. "New sources" are defined as stationary sources, the construction or modification of which is commenced after the publication of the regulations or proposed regulations prescribing a standard of performance applicable to such source. 42 U.S.C. § 7411(a)(2). These standards are known as New Source Performance Standards (“NSPS”)

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

22. Pursuant to Sections 111 and 114 of the Act, 42 U.S.C. §§ 7411, 7414, EPA promulgated 40 C.F.R. Part 60, Subpart A, §§ 60.1 - 60.19, which contains general provisions regarding NSPS.

23. 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 which 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.

24. 40 C.F.R. § 60.2 defines "affected facility" as any apparatus to which a standard is applicable.

25. Pursuant to Section 111(b)(1)(A) of the Act, 42 U.S.C. § 7411(b)(1)(A), at 40 C.F.R. §§ 60.40a-49a (Subpart Da) EPA has identified electric utility steam generating units as one category of stationary sources that cause, or contribute significantly to, air pollution that may reasonably be anticipated to endanger public health or welfare.

26. EPA's general NSPS provisions, referred to in paragraph 22, above, apply to owners or operators of any stationary source that contains an "affected facility" subject to regulation under 40 C.F.R. Part 60. EPA has also promulgated NSPS for various industrial categories, including electric utility steam generating units. NSPS requirements for electric utility steam generating units for which construction or modification is commenced after September 18, 1978, are codified at 40 C.F.R. Part 60, Subpart Da, §§ 60.40a-49a.

27. The "affected facilities" to which Subpart Da applies are each "electric utility steam generating unit" that is capable of combusting more than 73 megawatts (250 million 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 18, 1978. 40 C.F.R. § 60.40a.

28. Under Subpart Da, "steam generating unit" means any furnace, boiler, or other device, other than nuclear steam generators, used for combusting fuel for the purpose of producing steam, including fossil-fuel-fired steam generators associated with combined cycle gas turbines. 40 C.F.R. § 60.41a.

29. An “electric utility steam generating unit”, under Subpart Da, 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 (“MW”) electrical output to any utility power distribution system for sale. 40 C.F.R. § 60.41a.

30. “Modification” under NSPS is defined as “any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.” 40 C.F.R. § 60.2. Under NSPS, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of Section 111 of the Act, 42 U.S.C. § 7411. 40 C.F.R. § 60.14(a). Following the promulgation of 40 C.F.R. § 60.14(h) in July, 1992, no physical change, or change in method of operation, is treated as a modification of an existing electric steam generating unit if such change does not increase the maximum hourly emissions of a pollutant to which a standard applies above the maximum hourly emissions achievable at the unit during the 5 years prior to the change. 40 C.F.R. § 60.14(h).

31. Under 40 C.F.R. § 60.14, upon modification, an existing facility becomes an “affected facility” for which the applicable NSPS must be satisfied.

32. Section 111(e) of the Act, 42 U.S.C. § 7411(e), prohibits the operation of any new source in violation of an NSPS applicable to such source. Thus, a violation of an NSPS is a violation of Section 111(e) of the Act.

33. Pursuant to 40 C.F.R. § 60.7(a)(4), any owner or operator of an affected facility subject to NSPS must furnish written notification to EPA of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies postmarked 60 days or as soon as practicable before the change is commenced with information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change.

34. Pursuant to 40 C.F.R. § 60.8 , the owner or operator of an affected facility that is an electric utility steam generating unit must conduct a performance test in accordance with 40 C.F.R. § 60.48a within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, and furnish EPA a written report of the results of such performance test.

35. Pursuant to 40 C.F.R. § 60.42a(a), the owner or operator of an electric utility steam generating unit subject to Subpart Da, may not discharge into the atmosphere from the affected facility any gases which contain PM in excess of 0.03 lb/mmBtu.

#### ENFORCEMENT PROVISIONS

36. Section 113(a)(3) of the Act, 42 U.S.C. § 7413(a)(3), provides that “Except for a requirement or prohibition enforceable under the preceding provisions of this subsection, whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated, or is in violation of, any other requirement or prohibition of this subchapter . . . the Administrator may . . . bring a civil action in accordance with subsection (b) of this section . . . .”

37. Section 113(b)(2) of the Act, 42 U.S.C. § 7413(b)(2), authorizes the Administrator to initiate a judicial enforcement action for a permanent or temporary injunction, and/or for a civil penalty of up to \$25,000 per day of violation for violations occurring on or before January 30, 1997 and \$27,500 per day for each such violation occurring after January 30, 1997, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, against any person whenever such person has violated, or is in violation of, requirements of the Act other than those specified in Section 113(b)(1), 42 U.S.C. § 7413(b)(1), including violations of Section 165(a), 42 U.S.C. § 7475(a) and Section 111, 42 U.S.C. § 7411.

38. Section 167 of the Act, 42 U.S.C. § 7477, authorizes the Administrator to initiate an action for injunctive relief, as necessary to prevent the construction, modification or operation of a major emitting facility which does not conform to the PSD requirements in Part C of the Act.

39. At all times pertinent to this civil action, Defendant was and is the owner and operator of Culley Station and each of its three boilers, designated Units 1, 2 and 3.

40. At all times pertinent to this civil action, Culley Station was a “major emitting facility” and a “major stationary source,” within the meaning of the Act for NO<sub>x</sub>, SO<sub>2</sub>, and PM. Unit 3 is an “affected facility” that is subject to the requirements of NSPS.

**FIRST CLAIM FOR RELIEF**  
( PSD Violations: Modifications at Culley Station)

41. Paragraphs 1 through 40 are realleged and incorporated herein by reference.

42. At various times, Defendant commenced construction of modifications, as defined in the Act, at Culley Station. These modifications included, but are not limited to, these modifications or combination of modifications: (1) the replacement of numerous components of Unit 3 in 1997, including, replacing all tubes in the secondary superheater outlet bank, replacing

the reheater outlet bank and overhauling the Unit 3 turbine, generator, exciter, boiler feed pump turbine and boiler feed pump; (2) the replacement of the Unit 3 economizer bank in 1994; (3) installation of a new economizer for Unit 1 in 1991; and, (4) the installation of a new outlet section for the secondary superheater for Unit 2 in 1992. Defendant constructed additional modifications to its plant beyond those described in this paragraph.

43. Defendant violated and continues to violate Section 165(a) and 167 of the Act, 42 U.S.C. §§ 7475(a) and 7477, by, among other things, undertaking such “modifications” and continuing to operate its facility without (1) obtaining a PSD permit; and (2) applying best available control technology for NO<sub>x</sub>, SO<sub>2</sub>, and PM, as required.

44. Unless restrained by an order of this Court, these and similar violations of the Act will continue.

45. As provided in Section 113(b)(2) of the Act, 42 U.S.C. § 7413(b)(2), and Section 167 of the Act, 42 U.S.C. § 7477, the violations set forth above subject Defendant to injunctive relief and civil penalties of up to \$25,000 per day for each violation prior to January 30, 1997, and \$27,500 per day for each such violation after January 30, 1997, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701.

**SECOND CLAIM FOR RELIEF**  
(NSPS violations: 1997 Unit 3 Refurbishment)

46. Paragraphs 1 through 40 are realleged and incorporated herein by reference.

47. Defendant is the "owner or operator," within the meaning of Section 111(a)(5) of the Act, 42 U.S.C. § 7411(a)(5), and 40 C.F.R. § 60.2, of an electric utility steam generating unit, within the meaning of 40 C.F.R. §§ 60.40a and 60.41a, designated Unit 3, located at Culley Station.

48. Unit 3 at Culley Station is an “affected facility” under Subparts A and Da of NSPS and is subject to the NSPS, including provisions of Subpart A and Da of the NSPS.

49. During 1997, Defendant replaced numerous components of Unit 3, including, replacing all tubes in the secondary superheater outlet bank, replacing the reheater outlet bank, and overhauling the Unit 3 turbine, generator, exciter, boiler feed pump turbine and boiler feed pump. These activities, hereinafter referred to as the 1997 Unit 3 Replacement Activities, increased the gross megawatt generation capacity at Unit 3 and the maximum hourly emission rate of SO<sub>2</sub>, NO<sub>x</sub> and PM from Unit 3 above the maximum hourly emissions achievable at that unit during the 5 years prior to the change. The 1997 Unit 3 Replacement Activities constituted “modification” of an “affected facility” as those terms are defined in the NSPS. 40 C.F.R. §§ 60.2 and 60.14(a). The 1997 Unit 3 Replacement Activities took place after September 18, 1978.

50. With regard to the 1997 Unit 3 Replacement Activities, Defendant failed to furnish written notification to EPA in accordance with the requirements of 40 C.F.R. § 60.7(a)(4) of any physical or operational change to the Unit which may increase the emission rate of any air pollutant to which a standard applies postmarked 60 days or as soon as practicable before the change is commenced with information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change.

51. With regard to the 1997 Unit 3 Replacement Activities, Defendant failed to conduct a performance test in accordance with the procedures required by § 60.48a within 60 days after achieving the maximum production rate at Unit 3 (or within 180 days after initial startup of Unit

3) after the 1997 Unit 3 Replacement Activities, and to furnish a written report of the results of such performance test to EPA, in violation of 40 C.F.R. § 60.8.

52. On diverse occasions since the 1997 Unit 3 Replacement Activities, including at least February 12, 1999, Defendant has operated Unit 3 in such a manner that the PM emission limitation of 0.03 lb/mmBtu has been exceeded, in violation of 40 C.F.R. § 60.42a(a)(1).

53. Each day that Defendant failed to comply with each of the NSPS requirements described in this Complaint, constitutes a violation of the federal NSPS regulations, and the Act.

54. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), Defendant is subject to injunctive relief and civil penalties up to \$25,000 per day of violation for violations occurring on or before January 30, 1997 and \$27,500 per day for each such violation occurring after January 30, 1997 pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701. Unless enjoined by this Court, Defendant will continue to violate the requirements of the NSPS and the Act.

#### PRAYER FOR RELIEF

WHEREFORE, based upon all the allegations contained in paragraphs 1 through 54 above, the United States of America requests that this Court:

1. Permanently enjoin the Defendant from operating Units 1, 2 and 3 of Culley Station, including the construction of future modifications, except in accordance with the Clean Air Act and any applicable regulatory requirements;

2. Order Defendant to remedy its past violations by, among other things, requiring Defendant to install, as appropriate, the best available control technology on Units 1, 2 and 3 at Culley Station for each pollutant subject to regulation under the Clean Air Act;

3. Order Defendant to apply for a permit that is in conformity with the requirements of the PSD program;

4. Order Defendant to comply with the NSPS provisions of the Act;

5. Order Defendant to conduct audits of its operations to determine if any additional modifications have occurred which would require it to meet the requirements of PSD and NSPS and report the results of these audits to the United States;

6. Order defendant to take other appropriate actions to remedy, mitigate, and offset the harm to public health and the environment caused by the violations of the Clean Air Act alleged above;

7. Assess a civil penalty against Defendant of up to \$25,000 per day for each violation of the Clean Air Act and applicable regulations, and \$27,500 per day for each such violation after January 30, 1997;

8. Award Plaintiff its costs of this action; and,

9. Grant such other relief as the Court deems just and proper.

Respectfully Submitted,

---

LOIS J. SCHIFFER  
Assistant Attorney General  
Environment and Natural Resources  
Division

---

PAMELA R. LEE  
Trial Attorney

Environmental Enforcement Section  
Environment and Natural Resources  
Division  
Department of Justice  
P.O. Box 7611  
Washington, D.C. 20530  
(202) 305-2775

JUDITH A. STEWART  
United States Attorney for the  
Southern District of Indiana

By:

\_\_\_\_\_  
HAROLD R. BICKHAM  
Assistant United States Attorney  
United States Attorney's Office  
Southern District of Indiana  
5<sup>th</sup> Floor  
46 East Ohio St.  
Indianapolis, Indiana 46204

OF COUNSEL

REGINALD A. PALLESEN  
Associate Regional Counsel  
Office of Regional Counsel (C-14J)  
U.S. EPA, Region 5  
77 W. Jackson Boulevard  
Chicago, Illinois 60604-3590