# IN THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF OHIO EASTERN DIVISION

UNITED STATES OF AMERICA, et al., ) Plaintiffs, ) v. ) OHIO EDISON COMPANY and PENNSYLVANIA) POWER COMPANY, subsidiary of Ohio Edison, ) Defendants. )

Civil Action No: 2:99-CV-1181 JUDGE EDMUND A. SARGUS, JR.

# CONSENT DECREE

March 18, 2005

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#### CONSENT DECREE

WHEREAS, Plaintiff, the United States of America ("the United States"), on behalf of the United States Environmental Protection Agency ("EPA"), and Plaintiffs-Intervenors, the States of New York, New Jersey and Connecticut ("States"), filed complaints or amended complaints for injunctive relief and civil penalties pursuant to Sections 113(b)(2) and 167 of the Clean Air Act (the "Act"), 42 U.S.C. §§ 7413(b)(2) and 7477, and Section 304(a) of the Act, 42 U.S.C. § 7604(a), alleging that Defendants, Ohio Edison Company and Pennsylvania Power Company, a subsidiary of Ohio Edison ("Ohio Edison"), which in turn is a subsidiary of FirstEnergy Corp. ("FirstEnergy"), undertook construction projects at major emitting facilities in violation of the Prevention of Significant Deterioration provisions of Part C of Subchapter I of the Act, 42 U.S.C. §§ 7470-7492, the New Source Review provisions of the Act, 42 U.S.C. §§ 7501-7515, and in violation of the federally approved and enforceable Ohio State Implementation Plan;

WHEREAS, in its Amended Complaint, the United States and the States ("Plaintiffs") allege, inter alia, that Ohio Edison failed to obtain the necessary permits and install the controls necessary under the Act to reduce its sulfur dioxide, nitrogen oxides, and/or particulate matter emissions;

WHEREAS, the Amended Complaint alleges claims upon which relief can be granted against Ohio Edison under Sections 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477;

WHEREAS, the United States and some or all of the States provided Ohio Edison and the State of Ohio with actual notice of Ohio Edison's alleged violations in accordance with Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1);

WHEREAS, on August 7, 2003, the United States District Court for the Southern District of Ohio, Eastern Division, issued an opinion in the liability phase of this matter holding that Ohio Edison failed to obtain pre-construction permits for eleven projects it undertook at its Sammis Plant; and further held that the projects were "major modifications" and that Ohio Edison had violated 42 U.S.C. § 7475 and associated regulations; but did not reach the remedy phase of the trial and did not address the level of air pollution controls or other remedies required, if any, or the level of impact, if any, to public health or the environment;

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WHEREAS, there are unique difficulties associated with retrofitting SCRs and FGDs at the smaller units (Units 1-5) at the Sammis Plant, due to the location of the Sammis Plant between State Route 7 and the Ohio River to the east and steep terrain to the west, prior retrofitting of particulate emission control devices located on decking built over State Route 7, existing facilities to the north and south of the plant, and the close proximity between the seven Sammis Plant units, and the Parties have considered these circumstances and overall benefit to the environment in reaching agreement herein;

WHEREAS, the Clean Air Interstate Rule ("CAIR") was proposed on January 30, 2004 and a Supplemental Proposal was proposed on June 10, 2004 (69 Fed. Reg. 4,566 (Jan. 30, 2004); 69 Fed. Reg. 32,684 (June 10, 2004)); and CAIR was promulgated as a final rule on March 9, 2005, it is anticipated that under CAIR, other owners of electric generating units in affected areas also will reduce their emissions of  $NO_X$  and  $SO_2$ ;

WHEREAS, the Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated in good faith and at arm's length and that this Consent Decree is fair, reasonable, consistent with the goals of the Act, and in the public interest;

WHEREAS, the Parties have consented to entry of this Consent Decree without trial on remedy;

WHEREAS, the Parties have agreed that settlement of this action is in the best interest of the Parties and in the public interest, and that entry of this Consent Decree without further litigation is the most appropriate means of resolving this matter;

NOW, THEREFORE, without any admission of fact or law or concession of any liability on the part of Ohio Edison but solely for purposes of resolving this case, it is hereby ORDERED, ADJUDGED, AND DECREED as follows:

## I. JURISDICTION AND VENUE

This Court has jurisdiction over this action, the subject matter herein, and the Parties consenting hereto, pursuant to 28 U.S.C. §§ 1331, 1345, 1355, and 1367, and pursuant to Sections 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477. Venue is proper under Section 113(b) of the Act, 42 U.S.C. § 7413(b), and under 28 U.S.C. § 1391(b) and (c). Solely for the purposes of this Consent Decree and the underlying Complaint, Ohio Edison waives all objections and defenses that it may have to the Court's jurisdiction

over this action, to the Court's jurisdiction over Ohio Edison, and to venue in this District. The Parties shall not challenge the terms of this Consent Decree or this Court's jurisdiction to enter and enforce this Consent Decree. For purposes of the Amended Complaints filed by the Plaintiffs in this matter and resolved by the Consent Decree, and for purposes of entry and enforcement of this Consent Decree, Ohio Edison waives any defense or objection based on standing as to the Plaintiffs. Except as expressly provided for herein, this Consent Decree shall not create any rights in any party other than the Parties to this Consent Decree. Except as provided in Section XXVI (Public Comment) of this Consent Decree, the Parties consent to entry of this Consent Decree without further notice.

# II. <u>APPLICABILITY</u>

- Upon entry, the provisions of this Consent Decree shall apply to and be binding upon the Plaintiffs and Ohio Edison and their successors and assigns, and upon Ohio Edison's officers, employees and agents solely in their capacities as such.
- 3. Ohio Edison shall provide notice of and access to a copy of this Consent Decree to all vendors, suppliers, consultants, contractors, agents, and any other company or other organization retained to perform any of the work required by this Consent Decree. Notwithstanding any retention of contractors, subcontractors, or agents to perform any work required under this Consent Decree, Ohio Edison shall be responsible for ensuring that all work is performed in accordance with the requirements of this Consent Decree. In any action to enforce this Consent Decree, Ohio Edison shall not assert as a defense the failure of its officers, directors, employees, servants, agents, or contractors to take actions necessary to comply with this Consent Decree, unless Ohio Edison establishes that such failure resulted from a Force Majeure Event, as defined in Paragraph 157.

#### III. <u>DEFINITIONS</u>

 "30-Day Rolling Average Emission Rate" shall be determined in accordance with 40 C.F.R. Part 60, subpart Da, except that in calculating all 30-Day Rolling Average Emission Rates Ohio Edison: A. shall include all emissions and Btus from startup and shutdown events from the time the unit is synchronized with a utility electric distribution system through the time that the unit ceases to combust fossil fuel and the fire is out in the boiler, except as provided by Subparagraph B or C;

B. may exclude emissions of  $NO_X$  and Btus occurring during the fifth and subsequent Cold Start Up Period(s) that occur in any 30-Day period if inclusion of such emissions would result in a violation of any applicable 30-Day Rolling Average Emission Rate, and if Ohio Edison has installed, operated and maintained the SCR, ECO, or other approved NO<sub>X</sub> control technology in question consistent with good engineering practices. A "Cold Start Up Period" occurs whenever there has been no fire in the boiler of a unit (no combustion of any fossil fuel) for a period of six hours or more. The emissions to be excluded during the fifth and subsequent Cold Start Up Period(s) shall be the lesser of: (1) those  $NO_X$  emissions emitted during the eight-hour period commencing when the unit is synchronized with a utility electric distribution system and concluding eight hours later; or (2) those emitted prior to the time that the flue gas has achieved the SCR operational temperature range as specified by the catalyst manufacturer; and C. may exclude  $NO_X$  and  $SO_2$  emissions and Btus occurring during any period of Malfunction as defined at 40 C.F.R.§ 60.2, provided Ohio Edison (1) makes reasonable best efforts to correct the Malfunction and (2) provides notice to the United States and the States in writing containing the information specified in Paragraph 158 of this Consent Decree as soon as practicable, but in no event later than fourteen (14) business days following the date Ohio Edison first knew or by the exercise of due diligence should have known of the Malfunction.

5. "Additional Burger Plant NO<sub>X</sub> Reductions" shall be expressed as tons of NO<sub>X</sub> and calculated in accordance with the following procedure: first, sum the total mmBtu heat input for Burger Units 4 and 5 measured by the CEMS for the subject year; second, multiply the total mmBtu heat input for Burger Units 4 and 5 by 0.411 lbs/mmBtu; third, divide the total number of pounds of NO<sub>X</sub> for Burger Units 4 and 5 by 2,000 to calculate NO<sub>X</sub> tons for the subject year; fourth, subtract the sum of the total NO<sub>X</sub> tons for Burger Units 4 and 5 measured by the CEMS for the subject year.

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- 6. "Additional Burger Plant SO<sub>2</sub> Reductions" shall be expressed as tons of SO<sub>2</sub> and calculated in accordance with the following procedure: first, sum the total mmBtu heat input for Burger Units 4 and 5 measured by the CEMS for the subject year; second, multiply the total mmBtu heat input for Burger Units 4 and 5 by 3.45 lbs/mmBtu; third, divide the total number of pounds of SO<sub>2</sub> for Burger Units 4 and 5 by 2,000 to calculate SO<sub>2</sub> tons for the subject year; fourth, subtract the sum of the total SO<sub>2</sub> tons for Burger Units 4 and 5 measured by the CEMS for the subject year.
- 7. "Additional Eastlake Plant NO<sub>X</sub> Reductions" shall be expressed as tons of NO<sub>X</sub> and calculated in accordance with the following procedure: first, sum the total mmBtu heat input for Eastlake Unit 5 measured by the CEMS for the subject year; second, multiply the total mmBtu heat input for Eastlake Unit 5 by 0.894 lbs/mmBtu; third, divide the total number of pounds of NO<sub>X</sub> for Eastlake Unit 5 by 2,000 to calculate NO<sub>X</sub> tons for the subject year; fourth, subtract the sum of the total NO<sub>X</sub> tons for Eastlake Unit 5 measured by the CEMS for the subject year.
- 8. "Additional Mansfield Plant SO<sub>2</sub> Reductions" shall be expressed as tons of SO<sub>2</sub> and calculated in accordance with the following procedure: first, sum the total mmBtu heat input for Mansfield Units 1, 2 and 3 measured by the CEMS for the subject year; second, multiply the total mmBtu heat input for Mansfield Units 1, 2 and 3 by 0.43 lbs/mmBtu; third, divide the total number of pounds of SO<sub>2</sub> for Mansfield Units 1, 2 and 3 by 2,000 to calculate SO<sub>2</sub> tons for the subject year; fourth, subtract the sum of the total SO<sub>2</sub> tons for Mansfield Units 1, 2 and 3 measured by the CEMS for the subject year.
- "Additional Reductions" means the additional tons reduced at the Burger Plant, Mansfield Plant, and Eastlake Plant.
- "Annual Average Removal Efficiency" shall be determined in accordance with 40 C.F.R.
   Part 60, subpart Da, provided that ASTM fuel sampling and analysis may be used in lieu of inlet SO<sub>2</sub> emission monitoring where the inlet sampling location does not meet the minimum requirements specified in 40 C.F.R. Part 60, Appendix A, EPA Reference Method 1.
- 11. "Burger Plant" means the R.E. Burger Plant located near Shadyside, Ohio.
- 12. "CEMS" or "Continuous Emission Monitoring System," means, for obligations involving NO<sub>X</sub> and SO<sub>2</sub> under this Consent Decree, the devices defined in 40 C.F.R. § 72.2 and

installed and maintained (including quarterly quality assurance procedures) as specified by 40 C.F.R. Part 75 except as provided for in Paragraphs 80 and 109 relating to data substitution provisions.

- "Consent Decree" means this Consent Decree and the Appendices hereto, which are incorporated into this Consent Decree.
- 14. "Design Removal Efficiency" means the minimum removal efficiency for which a design is developed for a new or modified air pollution control device, when operating at full load maximum continuous rating ("MCR") of the boiler. The design removal efficiency shall provide the capability of attaining and maintaining at least the specified removal efficiency at MCR.
- 15. "Eastlake Plant" means the Eastlake Plant located near Eastlake, Ohio.
- 16. "Electric-Catalytic Oxidation" or "ECO" means a barrier discharge reactor, wet flue gas desulfurization and wet electrostatic precipitator ("wet ESP"), which combine to remove multiple pollutants from flue gas.
- 17. "Emission Rate" for a given pollutant means the number of pounds of that pollutant emitted per million British thermal units of heat input (lb/mmBtu), measured in accordance with this Consent Decree.
- 18. "EPA" means the United States Environmental Protection Agency.
- "ESP" means electrostatic precipitator, a pollution control device for the reduction of PM.
- 20. "FirstEnergy System" means, collectively, the Ohio Edison System, any existing units owned by a FirstEnergy subsidiary, and any new or existing units that might be built or acquired by a FirstEnergy subsidiary, provided that FirstEnergy and/or a subsidiary has a greater than 50% ownership interest in such newly-built or acquired units.
- 21. "Flash Dryer Absorber" means a flue gas desulfurization technology employing a fluidized bed-type absorber utilizing recycled fly ash and lime injection for SO<sub>2</sub> removal upstream of a pollution control device for the reduction of PM.
- 22. "Flue Gas Desulfurization System" or "FGD" means a pollution control device that employs flue gas desulfurization technology, including absorber(s) for the reduction of sulfur dioxide emissions.

- 23. "Fossil Fuel" means any hydrocarbon fuel, including coal, petroleum coke, petroleum oil, or natural gas.
- 24. "Induct Scrubber" means a flue gas desulfurization technology in which an atomized lime slurry is injected into the ductwork for SO<sub>2</sub> removal upstream of a pollution control device for the reduction of PM.
- 25. "KW" means kilowatt or one thousand Watts.
- 26. "lb/mmBtu" means pound of a pollutant per million British thermal units of heat input.
- 27. "Malfunction" means malfunction as that term is defined under 40 C.F.R. § 60.2.
- 28. "Mansfield Plant" means the Bruce Mansfield Plant located near Shippingport, PA.
- 29. "MW" means a megawatt or one million Watts.
- 30. "Monthly Cap" means the sum of the tons of the pollutant in question emitted during all periods of operation from Sammis Units 1 through 5 in a calendar month, including the pollutants emitted during periods of startup and shutdown, and Malfunction.
- "NO<sub>X</sub>" means oxides of nitrogen, measured in accordance with the provisions of this Consent Decree.
- 32. "NO<sub>X</sub> Allowance" means an authorization or credit to emit a specified amount of NO<sub>X</sub> that is allocated or issued under an emissions trading or marketable permit program of any kind that has been established under the Clean Air Act or a State Implementation Plan.
- "Ohio Edison System" means, collectively, the Sammis Plant, Mansfield Plant and Burger Plant.
- 34. "Operational needs" means the allowances needed to comply with federal and/or State Clean Air Act regulatory requirements for the units at the Sammis Plant and any other existing, new, and newly acquired unit in the FirstEnergy system.
- 35. "Parties" means the United States of America; the States of New York, New Jersey and Connecticut; and Ohio Edison and Pennsylvania Power Company. "Party" means one of the six named "Parties."
- 36. "Plant-Wide Annual Cap" means the sum of the tons of the pollutant in question emitted during all periods of operation from the Sammis Plant in a calendar year, including the pollutants emitted during periods of startup and shutdown, and Malfunction.

- 37. "PM" means total particulate matter, measured in accordance with the provisions of this Consent Decree.
- 38. "PM Emission Rate" means pounds of PM emitted per million Btu of heat input (lb/mmBtu), as measured in annual stack tests, in accordance with the reference methods set forth in 40 C.F.R. Part 60, Appendix A, Method 5 or Method 5B if allowed by the State of Ohio or local authority.
- 39. "Prevention of Significant Deterioration" or "PSD" means the prevention of significant deterioration of air quality program under Part C of Subchapter I of the Clean Air Act, 42 U.S.C. §§ 7470 7492, and 40 C.F.R. Part 52.
- 40. "Removal Efficiency" means the percent of an air pollutant removed from flue gas by an air pollution control device based on the mass emission rate before and after the air pollution control device.
- 41. "Renewable Energy Sources" means wind, solar power, or landfill gas or any other approved project.
- 42. "Restricted NO<sub>X</sub> Allowances" means the NO<sub>X</sub> Allowances allocated annually to Ohio Edison that were made available for sale, trade, or transfer after the date of entry of this Consent Decree as a result of the requirements of this Consent Decree, but the use of which is restricted by this Consent Decree.
- 43. "Restricted SO<sub>2</sub> Allowances" means (1) the SO<sub>2</sub> Allowances resulting from the one-time Additional Mansfield Plant Reductions required by Paragraph 92 for calendar years 2006 of 4,000 tons and for 2007 of 8,000 tons; (2) the SO<sub>2</sub> Allowances resulting from the onetime SO<sub>2</sub> Interim Emission Reductions required by Paragraph 97 of 35,000 tons and by Paragraph 98 of 24,600 tons; and (3) 67,503 SO<sub>2</sub> Allowances allocated annually to the Sammis Plant beginning January 2011.
- 44. "Sammis Plant" means the W. H. Sammis Plant, located along the Ohio River on StateRoute 7 in the Village of Stratton, Saline Township, Jefferson County, Ohio.
- 45. "Selective Catalytic Reduction System" or "SCR" means a pollution control device that employs selective catalytic reduction technology for the reduction of NO<sub>X</sub> emissions.
- 46. "SNCR" means a pollution control device that employs selective non-catalytic reduction, utilizing ammonia or urea injection in the boiler, for the reduction of NO<sub>X</sub> emissions.

- 47. "SO<sub>2</sub>" means sulfur dioxide, measured in accordance with the provisions of this Consent Decree.
- 48. "SO<sub>2</sub> Allowance" means "allowance" as defined at 42 U.S.C. § 7651a(3): "an authorization, allocated to an affected unit by the Administrator of EPA under Subchapter IV of the Act, to emit, during or after a specified calendar year, one ton of sulfur dioxide."
- 49. "Super-compliant NO<sub>X</sub> Allowances" means those allowances attributable to reductions beyond the requirements of this Consent Decree and in accordance with Paragraph 76. NO<sub>X</sub> allowances that become available as a result of emission reductions used to demonstrate compliance with Paragraph 72 shall not be Super-compliant NO<sub>X</sub> Allowances.
- 50. "Super-compliant SO<sub>2</sub> Allowances" means those allowances attributable to reductions beyond the requirements of this Consent Decree and in accordance with Paragraph 106. SO<sub>2</sub> allowances that become available as a result of emission reductions used to demonstrate compliance with Paragraph 97 shall not be Super-compliant SO<sub>2</sub> Allowances.
- 51. "Surrender" means permanently surrendering allowances from the accounts administered by EPA for the Ohio Edison System so that such allowances can no longer be used to meet any compliance requirement under the Clean Air Act.
- 52. "NO<sub>X</sub> System-Wide Annual Emission Rate" means the annual average emission rate for NO<sub>X</sub> from the FirstEnergy System during a calendar year calculated in accordance with the procedures and equation set forth in 40 C.F.R. § 76.11 (d)(1)(ii)(A).
- "Title V Permit" means the permit required of each of Ohio Edison's major sources under Subchapter V of the Act, 42 U.S.C. §§ 7661-7661e.

## IV. <u>NO<sub>X</sub> EMISSION REDUCTIONS AND CONTROLS</u>

- A. <u>NO<sub>x</sub> Emission Controls</u>
  - 1. SCRs on Sammis Units 6 and 7
- Ohio Edison shall install an SCR (or the equivalent NO<sub>X</sub> control technology approved by Plaintiffs pursuant to Paragraph 55) at either Sammis Unit 6 or Unit 7 no later than December 31, 2010, and install a second SCR at either Sammis Unit 6 or 7 no later than

December 31, 2011. Each SCR to be installed by Ohio Edison under this paragraph shall have at least a 90% Design Removal Efficiency for  $NO_X$ . Upon operation of the unit with the installed SCR and thereafter, Ohio Edison shall continuously operate each SCR at Sammis Units 6 and 7 at all times that each unit the SCR serves is combusting Fossil Fuel, consistent with good engineering practices for  $NO_X$  control, to minimize  $NO_X$ emissions to the extent practicable. The preceding sentence shall not be construed to require that Ohio Edison achieve a more stringent unit emission rate than required by this Consent Decree. No later than 180 days after the installation date required above and thereafter, Ohio Edison shall operate each SCR so as to achieve and thereafter maintain a 30-Day Rolling Average Emission Rate for  $NO_X$  of 0.100 lb/mmBtu.

- 55. With prior written notice to and written approval from EPA and the States, Ohio Edison may, in lieu of installing and operating an SCR (or ECO, if approved pursuant to Section VII) at any unit specified in Paragraph 54, install and operate equivalent NO<sub>x</sub> control technology, so long as such equivalent NO<sub>x</sub> control technology is designed for a 90% Removal Efficiency for NO<sub>x</sub> and achieves and thereafter maintains a 30-Day Rolling Average Emission Rate for NO<sub>x</sub> not greater than 0.100 lb/mmBtu.
- <u>SNCRs at Sammis Units 1 -7, Eastlake Unit 5 and Burger Units 4-5</u>
   No later than thirty days after entry of the Consent Decree, Ohio Edison shall continuously operate each SNCR at Sammis Units 2 and 7 at all times that each unit the SNCR serves is combusting Fossil Fuel, consistent with good engineering practices for NO<sub>x</sub> control, to minimize NO<sub>x</sub> emissions to the extent practicable. The preceding sentence shall not be construed to require that Ohio Edison achieve more stringent unit emission rate(s) than required by this Consent Decree. No later than 210 days after entry of this Consent Decree, Ohio Edison shall operate the SNCR so as to achieve and thereafter maintain a 30-Day Rolling Average Emission Rate for NO<sub>x</sub> of 0.250 lb/mmBtu at Sammis Unit 2.
- 57. Ohio Edison shall install an SNCR (or equivalent NO<sub>x</sub> control technology approved pursuant to Paragraph 68) at either Sammis Unit 1, Unit 3, or Unit 4, no later than October 31, 2006; and install a second SNCR at either Sammis Unit 1, Unit 3, or Unit 4 no later than October 31, 2007; and install one additional SNCR at Sammis Unit 1, Unit

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3, or Unit 4 no later than December 31, 2007. Upon operation of the unit with the installed SNCR and thereafter, Ohio Edison shall continuously operate each SNCR at Sammis Units 1, 3 and 4 at all times that each unit the SNCR serves is combusting Fossil Fuel, consistent with good engineering practices for  $NO_X$  control, to minimize  $NO_X$  emissions to the extent practicable. The preceding sentence shall not be construed to require that Ohio Edison achieve more stringent unit emission rate(s) than required by this Consent Decree. No later than 180 days after the installation date required above and thereafter, Ohio Edison shall operate each SNCR so as to achieve and thereafter maintain a 30-Day Rolling Average Emission Rate for  $NO_X$  of 0.250 lb/mmBtu.

- 58. No later than December 31, 2007, Ohio Edison shall install an SNCR (or equivalent NO<sub>x</sub> control technology approved pursuant to Paragraph 68) at Sammis Unit 5. Upon operation of the unit with the installed SNCR and thereafter, Ohio Edison shall continuously operate the SNCR at Sammis Unit 5 at all times that the unit the SNCR serves is combusting Fossil Fuel, consistent with good engineering practices for NO<sub>x</sub> control, to minimize NO<sub>x</sub> emissions to the extent practicable. The preceding sentence shall not be construed to require that Ohio Edison achieve more stringent unit emission rate(s) than required by this Consent Decree. No later than 180 days after the installation date required above and thereafter, Ohio Edison shall operate the SNCR so as to achieve and thereafter maintain a 30-Day Rolling Average Emission Rate for NO<sub>x</sub> of 0.290 lb/mmBtu.
- 59. No later than June 30, 2005, Ohio Edison shall install an SNCR at Sammis Unit 6. Ohio Edison shall continuously operate the SNCR at Sammis Unit 6 at all times that the unit the SNCR serves is combusting Fossil Fuel, consistent with good engineering practices for NO<sub>X</sub> control, to minimize NO<sub>X</sub> emissions to the extent practicable. The preceding sentence shall not be construed to require that Ohio Edison achieve more stringent unit emission rate(s) than required by this Consent Decree.
- 60. No later than December 31, 2006, Ohio Edison shall cause the FirstEnergy System to install low NO<sub>X</sub> burners, overfired air and SNCR (or equivalent NO<sub>X</sub> control technology approved pursuant to Paragraph 68) at Eastlake Unit 5. Upon operation of the unit with the installed NO<sub>X</sub> controls referred to above and thereafter, Ohio Edison shall cause the FirstEnergy System to continuously operate the NO<sub>X</sub> controls referred to above at

Eastlake Unit 5 at all times that the unit is combusting Fossil Fuel, consistent with good engineering practices for  $NO_X$  control, to minimize  $NO_X$  emissions to the extent practicable. The preceding sentence shall not be construed to require Ohio Edison to cause the FirstEnergy System to achieve more stringent unit emission rate(s) than required by this Consent Decree.

- 61. If the FirstEnergy System does not install and commence continuous operation of low NO<sub>X</sub> burners, overfired air, and SNCR (or equivalent NO<sub>X</sub> control technology approved pursuant to Paragraph 68) as required in Paragraph 60, Ohio Edison shall submit to the Plaintiffs for approval, and implement upon approval, a substitute compliance plan that would provide for an alternative means of achieving emission reductions within the FirstEnergy System units located in Ohio and/or Pennsylvania in the same time frame through use of post-combustion NO<sub>X</sub> emission control devices, equivalent to or exceeding the emission reductions that Ohio Edison anticipated achieving by installation and operation of the low NO<sub>X</sub> burners, overfired air, and SNCR at Eastlake Unit 5.
- 62. Ohio Edison shall cause the FirstEnergy System to achieve Additional Eastlake Plant NO<sub>X</sub> Reductions of 11,000 tons of NO<sub>X</sub> per year commencing in calendar year 2007 provided, however, that this obligation shall be eliminated upon permanent shutdown in which Eastlake Unit 5 has been permanently retired from service and has been physically disabled. If Ohio Edison determines that it will be unable to achieve any portion of the reductions of 11,000 tons of NO<sub>X</sub> at Eastlake Unit 5 in any calendar year due to planned or unplanned outages, or any combination thereof. Ohio Edison shall submit to the Plaintiffs for approval, and upon approval, shall implement or cause to be implemented, a substitute compliance plan ("plan"). The plan shall demonstrate how Ohio Edison will achieve elsewhere in the FirstEnergy System and within the same year (or if that is not possible, within the next succeeding calendar year) all the remaining Additional Eastlake Plant NO<sub>X</sub> Reductions. The plan must identify the plant(s) in Pennsylvania and/or Ohio where any remaining Additional Eastlake Plant NO<sub>X</sub> Reductions are to be achieved. Ohio Edison shall use best efforts to submit the plan no later than 30 days after Ohio Edison determines that it will be unable to achieve Additional Eastlake Plant NO<sub>X</sub> Reductions, but in no event later than January 31 of the year following the year in which Ohio Edison makes such determination. For purposes of this paragraph, the amount of

Additional Eastlake Plant  $NO_X$  Reductions to be achieved at such other FirstEnergy plant(s) shall be calculated based on the decrease from that plant's 2003 actual emission rate (lb/mmBtu). Compliance with the approved plan shall be considered compliance with the Additional Eastlake Plant  $NO_X$  Reductions requirement. The terms of this provision are in addition to, and shall not alter or affect, the provisions of Section XV relating to Force Majeure.

- 63. Subject to Paragraph 62, Ohio Edison shall cause the FirstEnergy System to use reasonable best efforts to achieve Additional Eastlake Plant NO<sub>X</sub> Reductions of 11,000 tons of NO<sub>X</sub> per year commencing in calendar year 2007, but in no case shall the Additional Eastlake Plant NO<sub>X</sub> Reductions be less than 10,000 tons in any given year commencing in 2007. In the event that Ohio Edison expects to be unable to achieve Additional Eastlake Plant NO<sub>X</sub> Reductions of at least 11,000 tons of NO<sub>X</sub> in 2007 or any year thereafter, Ohio Edison shall submit to the Plaintiffs for approval, and upon approval, shall implement or cause to be implemented, a substitute compliance plan to achieve elsewhere in the FirstEnergy system and within the same calendar year all the remaining Additional Eastlake Plant NO<sub>X</sub> Reductions up to 1,000 tons of NO<sub>X</sub> that will not be realized that year at the Eastlake Plant. Such a plan must identify the plants, in Pennsylvania and/or Ohio, and the controls at those plants where any remaining Additional Eastlake Plant NO<sub>X</sub> Reductions that will not be realized that year at the Eastlake Plant are to be achieved.
- 64. No later than December 31, 2008, Ohio Edison shall install SNCRs (or equivalent NO<sub>X</sub> control technology approved pursuant to Paragraph 68) at Burger Unit 4 and Unit 5. Upon operation of the unit with the installed SNCR and thereafter, Ohio Edison shall continuously operate each SNCR at the Burger Units 4 and 5 at all times that each unit the SNCR serves is combusting Fossil Fuel, consistent with good engineering practices for NO<sub>X</sub> control, to minimize NO<sub>X</sub> emissions to the extent practicable. The preceding sentence shall not be construed to require that Ohio Edison achieve more stringent unit emission rate(s) than required by this Consent Decree.
- 65. Ohio Edison shall achieve Additional Burger Plant NO<sub>X</sub> Reductions of 1,400 tons of NO<sub>X</sub> per year commencing in calendar year 2009 provided, however, that this obligation shall be eliminated upon permanent shutdown in which one or more of the Burger units

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has been permanently retired from service and has been physically disabled. If Ohio Edison determines that it will be unable to achieve any portion of the reductions of 1,400 tons at the Burger Plant in any calendar year due to planned or unplanned outages, or any combination thereof, Ohio Edison shall submit to the Plaintiffs for approval, and upon approval, shall implement or cause to be implemented, a substitute compliance plan ("plan"). The plan shall demonstrate how Ohio Edison will achieve elsewhere in the FirstEnergy System and within the same year (or if that is not possible, within the next succeeding calendar year) all the remaining Additional Burger Plant NO<sub>X</sub> Reductions. The plan must identify the plant(s) in Pennsylvania and/or Ohio where any remaining Additional Burger Plant NO<sub>X</sub> Reductions are to be achieved. Ohio Edison shall use best efforts to submit the plan no later than 30 days after Ohio Edison determines that it will be unable to achieve Additional Burger Plant NO<sub>X</sub> Reductions, but in no event later than January 31 of the year following the year in which Ohio Edison makes such determination. For purposes of this paragraph, the amount of Additional Burger Plant NO<sub>X</sub> Reductions to be achieved at such other FirstEnergy plant(s) shall be calculated based on the decrease from that plant's 2003 actual emission rate (lb/mmBtu). Compliance with the approved plan shall be considered compliance with the Additional Burger Plant NO<sub>X</sub> Reductions requirement. The terms of this provision are in addition to, and shall not alter or affect, the provisions of Section XV relating to Force Majeure.

66.

Subject to Paragraph 65, Ohio Edison shall use reasonable best efforts to achieve Additional Burger Plant NO<sub>X</sub> Reductions of 1,400 tons of NO<sub>X</sub> per year commencing in calendar year 2009, but in no case shall the Additional Burger Plant NO<sub>X</sub> Reductions be less than 1,300 tons in any given year commencing in 2009. In the event that Ohio Edison expects to be unable to achieve Additional Burger Plant NO<sub>X</sub> Reductions of at least 1,400 tons of NO<sub>X</sub> in 2009 or any year thereafter, Ohio Edison shall submit to the Plaintiffs for approval, and upon approval implement, a substitute compliance plan to achieve elsewhere in the FirstEnergy system and within the same calendar year all the remaining Additional Burger Plant NO<sub>X</sub> Reductions up to 100 tons of NO<sub>X</sub> that will not be realized that year at the Burger Plant. Such a plan must identify the plants, in Pennsylvania and/or Ohio, and the controls at those plants where any remaining Additional Burger Plant  $NO_X$  Reductions that will not be realized that year at the Burger Plant are to be achieved.

- 67. No later than thirty days following entry of this Consent Decree, Ohio Edison shall complete installation and operation of low NO<sub>X</sub> burners on Sammis Units 1, 2, 4, 5, 6, and 7 and overfired air on Sammis Units 1, 2, 4, 6 and 7. No later than December 1, 2005, Ohio Edison shall complete installation and operation of low NO<sub>X</sub> burners and overfired air on Sammis Unit 3, and advanced combustion control optimization with software to minimize NO<sub>X</sub> emissions from Sammis Units 1 through 5.
- 68. With prior written notice to and written approval from EPA and the States, Ohio Edison may, in lieu of installing and operating an SNCR at any unit specified in Paragraphs 56, 57, 58, 60, and 66, install and operate equivalent NO<sub>X</sub> control technology, so long as such equivalent NO<sub>X</sub> control technology achieves and thereafter maintains a 30-Day Rolling Average Emission Rate for NO<sub>X</sub> not greater than 0.250 lb/mmBtu, or 0.290 lb/mmBtu for Sammis Unit 5.
  - B. <u>Plant-Wide Annual Cap for NO<sub>X</sub></u>
- 69. Ohio Edison shall comply with the following Plant-Wide Annual Cap for the Sammis Plant for NO<sub>X</sub>, which applies collectively to all units within the Sammis Plant:

For the Periods Commencing on the Dates Specified Below:	Plant-Wide Annual Cap For NO <sub>X</sub>
July 1, 2005 through December 31, 2005	11,371 tons
January 1, 2006 through December 31, 2006	21,251 tons
January 1, 2007 through December 31, 2007	20,596 tons
January 1, 2008 through December 31, 2008	18,903 tons
January 1, 2009 through December 31, 2009	17,328 tons
January 1, 2010 through December 31, 2010	17,328 tons
January 1, 2011 through December 31, 2011	14,845 tons

January 1, 2012 and every calendar year thereafter	11,863 tons
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- 70. Compliance with the Plant-Wide Annual Cap in Paragraph 69 shall be determined by calculating actual annual emissions during all periods of operation from the Sammis plant using CEMS. The amount of NO<sub>X</sub> allowances in the possession of Ohio Edison shall not be used in determining compliance with the Plant-Wide Annual Cap in Paragraph 69.
- 71. Periods of nonoperation of a unit are not violations of a unit specific emission obligation of this Consent Decree. If Ohio Edison ceases operations for more than 12 months, the Plant-Wide Annual Cap in Paragraph 69 shall be reduced by one-half of the shutdown unit's(s') pro rata nameplate MW share of the Plant-Wide Annual Cap for the Sammis Plant for NO<sub>X</sub>, unless Ohio Edison demonstrates to Plaintiffs that it intends to start up the unit(s) within the following 12 months and actually starts up in the following 12 months.
  - C. Interim NO<sub>X</sub> Emission Reductions
- 72. Between July 1, 2005 and no later than December 31, 2010, Ohio Edison shall achieve reductions in the amount of 2,483 tons of NO<sub>X</sub> using any combination of the following: (1) using a low sulfur coal at Burger Units 4 and 5; (2) operating the SCRs currently installed at Mansfield Units 1 through 3 during the months of October through April; and/or (3) emitting fewer tons than the Plant-Wide Annual Cap for NO<sub>X</sub> required under Paragraph 69 in a given year at the Sammis Plant. For purposes of determining that amount of reductions achieved at Burger, Ohio Edison shall use the procedure for determining Additional Burger Plant NO<sub>X</sub> Reductions. For purposes of this paragraph, the amount of NO<sub>X</sub> emission reductions to be achieved at the Mansfield Plant shall be calculated based on the decrease from that plant's 2003 actual emission rate (lb/mmBtu).
  - D. <u>Use of  $NO_X$  Allowances</u>
- Except as provided in this Consent Decree, Ohio Edison shall not sell, trade, or transfer any Restricted NO<sub>X</sub> Allowances.
- 74. Restricted NO<sub>X</sub> Allowances resulting from actions taken by Ohio Edison to comply with the requirements of this Consent Decree may be used by Ohio Edison to meet the Operational Needs of the plant to which they were allocated but not at any other plant or

to sell, trade, or transfer to a third-party. In addition, Restricted NO<sub>X</sub> Allowances resulting from actions taken by Ohio Edison to comply with the requirements of this Consent Decree may be used by Ohio Edison and/or FirstEnergy to meet the Operational Needs of the FirstEnergy System but not to sell, trade, or transfer to a third-party, provided that commencing January 1, 2015, and continuing thereafter, actual NO<sub>X</sub> emissions from the FirstEnergy System do not exceed a NO<sub>X</sub> System-Wide Annual Emission Rate of 0.15 lb/mmBtu. For purposes of this paragraph, the FirstEnergy System is limited to the coal-fired units listed below less any of these units FirstEnergy or its subsidiaries sells.

Current FirstEnergy Coal-Fired Units
Mansfield 1
Mansfield 2
Mansfield 3
Sammis 1
Sammis 2
Sammis 3
Sammis 4
Sammis 5
Sammis 6
Sammis 7
Burger 1
Burger 2
Burger 3
Burger 4
Burger 5
Ashtabula 5
Bay Shore 1
Bay Shore 2

Bay Shore 3
Bay Shore 4
Eastlake 1
Eastlake 2
Eastlake 3
Eastlake 4
Eastlake 5
Lake Shore 18
Toronto 5
Toronto 6
Toronto 7

- 75. If Ohio Edison installs SCR, ECO if approved pursuant to Section VII, or equivalent control technology on any unit in the FirstEnergy System that is not required by this Consent Decree, the difference between the average annual NO<sub>x</sub> emissions of the 2 years before the control device is installed and the NO<sub>x</sub> Allowances allocated to such unit shall no longer be considered Restricted NO<sub>x</sub> Allowances.
- 76. After Ohio Edison reports the generation of Super-compliant NO<sub>X</sub> Allowances in accordance with Section XII (Periodic Reporting), nothing in this Consent Decree shall preclude Ohio Edison from selling, trading, or transferring these reported NO<sub>X</sub> Allowances that become available for sale or trade as a result of:
  - a. the installation and operation of any NO<sub>X</sub> pollution control technology or technique that is not otherwise required under this Consent Decree;
  - the installation and operation of any SCR (or ECO if approved pursuant to Section VII or other approved equivalent NO<sub>X</sub> control technology pursuant to Paragraph 55) or SNCR, prior to the date required under this Consent Decree; or
  - achievement and maintenance of NO<sub>X</sub> emission rates that are below the 30-Day Rolling Average Emission Rate of 0.100 lb/mmBtu for Sammis Units 6 and 7, the 30-Day Rolling Average Emission Rate of 0.250 lb/mmBtu for Sammis Units 1 through 4, and the 30-Day Rolling Average Emission Rate of 0.290

lb/mmBtu for Sammis Unit 5, and the applicable Plant-wide Annual Cap of 11,863 tons.

- 77. Except as provided in Paragraph 121, Ohio Edison may not purchase or otherwise obtain NO<sub>X</sub> Allowances from another source for purposes of complying with the requirements of this Consent Decree. However, nothing in this Consent Decree shall prevent Ohio Edison from purchasing or otherwise obtaining NO<sub>X</sub> Allowances from another source for purposes of complying with state or federal Clean Air Act requirements to the extent otherwise allowed by law.
- 78. If Ohio Edison transfers Restricted NO<sub>X</sub> Allowances to a unit within the FirstEnergy System not covered by this Consent Decree, Ohio Edison must provide or cause to provide right of entry as required by Paragraph 181.

#### E. <u>General NO<sub>X</sub> Provisions</u>

- 79. In determining 30-Day Rolling Average Emission Rates for NO<sub>X</sub>, Ohio Edison shall operate CEMS at each unit, provided, however, that due to the common stack CEMS at Sammis Units 1 to 4, NO<sub>X</sub> pollutant concentration monitors certified in accordance with 40 C.F.R. Part 60 shall determine the 30-Day Rolling Average Emission Rates for NO<sub>X</sub> at each of Sammis Units 1 to 4. In determining compliance with the Plant-Wide Annual NO<sub>X</sub> Cap, Ohio Edison shall operate CEMS at each stack (including the common stacks that serve Sammis Units 1 and 2 and Units 3 and 4).
- 80. If both primary and secondary CEMS have a missing data event, Ohio Edison shall use 40 C.F.R. Part 60 to show compliance with a 30-Day Rolling Average Emission Rate for NO<sub>X</sub>, provided that Ohio Edison (1) has secondary CEMS installed, and (2) places them in service within one hour of a missing data event from the primary CEMS but the secondary CEMS also fails. If Ohio Edison does not meet conditions in (1) and (2) above, Ohio Edison shall use 40 C.F.R. § 75.33 to determine compliance with the 30-Day Rolling Average Emission Rate for NO<sub>X</sub>. If there is a missing data event, Ohio Edison shall use the data substitution provisions in 40 C.F.R. § 75.33 to show compliance with the Plant-Wide Annual Cap for NO<sub>X</sub>.

## V. <u>SO<sub>2</sub> EMISSION REDUCTIONS AND CONTROLS</u>

## A. <u>SO<sub>2</sub> Emission Controls</u>

- <u>New FGD Installations at Sammis Units 6-7 and Burger Units 4-5</u>
   Ohio Edison shall install an FGD (or equivalent SO<sub>2</sub> control technology approved pursuant to Paragraph 84) at each Sammis Unit 6 and Unit 7 no later than December 31, 2010. Each FGD to be installed by Ohio Edison under this paragraph shall have at least a 95% Design Removal Efficiency for SO<sub>2</sub>. Upon operation of the unit with the installed FGD and thereafter, Ohio Edison shall continuously operate each FGD at Sammis Units 6 and 7 at all times that each unit the FGD serves is combusting Fossil Fuel, consistent with good engineering practices for SO<sub>2</sub> control, to minimize SO<sub>2</sub> emissions to the extent practicable. The preceding sentence shall not be construed to require that Ohio Edison achieve more stringent unit emission rate(s) than required by this Consent Decree. No later than 180 days after the installation date required above and thereafter, Ohio Edison shall operate each FGD so as to achieve and thereafter maintain a 30-Day Rolling Average Emission Rate for SO<sub>2</sub> of 0.130 lb/mmBtu.
- 82. Subject to Paragraph 83 below, no later than December 31, 2010, Ohio Edison shall install and commence continuous operation of wet FGDs or ECO (or equivalent SO<sub>2</sub> control technology approved pursuant to Paragraph 85) on Burger Units 4 and 5, which shall have at least a 95% Design Removal Efficiency. Ohio Edison shall achieve Additional Burger Plant SO<sub>2</sub> Reductions of 25,000 tons of SO<sub>2</sub> per year commencing on or before calendar year 2011 provided, however, that this obligation shall be eliminated upon permanent shutdown in which one or more of the Burger units is permanently retired from service and has been physically disabled. If Ohio Edison determines that it will be unable to achieve any portion of the reductions of 25,000 tons of  $SO_2$  at the Burger Plant in any calendar year due to planned or unplanned outages, or any combination thereof, Ohio Edison shall submit to the Plaintiffs for approval, and upon approval, shall implement or cause to be implemented, a substitute compliance plan ("plan"). The plan shall demonstrate how Ohio Edison will achieve elsewhere in the FirstEnergy System and within the same year (or if that is not possible, within the next succeeding calendar year) all the remaining Additional Burger Plant SO<sub>2</sub> Reductions.

The plan must identify the plant(s) in Pennsylvania and/or Ohio where any remaining Additional Burger Plant SO<sub>2</sub> Reductions are to be achieved. Ohio Edison shall use best efforts to submit the plan no later than 30 days after Ohio Edison determines that it will be unable to achieve Additional Burger Plant SO<sub>2</sub> Reductions, but in no event later than January 31 of the year following the year in which Ohio Edison makes such determination. For purposes of this paragraph, the amount of Additional Burger Plant SO<sub>2</sub> Reductions to be achieved at such other FirstEnergy plant(s) shall be calculated based on the decrease from that plant's 2003 actual emission rate (lb/mmBtu). Compliance with the approved plan shall be considered compliance with the Additional Burger Plant SO<sub>2</sub> Reductions requirement. The terms of this provision are in addition to, and shall not alter or affect, the provisions of Section XV relating to Force Majeure.

No later than December 31, 2008, Ohio Edison shall elect either to satisfy the emission

83.

a. Shut down Burger Units 4 and 5 no later than December 31, 2010; or

control requirements of Paragraph 82 for Burger Units 4 and 5, or:

Repower Burger Units 4 and 5 no later than December 31, 2012, including b. through construction of circulating fluidized bed boilers or other clean coal technologies of equivalent environmental performance that at a minimum achieve and maintain a 30-Day Rolling Average Emission Rate not greater than 0.100 lb/mmBtu for SO<sub>2</sub> or a Removal Efficiency of at least ninety-five percent (95%) for SO<sub>2</sub>; a 30-Day Rolling Average Emission Rate not greater than 0.100 lb/mmBtu for NO<sub>X</sub>; and a PM Emission Rate not greater than 0.015 lb/mmBtu. In measuring the PM Emission Rate, Ohio Edison shall conduct periodic stack tests in accordance with 40 C.F.R. Part 60, Appendix A, Method 5, or Method 5B if allowed by the State of Ohio or local authority, or alternative methods requested by Ohio Edison and approved by EPA. For units that are required to be equipped with SO<sub>2</sub> control equipment and that are subject to the percent removal efficiency requirements of this Consent Decree, the outlet SO<sub>2</sub> Emission Rate and the inlet SO<sub>2</sub> Emission Rate shall be determined based on the data generated in accordance with 40 C.F.R. Part 75 (using SO<sub>2</sub> CEMS data from both the inlet and outlet of the control device), except that, if it is not feasible to install SO<sub>2</sub> CEMS at the inlet of the control device, Ohio Edison may use fuel sampling consistent with ASTM protocols and standards to compute the inlet SO<sub>2</sub> Emission Rate.

- 84. With prior written notice to and written approval from EPA and the States, Ohio Edison may, in lieu of installing and operating wet FGDs at Sammis Units 6 and 7 (or ECO, if approved pursuant to Section VII), install and operate equivalent SO<sub>2</sub> control technology at Sammis Units 6 and 7 so long as such equivalent SO<sub>2</sub> control technology is designed for at least a 95% removal efficiency for SO<sub>2</sub> and achieves and thereafter maintains a 30-Day Rolling Average Emission Rate for SO<sub>2</sub> not greater than 0.130 lb/mmBtu.
- 85. With prior written notice to and written approval from EPA and the States, Ohio Edison may, in lieu of installing and operating wet FGDs or ECO at Burger Units 4 and 5, install and operate equivalent SO<sub>2</sub> control technology so long as such equivalent SO<sub>2</sub> control technology is designed for at least a 95% Removal Efficiency for SO<sub>2</sub>.

#### 2. Flash Dryer Absorber at Sammis Unit 5

86. No later than December 31, 2008, Ohio Edison shall install a Flash Dryer Absorber or ECO (or equivalent  $SO_2$  control technology approved pursuant to Paragraph 90) at Sammis Unit 5, which shall have at least a 50% Design Removal Efficiency for SO<sub>2</sub>. Upon operation of the unit with the installed Flash Dryer or ECO and thereafter, Ohio Edison shall continuously operate the Flash Dryer at Sammis Unit 5 at all times that the unit the Flash Dryer or ECO serves is combusting Fossil Fuel, consistent with good engineering practices for SO<sub>2</sub> control, to minimize SO<sub>2</sub> emissions to the extent practicable. The preceding sentence shall not be construed to require that Ohio Edison achieve more stringent unit emission rate(s) than required by this Consent Decree. No later than 180 days after the installation date required above and thereafter, Ohio Edison shall operate the Flash Dryer Absorber or ECO so as to achieve and thereafter maintain a 30-Day Rolling Average Emission Rate for SO<sub>2</sub> of 1.100 lb/mmBtu. If Ohio Edison cannot install the Flash Dyer (or ECO, if so elected) on Sammis Unit 5 because of a failure to obtain a necessary permit, Ohio Edison shall submit to the Plaintiffs for approval, and implement upon approval, a substitute compliance plan that would provide for an alternative means of achieving emission reductions within the FirstEnergy System units located in Ohio and/or Pennsylvania in the same time frame through use of postcombustion SO<sub>2</sub> emission control devices, equivalent to or exceeding the emission

reductions that Ohio Edison anticipated achieving by installation and operation of the Flash Dryer at Sammis Unit 5.

- 87. With prior written notice to and written approval from EPA and the States, Ohio Edison may, in lieu of installing and operating a Flash Dryer Absorber or ECO at Sammis Unit 5, install and operate equivalent SO<sub>2</sub> control technology so long as such equivalent SO<sub>2</sub> control technology has at least a 50% Design Removal Efficiency and attains a 30-Day Rolling Average Emission Rate for SO<sub>2</sub> of 1.100 lb/mmBtu.
- 88. No later than July 1, 2007, Ohio Edison may seek written approval from the EPA and the States of a plan to install and operate an improved SO<sub>2</sub> control technology at Sammis Unit 5 by no later than December 31, 2010. If Ohio Edison demonstrates that the improved SO<sub>2</sub> control technology is designed to meet a 75% or greater Design Removal Efficiency, Plaintiffs will approve the plan to install and operate an improved SO<sub>2</sub> control technology, in lieu of installing and operating a Flash Dryer Absorber or ECO at Sammis Unit 5. If Plaintiffs approve the plan, Ohio Edison shall implement and complete construction of the improved SO<sub>2</sub> control technology no later than December 31, 2010. No later than 180 days after the installation date required above and thereafter, Ohio Edison shall achieve and maintain at Sammis Unit 5 a 30-Day Rolling Average Emission Rate for SO<sub>2</sub> as defined by the following formula:

## 2.3 lbs/mmBtu x (100% - % Design Removal Efficiency as approved).

In no event shall the 30-Day Rolling Average Emission Rate requirement for SO<sub>2</sub> be greater than 0.550 lb/mmBtu or below 0.130 lb/mmBtu for Sammis Unit 5.

## 3. <u>Induct Scrubbing at Sammis Units 1-4</u>

89. Ohio Edison shall install an Induct Scrubber (or equivalent SO<sub>2</sub> control technology approved pursuant to Paragraph 90) at Sammis Unit 1, Unit 2, Unit 3, or Unit 4 no later than September 30, 2008; and install a second Induct Scrubber at either Sammis Unit 1, Unit 2, Unit 3, or Unit 4 no later than December 31, 2008; and install two additional Induct Scrubbers at Sammis Unit 1, Unit 2, Unit 3 or Unit 4 no later than December 31, 2008; and install two additional Induct Scrubbers at Sammis Unit 1, Unit 2, Unit 3 or Unit 4 no later than December 31, 2009. Each Induct Scrubber to be installed by Ohio Edison under this paragraph shall

have at least a 50% Design Removal Efficiency for SO<sub>2</sub>. Upon operation of the unit with the installed Induct Scrubber and thereafter, Ohio Edison shall continuously operate the Induct Scrubber at the unit at all times that the unit the Induct Scrubber serves is combusting Fossil Fuel, consistent with good engineering practices for SO<sub>2</sub> control, to minimize SO<sub>2</sub> emissions to the extent practicable. The preceding sentence shall not be construed to require that Ohio Edison achieve more stringent unit emission rate(s) than required by this Consent Decree. No later than 180 days after the installation date required above and thereafter, Ohio Edison shall operate each Induct Scrubber so as to achieve and thereafter maintain a 30-Day Rolling Average Emission Rate for SO<sub>2</sub> of 1.100 lb/mmBtu.

90. With prior written notice to and written approval from EPA and the States, Ohio Edison may, in lieu of installing and operating Induct Scrubbers at Sammis Units 1 through 4, install and operate equivalent SO<sub>2</sub> control technology so long as such equivalent SO<sub>2</sub> control technology is designed for at least a 50% removal efficiency for SO<sub>2</sub> and a 30-Day Rolling Average Emission Rate for SO<sub>2</sub> of 1.100 lb/mmBtu.

4. FGD Upgrades for Mansfield Units 1-3

91. No later than the dates specified below, Ohio Edison shall upgrade the FGDs currently installed at Mansfield Units 1, 2 and 3 according to the following schedule:

Mansfield Unit	Upgrade Date
Unit 1	December 31 , 2005
Unit 2	December 31, 2006
Unit 3	October 31, 2007

The upgrade of the Mansfield FGDs shall be designed to achieve at least a 95% Design Removal Efficiency on Mansfield Units 1, 2 and 3. No later than 180 days after the upgrade dates specified above, Ohio Edison shall conduct a performance test to demonstrate a 95% Removal Efficiency. Every subsequent year, Ohio Edison shall either conduct a performance test or submit CEMS data (or combination of CEMS data and coal sampling) equivalent to the sampling period of a performance test that show that each FGD has achieved a 95% Removal Efficiency. If Ohio Edison cannot demonstrate a 95% Removal Efficiency during a performance test, Ohio Edison shall modify the equipment as necessary and re-test to demonstrate a 95% Removal Efficiency.

Calendar Year	Additional Mansfield Plant SO <sub>2</sub> Reductions (tons per year)
2006	4,000
2007	8,000
2008 and every calendar year thereafter	12,000

92. Ohio Edison shall achieve Additional Mansfield Plant SO<sub>2</sub> Reductions on or before the following dates:

This obligation shall be eliminated upon permanent shutdown in which one or more of the Mansfield units is permanently retired from service and has been physically disabled. If Ohio Edison determines that it will be unable to achieve any portion of the reductions of 12,000 tons of SO<sub>2</sub> at the Mansfield Plant in any calendar year due to planned or unplanned outages, or any combination thereof, Ohio Edison shall submit to the Plaintiffs for approval, and upon approval, shall implement or cause to be implemented, a substitute compliance plan ("plan"). The plan shall demonstrate how Ohio Edison will achieve elsewhere in the FirstEnergy System and within the same year (or if that is not possible, within the next succeeding calendar year) all the remaining Additional Mansfield Plant SO<sub>2</sub> Reductions. The plan must identify the plant(s) in Pennsylvania and/or Ohio where any remaining Additional Mansfield Plant SO<sub>2</sub> Reductions are to be achieved. Ohio Edison shall use best efforts to submit the plan no later than 30 days after Ohio Edison determines that it will be unable to achieve Additional Mansfield Plant SO<sub>2</sub> Reductions, but in no event later than January 31 of the year following the year in which Ohio Edison makes such determination. For purposes of this paragraph, the amount of Additional Mansfield Plant SO<sub>2</sub> Reductions to be achieved at such other FirstEnergy plant(s) shall be calculated based on the decrease from that plant's 2003 actual emission rate (lb/mmBtu). Compliance with the approved plan shall be considered compliance with the Additional Mansfield Plant SO<sub>2</sub> Reductions requirement. The terms of this

provision are in addition to, and shall not alter or affect, the provisions of Section XV relating to Force Majeure.

- B. <u>Plant-Wide Annual and Monthly Caps for SO<sub>2</sub></u>
- 93. Ohio Edison shall comply with the following Plant-Wide Annual Cap for the Sammis Plant for SO<sub>2</sub>, which applies to all units collectively within the Sammis Plant:

For the Periods Commencing on the Dates Specified Below:	Plant-Wide Annual Cap for SO <sub>2</sub>
July 1, 2005 through December 31, 2005	58,000 tons
January 1, 2006 through December 31, 2006	116,000 tons
January 1, 2007 through December 31, 2007	116,000 tons
January 1, 2008 through December 31, 2008	114,000 tons
January 1, 2009 through December 31, 2009	101,500 tons
January 1, 2010 through December 31, 2010	101,500 tons
January 1, 2011 and every calendar year thereafter	29,900 tons

- 94. Ohio Edison shall comply with the following Monthly Caps, which applies to Sammis Units 1 through 5 collectively:
  - a. May 1, 2010 to September 30, 2010:
    - If Plaintiffs approve an improved SO<sub>2</sub> control technology under Paragraph 88:

Calendar Months	Sammis Units 1 through 5 Monthly Cap for SO <sub>2</sub>
May, July, August	3,242 tons
June, September	3,137 tons

Calendar Months	Sammis Units 1 through 5 Monthly Cap for SO <sub>2</sub>
May, July, August	2,533 tons
June, September	2,451 tons

 If Ohio Edison installs the SO<sub>2</sub> control technology otherwise required under Paragraph 86:

#### b. May 1, 2011 to September 30, 2011 and thereafter:

Calendar Months	Sammis Units 1 through 5 Monthly Cap for SO <sub>2</sub>
May, July, August	2,533 tons
June, September	2,451 tons

- 95. Compliance with the Plant-wide Annual and Monthly Caps in Paragraphs 93 and 94 shall be determined by calculating actual annual or monthly emissions from the Sammis plant using CEMS in accordance with the reference methods specified in 40 C.F.R. Part 75 except as provided for in Paragraphs 80 and 109 relating to data substitution provisions. The SO<sub>2</sub> Allowances in the possession of Ohio Edison shall not be used in determining compliance with the Plant-wide Annual and Monthly Caps in Paragraphs 93 and 94.
- 96. Periods of non-operation of a unit are not violations of a unit specific emission obligation of this Consent Decree. If Ohio Edison ceases operations for more than 12 months, the Plant-Wide Annual Cap in Paragraph 93 shall be reduced by one-half of the shutdown unit's(s') pro rata nameplate MW share of the Plant-Wide Annual Cap for the Sammis Plant for SO<sub>2</sub> unless Ohio Edison demonstrates to Plaintiffs that it intends to start up the unit(s) within the following 12 months and actually starts up in the following 12 months.
  - C. <u>SO<sub>2</sub> Interim Emission Reductions</u>
- 97. Beginning on January 1, 2006, and ending on December 31, 2010, Ohio Edison shall achieve reductions of SO<sub>2</sub> emissions in the amount of 35,000 tons by achieving reductions of SO<sub>2</sub> emissions in the amount of 7,000 tons per year on a rolling average basis during the applicable five-year period through the use of low sulfur coal at Burger Units 4 and 5. For purposes of determining the amount of reductions achieved at Burger

Units 4 and 5 through the use of low sulfur coal, Ohio Edison shall use the procedure for determining Additional Burger Plant SO<sub>2</sub> Reductions.

- 98. No later than December 31, 2007, Ohio Edison shall submit to the Plaintiffs for approval, and upon approval, shall implement or cause to be implemented a plan to achieve a reduction of SO<sub>2</sub> emissions from the FirstEnergy System in the amount of 24,600 tons by or before December 31, 2010. The plan must identify the plant(s) in Pennsylvania and/or Ohio where the SO<sub>2</sub> reductions will be achieved. The plan may provide that some or all of the 24,600-ton reduction will be achieved through emitting fewer tons than the Plant-Wide Annual Cap for SO<sub>2</sub> required under Paragraph 93 in a given year at the Sammis Plant. For purposes of determining any amount of the 24,600-ton reduction achieved at Mansfield and/or Burger, Ohio Edison shall use the procedure for determining Additional Burger Plant SO<sub>2</sub> Reductions and Additional Mansfield Plant SO<sub>2</sub> Reductions. If emission reductions from other FirstEnergy plants are used to achieve the SO<sub>2</sub> emission reductions to be achieved at such other FirstEnergy plant(s) shall be calculated based on the decrease from that plant's 2003 actual emission rate (lb/mmBtu).
  - D. <u>Surrender of SO<sub>2</sub> Allowances</u>
- 99. Beginning on January 1, 2006 and every year thereafter, Ohio Edison may use, sell or transfer any Restricted SO<sub>2</sub> Allowances only to satisfy the Operational Needs at the Sammis Plant, Burger Plant, Mansfield Plant and/or the Operational Needs of existing and new units within the FirstEnergy System that are equipped with emission controls for SO<sub>2</sub> that are operated year-round and that meet an Annual Average Removal Efficiency of 96% or a Annual Average Emission Rate of 0.100 lb/mmBtu for SO<sub>2</sub> ("SO<sub>2</sub> Emission Control Standards").
- 100. For calendar years 2006 through 2017, Ohio Edison may accumulate for its own use Restricted SO<sub>2</sub> Allowances for use at the Sammis Plant, Burger Plant, and Mansfield Plant, and for use at units within the FirstEnergy System that are equipped with "SO<sub>2</sub> Emission Control Standards." Notwithstanding this provision, however:

1. Ohio Edison cannot use, sell or transfer Restricted SO<sub>2</sub> Allowances to meet the Operational Needs of an existing unit equipped with "SO<sub>2</sub> Emission Control Standards"

until after such unit first uses all of the  $SO_2$  Allowances allocated in that given year to such unit to meet the operational needs of that unit; and

2. If Ohio Edison, in advance of compliance with this Consent Decree, sells or transfers to a third party SO<sub>2</sub> Allowances that, if such SO<sub>2</sub> Allowances had not been sold would be classified as Restricted SO<sub>2</sub> Allowances, Ohio Edison cannot use Restricted SO<sub>2</sub> Allowances to meet the Operational Needs of the Sammis Plant or any other plant that is allowed to use Restricted SO<sub>2</sub> Allowances under this Consent Decree until it first buys back or re-transfers all of those sold or transferred SO<sub>2</sub> Allowances and uses them to meet the Operational Needs of that unit.

- 101. If Ohio Edison installs an FGD, ECO if approved pursuant to Section VII, or equivalent control technology on any unit in the FirstEnergy System that is not required by this Consent Decree, the difference between the average annual SO<sub>2</sub> emissions of the 2 years before the control device is installed and the SO<sub>2</sub> Allowance allocation of such unit shall be deducted and no longer be considered Restricted SO<sub>2</sub> Allowances.
- 102. For each calendar year beginning with calendar year 2018, Ohio Edison shall surrender to EPA any Restricted SO<sub>2</sub> Allowances that were not used pursuant to Paragraphs 99 or 100. Surrender of unused Restricted SO<sub>2</sub> Allowances shall occur annually thereafter and within 45 days of Ohio Edison's receipt from EPA of the Annual Deduction Reports for SO<sub>2</sub>.
- 103. Ohio Edison shall surrender Restricted SO<sub>2</sub> Allowances by the use of applicable United States Environmental Protection Agency Acid Rain Program Allowance Transfer Form or transfer to a nonprofit third party selected by Ohio Edison for surrender.
- 104. If any Restricted SO<sub>2</sub> Allowances are transferred directly to a third party, Ohio Edison shall include a description of such transfer in the next report submitted to the Plaintiffs pursuant to Section XII (Periodic Reporting) of this Consent Decree. Such report shall:
  (i) provide the identity of the non-profit third-party recipient(s) of the Restricted SO<sub>2</sub> Allowances and a listing of the serial numbers of the transferred SO<sub>2</sub> Allowances; and (ii) include a certification by the third-party recipient(s) stating that the recipient will not sell, trade, or otherwise exchange any of the allowances and will not use any of the Restricted SO<sub>2</sub> Allowances to meet any obligation imposed by any environmental law. No later than the next Section XII periodic report due 12 months after the first report due after the

transfer, Ohio Edison shall include in a statement that the third-party recipient(s) surrendered the Restricted SO<sub>2</sub> Allowances for permanent surrender to EPA within one year after Ohio Edison transferred the Restricted SO<sub>2</sub> Allowances to them. Ohio Edison shall not have complied with the Restricted SO<sub>2</sub> Allowance surrender requirements of this Paragraph until all third-party recipient(s) have actually surrendered the transferred Restricted SO<sub>2</sub> Allowances to EPA.

- 105. The requirements in Paragraphs 99-102 of this Consent Decree pertaining to Ohio Edison's use and surrender of Restricted SO<sub>2</sub> Allowances are permanent injunctions not subject to any termination provision of this Decree. These provisions shall survive any termination of this Consent Decree in whole or in part.
- 106. After Ohio Edison reports the generation of Super-compliant SO<sub>2</sub> Allowances in accordance with Section XII (Periodic Reporting), nothing in this Consent Decree shall preclude Ohio Edison from selling, trading, or transferring these reported Super-compliant SO<sub>2</sub> Allowances that become available for sale or trade as a result of:
  - a. activities that occur prior to the date of entry of this Consent Decree;
  - b. Ohio Edison's achieving SO<sub>2</sub> emissions at Sammis Plant that are below the
     30-Day Rolling Average Emission Rate of 0.130 lb/mmBtu for Sammis Units 6
     and 7 and the 30-Day Rolling Average Emission Rate of 1.100 lb/mmBtu for
     Sammis Units 1 through 5 (or the applicable rate for Sammis Unit 5 as determined
     under Paragraph 88), and the applicable Plant-wide Annual Cap of 29,900 tons; or
  - c. the installation and operation of SO<sub>2</sub> pollution controls at units covered under this
     Consent Decree prior to the dates required under Section V (SO<sub>2</sub> Emission
     Reductions and Controls) of this Consent Decree.
- 107. If Ohio Edison transfers Restricted SO<sub>2</sub> Allowances to a unit within the FirstEnergy System not covered by this Consent Decree, Ohio Edison must provide or cause to provide right of entry as required by Paragraph 181.
  - E. <u>General SO<sub>2</sub> Provisions</u>
- 108. In determining 30-Day Rolling Average Emission Rates for SO<sub>2</sub>, Ohio Edison shall operate CEMS at each unit; provided, however, that due to the common stacks CEMS at Sammis Units 1 to 4, SO<sub>2</sub> pollutant concentration monitors certified in accordance with

40 C.F.R. Part 60 shall determine the 30-Day Rolling Average Emission Rates for  $SO_2$  at each of Sammis Units 1 to 4. In determining compliance with the Plant-Wide Annual  $SO_2$  Cap and the Monthly Cap, Ohio Edison shall operate CEMS at each stack (including the common stacks that serve Sammis Units 1 and 2 and Units 3 and 4).

109. If both primary and secondary CEMS have a missing data event, Ohio Edison shall use 40 C.F.R. Part 60 to show compliance with a 30-Day Rolling Average Emission Rate for SO<sub>2</sub>, provided that Ohio Edison (1) has secondary CEMS installed, and (2) places them in service within one hour of a missing data event from the primary CEMS but the secondary CEMS also fails. If Ohio Edison does not meet conditions in (1) and (2) above, Ohio Edison shall use 40 C.F.R. § 75.33 to determine compliance with the 30-Day Rolling Average Emission Rate for SO<sub>2</sub>. If there is a missing data event, Ohio Edison shall use the data substitution provisions in 40 C.F.R. § 75.33 to show compliance with the Plant-Wide Annual Caps and Monthly Caps for SO<sub>2</sub>.

#### VI. <u>PM EMISSION REDUCTIONS AND CONTROLS</u>

#### A. <u>Demonstration and Compliance with PM Emission Limit</u>

- 110. No later than January 1, 2010, Ohio Edison shall achieve and maintain a PM Emission Rate of no greater than 0.030 lb/mmBtu at Sammis Units 6 and 7.
- 111. Ohio Edison shall continuously operate each ESP at Sammis Units 6 and 7 at all times that each unit the ESP serves is combusting Fossil Fuel, consistent with good engineering practices for PM control, to minimize PM emissions to the extent practicable. The preceding sentence shall not be construed to require that Ohio Edison achieve more stringent unit emission rate(s) than required by this Consent Decree.
  - B. <u>PM Monitoring</u>
- 112. By no later than December 31, 2005, and continuing annually thereafter, Ohio Edison shall conduct PM performance testing on Sammis Units 6 and 7. Such annual performance tests may be satisfied by stack tests conducted in a given year, in accordance with Ohio Edison's permit from the State of Ohio.
- 113. In determining the PM Emission Rate, Ohio Edison shall use the reference methods specified in 40 C.F.R. Part 60, Appendix A, Method 5, or Method 5B if allowed by the

State of Ohio or local authority, or alternative methods requested by Ohio Edison and approved by EPA. Ohio Edison shall also calculate the PM Emission Rates from annual stack tests in accordance with 40 C.F.R. § 60.8(f). The results of each PM stack test shall be submitted to EPA within 30 days of completion of each test.

#### VII. <u>SUBSTITUTION OF ECO TECHNOLOGY</u>

- 114 Overview of ECO. The Parties recognize the significant potential environmental and economic benefits that may be available if Electro-Catalytic Oxidation ("ECO") pollution control technology, which is currently being demonstrated at Ohio Edison's Burger Plant, becomes sufficiently reliable and effective to enable it to be used as substitute technology for control of nitrogen oxide, sulfur dioxide and particulate matter emissions from Sammis Units 6 and 7 in accordance with the requirements of this Consent Decree. ECO uses a form of wet scrubber technology to control SO<sub>2</sub> and a form of wet electrostatic precipitator technology to control PM, and it is a promising technology to control NO<sub>X</sub>. ECO is anticipated to have the additional environmental benefits of controlling mercury, preventing a visible stack plume, and producing a commercially valuable fertilizer that minimizes waste disposal requirements, none of which is required by this Consent Decree or sought in this action. ECO is expected to be at least as effective as the conventional technology required by Sections V and VI of this Consent Decree in reducing emissions of sulfur dioxide and particulate matter; further development of the ECO technology will be required before it can provide the level of reduction of nitrogen oxides required by this Consent Decree. The performance goals for the ECO technology include emission rates of 0.010 lb/mmBtu for particulate matter, 98% removal of sulfur dioxide, 90% removal of nitrogen oxide, and 90% removal of mercury from power plant emissions. If the ECO technology achieves these goals, installation of that technology at Sammis Units 6 and 7 will provide greater reduction of emissions of pollutants specified by this Consent Decree than the conventional technology, at a potentially lower cost with the added benefits of significant reduction of mercury emissions.
- 115. Demonstration Requirements for Substitution of ECO Control Technology on Sammis Units 6 and 7. No later than December 31, 2007, Ohio Edison may seek Plaintiffs' approval to install ECO control technology on both Sammis Units 6 and 7 by December

31, 2010 in lieu of the requirements of Paragraphs 54 and 81 of the Consent Decree to install two FGDs by December 31, 2010 and one SCR control system for  $NO_X$  by December 31, 2010. Ohio Edison shall make a good faith effort to submit the data necessary for such demonstration by December 31, 2006 and shall have the right to supplement this data until December 31, 2007. To obtain Plaintiffs' approval, Ohio Edison must demonstrate that ECO technology installed at the Burger plant or another full scale commercial facility:

- has achieved the reliability criterion set forth in Paragraph 116 below on a consistent basis for a period of no less than 180 consecutive calendar days that ends within a year of seeking approval;
- b. has met the emission reduction requirements for SO<sub>2</sub> and PM set forth in
   Paragraph 117 below continuously, *i.e.* at least 95% of the time that the control equipment is running; and
- c. for at least a 135 consecutive calendar day test period, has achieved a 30-Day Rolling Average Emission Rate of NO<sub>X</sub> such that operation of ECO at both Sammis Units 6 and 7 would reduce total NO<sub>X</sub> emissions by at least ten percent (10%) more than the 30-Day Rolling Average Emission Rate for a single SCR at either Sammis Unit 6 or 7 as required in Paragraph 54 of this Consent Decree for 95% of the time that the control equipment is running at the Burger plant or any other plant in full-scale commercial operation.
- 116. <u>Reliability Criteria</u>. The reliability criterion for Plaintiffs' approval of the substitution of the ECO technology on Sammis Units 6 and 7, for purposes of Paragraph 115.a., is 95% availability, *i.e.* Ohio Edison must demonstrate that the ECO control itself has not caused outages on the unit(s) on which it has been installed more than 5% of the time those units were in operation or called upon to operate.
- 117. Emission Reduction Requirements for SO<sub>2</sub> and PM. The SO<sub>2</sub> and PM emission reduction requirements for demonstration of ECO technology under this paragraph shall be the limitations set forth in this Consent Decree for the emission of such pollutants from Sammis Units 6 and 7. The limitation for SO<sub>2</sub> emissions from Units 6 and 7, as provided in Paragraph 81 of this Consent Decree, is a 30-Day Rolling Average Emission Rate for

SO<sub>2</sub> of 0.130 lb/mmBtu. The limitation for PM emissions from Units 6 and 7, as provided in Paragraph 110 of this Consent Decree, is 0.030 lb/mmBtu.

- 118. <u>Plaintiffs' Review and Approval</u>. Plaintiffs shall review Ohio Edison's proposal for substitution of ECO technology on Sammis Units 6 and 7 in accordance with Section XIII of this Consent Decree (Review and Approval of Submissions) and this paragraph, as follows:
  - a. <u>Substitution of ECO Technology From December 31, 2010 to December 31,</u> 2011. If Ohio Edison demonstrates that ECO has met the requirements of Paragraph 115, Plaintiffs will approve the substitution of ECO controls at Sammis Units 6 and 7 in lieu of the requirements of Sections IV and V of this Consent Decree that one SCR and two conventional FGDs be installed by December 31, 2010.
  - b. <u>Dispute Resolution</u>. If Plaintiffs do not grant their approval, Ohio Edison may seek dispute resolution from the Court pursuant to Section XVI of this Consent Decree. Ohio Edison shall have the burden of demonstrating that ECO meets the approval criteria of Paragraph 115. If Plaintiffs do not agree that ECO meets the requirements of Paragraph 115, Plaintiffs nonetheless reserve the right to grant their approval if, based on the facts and circumstances then appearing, including but not limited to engineering concerns involving scale-up and reliability, they conclude that there is a substantial likelihood that ECO will meet the requirements of this Consent Decree at the Sammis plant on a reliable and consistent basis. If the criteria set forth in Paragraph 115 are not met and Plaintiffs do not otherwise grant approval in accordance with the preceding sentence, such denial shall not be reviewable and not subject to dispute.
- 119. <u>Adjustment of Installation Dates</u>. In the event that Plaintiffs approve the installation of ECO on both Sammis Units 6 and 7, or the Court reverses Plaintiffs' denial of approval, the schedule and requirements for installation of controls at Sammis Units 6 and 7 shall be adjusted as follows: Ohio Edison shall install ECO control technology on Units 6 and 7 by December 31, 2010. This shall be in lieu of the requirements of Sections IV and V of this Consent Decree to install two FGDs and one SCR on those units by that date. By December 31, 2010, Ohio Edison shall complete such engineering for installation of

SCRs on Units 6 and 7, so that Ohio Edison is prepared, if necessary, to install such SCRs expeditiously in the event that such installation is required by December 31, 2011 under Paragraph 123 below.

- 120. At all times that ECO is installed, Ohio Edison shall use reasonable best efforts to meet a 30-Day Rolling Average Emission Rate of 0.100 lb/mmBtu for NO<sub>X</sub> at Sammis Units 6 and 7. Reasonable best efforts shall include operation of SNCR and any other NO<sub>X</sub> controls, consistent with good engineering practices, at Sammis Units 6 and 7. The preceding two sentences shall not be construed to require that Ohio Edison achieve a more stringent unit emission rate than required by this Consent Decree.
- 121. Penalties and Makeup Tons for Failure to Achieve NO<sub>X</sub> Emission Limitations Between December 31, 2010 and December 31, 2011. If Ohio Edison elects to install ECO technology on Sammis Units 6 and 7 and fails to achieve the emission limitation for NO<sub>X</sub> of 0.100 lb/mmBtu on a 30-day rolling average basis as required under this Consent Decree, it shall be subject to the stipulated penalties requirements of Section XIV of this Consent Decree. If Ohio Edison fails to achieve a 30-Day Rolling Average Emission Rate for NO<sub>X</sub> of 0.100 lb/mmBtu or the Plant-Wide Annual Cap for NO<sub>X</sub> provided under Section IV of this Consent Decree, Ohio Edison, in addition to paying stipulated penalties under Section XIV of this Consent Decree, shall purchase and retire NO<sub>X</sub> credits from the market equivalent to 1.25 times the excess tons emitted by any violation. The assessment of stipulated penalties in accordance with this paragraph is not subject to the Dispute Resolution procedures of Section XVI of this Consent Decree. In order to assure that the makeup tons are obtained from an area that is upwind from and impacts the air quality in Plaintiffs' States to the maximum extent practicable, Ohio Edison further agrees to seek to purchase such credits from facilities in Ohio or Pennsylvania, and to pay up to a 5% premium for such credits if necessary.
- 122. Evaluation. By July 31, 2011, Ohio Edison shall submit a certified report to Plaintiffs and the Court demonstrating that ECO has continuously met the emission limitation requirements of Sections IV, V, and VI of this Consent Decree for emissions from Sammis Units 6 and 7, *i.e.*, 30-Day Rolling Average Emission Rate of 0.130 lb/mmBtu for SO<sub>2</sub>, 0.030 lb/mmBtu for PM and 30-Day Rolling Average Emission Rate of 0.100 lb/mmBtu for NO<sub>x</sub>, for 98% of the time that the control equipment is running following a

shakedown period of not more than 180 days, and meeting the reliability criteria in Paragraph 116 above. The report shall include all emission data and all data showing the performance of the ECO technology at Units 6 and 7 during the evaluation period. The report shall also include reliability data identifying all outages of the ECO control system, the duration of such outages, and the causes or reasons for such outages.

123. Final Approval of ECO or Installation of SCRs. If Plaintiffs agree that Ohio Edison's report, submitted pursuant to the preceding paragraph, demonstrates that the ECO and the combination of other pollution control technologies installed on Sammis Units 6 and 7 have continuously met the 30-Day Rolling Average Emission Rate of 0.130 lb/mmBtu for SO<sub>2</sub>, 30-Day Rolling Average Emission Rate of 0.100 lb/mmBtu for NO<sub>X</sub>, and PM Emission Rate of 0.030 lb/mmBtu at Sammis Units 6 and 7 as required by this Consent Decree, and has proven to be reliable, installation of SCRs shall not be required on Units 6 and 7. If Plaintiffs do not agree that Ohio Edison has made and adequately supported this demonstration for NO<sub>X</sub>, Ohio Edison shall install SCRs on Units 6 and 7 as expeditiously as possible, but in no event later than December 31, 2011. Any dispute as to whether Ohio Edison has made the required demonstration shall be subject to the Dispute Resolution procedures of Section XVI of this Consent Decree. Until the SCRs are installed, Ohio Edison shall continue to operate the ECO and other pollution control technologies to maximize reductions of emissions from Sammis Units 6 and 7, consistent with good engineering practices.

### VIII. <u>PROHIBITION ON NETTING CREDITS OR OFFSETS FROM REQUIRED</u> <u>CONTROLS</u>

- 124. Emission reductions generated by Ohio Edison to comply with the requirements of this Consent Decree shall not be considered as a creditable contemporaneous emission decrease for the purpose of obtaining a netting credit under the Clean Air Act's PSD program.
- 125. Nothing in this Consent Decree is intended to preclude the emission reductions generated under this Consent Decree from being considered by EPA as creditable contemporaneous emission decreases for the purpose of attainment demonstrations submitted pursuant to Section 110 of the Act, 42 U.S.C. § 7410, or in determining impacts on NAAQS, PSD increment, visibility, air quality related values, or any other air quality impact assessment.

#### IX. ENVIRONMENTALLY BENEFICIAL PROJECTS

- 126. Ohio Edison shall fund and/or implement the Environmentally Beneficial Projects ("Projects") described in this Section in compliance with the terms of this Consent Decree. In funding and/or implementing the Projects, Ohio Edison shall expend moneys and/or implement Projects cumulatively valued at \$25 million as allocated below.
- 127. All plans and reports prepared by Ohio Edison pursuant to the requirements of this Section of the Consent Decree shall be publicly available electronically without charge.
- 128. Ohio Edison shall certify for each Project that Ohio Edison is not otherwise required by law to perform the Project, that Ohio Edison is unaware of any other person who is required by law to perform the Project, and that Ohio Edison will not use any Project, or portion thereof, to satisfy any obligations that it may have under other applicable requirements of law in effect at the time of lodging of this Consent Decree.
- 129. <u>Cash Contribution to States</u>: The States shall jointly submit environmentally beneficial projects to Ohio Edison for funding in amounts not to exceed \$2 million per calendar year for up to five (5) years following the entry of the Consent Decree beginning as early as calendar year 2005. The funds for these projects will be apportioned by and among the States, and Ohio Edison shall not have approval rights for the projects or the apportionment. Ohio Edison shall pay proceeds as designated by the States in accordance with the environmentally beneficial projects submitted for funding each year within 75 calendar days after being notified in writing by the States. Notwithstanding the \$2 million and 5-year limitations above, if the total costs of the projects submitted in any one or more years are less than \$2 million, the difference between that amount and \$2 million will be available for funding by Ohio Edison of new or previously submitted projects in the following years, except that all amounts not designated by the States within ten (10) years after entry of this Consent Decree shall expire.
- 130. <u>Renewable Energy Development Projects</u>. Within three and a half years after entry of this Consent Decree, Ohio Edison shall provide proof to the Plaintiffs that it has entered into one or more contracts with providers of wind energy for purchase of at least 93 megawatts if federal tax credits are applicable to a project (or 23 megawatts if federal tax credits are not applicable). These renewable energy development projects have a net

present value of \$14.385 million. Such power purchase contracts shall be for 20 years of electric generation capacity generated by wind in Pennsylvania, New Jersey and/or western New York at such megawattage described above. Ohio Edison shall enter into one or more power purchase contracts within one year of entry of the Consent Decree for a minimum of 15 megawatts if federal tax credits are applicable to a project (or a minimum of 3.7 megawatts if tax credits are not applicable). The amount of megawatts shall be adjusted pro rata depending on the proportion of megawatts for which tax credits are or are not applicable.

- 131. With Plaintiffs' written approval, Ohio Edison may, in lieu of some or all of the wind projects under Paragraph 130, enter into contract(s) for electricity from new landfill gas projects in New Jersey, Connecticut, or New York.
- 132. <u>Allegheny County Project(s)</u>. Ohio Edison shall provide to the Allegheny County Clean Air Fund \$400,000 for municipal clean energy projects, as more fully described in Appendix A. Ohio Edison shall pay proceeds as designated by Allegheny County within 75 calendar days after being notified in writing by Allegheny County.
- 133. <u>National Park Service Project(s)</u>. The National Park Service shall submit to Ohio Edison a plan for using \$215,000 in accordance with the Park System Resource and Protection Act, 16 U.S.C. § 19jj, for a project or projects to improve air quality by addressing air quality and/or air deposition issues in and about the Shenandoah National Park. Ohio Edison shall not have approval rights for the plan or these projects. Ohio Edison shall transfer the sum of \$215,000 to the Natural Resource Damage and Assessment Fund (instructions to be provided in the National Park Service plan) within 75 calendar days after receipt of the plan.
- 134. Ohio Edison agrees that neither it, its affiliates nor the project developer shall sell, transfer, or otherwise use any renewable energy credits or any other benefits from the purchase power agreements for the wind and/or landfill gas projects undertaken (except for the federal tax credit if applicable) under any law or program enacted, adopted or promulgated on or before the date of lodging of the Consent Decree and any re-enacted or amended versions of such programs that come into effect thereafter, including, but not limited to, the Renewable Portfolio Standards enacted in Connecticut, New York, New Jersey and Pennsylvania.

#### X. <u>CIVIL PENALTY</u>

- 135. Within thirty (30) calendar days after entry of this Consent Decree, Ohio Edison shall pay to the United States a civil penalty in the amount of \$8.5 million. The civil penalty shall be paid by Electronic Funds Transfer ("EFT") to the United States Department of Justice, in accordance with current EFT procedures, referencing USAO File Number 2003v02237 and DOJ Case Number 90-5-2-1-06894 and the civil action case name and case number of this action. The costs of such EFT shall be Ohio Edison's responsibility. Payment shall be made in accordance with instructions provided to Ohio Edison by the Financial Litigation Unit of the U.S. Attorney's Office for the Southern District of Ohio. Any funds received after 2:00 p.m. EDT shall be credited on the next business day. At the time of payment, Ohio Edison shall provide notice of payment, referencing the USAO File Number, the DOJ Case Number, and the civil action case name and case number, to the Department of Justice and to EPA in accordance with Section XIX (Notices) of this Consent Decree.
- 136. Failure to timely pay the civil penalty shall subject Ohio Edison to interest accruing from the date payment is due until the date payment is made at the rate prescribed by 28 U.S.C. § 1961, and shall render Ohio Edison liable for all charges, costs, fees, and penalties established by law for the benefit of a creditor or of the United States in securing payment.
- 137. Payments made pursuant to this Section are penalties within the meaning of Section 162(f) of the Internal Revenue Code, 26 U.S.C. § 162(f), and are not tax-deductible expenditures for purposes of federal law.

#### XI. <u>RESOLUTION OF CLAIMS</u>

138. Entry of this Consent Decree shall resolve all civil claims of the Plaintiffs that arose from any modifications that commenced at Sammis Units 1 through 7 prior to the date of lodging of this Consent Decree (including but not limited to those modifications alleged in the Complaint in this civil action) under Parts C or D of Subchapter I of the Clean Air Act, under the New Source Performance Standard program of Section 111 of the Clean Air Act, or under the relevant provisions of the federally approved and enforceable Ohio State Implementation Plan (Ohio Admin. Code Chapter 3745-31).

- 139. Entry of this Consent Decree also shall resolve all civil claims of the United States under Parts C or D of Subchapter I of the Clean Air Act and regulations promulgated as of the date of lodging of this Consent Decree, where such claims are based on a modification, completed before December 31, 2012, that this Consent Decree directs Ohio Edison to undertake.
- 140. Upgrades of Units 6 and 7. The United States agrees that, in conjunction with the installation of emission controls on Sammis Units 6 and 7 pursuant to this Consent Decree, Ohio Edison may make modifications to one or both of those units that increase each of their maximum hourly emission rates by up to 10%, provided that:
  - a. any modifications for each unit occur simultaneously with, or no more than one year after, the installation and operation of the last of the controls as required under this Consent Decree for that unit, pursuant to Paragraphs 54, 81, and 118;
  - b. Ohio Edison is in compliance with all of the requirements of the Consent Decree for installation of emission controls pursuant to Paragraphs 54, 81, and 118, and for achieving and maintaining levels of emissions reductions pursuant to Paragraphs 69 and 93 (Plant-Wide Annual Caps for NO<sub>X</sub> and SO<sub>2</sub>); and
  - c. the modifications for each unit, either individually or collectively, do not increase the maximum hourly emission rate of each unit for  $NO_X$  or  $SO_2$  (as measured by 40 C.F.R. § 60.14(b) and (h)) by more than 10%.

If modifications occur in compliance with this paragraph, the United States agrees not to assert any claims for these modifications under Parts C and D of Subchapter I of the Clean Air Act, seeking the installation of additional NO<sub>X</sub>, SO<sub>2</sub>, and PM pollution controls on Units 6 and 7, other than those required by this Consent Decree. Nothing herein shall affect Ohio Edison's obligations under Ohio law, including any permitting requirements.

#### XII. <u>PERIODIC REPORTING</u>

141. Beginning forty-five (45) days after the end of the first full calendar quarter following the entry of this Consent Decree, continuing on a semi-annual basis until December 31, 2015, Ohio Edison shall submit to EPA and the States a periodic report in compliance with Appendix B.

- 142. In any periodic report submitted pursuant to this Section, Ohio Edison may incorporate by reference information previously submitted under its Title V permitting requirements, provided that Ohio Edison attaches the Title V permit report (or pertinent portions of such report) and provides a specific reference to the provisions of the Title V permit report that are responsive to the information required in the periodic progress report.
- 143. In addition to the periodic reports required pursuant to this Section, Ohio Edison shall provide a written report to Plaintiffs of the following violations of the requirements of this Consent Decree: (1) the 30-Day Rolling Average Emission Rates, (2) PM Emission Rates, (3) Annual and Monthly Caps, (4) Additional and Interim Reductions, and (5) Restricted SO<sub>2</sub> Allowance surrender within ten (10) business days of when Ohio Edison knew or should have known of any such violation. In this report, Ohio Edison shall explain to the best of its knowledge the cause or causes of the violation and all measures taken or to be taken by Ohio Edison to prevent such violations in the future. Pursuant to Section XXVII (Conditional Termination of Enforcement Under Consent Decree), when provisions of the Consent Decree are included in Title V Permits, the deviation reports required under applicable Title V regulations shall be deemed to satisfy all requirements of this paragraph.
- 144. Each Ohio Edison report shall be signed by Ohio Edison's Manager, Environmental Reporting and Compliance or, in his or her absence, Ohio Edison's Vice President of Environmental, or higher ranking official, and shall contain the following certification:

his information was prepared either by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my evaluation, or the direction and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, I hereby certify under penalty of law that, to the best of my knowledge and belief, this information is true, accurate, and complete. I understand that there are significant penalties for submitting false, inaccurate, or incomplete information to the United States.

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#### XIII. <u>REVIEW AND APPROVAL OF SUBMITTALS</u>

- 145. Ohio Edison shall submit each plan, report, or other submission to EPA and the States on or before the date that document is required or allowed to be submitted for review or approval pursuant to this Consent Decree. Plaintiffs shall within ninety (90) days of receipt of a plan, report, or other submission approve or decline to approve it and provide written comments. Plaintiffs' failure to respond within ninety (90) days shall not be construed as an approval or a disapproval of the submission, a wavier of the right to review the submission, or a basis to excuse compliance with the Consent Decree. Within sixty (60) days of receiving written comments from Plaintiffs, Ohio Edison shall either: (a) revise the submittal consistent with the written comments and provide the revised submittal for final approval to Plaintiffs; or (b) submit the matter for dispute resolution, including the period of informal negotiations, under Section XVI (Dispute Resolution) of this Consent Decree.
- 146. Upon receipt of Plaintiffs' final approval of the submittal or upon completion of the submittal pursuant to dispute resolution, Ohio Edison shall implement the approved submittal in accordance with the schedule specified therein.

#### XIV. STIPULATED PENALTIES

147. For any failure by Ohio Edison to comply with the terms of this Consent Decree, and subject to the provisions of Sections XV (Force Majeure) and XVI (Dispute Resolution) of this Consent Decree, Ohio Edison shall pay, within thirty (30) days after receipt of written demand to Ohio Edison by the United States, the following stipulated penalties to the United States:

Consent Decree Violation	Stipulated Penalty (Per day per violation, unless otherwise specified)
a. Failure to pay the civil penalty as specified in Section X (Civil Penalty) of this Consent Decree	\$10,000

Consent Decree Violation	Stipulated Penalty (Per day per violation, unless otherwise specified)
b. Failure to comply with any applicable 30-Day Rolling Average Emission Rate for $NO_X$ or $SO_2$ , or Emission Rate for PM, where the violation is less than 5% in excess of the limits set forth in this Consent Decree	\$2,500
c. Failure to comply with any applicable 30-Day Rolling Average Emission Rate for $NO_X$ or $SO_2$ , or Emission Rate for PM, where the violation is equal to or greater than 5% but less than 10% in excess of the limits set forth in this Consent Decree	\$5,000
d. Failure to comply with any applicable 30-Day Rolling Average Emission Rate for $NO_X$ or $SO_2$ , or Emission Rate for PM, where the violation is equal to or greater than 10% in excess of the limits set forth in this Consent Decree	\$10,000
e. Failure to comply with the Plant-Wide Annual Caps for $SO_2$ and $NO_{X_1}$ and the Sammis Units 1 through 5 Monthly Cap for $SO_2$	\$60,000 per ton for the first 100 tons over the limit, and \$120,000 per ton for each additional ton over the limit.
f. Failure to achieve the required Additional Reductions for $SO_2$ and $NO_X$	\$30,000 per ton for the first 100 tons not achieved, and \$60,000 per ton for each additional ton not achieved.
g. Failure to achieve the required Interim Reductions for $SO_2$ and $NO_X$	\$30,000 per ton for the first 100 tons not achieved, and \$60,000 per ton for each additional ton not achieved.
h. Failure to install, commence operation, or continue operation of the $NO_X$ , $SO_2$ , and PM pollution control devices on any unit, or failure to cease operations of a unit. This stipulated penalty will only accrue if the unit is operated without the required control device after the date by which the control device was required to be installed under this Consent Decree.	\$10,000 during the first 30 days, \$27,000 thereafter.

Consent Decree Violation	Stipulated Penalty (Per day per violation, unless otherwise specified)
i. Failure to install or operate CEMS as required in Paragraphs 79 and 108	\$1,000
j. Failure to conduct annual performance tests of PM emissions, as required in Paragraph 112	\$1,000
k. Failure to apply for any permit required by Section XVII	\$1,000
1. Failure to timely submit, modify, or implement, as approved, the reports, plans, studies, analyses, protocols, or other submittals required by this Consent Decree	\$750 during the first ten days, \$1,000 thereafter.
m. Using, selling, or transferring SO <sub>2</sub> Allowances, except as permitted in Section V.C.	the surrender, pursuant to the procedures set forth in Paragraphs 103 and 104 of this Consent Decree, of $SO_2$ Allowances in an amount equal to three times the number of $SO_2$ Allowances used, sold, or transferred in violation of this Consent Decree.
n. Selling, trading, or transferring NO <sub>X</sub> Allowances, except as permitted in Section IV.C.	the surrender of $NO_X$ Allowances in an amount equal to three times the number of $NO_X$ Allowances sold or transferred in violation of this Consent Decree.
o. Failure to surrender an SO <sub>2</sub> Allowance as required by Paragraph 102	(a) \$27,500 plus (b) 100 additional SO <sub>2</sub> Allowances per day per violation.
p. Failure to fund and/or implement any of the Environmentally Beneficial Projects in compliance with Section IX (Environmentally Beneficial Projects) of this Consent Decree	\$1,000 during the first 30 days, \$5,000 thereafter.
q. Any other violation of this Consent Decree	\$1,000

- 148. Violation of a 30-Day Rolling Average Emission Rate is a violation on every day on which the average is based. Violation of the Plant-Wide Annual Cap or Sammis Units 1 through 5 Monthly Cap is a single violation.
- 149. Where a violation of a 30-Day Rolling Average Emission Rate (for the same pollutant and from the same source) recurs within periods of less than thirty (30) days, Ohio Edison shall not pay a daily stipulated penalty for any day of the recurrence for which a stipulated penalty has already been paid.
- 150. Ohio Edison shall not be assessed or required to pay any stipulated penalties for any day on which a unit is not operated for failure to comply with a unit-specific requirement under this Consent Decree.
- 151. All stipulated penalties shall begin to accrue on the day after the performance is due or on the day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Nothing in this Consent Decree shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Consent Decree.
- 152. Ohio Edison shall pay all stipulated penalties to the United States within thirty (30) days of receipt of written demand to Ohio Edison from the United States, and shall continue to make such payments every thirty (30) days thereafter until the violation(s) no longer continues, unless Ohio Edison elects within 20 days of receipt of written demand to Ohio Edison from the United States to dispute the accrual of stipulated penalties in accordance with the provisions in Section XVI (Dispute Resolution) of this Consent Decree.
- 153. Stipulated penalties shall continue to accrue as provided in accordance with Paragraph 151 during any dispute, with interest on accrued stipulated penalties payable and calculated at the rate established by the Secretary of the Treasury, pursuant to 28 U.S.C. § 1961, but need not be paid until the following:
  - a. If the dispute is resolved by agreement, or by a decision of Plaintiffs pursuant to Section XVI (Dispute Resolution) of this Consent Decree that is not appealed to the Court, accrued stipulated penalties agreed or determined to be owing, together with accrued interest, shall be paid within thirty (30) days of the effective date of the agreement or of the receipt of Plaintiffs' decision;

- b. If the dispute is appealed to the Court and Plaintiffs prevail in whole or in part,
   Ohio Edison shall, within sixty (60) days of receipt of the Court's decision or
   order, pay all accrued stipulated penalties determined by the Court to be owing,
   together with accrued interest, except as provided in Subparagraph 153.c.;
- c. If the Court's decision is appealed by any Party, Ohio Edison shall, within fifteen (15) days of receipt of the final appellate court decision, pay all accrued stipulated penalties determined to be owing, together with accrued interest.

or purposes of this paragraph, the accrued stipulated penalties agreed by the Parties, or determined by the Plaintiffs through Dispute Resolution, to be owing may be less than the stipulated penalty amounts set forth in Paragraph 147.

- 154. All stipulated penalties shall be paid in the manner set forth in Section X (Civil Penalty) of this Consent Decree.
- 155. Should Ohio Edison fail to pay stipulated penalties in compliance with the terms of this Consent Decree, the United States shall be entitled to collect interest on such penalties, as provided for in 28 U.S.C. § 1961.
- 156. The stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to any Plaintiff by reason of Ohio Edison's failure to comply with any requirement of this Consent Decree or applicable law, except that for any violation of the Act for which this Consent Decree provides for payment of a stipulated penalty, Ohio Edison shall be allowed a credit for stipulated penalties paid against any statutory penalties also imposed for such violation.

#### XV. FORCE MAJEURE

157. For purposes of this Consent Decree, including but not limited to Paragraphs 69, 93, and 94 (Plant-Wide Annual Cap and Monthly Cap), a "Force Majeure Event" shall mean an event that has been or will be caused by circumstances beyond the control of Ohio Edison, its contractors, or any entity controlled by Ohio Edison that delays compliance with any provision of this Consent Decree or otherwise causes a violation of any provision of this Consent Decree despite Ohio Edison's best efforts to fulfill the obligation. "Best efforts to fulfill the obligation" include using best efforts to anticipate any potential Force Majeure Event and to address the effects of any such event (a) as it is

occurring and (b) after it has occurred, such that the delay or violation is minimized to the greatest extent possible.

- 158. Notice of Force Majeure Events. If any event occurs or has occurred that may delay compliance with or otherwise cause a violation of any obligation under this Consent Decree, as to which Ohio Edison intends to assert a claim of Force Majeure, Ohio Edison shall notify the United States and the States in writing as soon as practicable, but in no event later than fourteen (14) business days following the date Ohio Edison first knew, or by the exercise of due diligence should have known, that the event caused or may cause such delay or violation. In this notice, Ohio Edison shall reference this paragraph of this Consent Decree and describe the anticipated length of time that the delay or violation may persist, the cause or causes of the delay or violation, all measures taken or to be taken by Ohio Edison to prevent or minimize the delay or violation, the schedule by which Ohio Edison proposes to implement those measures, and Ohio Edison's rationale for attributing a delay or violation to a Force Majeure Event. Ohio Edison shall adopt all reasonable measures to avoid or minimize such delays or violations. Ohio Edison shall be deemed to know of any circumstance which Ohio Edison, its contractors, or any entity controlled by Ohio Edison knew or should have known.
- 159. <u>Failure to Give Notice</u>. If Ohio Edison fails to comply with the notice requirements in Paragraph 158, the Plaintiffs may void Ohio Edison's claim for Force Majeure as to the specific event for which Ohio Edison has failed to comply with such notice requirement.
- 160. <u>Plaintiffs' Response</u>. The Plaintiffs shall notify Ohio Edison in writing regarding Ohio Edison's claim of Force Majeure within twenty (20) business days of receipt of the notice provided under Paragraph 158. If the Plaintiffs agree that a delay in performance has been or will be caused by a Force Majeure Event, the Parties shall stipulate to an extension of deadline(s) for performance of the affected compliance requirement(s) by a period equal to the delay actually caused by the event. In such circumstances, an appropriate modification shall be made pursuant to Section XXIII (Modification) of this Consent Decree.
- 161. <u>Disagreement</u>. If the Plaintiffs do not accept Ohio Edison's claim of Force Majeure, or if the Parties cannot agree on the length of the delay actually caused by the Force Majeure

Event, the matter shall be resolved in accordance with Section XVI (Dispute Resolution) of this Consent Decree.

- 162. <u>Burden of Proof</u>. In any dispute regarding Force Majeure, Ohio Edison shall bear the burden of proving that any delay in performance or any other violation of any requirement of this Consent Decree was caused by or will be caused by a Force Majeure Event. Ohio Edison shall also bear the burden of proving that Ohio Edison gave the notice required by Paragraph 158 and the burden of proving the anticipated duration and extent of any delay(s) attributable to a Force Majeure Event. An extension of one compliance date based on a particular event may, but will not necessarily, result in an extension of a subsequent compliance date.
- 163. <u>Events Excluded</u>. Unanticipated or increased costs or expenses associated with the performance of Ohio Edison's obligations under this Consent Decree shall not constitute a Force Majeure Event.
- 164. Potential Force Majeure Events. The Parties agree that, depending upon the circumstances related to an event and Ohio Edison's response to such circumstances, the kinds of events listed below are among those that could qualify as Force Majeure Events within the meaning of this Section: construction, labor, or equipment delays; Malfunction of a unit or emission control device; coal supply interruption; acts of God; acts of war or terrorism; and orders by a government official, government agency, or other regulatory body acting under and authorized by applicable law that directs Ohio Edison to supply electricity in response to a system-wide (state-wide or regional) emergency. Depending upon the circumstances and Ohio Edison's response to such circumstances, failure of a permitting authority to issue a necessary permit in a timely fashion may constitute a Force Majeure Event where the failure of the permitting authority to act is beyond the control of Ohio Edison and Ohio Edison has taken all steps available to it to obtain the necessary permit, including, but not limited to: submitting a complete permit application; responding to requests for additional information by the permitting authority in a timely fashion; and accepting lawful permit terms and conditions after expeditiously exhausting any legal rights to appeal terms and conditions imposed by the permitting authority.

165. As part of the resolution of any matter submitted to this Court under Section XVI (Dispute Resolution) of this Consent Decree regarding a claim of Force Majeure, the Parties by agreement, or this Court by order, may in appropriate circumstances extend or modify the schedule for completion of work under this Consent Decree to account for the delay in the work that occurred as a result of any delay agreed to by the United States and the States or approved by the Court. Ohio Edison shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule.

#### XVI. <u>DISPUTE RESOLUTION</u>

- 166. The dispute resolution procedure provided by this Section shall be available to resolve all disputes arising under this Consent Decree, provided that the Party invoking such procedure has first made a good faith attempt to resolve the matter with the other Parties.
- 167. The dispute resolution procedure required herein shall be invoked by one Party giving written notice to the other Parties advising of a dispute pursuant to this Section. The notice shall describe the nature of the dispute and shall state the noticing Party's position with regard to such dispute. The Parties receiving such a notice shall acknowledge receipt of the notice, and the Parties in dispute shall expeditiously schedule a meeting to discuss the dispute informally not later than fourteen (14) days following receipt of such notice.
- 168. Disputes submitted to dispute resolution under this Section shall, in the first instance, be the subject of informal negotiations among the disputing Parties. Such period of informal negotiations shall not extend beyond thirty (30) calendar days from the date of the first meeting among the disputing Parties' representatives unless they agree in writing to shorten or extend this period. During the informal negotiations period, the disputing Parties may also submit their dispute to a mutually-agreed-upon alternative dispute resolution ("ADR") forum if the Parties agree that the ADR activities can be completed within the 30-day informal negotiations period (or such longer period as the Parties may agree to in writing).
- 169. If the disputing Parties are unable to reach agreement during the informal negotiation period, the Plaintiffs shall provide Ohio Edison with a written summary of their position

regarding the dispute. The written position provided by the Plaintiffs shall be considered binding unless, within forty-five (45) calendar days thereafter, Ohio Edison seeks judicial resolution of the dispute by filing a petition with this Court. The Plaintiffs may respond to the petition within forty-five (45) calendar days of filing.

- 170. Where the nature of the dispute is such that a more timely resolution of the issue is required, the time periods set out in this Section may be shortened upon motion of one of the Parties to the dispute.
- 171. This Court shall not draw any inferences nor establish any presumptions adverse to any disputing Party as a result of invocation of this Section or the disputing Parties' inability to reach agreement.
- 172. As part of the resolution of any dispute under this Section, in appropriate circumstances the disputing Parties may agree, or this Court may order, an extension or modification of the schedule for the completion of the activities required under this Consent Decree to account for the delay that occurred as a result of dispute resolution. Ohio Edison shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule, provided that Ohio Edison shall not be precluded from asserting that a Force Majeure Event has caused or may cause a delay in complying with the extended or modified schedule.
- 173. The Court shall decide all disputes pursuant to applicable principles of law for resolving such disputes. In their initial filings with the Court under Paragraph 169, the disputing Parties shall state their respective positions as to the applicable standard of law for resolving the particular dispute.

#### XVII. <u>PERMITS</u>

174. Unless expressly stated otherwise in this Consent Decree, in any instance where otherwise applicable law or this Consent Decree requires Ohio Edison to secure a permit to authorize construction or operation of any device, including all preconstruction, construction, and operating permits required under state law, Ohio Edison shall make such application in a timely manner. The United States will use its best efforts to expeditiously review all permit applications submitted by Ohio Edison in order to meet the requirements of this Consent Decree.

- 175. When permits are required as described in Paragraph 174, Ohio Edison shall complete and submit applications for such permits to the appropriate authorities to allow sufficient time for all legally required processing and review of the permit request, including requests for additional information by the permitting authorities. Any failure by Ohio Edison to submit a timely permit application for any unit in the Ohio Edison System shall bar any use by Ohio Edison of Section XV (Force Majeure) of this Consent Decree, where a Force Majeure claim is based on permitting delays.
- 176. <u>Title V Permits</u>. Whenever Ohio Edison applies for Title V Permit(s) or for amendment(s) to existing Title V Permit(s) to include any of the requirements of this Consent Decree in such permit, Ohio Edison shall send, at the same time, a copy of such application to each Plaintiff. Also, upon receiving a copy of any permit proposed for public comment as a result of such application, Ohio Edison shall promptly send a copy of such proposal to each Plaintiff, thereby allowing for timely participation in any public comment opportunity.
- 177. <u>Title V Permits Enforceable on Their Own Terms</u>. Notwithstanding the reference to Title V permits in this Consent Decree, the enforcement of such permits shall be in accordance with their own terms and the Act. The Title V permits shall not be directly enforceable under this Consent Decree, though any term or limit established by or under this Consent Decree shall be enforceable under this Consent Decree regardless of whether such term has or will become part of a Title V Permit subject to the limits of Section XXVII ("Conditional Termination of Enforcement Under Consent Decree").
- 178. Consent Decree Requirements To Be Proposed for Inclusion in Title V Permits. Whenever Ohio Edison applies for Title V Permit(s), or for amendment(s) to existing Title V Permit(s) to include any of the requirements of this Consent Decree in such permit, Ohio Edison shall include in such application all "applicable requirements" (as defined in the Title V program regulations) including but not limited to (1) unit specific emission rates, (2) Plant-Wide Annual and Monthly Sammis Caps, (3) Additional and Interim Reductions and (4) SO<sub>2</sub> Allowance surrender requirements and NO<sub>X</sub> Allowance restrictions. The NO<sub>X</sub> Allowance restrictions that are based upon the FirstEnergy System-Wide Emission Rate required in Paragraph 74 shall be incorporated into the Sammis facility Title V permit.

- 179. <u>New Source Review Permits</u>. This Consent Decree shall not be construed to require Ohio Edison to apply for or obtain a permit pursuant to the New Source Review requirements of Parts C and D of Title I of the Act.
- 180. If Ohio Edison sells or transfers to an entity unrelated to Ohio Edison ("Third Party Purchaser") part or all of its ownership interest in a unit in the Ohio Edison System ("Ownership Interest") covered under this Consent Decree, Ohio Edison shall comply with the requirements of Paragraph 178 with regard to that unit prior to any such sale or transfer unless, following any such sale or transfer, Ohio Edison remains the holder of the Title V permit for such facility.

### XVIII. INFORMATION COLLECTION AND RETENTION

- 181. Any authorized representative of the Plaintiffs, including their attorneys, contractors, and consultants, upon presentation of credentials, shall have a right of entry upon the premises of Sammis, Mansfield, Burger, Eastlake, and any facility that Ohio Edison must provide or cause to provide right of entry as required by Paragraphs 78 and 98, at any reasonable time for the purpose of:
  - a. monitoring the progress of activities required under this Consent Decree;
  - b. verifying any data or information submitted to the Plaintiffs in accordance with the terms of this Consent Decree;
  - c. obtaining samples and, upon request, splits of any samples taken by Ohio Edison or its representatives, contractors, or consultants; and
  - d. assessing Ohio Edison's compliance with this Consent Decree.
- 182. Ohio Edison shall retain, and instruct its contractors and agents to preserve, all nonidentical copies of all records and documents (including records and documents in electronic form) now in its or its contractors' or agents' possession or control, and that directly relate to Ohio Edison's performance of its obligations under this Consent Decree, until December 31, 2020. This record retention requirement shall apply regardless of any corporate document retention policy to the contrary.
- 183. All information and documents submitted by Ohio Edison pursuant to this Consent Decree shall be subject to any requests under applicable law providing public disclosure of documents unless (a) the information and documents are subject to legal privileges or

protection or (b) Ohio Edison claims and substantiates in accordance with 40 C.F.R. Part 2 that the information and documents contain confidential business information.

184. Nothing in this Consent Decree shall limit the authority of the Plaintiffs to conduct tests and inspections at facilities covered under this Consent Decree under Section 114 of the Act, 42 U.S.C. § 7414, or any other applicable federal or state laws, regulations or permits.

# XIX. NOTICES

185. Unless otherwise provided herein, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

As to the United States of America:

Chief, Environmental Enforcement Section Environment and Natural Resources Division U.S. Department of Justice P.O. Box 7611, Ben Franklin Station Washington, D.C. 20044-7611 DJ# 90-5-2-1-06894

and

Director, Air Enforcement Division Office of Enforcement and Compliance Assurance U.S. Environmental Protection Agency Ariel Rios Building [2242A] 1200 Pennsylvania Avenue, N.W. Washington, DC 20460

and

Air Enforcement & Compliance Assurance Branch U.S. EPA Region V 77 West Jackson Blvd. Mail Code AE17J Chicago, IL 60604-3590

#### As to the State of New York:

Chief, Environmental Protection Bureau New York State Attorney General's Office 120 Broadway New York, NY 10271

As to the State of New Jersey:

Administrator, Air and Environmental Quality Compliance and Enforcement P.O. Box 422 401 East State Street, Floor 4 Trenton, NJ 08625

and

Section Chief, Environmental Enforcement Section Division of Law Richard J. Hughes Justice Complex 25 Market Street P.O. Box 093 Trenton, NJ 08625-0093

As to the State of Connecticut:

Department Head Environment Department State of Connecticut Office of the Attorney General 55 Elm Street Hartford, CT 06106

and

Bureau Chief Air Bureau State of Connecticut Department of Environmental Protection 79 Elm Street Hartford, CT 06106

#### As to Ohio Edison:

Leila Vespoli Senior Vice President and General Counsel Ohio Edison Company 76 South Main Street Akron, OH 44308

and

Daniel V. Steen Vice President of Environmental Ohio Edison Company 76 South Main Street Akron, OH 44308

and

Douglas J. Weber Environmental Counsel Ohio Edison Company 76 South Main Street Akron, OH 44308

and

E. Donald Elliott Willkie Farr & Gallagher LLP 1875 K Street, NW Washington, DC 20006

and

Robert L. Brubaker Porter, Wright, Morris & Arthur LLP 41 S. High Street Columbus, Ohio 43215

186. All notifications, communications or submissions made pursuant to this Section shall be sent either by: (a) overnight mail or delivery service; (b) certified or registered mail, return receipt requested; or (c) electronic transmission, unless the recipient is not able to review the transmission in electronic form. All notifications, communications and transmissions (a) sent by overnight, certified or registered mail shall be deemed

submitted on the date they are postmarked, or (b) sent by overnight delivery service shall be deemed submitted on the date they are delivered to the delivery service. All notifications, communications, and submissions made by electronic means shall be electronically signed and certified, and shall be deemed submitted on the date that Ohio Edison receives written acknowledgment of receipt of such transmission.

187. Any Party may change either the notice recipient or the address for providing notices to it by serving the other Parties with a notice setting forth such new notice recipient or address.

#### XX. SALES OR TRANSFERS OF OWNERSHIP INTERESTS

- 188. If Ohio Edison proposes to sell or transfer part or all of its ownership interest in any of its real property or operations subject to this Consent Decree ("Ownership Interest") to an entity unrelated to FirstEnergy ("Third Party Purchaser"), it shall advise the Third Party Purchaser in writing of the existence of this Consent Decree prior to such sale or transfer, and shall send a copy of such written notification to the Plaintiffs pursuant to Section XIX (Notices) no later than thirty (30) days before closing.
- 189. At the time of sale or transfer of an Ownership Interest (but in no case later than ten (10) days after closing) Ohio Edison shall move the Court for a modification of this Consent Decree to make the purchaser or transferee a party to this Consent Decree and jointly and severally liable with Ohio Edison for all requirements of this Consent Decree that are applicable to the transferred or purchased Ownership Interests. Until the Court approves the modification of the Consent Decree, Ohio Edison shall remain fully liable for compliance with the Consent Decree notwithstanding the sale or transfer.
- 190. This Consent Decree shall not be construed to impede the transfer of any Ownership Interests between Ohio Edison and/or FirstEnergy and any Third Party Purchaser as long the requirements of this Consent Decree are met. This Consent Decree shall not be construed to prohibit a contractual allocation – as between Ohio Edison and/or First Energy and any Third Party Purchaser of Ownership Interests – of the burdens of compliance with this Consent Decree, provided that both Ohio Edison and such Third Party Purchaser shall remain jointly and severally liable for the obligations of the

Consent Decree applicable to the transferred or purchased Ownership Interests, except as provided in Paragraph 191.

- 191. If the Plaintiffs agree that the conditions of Paragraph 189 are satisfied and determine in their sole and unreviewable discretion that a transfer of liability and obligations is justified upon consideration of the Third Party Purchaser's technical capability, financial capability, and recent history of environmental compliance, Plaintiffs, Ohio Edison, and/or the Third Party Purchaser that has become a party to this Consent Decree pursuant to Paragraph 189 may move the Court for a modification that relieves Ohio Edison of its liability under this Consent Decree for the obligations of the Consent Decree applicable to the transferred or purchased Ownership Interests and makes the Third Party Purchaser solely liable for all requirements under the Consent Decree that are applicable to the transferred Ownership Interests.
- 192. Unless and until such modification relieving Ohio Edison of liability for the obligations and liabilities associated with the transferred Ownership Interest is entered by the Court, Ohio Edison shall remain liable for all the requirements of this Consent Decree, including those that may be applicable to the purchased or transferred Ownership Interests.
- 193. Notwithstanding the foregoing, however, Ohio Edison shall not assign, and shall not be released from, any obligation under this Consent Decree that is not specifically applicable to the purchased or transferred Ownership Interests, including the obligations set forth in Sections IX (Environmentally Beneficial Projects) and X (Civil Penalty).

#### XXI. <u>EFFECTIVE DATE</u>

194. The effective date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court.

#### XXII. <u>RETENTION OF JURISDICTION</u>

195. <u>Continuing Jurisdiction</u>. The Court shall retain jurisdiction of this case after entry of this Consent Decree to enforce compliance with the terms and conditions of this Consent Decree and to take any action necessary or appropriate for its interpretation, construction, execution, modification, or adjudication of disputes. During the term of this Consent Decree, any Party to this Consent Decree may apply to the Court for any relief necessary to construe or effectuate this Consent Decree.

#### XXIII. MODIFICATION

196. The terms of this Consent Decree may be modified only by a subsequent written agreement signed by all Parties. Where the modification constitutes a material change to any term of this Consent Decree, it shall be effective only upon approval by the Court.

#### XXIV. GENERAL PROVISIONS

- 197. This Consent Decree is not a permit. Compliance with the terms of this Consent Decree does not guarantee compliance with all applicable federal, state, or local laws or regulations. The emission rates set forth herein do not relieve Ohio Edison from any obligation to comply with other state and federal requirements under the Clean Air Act, including Ohio Edison's obligation to satisfy any state modeling requirements set forth in the Ohio State Implementation Plan.
- 198. This Consent Decree does not apply to any claim(s) of alleged criminal liability.
- 199. In any subsequent administrative or judicial action initiated by the United States for injunctive relief or civil penalties relating to the facilities covered by the Complaint in this action, Ohio Edison shall not assert any defense or claim based upon principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, or claim splitting, or any other defense based upon the contention that the claims raised by the Plaintiffs in the subsequent proceeding were brought, or should have been brought, in the instant case; provided, however, that nothing in this paragraph is intended to, or shall, affect the validity of Section XI (Resolution of Claims) of this Consent Decree.
- 200. Ohio Edison shall be bound by the law and/or regulations under Parts C & D of Subchapter I of the Clean Air Act in effect at the time of any physical change in, or change in the method of operation of, a stationary source.
- 201. Except as specifically provided by this Consent Decree, nothing in this Consent Decree shall relieve Ohio Edison of its obligation to comply with all applicable federal, state, and local laws and regulations, nor shall be construed to prevent or limit the rights of the Plaintiffs to obtain penalties or injunctive relief under the Act or other federal, state, or local statutes, regulations, or permits.
- 202. Every term expressly defined by this Consent Decree shall have the meaning given to that term by this Consent Decree and, except as otherwise provided in this Consent Decree,

every other term used in this Consent Decree that is also a term under the Act or the regulations implementing the Act shall mean in this Consent Decree what such term means under the Act or those implementing regulations.

- 203. Nothing in this Consent Decree is intended to, or shall, alter or waive any applicable law (including but not limited to any defenses, entitlements, challenges, or clarifications related to the Credible Evidence Rule, 62 Fed. Reg. 8315 (Feb. 27, 1997)) concerning the use of data for any purpose under the Act, generated either by the reference methods specified herein or otherwise.
- 204. Each limit and/or other requirement established by or under this Consent Decree is a separate, independent requirement.
- 205. Performance standards, emissions limits, and other quantitative standards set by or under this Consent Decree must be met to the number of significant digits in which the standard or limit is expressed. For example, an Emission Rate of 0.100 is not met if the actual Emission Rate is 0.101. Ohio Edison shall round the fourth significant digit to the nearest third significant digit, or the third significant digit to the nearest second significant digit, depending upon whether the limit is expressed to three or two significant digits. For example, if an actual Emission Rate is 0.1004, that shall be reported as 0.100, and shall be in compliance with an Emission Rate of 0.100, and if an actual Emission Rate is 0.1005, that shall be reported as 0.101, and shall not be in compliance with an Emission Rate of 0.100. Ohio Edison shall report data to the number of significant digits in which the standard or limit is expressed.
- 206. This Consent Decree does not limit, enlarge or affect the rights of any Party to this Consent Decree as against or on behalf of any third parties. Entry of this Consent Decree shall be solely for purposes of resolving this case and does not affect any other claims, including any claims by third parties. Entry of this Consent Decree as a final judgment shall not be considered binding on Ohio Edison in litigation with third parties. Except as provided in Paragraph 178, no portion of this Consent Decree or any prior rulings or orders in this case shall be enforceable by any person or entity other than the Parties. Ohio Edison's settlement of this case without exercising its right of appeal shall not be construed in any litigation between Ohio Edison and third parties as a final judgment or final determination on the issues addressed by the prior rulings or orders in this case.

- 207. This Consent Decree constitutes the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Consent Decree, and supercedes all prior agreements and understandings among the Parties related to the subject matter herein. No document, representation, inducement, agreement, understanding, or promise constitutes any part of this Consent Decree or the settlement it represents, nor shall they be used in construing the terms of this Consent Decree.
- 208. Each Party to this action shall bear its own costs and attorneys' fees.

### XXV. SIGNATORIES AND SERVICE

- 209. Each undersigned representative of the Parties certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind to this document the Party he or she represents.
- 210. This Consent Decree may be signed in counterparts, and such counterpart signature pages shall be given full force and effect.
- 211. Each Party hereby agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

#### XXVI. PUBLIC COMMENT

212. The Parties agree and acknowledge that final approval by the United States and entry of this Consent Decree is subject to the procedures of 28 C.F.R. § 50.7, which provides for notice of the lodging of this Consent Decree in the Federal Register, an opportunity for public comment, and the right of the United States to withdraw or withhold consent if the comments disclose facts or considerations which indicate that the Consent Decree is inappropriate, improper or inadequate. Ohio Edison shall not oppose entry of this Consent Decree by this Court or challenge any provision of this Consent Decree unless the United States has notified Ohio Edison, in writing, that the United States no longer supports entry of the Consent Decree.

# XXVII. <u>CONDITIONAL TERMINATION OF ENFORCEMENT UNDER CONSENT</u> <u>DECREE</u>

- 213. <u>Termination as to Completed Tasks.</u> As soon as Ohio Edison completes a construction project or any other requirement of this Consent Decree that is not ongoing or recurring, Ohio Edison may, by motion to this Court, seek termination of the provision or provisions of this Consent Decree that imposed the requirement.
- 214. <u>Conditional Termination of Enforcement Through the Consent Decree.</u> After Ohio Edison:
  - a. has successfully completed construction, and has maintained operation, of all pollution controls as required by this Consent Decree;
  - b. has obtained final Title V permits (i) as required by the terms of this Consent
     Decree; (ii) that cover all units in this Consent Decree; and (iii) that include as
     enforceable permit terms all of the unit performance and other requirements
     specified in Section XVII (Permits) of this Consent Decree; and

c. certifies that the date is later than December 31, 2015;

Ohio Edison may so certify these facts to the Plaintiffs and this Court. If the Plaintiffs do not object in writing with specific reasons within forty-five (45) days of receipt of Ohio Edison's certification, then, for any Consent Decree violations that occur after the filing of notice, the Plaintiffs shall pursue enforcement of the requirements contained in the Title V permit through the applicable Title V permit and not through this Consent Decree.

215. <u>Resort to Enforcement under this Consent Decree.</u> Notwithstanding Paragraph 214, if enforcement of a provision in this Consent Decree cannot be pursued by a Party under the applicable Title V permit, or if a Consent Decree requirement was intended to be part of a Title V Permit and did not become or remain part of such permit, such requirement may be enforced under the terms of this Consent Decree at any time.

# XXVIII. FINAL JUDGMENT

216. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment in the above-captioned matter between the Plaintiffs and Ohio Edison.

SO ORDERED, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2005.

UNITED STATES DISTRICT COURT JUDGE

# FOR THE UNITED STATES OF AMERICA:

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# FOR DEFENDANTS OHIO EDISON COMPANY AND PENNSYLVANIA POWER COMPANY:

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# APPENDIX A - ALLEGHENY COUNTY ENVIRONMENTALLY BENEFICIAL PROJECTS

In accordance with Paragraph 132, the following describes the Environmentally Beneficial Projects for the residents of Allegheny County, Pennsylvania.

- A. A 52 kW-DC rated Grid Connected Solar Power System, described below. This project shall be installed on the roof of the Monument Hill Building, 808 Ridge Avenue, Pittsburgh, PA 15212-6097. This environmentally beneficial project is estimated to prevent the emission of 68.5 tons of CO<sub>2</sub>, 0.38 tons of SO<sub>2</sub>, and 0.10 tons of NO<sub>X</sub> per year of operation.
- B. Project Parameters:

The Grid Connected Solar Power System is a 52 kW-DC rated grid tied design. This system is configured as twenty-four parallel-connected arrays, each dedicated to an inverter. Within each array are twenty-two 100 watt modules. The system will include a PV performance monitoring system to provide a system display. The system will also include appropriate DC and AC disconnects, ground fault protection, and lightning surge protection. Additional hardware requirements may be imposed by Duquesne Light (the local electric utility). The estimated roof area for this installation is 5,800 square feet. The GCSPS will be mounted to the roof via a standard industrial roof mounting system. The GCSPS design and installation must be completed in accordance with the National Electric Code Section 690 provisions pertaining to photovoltaic systems.

- C. Specific components include:
  - 528 Solar Power Industries M100 100 watt modules (SPI-M100) designed to meet "World Class" quality, reliability and performance requirements, and UL 1703 and IEC 612215 certification requirements. The SPI-M100 modules include 150mm square multi-crystalline solar cells, PECVD antireflective coating, heavy duty anodized aluminum frames, tempered low iron front cover glass, EVA encapsulation and

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multi-layer back sheet protection, high capacity junction box with diodes, and quick connect polarized DC connectors.

- Twenty-four (24) 2500 watt SunnyBoy inverters, model 2500U, housed in NEMA 4X stainless steel outdoor enclosures, with an efficiency of at least 90% at maximum output. The Sunny Boy inverters must include DC and AC disconnects to isolate the inverters from the photovoltaic array and grid, respectively.
- 3. Twenty-four (24) SunnyBoy PC options to monitor each inverter's performance, to be connected to the central PC.
- 4. One (1) Sunny Control Lite Unit
- 5. Twenty-four (24) 250V safety switches
- 6. One 250 Amp AC Load Center
- 7. One (1) RS-485 Cable
- Twenty-four (24) Cutler Hammer Heavy Duty Disconnect Switches (30A dc)
- 9. Twenty-four (24) Lightning Surge Arrestors
- 10. One (1) UniRac Roof Mount System, including mounting hardware
- 11. Thirty thousand (30,000) feet of Use 2 wire
- 12. One (1) personal computer and display monitor
- 13. Two (2) Installation and Operations manuals
- D. Payments to fund this project shall be made to the order of the Allegheny County Clean Air Fund, and submitted to the following address:

Allegheny County Health Department Air Quality Program 301 Thirty-ninth Street Pittsburgh, Pennsylvania 15201-1891

# **APPENDIX B – REPORTING REQUIREMENTS**

I. Semi-annual Reporting Requirements

Ohio Edison shall submit semi-annual reports, electronically and in hard copy, as required by Paragraph 141 and certified as required by Paragraph 144 of this Consent Decree. Ohio Edison shall provide the following information in each of the semi-annual reports.

A. Installation of NO<sub>X</sub> and SO<sub>2</sub> Removal Equipment

Report the progress of construction of NO<sub>X</sub> and SO<sub>2</sub> removal equipment, including:

- 1. If construction is not underway, the construction schedule, dates of contract execution, and major component delivery;
- 2. If construction is underway, the estimated percent of installation and estimated construction completion date; and
- 3. Once construction is complete, the date of final installation and of acceptance testing.
- B. 30-Day Rolling Average Emission Rates for NO<sub>X</sub> and SO<sub>2</sub>
  - Report a NO<sub>X</sub> and SO<sub>2</sub> 30-Day Rolling Average Emission Rate (lb/mmBtu), as defined in Paragraph 4, for each operating day of a Sammis unit commencing on the thirtieth day after 30-Day Rolling Average Emission Rates become applicable.
  - 2. Within the first report that identifies a 30-Day Rolling Average Emission Rate (lb/mmBtu) at least five (5) example calculations (including hourly CEMS data in electronic format for the calculation) used to determine the 30-Day Rolling Average Emission Rate. If at any time Ohio Edison changes the methodology used in determining the 30-Day Rolling Average Emission Rate, Ohio Edison shall explain the change and the reason for using the new methodology.

- Report all deviations from any 30-Day Rolling Average Emission Rate in lb/mmBtu. Ohio Edison shall identify any corrective actions taken in response to such deviation.
- 4. Commencing when a unit becomes subject to a 30-Day Rolling Average Emission Rate, Ohio Edison shall also report:
  - a. The date and time that the unit initially combusts any fuel;
  - b. The date and time that the unit is synchronized with a utility electric distribution system;
  - c. The date and time that the fire is extinguished in the unit; and
  - d. For the fifth and subsequent Cold Start Up Period that occurs within any 30-Day period, the earlier of the date and time that (1) is eight hours after the unit is synchronized with a utility electric distribution system, or (2) the flue gas has reached the SCR operational temperature range specified by the catalyst manufacturer.
- C. PM Emission Rates
  - Commencing when a PM Emission Rate becomes applicable, report the PM Emission Rate (lb/mmBtu) as defined in Paragraph 38, for Sammis Units 6 and 7.
  - 2. For Sammis Units 6 and 7, attach a copy of the executive summary and results of any stack test to the next semi-annual report submitted.
  - 3. Report all deviations from the PM Emission Rate in lb/mmBtu. Ohio Edison shall identify any corrective actions taken in response to such deviations.
- D. Plant-Wide Annual Cap and Monthly Cap
  - Commencing when the Plant-Wide Annual Caps becomes applicable, report the applicable NO<sub>X</sub> and SO<sub>2</sub> Plant-Wide Annual Caps (tons) as defined in Paragraph 36, for the Sammis Plant.

- Commencing when the Monthly Cap becomes applicable, report the applicable SO<sub>2</sub> Monthly Cap (tons) as defined in Paragraph 30, for Sammis Units 1-5.
- 3. Deviations shall be reported once per year in the semi-annual report following the end of each calendar year. Ohio Edison shall identify the cause and any corrective actions, if necessary, taken for each deviation from the Plant-Wide Annual Caps and Monthly Cap reported above.
- E. Additional Reductions shall be reported once per year in the semi-annual report following the end of each calendar year.
  - Commencing in calendar year 2008, report the amount of Additional Eastlake Plant NO<sub>X</sub> Reductions (tons) achieved for the applicable year for the Eastlake Plant and, if applicable, for each plant in addition to the Eastlake Plant where any remaining Additional Eastlake Plant NO<sub>X</sub> Reductions are achieved.
  - Commencing in calendar year 2010, report the amount of Additional Burger Plant NO<sub>X</sub> Reductions (tons) achieved for the applicable year at the Burger Plant and, if applicable, for each plant in addition to the Burger Plant where any remaining Additional Burger Plant NO<sub>X</sub> Reductions are achieved.
  - 3. Commencing in calendar year 2011, unless Ohio Edison elects to satisfy the options for the Burger Plant in accordance with Paragraph 83.a. and b., report the amount of Additional Burger Plant SO<sub>2</sub> Reductions achieved for the applicable year at the Burger Plant and, if applicable, for each plant in addition to the Burger Plant where any remaining Additional Burger Plant SO<sub>2</sub> Reductions are achieved.
    - a. If Ohio Edison elects to permanently shut down Burger Units 4 and 5 pursuant to Paragraph 83.a., Ohio Edison shall provide proof that the units are in fact shut down.
    - b. If Ohio Edison elects to repower Burger Units 4 and 5 pursuant to Paragraph 83.b., the 30-Day Rolling Average Emission Rates for NO<sub>X</sub> and SO<sub>2</sub> and the PM Emission Rate as defined in Paragraphs 4 and 38.

- 4. Commencing in calendar year 2006, report the amount of Additional Mansfield Plant SO<sub>2</sub> Reductions (tons) achieved for the applicable year at the Mansfield Plant and, if applicable, for each plant in addition to the Mansfield Plant where any remaining Additional Mansfield Plant SO<sub>2</sub> Reductions are achieved and performance test data or CEMS data (or combination of CEMS data and coal sampling) equivalent to the sampling period of a performance test demonstrating that each FGD at Mansfield Units 1, 2, and 3 achieved a 95% Removal Efficiency in accordance with Paragraph 91.
- F. Interim Reductions for NO<sub>X</sub> and SO<sub>2</sub>

Commencing in calendar year 2006, report the amount of Interim Emission Reductions (tons) achieved pursuant to Paragraphs 72, 97, and 98, including identifying the location from which such emissions are reduced and the methods by which such emission reductions are achieved.

- G. Surrender of Restricted SO<sub>2</sub> Allowances
  - Beginning in 2018, report the Restricted SO<sub>2</sub> Allowances surrendered to EPA pursuant to Paragraph 102 and documentation verifying such surrender.
  - 2. If Ohio Edison surrenders any Restricted SO<sub>2</sub> Allowances to a third party:
    - a. Include a description of the transfer in accordance with the provisions of Paragraph 104;
    - b. No later than the next semi-annual report due 12 months after the report containing in the information in a. above, include a statement that the third party permanently surrendered the SO<sub>2</sub> Allowances to EPA within one year after Ohio Edison transferred the SO<sub>2</sub> Allowances to the third party; and
    - c. Report the amount of Restricted SO<sub>2</sub> Allowances transferred and the units to which Ohio Edison transfers Restricted SO<sub>2</sub> Allowances pursuant to Paragraph 100.

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H. Generation of Super-Compliant Allowances

Report the generation of Super-compliant  $NO_X$  and  $SO_2$  Allowances as defined in Paragraphs 49 and 50 and the calculations or data justifying the generation of the used or traded Super-compliant Allowances, annually as part of the Semi-annual report following the completion of a calendar year.

I. NO<sub>X</sub> System-Wide Annual Emission Rate

Commencing in calendar year 2016, report the  $NO_X$  System-Wide Annual Emission Rate (lb/mmBtu) for the preceding year if Ohio Edison elects to use Restricted  $NO_X$ Allowances pursuant to the second sentence of Paragraph 74.

- J. Environmentally Beneficial Projects
  - Cash Contributions for Environmentally Beneficial Projects. Report the payment of proceeds and amounts of proceeds for these projects made pursuant to Paragraphs 129, 132, and 133.
  - Renewable Energy Development Projects. Report the execution of each purchase power contract pursuant to Paragraph 130, including the amount of megawatts to be purchased over a 20-year period; the location and description of the renewable energy development project; and the date of commencement of operation of any renewable energy development project.

# II. Deviation Reports

In addition to the reporting requirements under Paragraph 143, a summary of all deviations from the requirements of the Consent Decree that occurred during the reporting period identifying the date and time that the deviation occurred, the date and time the deviation was corrected, the cause and any corrective actions, if necessary, taken for each deviation, and the date that the deviation was initially reported under Paragraph 143.

III. Ohio Edison Submissions

A list of all plans or submissions and the date submitted to the Plaintiffs for the reporting period, identifying if any are pending the review and approval of the Plaintiffs.