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# MISSOURI PUBLIC SERVICE COMMISSION

## CASE NO. EF-2024-0021

## DIRECT TESTIMONY

## OF

## KARL R. MOOR

## ON

## BEHALF OF

## UNION ELECTRIC COMPANY
## D/B/A AMEREN MISSOURI

**St. Louis, Missouri**
**November 21, 2023**

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# DIRECT TESTIMONY

# OF

# KARL R. MOOR

# FILE NO. EF-2024-0021

## I. INTRODUCTION

**Q. Can you state your name and where you live?**

A. Karl R. Moor. I live in Washington, DC.

**Q. What do you do for work?**

A. I retired from the United States Environmental Protection Agency ("EPA") in January 2021. I am a principal in Powerscape Global, LLC, a clean combustion technology company and consulting firm.

**Q. Can you summarize your educational background?**

A. I graduated from the University of Montevallo in Alabama in 1979 with a B.A. in History (and a minor in Economics). After that, I attended The George Washington University in Washington, D.C., where in 1982 I earned an M.A. in Public & International Affairs; Science, Technology and Public Policy. I then attended the Georgetown University Law Center, where I earned my law degree in 1986. A copy of my *curriculum vitae* is attached as Schedule KRM-D1.

**Q. Can you summarize your professional background, as relevant to the issues in this proceeding?**

A. Professionally, I have been dealing with Clean Air Act issues since 1986. Prior to that time, I served on two Congressional committees, in a U.S. Senate office and briefly within the Reagan Administration. My work in connection to the Clean Air Act

began when I was asked by my client Alabama Power Company to relocate to Washington, D.C. to assist with the development of policy and legislation as Congress and the Executive Branch considered possible amendment of the federal Clean Air Act to address, among other things, emissions from coal-fired power plants. Between 1987 and 1989, I also served as loaned counsel to the Clean Air Working Group, the primary industry group interacting with members of Congress and the Executive Branch—including the EPA and the Office of Management and Budget—on key portions of the Clean Air Act Amendments that affected electric utilities and every other industrial sector. In this role, I was conversant and active on all matters related to New Source Review ("NSR"). Whether and how NSR would apply to projects performed on existing coal-fired power plants was a key topic of discussion with Congress and the Executive Branch.

After passage of the 1990 Clean Air Act Amendments, I worked extensively on the regulatory implementation of these amendments for my utility clients (including Southern Company Services, the operating companies of Southern Company, and South Carolina Electric & Gas Company) as a lawyer in private practice.

In 1998, I joined Southern Company Services as Vice President and Associate General Counsel for Litigation and Public Policy. Accordingly, I was the Southern Company Services system executive primarily responsible for all interactions, discussions, litigation and decision-making associated with EPA's electric utility enforcement initiative from 1999 to 2015. Later, I also served simultaneously as General Counsel and Compliance Officer for Southern Transmission. Subsequently, I was promoted to Senior Vice President and Chief Environmental Counsel for Southern Company Services, Inc. I retired from the company in that position in 2015. In my various company roles, from

1998 to 2015, I served as the executive responsible at Southern Company Services for determining whether and recommending when the Southern Company's various operating companies should seek NSR permits for activities at more than 30 fossil steam stations with a combined nameplate capacity of greater than 21,000 MW.

After my retirement from Southern Company Services, and subsequent service as counsel for the law firm Balch & Bingham LLP, I accepted an appointment at the EPA. From 2019 to 2021, I served as Deputy Assistant Administrator for Policy in the EPA Office of Air and Radiation, the office that has responsibility for the federal NSR program. I retired from federal government service in January, 2021. In 2022, I founded Powerscape Global, LLC, based in Virginia. Powerscape Global is a technology company that applies a proprietary advanced technology for the gasification or reformation of fossil fuels and plastics for use in the construction of power plants.

As a result of this range of experiences, I have a deep understanding of and professional engagement with the legislative, regulatory, litigation and policy issues that existed when Ameren Missouri made its decisions with respect to the Rush Island plant. This larger context is key to understanding what Ameren Missouri and the utility industry were facing in the period between 2005 and 2010, the timeframe when Ameren Missouri made the relevant decisions.

The opinions offered in my testimony are, except as specifically noted, based upon information that is publicly available or provided to me by Ameren Missouri.

**Q. During your tenure at EPA, did you have anything to do with EPA's NSR enforcement case against Ameren Missouri?**

A. No. EPA's enforcement actions were handled by a separate office, the Office of Enforcement and Compliance Assurance ("OECA").

## II. PURPOSE OF TESTIMONY

**Q. What is the purpose of your testimony?**

A. The purpose of my direct testimony is to offer opinions on the following topics:

- The reasonableness of Ameren Missouri's efforts to understand and to comply with the law;
- The reasonableness of Ameren Missouri's decisions that NSR did not apply to certain projects Ameren Missouri performed at its Rush Island plant in 2007 and 2010, and the decisions to proceed with those projects without seeking NSR permits;
- The reasonableness of Ameren Missouri's environmental compliance planning; and
- The reasonableness of Ameren Missouri's response to EPA's allegations of non-compliance.

**Q. Can you provide a summary of your testimony and opinions?**

A. I would summarize my testimony and opinions as follows.

1. To determine the reasonableness of Ameren Missouri's decisions, a reviewer should understand the statutory, regulatory and legal context that existed at the time they were made: 2005-2007 for the Unit 1 projects and 2005-2010 for the Unit 2 projects. Post-hoc second-guessing of those decisions is not appropriate. To evaluate Ameren Missouri's decisions requires understanding what Ameren Missouri knew, or reasonably should have known, about the applicable legal requirements and how they would apply to the specific projects at Rush Island.

2. Ameren Missouri made reasonable efforts to understand and to comply with the law. Ameren Missouri utilized the resources of Ameren Services Company's

Environmental Services Department ("ESD") on matters concerning Clean Air Act compliance, including New Source Review. To learn about the requirements of New Source Review, ESD personnel (1) read the applicable regulations; (2) consulted with regulators and industry organizations knowledgeable on the regulatory programs; and (3) consulted with the Ameren Legal Department, as necessary. These were the reasonable efforts that any utility would employ to understand the applicable law.

3. The NSR program requires source owners or operators to make preconstruction determinations of whether their activities will trigger permitting requirements. The program does not require source owners or operators to obtain regulatory approval of those determinations. In its pre-construction evaluation of the projects at Rush Island for potential permitting requirements, Ameren Missouri evaluated three criteria:

- Would the project be expected to cause an increase in the unit's potential emissions (i.e., the maximum achievable hourly emissions rate)?
- Would the project be expected to cause an increase in the unit's actual annual emissions?
- Would the project involve a change to the unit that was not "routine maintenance, repair or replacement"?

Ameren Missouri understood that only if the answer to all three of these questions was "yes" would an NSR permit be required.

4. Given the state of the law that existed at the time Ameren Missouri conducted its preconstruction evaluations, it was entirely reasonable for Ameren Missouri to use these three criteria to identify projects requiring NSR permits. Ameren Missouri's view of the applicable regulations, which had been promulgated by Missouri and approved by EPA as part of the Missouri state implementation plan ("SIP"), was consistent with that

of the Missouri Department of Natural Resources ("MDNR"). Ameren Missouri's view of the federal NSR regulations as incorporated into the Missouri SIP was also consistent with the official statements and policy of EPA's program office in charge of implementing the NSR program.

5. When one applies Ameren Missouri's reasonable understanding of the applicable legal requirements to the facts of the Rush Island projects, the only reasonable conclusion based on what Ameren Missouri knew or should have known at the time was that no NSR permit was required. No project increased a unit's potential to emit, and no one to my knowledge has ever claimed otherwise. No project would have been expected to cause an increase in a unit's actual annual emissions, because each unit had ample unused capacity to generate in the years before the projects occurred—capacity unused due to lack of demand—and the component replacements at issue were merely like-kind replacements that would not be expected to affect the overall capacity or utilization of the unit. Finally, the components at issue were routinely replaced by Ameren Missouri, by Ameren Missouri's Illinois affiliate, and by others across the electric utility industry. Accordingly, the projects fit comfortably within the exclusion of routine maintenance, repair or replacement ("RMRR") from NSR permitting requirements. This is supported by statements of EPA and the determinations made by Missouri and other states with respect to similar projects, leading up to and contemporaneous with the 2007 and 2010 projects at Rush Island.

6. EPA attempted to abandon its established interpretation of NSR with an industry-wide "enforcement initiative" launched in 1999 against electric utilities. The litigation positions advanced in EPA's enforcement initiative over the decade that

followed—in addition to departing from past EPA statements and practice—conflicted with the official policy and guidance developed by the relevant EPA program office during that time. At the time that Ameren Missouri made its pre-project decisions on NSR applicability, most courts had rejected EPA's attempts to re-write the NSR program through litigation.

7. The projects Ameren Missouri performed at Rush Island are like those performed countless times every year in the electric utility industry, because they are necessary for the continued safe and reliable operation of generating assets critical to the supply of electricity. After the launch of EPA's enforcement initiative, Ameren Missouri—like other utilities—continued to follow the requirements of its state permitting authority and the official interpretations of the NSR regulations issued by EPA's program office. Despite the prevalence of similar component replacements across the industry, I know of no utility in that period that sought an NSR permit prior to undertaking such projects.

8. Starting before the Rush Island Projects and continuing well after the Rush Island Projects, Ameren Missouri studied what forthcoming Clean Air Act rulemakings might require in terms of emission reductions and, potentially, new emissions controls on Rush Island and the rest of the coal-fired fleet. Ameren Missouri developed an "Environmental Compliance Plan" for compliance with these new rulemakings that considered, but ultimately rejected, adding more scrubbers on the Ameren Missouri system. The consideration of scrubber additions to Rush Island and Labadie in the development of Ameren Missouri's Environmental Compliance Plan was in response to the potential that these rulemakings would impose more stringent requirements than

ultimately were enacted. Evaluating potential contingencies was good utility practice, not a sign of concern over triggering NSR at the plants. When the rulemakings concluded and Ameren Missouri was able to comply without adding additional scrubbers to its system, it reasonably took the least-cost approach to compliance, for the benefit of its customers.

9. I conclude that Ameren Missouri made reasonable efforts to understand and to apply the law, acted reasonably in determining that none of the Rush Island projects required preconstruction permitting, acted reasonably in proceeding with the projects without seeking any NSR permits (or an applicability determination confirming that NSR did not apply), and acted reasonably through its environmental compliance planning.

## III. THE CLEAN AIR ACT AND NEW SOURCE REVIEW

**Q. Can you summarize the nature of the Clean Air Act's New Source Review program, and how it fits with the 1990 Clean Air Act Amendments?**

A. As the name denotes, "New Source Review" focuses on new emissions sources, not existing sources. NSR requires preconstruction review and permitting of new sources of air emissions. NSR does not apply to existing sources of emissions unless they undergo "modification." 42 U.S.C. §§ 7475, 7411(a)(4). The Clean Air Act defines "modification" as "any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source . . . ." Id. § 7411(a)(4). The Clean Air Act does not assume that every existing source will eventually undergo "modification" and require controls. United States v. DTE Energy Co., 711 F.3d 643, 650-51 (6th Cir. 2013). In fact, the 1990 Clean Air Act Amendments, with which I was intimately familiar, were premised on the assumption that coal-fired electric generating units would be refurbished and continue to operate (and generate sulfur dioxide ("$SO_2$") emissions as a result), without triggering NSR and its control requirements.

Congress considered and specifically rejected proposals to require unit-by-unit retrofits of scrubbers and similar controls on existing coal-fired units, and instead chose the innovative strategy of "cap-and-trade" to address emissions from these sources. Lower emissions rates, not control technologies, were the end point of the 1990 Clean Air Act Amendments. This "grand compromise" was the seminal environmental success of those amendments. At every step in the legislative and regulatory process leading to and after the 1990 Clean Air Act Amendments, the industry was assured by EPA, consistent with the plain text of the regulations, that the NSR regulations cannot be interpreted to undermine the industry's ability to operate, repair, and maintain existing units.

There are two different parts of the federal NSR program: (1) the Prevention of Significant Deterioration ("PSD") program, which applies to sources located in areas that have been found to meet EPA's national ambient air quality standards; and (2) the Nonattainment New Source Review ("NNSR") program, which applies to sources located in areas that fail to meet those air quality standards.[1] The applicability provisions in the federal PSD and federal NNSR rules are the same in all relevant respects. For this reason, and because most practitioners in my experience refer to both PSD and NNSR collectively as the "NSR program," I will do the same and refer in my testimony generally to the "NSR program" and the "NSR regulations," even though Rush Island was not subject to the subset of these consisting of the NNSR regulations.

[1] I understand that Rush Island was located is an area that met EPA's national ambient air quality standards at all relevant times.

## IV. AMEREN MISSOURI'S APPLICABILITY DETERMINATIONS

**Q. How did you gain an understanding of what Ameren Missouri did to evaluate the applicability of NSR for the Rush Island projects?**

A. I reviewed the decisions in the Ameren Missouri litigation in the U.S. District Court for the Eastern District of Missouri, as well as the testimony and declarations of Steven Whitworth and David Boll in that case. United States v. Ameren Missouri, No. 4:11-cv-00077-RWS (E.D. Mo.).[2] Mr. Whitworth was the head of Ameren Services Company's Environmental Services Department at the relevant time. Schedule KRM-D2 (Whitworth Decl.) ¶ 2. The Environmental Services Department had a lead role in determining whether permits are required for projects at Ameren Missouri's units. Id. ¶ 3. The Environmental Services Department would fulfill this responsibility by working with engineers who had responsibility for the projects. Id. ¶¶ 4-6. One such engineer was David Boll, a licensed professional engineer in Ameren's Environmental Project Engineering Department whose responsibilities included supervising the work for the component replacement projects at issue at Rush Island, and assessing the impact component replacements were expected to have on unit operations. Schedule KRM-D3 (Boll Decl.) ¶¶ 2-3. In addition to reviewing their testimony and declarations, I interviewed Steven Whitworth and David Boll. I have also reviewed Mr. Whitworth's direct testimony filed concurrently with the filing of my testimony in this docket. Finally, I also reviewed certain documents produced by Ameren Missouri in the underlying litigation in the U.S. District

[2] Unless otherwise noted, all references to depositions, exhibits and declarations herein refer to materials produced in the Ameren Missouri litigation in the U.S. District Court for the Eastern District of Missouri. United States v. Ameren Missouri, No. 4:11-cv-00077-RWS (E.D. Mo.).

Court for the Eastern District of Missouri and others provided to me by Ameren Missouri through counsel.

**Q. Did your review of the record allow you to form an opinion on whether the Environmental Services Department ("ESD") made reasonable efforts to understand the law?**

A. Yes.

**Q. What did you conclude?**

A. ESD made reasonable efforts to understand the law. ESD personnel (1) read the applicable regulations; (2) consulted with regulators and industry organizations knowledgeable on the regulatory programs; and (3) consulted with the Ameren Legal Department, as necessary. In my experience, this is consistent with good utility practice and represents the due diligence necessary to understand the applicable law.

**Q. Can you provide some examples of the consultations ESD personnel had with others that informed their understanding of NSR?**

A. Yes. Members of ESD, including Steve Whitworth, participated in the Utility Air Regulatory Group ("UARG"). UARG was an organization made up of individual generating companies and national trade associations. UARG's purpose was to provide members like Ameren detailed information about EPA's actions in every sphere of the Clean Air Act. It did this through various committees, including the Plant Repair, Enforcement, and Permitting ("PREP") Committee that focused on NSR.

Among the documents produced by Ameren Missouri in the District Court litigation are communications Ameren Missouri received from UARG on the topic of NSR, through ESD personnel participating in UARG. Several of these are attached to the Direct

Testimony of Steven C. Whitworth, filed concurrently with the filing of my testimony in this docket. For example, Schedule SCW-D5 is a memo dated October 20, 2005 notifying UARG members, including Ameren, that EPA had issued memoranda stating EPA would not be pursuing claims for alleged NSR violations unless the project at issue increased a unit's hourly rate of emissions (i.e., the potential emissions).

Similarly, Schedule SCW-D8 is an agenda for an "NSR Project Evaluation Workshop" held by UARG in October 2007. As the agenda demonstrates, topics for discussion included **[redacted]**

Schedule SCW-D11 is a presentation made by UARG counsel to UARG members in April 2009, detailing the claims that EPA was making concerning potential NSR violations in the utility industry. As described in Schedule SCW-D11, courts were deciding the NSR legal issues against EPA more often than not.

Finally, Schedule SCW-D13 is a separate presentation made by UARG counsel to UARG members, also in April 2009, concerning "Project Evaluations for NSR Applicability." Key points discussed there include:

1) no future actual annual emissions projection methodology is spelled out in any EPA rule or guidance;

2) as a result, courts were using different emissions increase methodologies and one court in particular held that a utility cannot be held liable unless all reasonable methodologies under the rules would have projected a significant actual annual emissions increase;



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3) a project must be "the predominant cause" of an actual annual emissions increase for NSR to apply, and emissions resulting from increased demand do not count;

4) EPA stated that a source can subtract from its future actual annual emissions projections all of the emissions that the unit could have accommodated during the baseline period and are unrelated to the work at issue, and this means the NSR emissions increase test under the existing rules "is not substantially different" from a test that looks exclusively to whether the work would increase the hourly rate (i.e., potential emissions) of the units;

5) other states and EPA were confirming that component replacement projects at electric utilities would not trigger NSR where (a) the unit could have operated at the projected levels in the baseline, even before the work was done, (b) the work would not increase the emission rate per unit of output, and (c) there was not expected change in the system dispatch order. In such cases, any increase in actual annual emissions after the work could be attributed to demand rather than to the project at issue; and

6) the actual annual emissions theory EPA had used to date in the NSR enforcement initiative against electric utilities had the problem of assuming causation, and could not demonstrate causation of an emissions increase are required by the statute and the rules.

Just like the utility companies with whom I worked at the time, Ameren Missouri spent significant time and effort to understand NSR and to keep up with developments on that front. This included examining EPA's public statements on NSR, receiving briefings on NSR from EPA officials and industry experts, and discussing with similarly situated utilities the meaning of the NSR rules and their potential applicability to projects. Through UARG, Ameren's Environmental Services Department gained a good understanding of NSR and EPA's utility enforcement initiative. I know this because I was a recipient of these UARG communications and a participant in these same UARG meetings.

**Q. Are these the only sorts of input the ESD employees received concerning NSR?**

A. No. ESD employees also participated in forums with MDNR and other electric utilities in Missouri at which NSR was discussed, as Mr. Whitworth explains. ESD

also coordinated with other industry groups on a national level, in addition to UARG. As described in Ameren Missouri's 2008 Environmental Compliance Plan, "[a]t both a national and state level, Ameren is a member of a number of industry organizations and regulatory groups which focus soley on environmental legislation and regulations facing the electric utility industry. Environmental Services' staff works with these industry groups and directly with local, state, and federal environmental regulators to keep abreast of and influence new and developing environmental requirments." Schedule SCW-D1 (2008 Environmental Compliance Plan, Appendix A), attached to the Direct Testimony of Steven C. Whitworth.

**Q. What does the record show are the key things that the Environmental Services Department understood about New Source Review in the 2005-2010 time period?**

A. The memoranda, presentations, and discussions that ESD employees had within UARG made Ameren Missouri aware of the following:

- EPA began its enforcement initiative against electric utilities in November 1999 with a series of actions filed against investor-owned utilities and an administrative action against TVA, the federal government's own electric utility. EPA alleged that nearly 550 projects conducted at 148 coal-fired units over the prior 20 years had violated NSR. The challenged boiler projects were generally tube replacements (economizers, superheaters, reheaters, and waterwalls) as well as auxiliary equipment replacements (e.g., pulverizers). ** ** Schedule SCW-D4 (PowerPoint Presentation from Hunton & Williams LLP to UARG Control Technologies Committee, "Update on Utility Enforcement Initiative," Mar. 11, 2004).

- The EPA litigation positions were based upon a ** ** Schedule SCW-D4.



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- The EPA litigation positions conflicted with the views of EPA's Administrator and the program office responsible for the NSR rules. Schedule SCW-D3; Schedule SCW-D5.

- By the spring of 2007, over 20 utilities and 80 plants faced claims for projects that were substantially the same as the Rush Island Projects. Schedule SCW-D6 (Memorandum from Hunton & Williams LLP to UARG PREP Committee, May 16, 2007). The majority of similarly situated utilities were resisting EPA's claims. Schedule SCW-D4.

- Those utilities that had entered into settlements with EPA did so when the settlements overlapped with pre-existing company business plans. Schedule SCW-D4.

- As of 2005, EPA announced it would not file new enforcement cases under the theories that it had advanced in commencing the utility enforcement initiative. Schedule SCW-D5.

- As of 2009, courts were generally ruling with utilities that RMRR is routine in the industry, rejecting EPA's position that RMRR excludes only what would be routine at the unit in question. Schedule SCW-D10 (PowerPoint Presentation from Hunton & Williams LLP to UARG Control Technologies Committee, "Utility Enforcement Initiative and NSR Rules," April 17, 2009).

- As of 2010, courts were also rejecting EPA's emissions increase claims, and refusing to automatically apply the Koppe-Sahu emissions projections method. Schedule SCW-D15 (PowerPoint Presentation to UARG Policy Committee, "Plant Repair, Enforcement, and Permitting (PREP) Committee," Dec. 4, 2009); Schedule SCW-D16 (PowerPoint Presentation to UARG Policy Committee, "Plant Repair, Enforcement, and Permitting (PREP) Committee" Dec. 3, 2010).

- EPA rules did not provide instructions on calculating actual annual emissions before and after projects, and that courts were finding that utilities simply had to make a reasonable projection of future actual annual emissions increases in order to comply. Schedule SCW-D11 (PowerPoint Presentation by Hunton & Williams to UARG PREP Committee, "NSR Enforcement Initiative," April 28, 2009).

- The utility industry recognized EPA's litigation theory of calculating emissions increases proffered by Koppe and Sahu was **_____**: if any project replaced a component that had caused a forced outage or derate in the baseline period, it would automatically be found to have increased actual annual emissions. Schedule SCW-D9 (PowerPoint Presentation by Hunton & Williams at UARG NSR Project Evaluation Workshop, "Emissions Increase Analysis Under NSR Rules" Oct. 9, 2007).



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- One court found that liability could not attach unless all reasonable methodologies would show that a project caused an actual annual emissions increase. Schedule SCW-D13 ("Plaintiffs' burden is not to demonstrate[] just that Allegheny might have projected a significant net increase . . . [but rather] that ***all*** reasonable methodologies ***must*** have projected a significant net increase such that Defendants' failure to obtain a permit at the time was unreasonable." (quoting PA DEP v. Allegheny, W.D. Pa.) (emphasis in original); Schedule SCW-D14 (same); Schedule SCW-D15 (same).

- Utilities were generally prevailing in the cases brought in the enforcement initiative. Schedule SCW-D18 (PowerPoint Presentation by Hunton & Williams at UARG Planning Workshop, "Plant Repair, Enforcement, and Permitting (PREP) Committee" June 2-3, 2011).

- Outside of the enforcement initiative, regulators were not requiring application of the Koppe-Sahu emissions calculations. Rather, regulators, considering projects similar to Ameren Missouri's, had accepted calculations showing there to be no increase in emissions (1) if a unit could have operated in baseline at the projected levels (2) when there was no increase in emissions rate per unit of output and (3) no change in the dispatch order. In other words, emissions increases in these circumstances should be attributed to projected demand increase and not presumed to be caused by the component replacement. Schedule SCW-D9; Schedule SCW-D13; Schedule SCW-D14.

In the 2005-2010 timeframe, when Ameren Missouri was making the decisions at issue, these are some of the critical facts that any utility should have considered in making its applicability determinations and compliance decisions. They were the same facts that I and many other utilities relied upon for making those decisions, and it was reasonable for Ameren Missouri to consider and rely upon these facts in its approach to NSR.

**Q. What was the process by which ESD reviewed the Rush Island Projects for any permitting requirements?**

A. Ameren Missouri first evaluated the projects in 2005. The NSR program requires companies to address program applicability before a project is commenced. The projects for Unit 1 were commenced in an outage that began in February of 2007. The projects for Unit 2 were commenced in an outage that began on January 1, 2010. In testimony provided in the district court litigation, Steve Whitworth described how ESD

reviewed the Rush Island Projects for NSR applicability at the relevant time (i.e., before undertaking the work).

- ESD "is a corporate function" whose "purpose is to help support operations in the company in dealing with environmental issues." Whitworth Individual Dep. at 32, lines 11-14. As "projects [or] work arise that involve environmental regulations, typically [E]nvironmental [S]ervices is called upon to help support those activities. Whitworth Individual Dep. at 31, lines 7-12.

- Specifically, ESD would evaluate projects "to determine what, if any permitting requirements would be necessary." Whitworth Individual Dep. at 15, line 24 to page 16, line 1. This included the NSR regulations. Id. at 26, lines 2-11 (reading and applying the PSD regulations was "part of [the] job"); id. at 28, lines 19-23 (confirming that ESD staff would consider the potential applicability of the PSD regulations in connection with projects).

- ESD would evaluate the nature and scope of the proposed projects in determining potential NSR applicability. Whitworth Individual Dep. at 27, lines 20-23. Over the years, ESD evaluated "a host of different . . . projects" for NSR applicability. Id. at 62, lines 12-14. When necessary, ESD would get input from the engineering staff on questions such as "the nature of the projects" and "what types of things are routinely done" in order to make the applicability determination. Id. at 64, lines 10-17.

- ESD determined that no permitting was required for the Rush Island Projects. Whitworth Individual Dep. at 15, lines 4-17. ESD considered the projects to be "routine in nature" and "the types of projects that would not be expected to have an emissions impact." Id. at 60, lines 9-13. The emissions evaluations Ameren Missouri typically conducted in the mid- to late-2000s—evaluation of both potential emissions and of actual annual emissions—was a qualitative evaluation. Calculations were not performed for projects in Missouri until the SIP was changed to require them. Id. at 70, lines 5-9.

- ESD's evaluation of the Rush Island Unit 1 Projects for NSR applicability was the subject of conversations and discussions, and not reduced to writing. Whitworth 30(b)(6) Dep. at 21, lines 12-17.

- As was the case with the Rush Island Unit 1 Projects, ESD concluded that the Rush Island Unit 2 Projects would not trigger NSR because they were routine and would not cause either potential emissions or actual annual emissions to increase. Whitworth 30(b)(6) Deposition at 96, line 5 to 97, line 11. These pre-project determinations by ESD were subsequently confirmed with an actual annual emissions calculation performed by ESD.

Mr. Whitworth's direct testimony filed concurrently with the filing of my testimony in this docket confirms these facts.

**Q. What steps did Ameren Missouri take to evaluate the Rush Island Projects for NSR applicability?**

A. Ameren Missouri considered (1) the plain language of the Missouri SIP and its application by the MDNR, (2) the plain regulatory meaning of the 2002 NSR rules and their application by EPA outside the enforcement initiative, and (3) how courts had ruled on the various NSR issues that were being litigated around the country. Considering these authorities, Ameren Missouri asked the right questions in its evaluation.

The first question Ameren Missouri evaluated was whether the projects would be expected to increase the units' maximum rated design capacity, given continuous year-round operations (i.e., the potential to emit). Whitworth Decl. ¶¶ 9, 13. The answer was no. None of the projects increased a unit's potential to emit. Under the Missouri SIP, this meant that an NSR permit was not required. But Ameren Missouri did not stop there. As any prudent utility at this point would, Ameren Missouri thought about it further.

The second question Ameren Missouri considered was whether actual annual emissions would be expected to increase because of the projects. The two coal-fired units operated below their annual capacity. The units had a large amount of unused capacity to generate. Ameren Missouri's engineering and environmental personnel, based upon their experience, knowledge and judgment, concluded that these projects would not be expected to cause actual annual emissions to increase. Id. ¶¶ 11, 15; Boll Decl. ¶¶ 13-18.

The third question Ameren Missouri evaluated was whether the projects constituted routine maintenance, repair and replacement activities excluded from NSR permitting.

Ameren Missouri concluded that the activities at issue were routine replacement of components and thus would not require NSR permits. Whitworth Decl. ¶¶ 10, 14; Boll Decl. ¶ 15.

If I had been asked to decide on whether to move forward with these projects, these are the three questions that I would have examined with my company's engineering and environmental personnel. These inquiries are consistent with my own experience and judgment-making as a responsible corporate executive—they are precisely the questions I asked in performing NSR applicability reviews for the operating companies I supported. Based upon my understanding of the law and the facts as they had developed at that time (2005-2010), these inquiries and the answers given would have been sufficient for me to approve moving forward with the projects without seeking NSR permits.

## V. AMEREN MISSOURI'S APPLICABILITY DETERMINATIONS WERE REASONABLE

**Q. Did you make a determination whether Ameren Missouri's applicability determinations were reasonable?**

A. Yes. Ameren Missouri's approach to compliance and its conclusions were prudent and consistent with the obligations of a public utility.

**Q. What is the appropriate frame of reference for evaluating whether Ameren Missouri's applicability determinations for the Rush Island projects were reasonable?**

A. The appropriate frame of reference for this question is not one of hindsight. NSR is a preconstruction program, requiring a utility to address program applicability before any construction or modification commences, with no requirement for seeking regulatory pre-approval. Thus, the relevant question is what Ameren Missouri knew or

should have known at the time it made its preconstruction applicability decisions: 2005-2010.

**Q. What would you have expected Ameren Missouri to do in order to make a reasonable decision on these projects?**

**A.** The proper thing for any utility examining and deciding whether to move forward with such projects would be to examine (a) the state SIP and (b) the application of the state SIP to its specific facts. The state SIP is the source law that governs compliance.

**Q. Has Missouri generally required NSR permits for such projects?**

A. No. The state prepared guidance on its Construction Permit Rule demonstrating that the question of NSR applicability arises only for projects first defined as "modifications" under the Missouri SIP. Schedule SCW-D20 (excerpts from MDNR 2011 Permit Manual). "Modifications" under the state SIP occur only where a project causes the potential emissions to increase. Mo. Code Regs. Ann. tit. 10, § 10-6.020(2)(M)(10) (2006). This is confirmed by the testimony of Kyra Moore on behalf of the MDNR in the Ameren Missouri litigation in the U.S. District Court for the Eastern District of Missouri, Tr. of 30(b)(6) Dep. of Kyra Moore (Sept. 18, 2013) ("Moore Dep."), and by MDNR's consistent application of that standard to boiler component replacements in Missouri before these projects began. Examples of this consistent application can be found in the exhibits to the Kyra Moore deposition.

In addition, the Missouri regulations themselves, when dealing with minor sources, defined boiler tube replacements as routine. Mo. Code Regs. Ann. tit. 10, § 10-6.061(3)(B)(1)(D) (2006). This is consistent with the industry understanding.

MDNR's statements and actions represent crucial context for the evaluation of Ameren Missouri's actions to comply with the SIP's permitting requirements at Rush Island.

**1. Evaluation of Potential Emissions**

**Q. The first reason Ameren Missouri had for concluding that the Rush Island projects would not trigger NSR was that they would not be expected to cause an increase in potential emissions. What basis did Ameren Missouri have to use this test?**

A. Focusing on whether a project would increase potential emissions was firmly grounded in the language of the Missouri SIP and its application by the MDNR. The relevant text is found in the "Applicability" provision of Mo. Code Regs. Ann. tit. 10, § 10-6.060 (2006). This section first defines when a permit is required, and then, if permitting is applicable, what form of permit should be obtained. The permitting obligation is spelled out as follows:

> **10 CSR 10-6.060. Construction Permits Required**
>
> **(1) Applicability.**
>
> […]
>
> (C) **Construction/Operation Prohibited.** No owner or operator shall commence construction or modification of any installation subject to this rule [or] begin operation after that construction or modification . . . without first obtaining a permit from the permitting authority under this rule. . . .

Id. § 10-6.060(1)(C) (Nov. 2006). Thus, according to the Missouri SIP, construction permits are required only for construction (i.e., installation of a new source of emissions) or "modification" of an existing source of emissions. The SIP specifically defines "[m]odification" as "[a]ny physical change, or change in method of operation of, a source

operation . . . which would cause an increase in potential emissions of any air pollutant emitted . . . ." Id. § 10-6.020(2)(M)(10). An existing source's "potential emissions" are "[t]he emission rates . . . at maximum design capacity," and annual potential emissions "shall be based on the maximum annual-rated capacity of the installation assuming continuous year-round operation." Id. § 10-6.020(2)(P)(19). Under the plain language of the Missouri SIP, which has been approved by EPA for implementing the requirements of the Clean Air Act and thus governed all the Rush Island Projects, only a change to a source that causes an increase in the potential emissions will be considered a modification. This is also consistent with how the word "modification" has historically been interpreted and applied by EPA under the Clean Air Act.

After establishing the applicability of construction permitting under 10 CSR 10-6.060(1) (requiring permitting only for "construction" or "modification"), the rule goes on to specify what sort of construction permit may be required. For example, subsection (5) says that "*de minimis*" permits may be required for "[a]ny construction or modification at an installation" that results in emissions below "*de minimis* levels." Mo. Code Regs. Ann. tit. 10, § 10-6.060(5) (2006). Subsection 8 of the same rule applies to permitting for major sources in attainment areas (i.e., PSD permitting), and incorporates by reference the requirements of 40 C.F.R. § 52.21 (the federal PSD regulations). Id. § 10-6.060(8)(A). Subsection 7 of the same rule applies to permitting for major sources in nonattainment areas (i.e., NNSR permitting). Id. § 10-6.060(7).

The text and structure of the Missouri SIP indicates that no construction permit of any type will be required for activities other than construction or modification. If modification as defined by the SIP would occur, then further analysis is required to

determine what type of permit to seek, such as a minor source permit for small annual emissions increases or PSD permits for emissions increases that would be "major." As discussed below, this was also MDNR's interpretation of the SIP at the time Ameren Missouri made its permitting decisions.

MDNR's interpretation of its SIP is plainly set forth in a flow chart published in its permitting manual that shows the potential to emit ("PTE") is the reference point for determining whether a project triggers construction permitting. Schedule SCW-D20 (excerpts from MDNR 2011 Permit Manual). First, one determines whether either "construction" or "modification" occurred. If so, then a permit is required. To determine what sort of permit is required, one then proceeds to examining annual emissions. If the annual emissions increase is significant, then an NSR permit is required. Id. If, on the other hand, neither "construction" nor "modification" has occurred, then no permit is required, and the inquiry ends before one has to examine changes in actual annual emissions. Id. In my experience, permit manuals like this are used and relied upon by both the agency and the regulated community to guide compliance decisions. They therefore tend to undergo substantial review by the agency before they are published.

Ameren Missouri acted consistent with state law and the interpretation of the responsible state regulatory authorities in evaluating the Rush Island projects. The deposition of Kyra Moore, Director of MDNR's air program who testified on behalf of MDNR in United States v. Ameren Missouri, is absolute proof of the truth of this statement. See Moore Dep. at 68-69, 73-74, 75, 99-100, and 115-17 (attached as Schedule KRM-D4).

At the time that these projects were undertaken, there was nothing to indicate that MDNR had abandoned the language of the SIP or its consistent prior interpretations. EPA

had not called upon Missouri to change its state SIP or the way it had been applied. Ameren Missouri had no basis to believe that its state regulator—acting under an EPA-approved SIP as contemplated by the Clean Air Act—had behaved unlawfully or that MDNR's interpretations of its own regulations as applied to projects like those at issue in this case were in error. If Ameren Missouri had sought NSR permits for these projects, it would have been contrary to the state SIP and its consistent application by the state regulator. In other words, it would have undermined established state law and impliedly cast the rest of Missouri industry as being in non-compliance. If Ameren Missouri and MDNR had the same understanding, and Ms. Moore's testimony makes clear that they did, then Ameren Missouri's understanding cannot be unreasonable.

At the time that these projects were undertaken, Ameren Missouri had no way of knowing that the state's interpretation of its regulations, as explained by MDNR and Ms. Moore, would be vitiated after-the-fact by a federal court years later in 2016. It is the SIP that sets forth the rule of decision, as explained by the U.S. Court of Appeals for the Seventh Circuit in United States v. Cinergy, 623 F.3d 455, 458 (7th Cir. 2010) ("The Clean Air Act does not authorize the imposition of sanctions for conduct that complies with a State Implementation Plan that the EPA has approved."). Thus, it was entirely reasonable for Ameren Missouri to credit and rely upon the interpretation of the SIP given by MDNR.

**Q. What other things lead you to conclude that it was reasonable in 2007 and 2010 for Ameren Missouri to use this potential-to-potential test to evaluate NSR applicability?**

A. The potential-to-potential test (comparing potential emissions before and after the proposed project) used in Missouri was consistent with the Clean Air Act. As Mr.

Holmstead explains in his direct testimony, this test boils down to a consideration of whether the project increases the maximum hourly emissions rate of a facility. That was the first test EPA incorporated into its regulations implementing the "modification" definition of the Clean Air Act. And it was the same test EPA proposed for NSR in 2005 and again in 2007. The 2007 proposal made by EPA specifically incorporated a two-step approach, like that set forth in the Missouri SIP.

> [W]e are proposing that major NSR applicability would include an hourly emissions increase test, followed by the current regulatory requirements for the actual-to-projected-actual emissions increase test to determine significance, and the significant net emissions increase test. We call this approach Option 1 and we are proposing it as our preferred option.
>
> …
>
> [C]hanges that will not increase the hourly emissions rate—such as those to make repairs to reduce the number of forced outages—do not require further review under Option 1. That is, if there would be no hourly emissions increase following a physical change or change in the method of operation, the proposed rule does not require a determination of whether a significant increase or a significant net emissions increase would occur.
>
> …
>
> However, if there would be an hourly emissions increase following a physical change or change in the method of operation, the proposed rule requires a determination of whether a significant increase or a significant net emissions increase would occur.

"Supplemental Notice of Proposed Rulemaking for Prevention of Significant Deterioration and Nonattainment New Source Review: Emission Increases for Electric Generating Units; Proposed Rule," 72 Fed. Reg. 26,202 26,205, 26,213 (May 8, 2007). Although EPA never finalized these proposals, it also issued a memorandum in 2005 stating that it did not

intend to bring enforcement actions for alleged violations of NSR unless the conduct at issue would also have violated the proposed rule, requiring an increase in the hourly emissions (i.e., potential emissions) for NSR applicability. Schedule KRM-D5 (Mem. from Marcus Peacock, Deputy Adm'r, EPA, to Reg'l Adm'rs & State Envtl. Comm'rs, "Fiscal Years (FY) 2005-2007 National Program Managers Guidance—Supplement," Oct. 13, 2005).

The potential-to-potential test was also used by states beyond Missouri to evaluate projects for NSR. For example, in a jurisdiction with which I am very familiar and had responsibility for understanding, the Alabama Department of Environmental Management ("ADEM") took the same two-step approach. ADEM first examined whether "there was in increase in the maximum hourly rate of emissions" (i.e., the potential emissions) caused by a project. Decl. of Richard Grusnick ¶ 11, United States v. Ala. Power Co., CV-01-HS-0152-S (N.D. Ala.) (Oct. 7, 2004). If so, ADEM would then evaluate whether the projects would trigger NSR by causing an increase in annual emissions. Id. ¶¶ 9, 11 ("Only if the maximum hourly rate of emissions increased as the result of a project or activity could the activity potentially trigger [NSR] requirements."). Tennessee had a similar approach. Decl. of Barry R. Stephens ¶¶ 21-22, Nat'l Parks Conservation Ass'n v. Tenn. Valley Auth., No. 3:01-cv-00071-TAV-HBG (E.D. Tenn. Apr. 11, 2008), ECF No. 129-2 ("Stephens Decl.").

**Q. Was Ameren Missouri's conclusion, when it applied this potential-to-potential test to the Rush Island projects, reasonable?**

A. Yes. No project increased a unit's design rate of emissions. No project increased the maximum achievable hourly rate of emissions at the units. Boll Decl. ¶¶ 7-

8. There was no dispute of this in the underlying litigation: the projects did not cause an increase in the potential rate of emissions for either unit.

**2. Evaluation of Actual Annual Emissions**

**Q. The second reason Ameren Missouri had for concluding that the Rush Island projects would not trigger NSR was that they would not be expected to cause an increase in actual annual emissions. Can you summarize Ameren Missouri's approach in making this evaluation?**

A. Prior to the projects, Ameren Missouri performed a qualitative analysis of whether any of the projects would cause annual generation and emissions to increase. That analysis focused on the availability and dispatch of the units prior to the outages. Ameren Missouri's engineers understood that because the units had high annual availability pre-project and the component replacements were like-kind (i.e., not impacting maximum continuous rating or steam flow), that any difference in annual utilization between the pre-project period and the post-project period would be driven by changes in demand, rather than caused by the component replacements. Id. ¶¶ 13-18; Whitworth Decl. ¶¶ 11, 15.

**Q. What basis did Ameren Missouri have in 2007 and 2010 for using this approach for evaluating whether projects would cause an increase in expected annual emissions?**

A. Based upon my knowledge and experience, this qualitative analysis was common in the industry. Detailed calculations were not required. See United States v. Cinergy, 458 F.3d 705, 709 (7th Cir. 2006) ("[W]hat is required . . . is . . . merely a reasonable estimate of the amount of additional emissions that the change will cause."). The exhibits to the Kyra Moore deposition contain numerous examples of similar

evaluations presented to and accepted by the regulator. See, e.g., Moore Dep. Ex. 2 at 70, AM-00025865-MDNR (Letter from Randy Raymond, Permit Section Chief, MDNR, to Charles Means, Manager, Envtl. Servs., Associated Elec. Coop., Inc. (undated, received May 19, 2003) (attached as Schedule KRM-D6). These letters evidence a settled understanding between regulators and regulated parties about the types of evaluations required by the rules, and what the results would be. Ameren Missouri's qualitative evaluation was also consistent with the text of the 2002 NSR regulations.

**Q. What do the NSR rules say about doing emission projections?**

A. The rules are flexible. Under the 2002 NSR rules incorporated into the Missouri SIP in 2006, "projected actual emissions" are determined by calculating "the maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a regulated NSR pollutant in any one of the 5 years (12-month period) following the date the unit resumes regular operation after the project." 40 C.F.R. § 52.21(b)(41)(i) (2003). The rules instruct operators to "consider all relevant information" when estimating the post-project emissions and require them to exclude the post-project emissions that are not caused by the projects. Id. § 52.21(b)(41)(ii)(*a*), (*c*).

**Q. What do these rules say concerning causation?**

A. Under both the Clean Air Act and the NSR regulations, causation is a core element of the definition of "modification" and "major modification." In other words, a project must cause the projected emissions increase for either a modification or a major modification to occur.

> The NSR regulatory provisions require that the physical or operational change "result in" an increase in actual emissions in order to consider that change to be a modification. . . . In other words, NSR will not apply unless

> EPA finds that there is a causal link between the proposed change and any post-change increase in emissions.

57 Fed. Reg. 32,314, 32,326 (July 21, 1992) (preamble to final rule commonly referred to as "the WEPCO Rule").

Nothing, in either the statute or the regulations, specifies how causation is to be determined. The only language in the regulations dealing with causation for projected emission increases is found in 40 C.F.R. § 52.21(b)(41)(ii)(*a*) and (*c*) (2003). These regulations required a source to exclude from any calculated increase "that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline . . . and that are also unrelated to the particular project, including any increased utilization due to product demand growth." Id. § 52.21(b)(41)(ii)(*c*). This was the language of the 2002 NSR regulations incorporated into the Missouri SIP in 2006, and it has not changed since that time. The regulations did not specify how sources were to determine the "relatedness" of any projected emissions. EPA has admitted that "there is no specific test available for determining whether an emissions increase indeed results from an independent factor such as demand growth, versus factors relating to the change at the unit." 63 Fed. Reg. 39,857, 39,861 (July 24, 1998). Thus, what emissions may be excluded as "unrelated" to a project or activity "'is a fact-dependent determination that must be resolved on a case-by-case basis.'" DTE Energy, 711 F.3d at 646 (quoting 57 Fed. Reg. at 32,327).

**Q. In promulgating the NSR rules, did EPA provide any guidance on evaluating causation?**

A. Yes. When EPA first promulgated such language for use by electric utilities in 1992, the Agency explained that under a "projected actual" rule, the causation test

"focus[es] on the effect of any nonroutine changes on operating characteristics of the unit during the representative baseline period." 57 Fed. Reg. as 32,327. In other words, the "capable of accommodating" test is a "but-for" test. If increased operations "could not [have] be[en] accommodated . . . but for the proposed . . . change," the increase is "considered to result from the change." Id. at 32,326. If the projected increase in operations could have been accommodated even without the change, then the question is whether the nonroutine change is "the predominant cause of the [increased annual operations] . . . and demand growth is not." Id. at 32,327. Under this "predominant cause" test, the source looks to whether "independent factors such as demand growth . . . could have occurred and affected the unit's operations during the representative baseline period even in the absence of the physical or operational change." Id. If that is the case, the projected increased operations "cannot be said to result from the change" (i.e., they are unrelated to the change) and the source "need not include in their projection of post-change utilization that portion of the increased rate of utilization, if any." Id. at 32,326, 32,327.

**Q. Did Ameren Missouri's approach to evaluating whether a project would cause an expected annual emission increase track EPA's regulations and guidance?**

A. Yes. Ameren Missouri applied this approach in its pre-project evaluation of the Rush Island projects, just as it had in countless other projects. Based upon this experience with utility operations and maintenance, Ameren Missouri understood that none of the Rush Island projects would cause actual annual emissions to increase. Whitworth Decl. ¶¶ 11, 15. This was so for two reasons. First, the Rush Island units were capable of increased generation (and emissions) in the baseline period, absent any of the projects.

Second, the projects consisted of like-kind replacement of components, without altering the design capacity of either unit. Thus, none of the projects would increase the hourly emissions rate or the potential emissions. In such circumstances, EPA has stated that the work should not be expected to cause an increase in actual annual emissions. See, e.g., 70 Fed. Reg. 61,081, 61,100 (Oct. 20, 2005) (the new source performance standards ("NSPS") hourly rate test "does not result in a substantially different outcome from the actual-to-projected-actual test . . . [because] a source can subtract from its post-project emissions those emissions that the unit could have accommodated during the baseline period and that are unrelated to the change").

**Q. Was Ameren Missouri's conclusion, that the Rush Island projects would not cause an increase in expected annual emissions, reasonable?**

A. Yes. Utility maintenance programs are focused on maintaining the availability of generating units. Maintaining availability is a requirement for system reliability. The Rush Island units had the availability to operate at higher annual levels of generation pre-projects. Whitworth Decl. ¶¶ 11, 15. In other words, they were capable of accommodating the post-project generation even without the component replacements. Moreover, it was reasonable to conclude that any post-project increases in emissions would be unrelated to the projects because the replacements were simply like-kind and did not change the design or operation of the unit. As noted previously, MDNR agreed with similar conclusions concerning boiler component replacement, without requiring submission of emission calculations. Ameren Missouri knew this, and it was reasonable for Ameren Missouri to conclude that the projects would not result in an emissions increase.

**Q. In addition to Missouri, did other states follow a similar approach in evaluating whether a project would result in an increase in expected annual emissions?**

A. Yes. For example, the State of Minnesota evaluated a potential air heater replacement for an existing Minnesota Power facility in 1992. Although the evaluation acknowledged a potential improvement in unit availability, the state concluded that the air heater replacement was not the cause of a projected emissions increase, but rather demand growth was. Minnesota therefore determined that the replacement would not trigger NSR. Schedule KRM-D7 (Facsimile from Ed Hoefs, Minnesota Pollution Control Agency, Air Quality Div., to Dennis Niemi, Minnesota Power, "Pre & Post Modification Emission Analysis" (Aug. 21, 1992)). This was one of the applicability determinations that Ameren Missouri and the utility industry studied. Schedule SCW-D9; Schedule SCW-D13, Schedule SCW-D14.

**Q. You have testified that Ameren Missouri's conclusions that there would be no actual annual emissions increase caused by the Rush Island Projects were reasonable conclusions. Was it even necessary for Ameren Missouri to reach that conclusion in order to decide that no NSR permit was required?**

A. No. As I outlined earlier, an NSR permit is required only if all three criteria are true: there must be an increase in potential emissions, there must be an increase in actual annual emissions, and the projects must not be RMRR. Having reasonably concluded that there would be no increase in potential emissions (because the maximum hourly rate of emissions would not change at all), Ameren Missouri did not need to evaluate

whether there would be a change in actual annual emissions caused by the project. That it did so simply underscores that Ameren Missouri acted prudently.

**3. <u>Evaluation of Routine Maintenance, Repair and Replacement</u>**

**Q. The third reason Ameren Missouri had for concluding that the Rush Island projects would not trigger NSR was that the projects were excluded from permitting requirements as "routine maintenance, repair or replacement" (hereinafter, "RMRR"). Was Ameren Missouri's approach to RMRR reasonable?**

A. Yes. Ameren Missouri's approach to RMRR was to evaluate each individual component replacement and to determine whether replacement of that component was routine for the utility industry. This was a reasonable approach and consistent with what other electric utilities were doing. For this reason alone, Ameren Missouri's conclusion that it did not need an NSR permit was reasonable, in addition to its other reasons discussed earlier.

**Q. Please explain.**

A. First, evaluating each component replacement separately for RMRR purposes was a reasonable approach. EPA's explanation of the RMRR exclusion in the WEPCO Rule preamble states that the inquiry "must be based on the evaluation of whether ***that type of equipment*** has been repaired or replaced by sources within the relevant industrial category." 57 Fed. Reg. at 32,326 (emphasis added). This describes a component-by-component approach to RMRR. EPA later recognized that just because projects may occur simultaneously does not mean that they must be aggregated as one. Rather, "inquiry into the nature of the activities and their relationship to each other is needed before deciding whether the activities must be aggregated under NSR." 68 Fed.

Reg. 61,248, 61,258 (Oct. 27, 2003). Ameren Missouri was not required to aggregate all component replacements together into a single "project" for purposes of the RMRR review. In denying EPA's motion for summary judgment, seeking to establish that the individual component replacement projects constituted a single "project" at each unit, the District Court found that there was authority on both sides of the aggregation question. United States v. Ameren Missouri, No. 4:11 CV 77 RWS, 2016 WL 728234, at *6-8 (E.D. Mo. Feb. 24, 2016). Because there were genuine issues of fact, the District Court denied EPA's motion for summary judgment. Id. at *8. This illustrates that reasonable minds could differ on the question of aggregation and the application of the RMRR exclusion. In my opinion, the aggregation test that the District Court ultimately used and applied at trial was unknown to the utility industry before the opinion was issued. Because Ameren Missouri's decisions must be judged based on what it knew or should have known at the time, what the District Court later decided is not relevant to the question of whether Ameren Missouri acted reasonably in 2007 and 2010. For the reasons I have stated above, it was reasonable for Ameren Missouri to assess RMRR on a component-by-component basis.

Second, the "routine in the industry" standard applied by Ameren Missouri was correct. This was expressly stated by EPA in its 1992 WEPCO Rule preamble, and the standard adopted by the majority of courts in the NSR enforcement initiative. See Nat'l Parks Conservation Ass'n v. Tenn. Valley Auth., No. 3:01-CV-71, 2010 WL 1291335, at *24-25, 29-31 (E.D. Tenn. Mar. 31, 2010); United States v. Duke Energy Corp., No. 1:00CV1262, 2010 WL 3023517, at *6-7 (M.D.N.C. July 28, 2010); Nat'l Parks Conservation Ass'n v. Tenn. Valley Auth., 618 F. Supp. 2d 815, 825 (E.D. Tenn. 2009); Pennsylvania, Dep't of Envtl. Prot. v. Allegheny Energy, Inc., No. 05-885, 2008 WL

4960100, at *7 (W.D. Pa. Sept. 2, 2008); United States v. Ala. Power Co., 681 F. Supp. 2d 1292, 1309-10 (N.D. Ala. 2008); United States v. E. Ky. Power Coop., 498 F. Supp. 2d 976, 993 (E.D. Ky. 2007); Mem. Op. in Supp. of Order to Stay & Referral to Mediation at 8-9 & n.6, Sierra Club v. Tenn. Valley Auth., No. 3:02-cv-2279-VEH (N.D. Ala. May 23, 2006), ECF No. 110; United States v. Ala. Power Co., 372 F. Supp. 2d 1283, 1293, 1307 (N.D. Ala. 2005), order vacated in part, No. 2:01-cv-00152-VEH, 2008 WL 11383702 (N.D. Ala. Feb. 25, 2008); Order at 4, United States v. Duke Energy Corp., No. 1:00-cv-01262-WO-JEP (M.D.N.C. Feb. 23, 2004), ECF No. 294; United States v. Duke Energy Corp., 278 F. Supp. 2d 619, 635-37 (M.D.N.C. 2003), aff'd on other grounds, 411 F.3d 539 (4th Cir. 2005), vacated sub nom. Env'tl Def. v. Duke Energy Corp., 549 U.S. 561 (2007).

**Q. Was Ameren Missouri required to limit application of RMRR to "de minimis" activities?**

A. No. EPA had early and often stated that RMRR was not a "de minimis" exception to NSR review. In 1978, EPA's Director of Stationary Source Enforcement provided the following guidance on the scope of RMRR: "Routine replacement means the routine replacement of parts, within the limitations of reconstruction . . ." (i.e., at a cost of less than 50% of replacing the entire facility). Schedule KRM-D8 (Mem. from Edward E. Reich, Dir., Div. of Stationary Source Enforcement, EPA, to Howard G. Bergman, Dir., Enforcement Div. (6AE), Region VI, "PSD-Routine Maintenance, Repair and Replacement" (Oct. 3, 1978)). This is the only "bright line" that EPA has ever drawn with respect to the RMRR exclusion. In 1988, EPA issued its first and only determination before the start of the NSR enforcement initiative concerning the application of the RMRR

exclusion to maintenance, repair and replacement activities at coal-fired electric utility units. In this determination, issued concerning the replacement of steam drums and refurbishment of boilers and turbines in a multi-year "life extension" project for the five units at the WEPCO Port Washington Plant, EPA concluded that the work would not be RMRR. Letter from Lee M. Thomas, Adm'r, U.S. EPA, to John W. Boston, Vice President, Wis. Elec. Power Co., at 2, 3 (Oct. 14, 1988), attached as Schedule KRM-D9.

After the 1988 WEPCO applicability determination, EPA conducted a survey of utility "life extension" activities and concluded that they can be routine and are not likely to trigger NSR. See id. at 4 (referring to survey of utility life extension projects).

**Q. What is life extension and how does it demonstrate that RMRR projects need not be "de minimis"?**

A. Utility life extension projects were studied by both EPA and Congress in the 1988 to 1991 timeframe, around the passage of the 1990 Clean Air Act Amendments. The results of this analysis were described in a 1990 GAO Report:

> Fossil fuel power plants traditionally were expected to have an operating service life of about 30 to 40 years, after which they would be replaced with new plants. However, in part to avoid the financial risks of constructing new plants, utilities increasingly [were] looking to extend the service life of older plants well past their assumed retirement age. Utilities' life extension projects encompass a variety of activities, including maintenance, repair and replacement of equipment.

U.S. GEN. ACCOUNTING OFFICE, GAO/RCED-90-200, ELECTRICITY SUPPLY; OLDER PLANTS' IMPACT ON RELIABILITY AND AIR QUALITY 2 (Sept. 1990) ("GAO Report").

The GAO Report provided several examples of utility life extension activities. Id. at 14-15. For example, at the Cincinnati Gas and Electric Company's Beckjord plant Unit 3, refurbishment of the unit "included replacing worn-out turbine-generator components"

and other life extension work during a single planned outage of 13 weeks. Id. at 14. "After the renovation, the utility estimated that the 32-year old plant . . . could operate at an acceptable level of availability for another 25 years." Id.

EPA Administrator William Reilly wrote a letter to Congressman John Dingell in 1989 discussing EPA's survey of utility life extension projects and noted that "[t]he survey did not result in the detection of any violations." Letter from William K. Reilly, Adm'r, U.S. EPA, to the Hon. John D. Dingell, Chairman, Subcomm. on Oversight & Investigations, Comm. on Energy & Commerce, U.S. House of Representatives, at 2 (Apr. 19, 1989) (attached as Schedule KRM-D10). EPA thereafter assured the public, utilities, and Congress that such actions are not expected to trigger NSR. For example, in the 1990 GAO Report, EPA officials are cited for the proposition that "WEPCO's life extension project is not typical of the majority of utilities' life extension projects, and concerns that the agency will broadly apply the ruling it applied to WEPCO's project are unfounded." GAO Report at 30-31. The EPA officials also noted that life extension projects may not increase emissions, and that such life extension projections can be routine in nature. Thus, EPA's official "1989 emission[s] forecast assumed that the WEPCO decision would not result in a significant number of additional power plants' having to comply with the NSPS and the [NSR] program requirements." Id. at 31.

As noted above, the assumption that utilities were expected to refurbish their coal-fired units (often by aggregating major component replacements under the heading of "life extension") without triggering NSR controls was a fundamental assumption of the Clean Air Act Amendments of 1990. Even after passage of these amendments, EPA continued to assure Congress and the regulated public that life extension and boiler refurbishment

would not trigger NSR. For example, EPA Assistant Administrator for Air William Rosenberg wrote in a letter to Congressman Dingell in 1991 that utility life extension projects can be routine. Letter from William G. Rosenberg, Assistant Adm'r for Air & Radiation, U.S. EPA, to the Hon. John D. Dingell, Chairman, Subcomm. on Oversight & Investigations, Comm. on Energy & Commerce, U.S. House of Representatives, at 5 (June 19, 1991) (attached as Schedule KRM-D11). Furthermore, EPA official Mary Nichols stated in 1995 that the RMRR provision in the rules encompasses restoration activities at a unit. See Letter from Mary D. Nichols, Assistant Adm'r for Air & Radiation, U.S. EPA, to William H. Lewis, Morgan Lewis & Bockius, at 19 (May 31, 1995) (response to Issue 6) (attached as Schedule KRM-D12). All of this was widely understood within the electric utility industry, and by Ameren Missouri. See Schedule SCW-D4.

Shortly before Ameren Missouri undertook the projects at issue, EPA again declared that the RMRR exclusion was broader than a mere "de minimis" exception. In issuing a proposed rule for RMRR in 2002, EPA stated:

> We recognize that there are numerous occasions when, to maintain, facilitate, restore, or improve efficiency, reliability, availability, or safety within normal facility operations, facilities replace existing equipment with either identical equipment or equipment that serves the same function. Such replacements may be conducted immediately after component failure or they may be conducted preventively to assure a source's continued safe, reliable and efficient operation. We believe that many such replacements typically should be considered RMRR activities.

67 Fed. Reg. 80,290, 80,300 (Dec. 31, 2002). In finalizing that proposed rule in 2003, EPA stated: "We believe industrial facilities are constructed with the understanding that certain equipment failures are common and ongoing maintenance programs that include replacing components in order to maintain, restore, or enhance the reliability, safety, and efficiency

of a plant are routine." 68 Fed. Reg at 61,253. Similarly, "[w]hen equipment is wearing out or breaks down, it often is replaced with equipment that serves the same purpose or function but is different in some respect or improved in some ways in comparison with the equipment that is removed." Id. If the replacement equipment is "functionally equivalent" and does not "change the basic design parameters of the affected process unit (*e.g.*, for electric utility steam generating units . . . heat input and fuel consumption specifications)", id., then according to EPA this should be "within the scope of 'routine maintenance, repair and replacement.'" Id. For a summary of EPA's statements in this rulemaking on the scope of the RMRR exclusion, and how those statements conflicted with EPA's enforcement interpretation, see Schedule SCW-D3 (Mem. from Hunton & Williams to UARG PREP Committee, "August 27, 2003 Routine Maintenance, Repair, and Replacement (RMRR) Rule: Summary and Implications for Future Projects and NSR Enforcement Actions," Sept. 9, 2003).

In 2006, EPA stated to the D.C. Circuit that it has historically interpreted the RMRR exclusion as "exclud[ing] at least some non-*de minimis* activities from NSR and NSPS." EPA's Pet. for Reh'g or Reh'g *En Banc* at 11, New York v. EPA, No. 03-1380 (D.C. Cir. May 1, 2006); 68 Fed. Reg. at 61,272 (EPA "did not consider the terms 'modification' or 'change' to cover everything other than *de minimis* activities").

The District Court's application of the "de minimis" standard for RMRR departed from the consistent statements from EPA's program office over decades. It is not reasonable to expect Ameren Missouri to have foreseen that years later a court would depart from the industry's clear understanding of the rules in 2007 and 2010.

**Q. Did Ameren Missouri reasonably conclude in 2007 and 2010 that the Rush Island projects were RMRR?**

A. Yes, Ameren Missouri reasonably concluded that the Rush Island projects were excluded from permitting as RMRR. To understand how it reached that conclusion, it is important to know what Ameren Missouri was doing as it considered, approved, and implemented these projects. Number one, Ameren Missouri changed fuels at Rush Island to meet the requirements of the 1990 Clean Air Act Amendments. In switching to low-sulfur coal sourced in the Powder River Basin ("PRB") of Wyoming, Ameren Missouri was taking a compliance approach consistent with what the industry was doing in response to the 1990 Clean Air Act Amendments. The 1990 Clean Air Act Amendments' cap-and-trade program was designed to permit utilities like Ameren Missouri to select fuel switching to meet new $SO_2$ reduction requirements. Lower-sulfur fuel could in some cases necessitate repairs through like-kind replacement of boiler components to ensure unit reliability. To gain operational and economic efficiencies, Ameren Missouri moved to a six-year maintenance cycle that would have directly benefitted Missouri consumers by ensuring that routine repairs and replacements would be done at the same time, to minimize planned outage hours and keep repair costs low. Simultaneously performing these routine projects would have resulted in efficiencies of direct benefit to Missouri electric customers and maximized system availability. It has been common industry practice to take advantage of planned outages to perform multiple repairs and replacements as needed. It was reasonable and prudent for Ameren Missouri to undertake RMRR activities in this way and under this schedule. At the time they did so, there was ample authority to view these projects as RMRR, even though they were done at the same time.

**Q. What were those authorities?**

A. First, the replacements were common for Ameren Missouri. Ameren's employee David Boll testified about several similar component replacements at other Ameren Missouri plants. Tr. of Dep. of David Boll at 62 (Sept. 5, 2014); Boll Decl. ¶ 14. See also Whitworth Decl. ¶¶ 10, 14. As an Ameren Missouri witness explained in direct testimony before this Commission in 2009: "Capital expenditures and continuing maintenance are integral to the continued operation of a power plant and are routine in the industry. Without ongoing capital expenditures, a plant will become increasingly less reliable and ultimately cannot operate." Direct Testimony of Larry W. Loos, P.E. on behalf of Union Electric Co. d/b/a AmerenUE, Mo. Pub. Serv. Comm'n, Case No. ER-2010-0036 at 11 (July 2009). The integrated resource plans filed by Ameren Missouri and its predecessors plainly describe its longstanding maintenance practices.

> AmerenUE continually reviews its existing units to determine the economic value of improving plant efficiency. Periodically, projects are evaluated for maintaining and improving availability and/or efficiency. Boiler components, heat exchangers, controls, etc. are evaluated and replaced or improved, if justified.

Ameren UE, "Integrated Resource Plan, Integrated Resource Analysis," at 113 (Dec. 2005) (AM-00073835). See also Union Electric, "Integrated Resource Plan," at 2-6 to 2-7 (Dec. 1993) (AM-00175804-05) (same). I have reviewed Schedule MCB-D1 and Schedule MCB-D2, which identify similar projects performed by Ameren Missouri and its affiliates, all without triggering NSR.

Second, based upon my own experience, these types of projects were routinely undertaken within the utility industry. A report prepared by the federal government's own utility—the Tennessee Valley Authority ("TVA")—makes this clear. TVA provided

public notice of this report in the Federal Register in 2000. 65 Fed. Reg. 35,154 (June 1, 2000). The large number of similar component replacements targeted by EPA across the electric utility industry underscored how common and routine these activities were. See Schedule SCW-D6 (tallying the component replacement projects targeted in the enforcement initiative as of early 2007).

Third, MDNR considered similar projects RMRR. In addition to defining boiler tube replacements as an example of routine maintenance in its regulations, MDNR issued specific applicability determinations on the application of the RMRR exclusion. For example:

- In 2003, MDNR found replacement of boiler tubes at the cost of $1.2 million to be RMRR. Moore Dep. Ex. 2 at 67, Letter from Kyra L. Moore, Interim NSR Unit Chief, MDNR, to Tad Johnsen, Power Production Superintendent, Columbia Municipal Power Plant (Dec. 23, 2003), AM-00025849-MDNR (attached as Schedule KRM-D13). The expected cost was approximately 2.5% of the cost to replace the unit. Id.[3]

- In 2009, MDNR found that replacement of boiler tubes, including all of the superheater pendant tubes, at Independence Power & Light's Missouri City Unit 2 was a routine repair. Moore Dep. Ex. 2 at 169, Letter from Kyra L. Moore, Permits Section Chief, MDNR, to Dayla Bishop Schwartz, Deputy City Counselor, City of Independence, MO, (July 17, 2009), AM-00024473-MDNR (attached as Schedule KRM-D14).

Fourth, other states determined similar projects to be RMRR. For example:

- Pennsylvania considered replacement of reheaters on boilers RMRR. Tr. of Nonjury Trial Proceedings, Testimony of Joseph Pezze at 46, *Pennsylvania, Dep't of Envtl. Prot. v. Allegheny Energy, Inc.*, No. 05-885 (W.D. Pa. Sept. 27, 2010).

- Tennessee considered "[p]rojects that maintain or restore the safety, reliability, availability or efficiency of a unit, plant, or process are typical of the kind of

[3] The relative cost of component replacement, in comparison to the cost of replacing the unit, is relevant for two reasons. First, spending more than 50% of the unit replacement cost triggers NSPS reconstruction review. Second, this 50% threshold is the only bright line for identifying a non-routine project under the NSR rules. Schedule KRM-D8.

projects that are common at plants and fall within this [RMRR] exclusion" under the Tennessee regulations. Stephens Decl. ¶ 19.

- In 1998, North Dakota found a turbine upgrade at the Coal Creek Plant to be routine. Letter from Dana K. Mount, P.E., Dir., Div. of Envtl. Eng'g, N.D. Dep't of Health, Envtl. Health Section., to Mary Jo Roth, Mgr., Envtl. Servs., Cooperative Power at 1 (Dec. 17, 1998), AM-00896287-NDH.

- In 2000, North Carolina found the replacement of a heat exchanger in a sulfuric acid plant to be routine. Letter from Donald R. van der Vaart, Supervisor, Permitting Branch, N.C. Dep't of Env't & Nat. Res., to Pete Wind, Envtl. Eng'r, PCS Phosphate Co., Inc. at 3 (Dec. 5, 2000). The project was expected to cost more than 3% of what it would cost to build a new plant. Id. at 3.

- In 2000, the State of Washington found the replacement of generating bank tubes and economizer tubes on a boiler to be routine. Letter from Alan Newman, State of Washington, Dep't of Ecology, to Dan Meyer, EPA Region X (Dec. 13, 2000). The project was expected to cost about 8% of the cost of replacing the entire boiler. Id. at 2.

- In 2002, North Carolina found that a boiler repair, intended to restore its reliability, would be routine. Letter from Donald R. van der Vaart, P.E., Supervisor, Permitting Branch, N.C. Dep't of Env't & Nat. Res., Div. of Air Quality, to Derric Brown, Mgr, Envtl. Affairs, Blue Ridge Paper Products, Inc. at 4 (Jan. 16, 2002), AM-00896803-SCDHEC. The project was expected to cost less than 4% of the replacement cost of the boiler. Id.

- In 2002, Florida found that replacing 60% of the steam generating bank tubes and replacing all of the roof tubes would be routine. Letter from C.H. Fancy, Chief, Bureau of Air Regulation, Fla. Dep't of Envtl. Prot., to William A. Raiola, Vice President, United States Sugar Corp. at 1-2 (Mar. 22, 2002), EPA4_AME056858–59.

- In 2003, the Lincoln-Lancaster County Health Department, at the request of the Nebraska Department of Environmental Quality, found the replacement of tube bundles on a fluidized bed combustion unit boiler to be routine. Letter from Gary Walsh, Envtl. Eng'r, Lincoln-Lancaster Cty. Health Dep't, to Michelle L. Bublitz, Envtl. Mgr., ADM Processing Div., Archer-Daniels-Midland Co. at 1-2 (June 25, 2003), EPA7_AME155697.

- In 2004, North Carolina found that replacement of approximately 12% of a boiler's steam tubes was routine. Letter from Donald R. van der Vaart, P.E., Supervisor, Permitting Branch, N.C. Dep't of Env't & Nat. Res., Div. of Air Quality, to Jaysen Schock, Facility Superintendent, Cargill, Inc. at 2 (Sept. 22, 2004), AM-00972098-NCDENR. The project was expected to cost less than 6% of the replacement cost of the facility. Id.

- In 2004, Wisconsin found that replacement of all superheater tubes on a boiler would be routine. Letter from Steven Dunn, NSR Team Leader, Bureau of Air Mgmt., Wis. Dep't of Nat. Res., to Susan Siepkowski, U.S. EPA – Region V at 1-2 (Aug. 13, 2004), EPAHQ_AME027548–49.

- In 2006, Oklahoma found that replacement of reheater outlet tube bank, the secondary superheater inlet tube bank, the primary air heater baskets, and the low-nitrogen oxide ("NOx") burners on a boiler would be routine, despite the fact that they were all done in one outage that was longer than the typical outage for the unit. Mem. from Grover R. Campbell, P.E., Existing Permit Section, Okla. Dep't of Envtl. Quality, Air Quality Div., to Dawson Lasseter, P.E., Chief Eng'r, Okla. Dep't of Envtl. Quality, "Evaluation of Permit Application No. 97-058-AD (M-3) Proposed Repair/Maintenance Activities, Western Farmers Electric Cooperative, Hugo Unit 1, Hugo, Choctaw County" (May 5, 2006), EPA6_AME088164–75. The tube replacements involved approximately 12% of the total boiler tubes. Id. at 8, EPA6-AME088171.

- In 2008, North Carolina found replacement of all waterwall tubes on a boiler, expected to cost over 10% of what it would cost to replace the boiler, to be RMRR. Letter from Donald R. van der Vaart, Ph.D., P.E., Chief, N.C. Dep't of Env't & Nat. Res., Div. of Air Quality, to Karen B. Wrigley, Plant Mgr., E.I. du Pont de Nemours & Co., LLC at 3 (May 8, 2008), AM-00972066_NCDENR.

- In 2010, North Carolina found that replacement of waterwall tubes (at the cost of $30 million) and the primary superheater tubes (at the cost of $5 million) on a coal-fired electric utility boiler was routine. Letter from Donald R. van der Vaart, Ph.D., J.D., P.E., Chief, N.C. Dep't of Env't & Nat. Res., Div. of Air Quality, to Harry Sideris, Plant Mgr., Roxboro Steam Elec. Plant, Progress Energy Carolinas, Inc. at 2 (May 27, 2010), AM-00972044-NCDENR. Respectively, the two projects were expected to cost 2% and 0.33% of the cost to replace the facility. Id.

Finally, as noted above, EPA acknowledged utility life extension projects can be RMRR. Because life extension often involved an aggregation of component replacements performed in a single outage, EPA has recognized that a collection of routine replacements performed simultaneously can remain routine, even as an aggregated life extension "project." Even if one aggregates the component replacement projects together for Unit 1 and for Unit 2 at Rush Island, they were less costly and less extensive than the "massive" and "unprecedented" WEPCO Port Washington project. Wis. Elec. Power Co. v. Reilly,

893 F.2d 901, 911 (7th Cir. 1990). They were also less costly and less extensive than other life extension projects that EPA surveyed in 1988-1990 and found not to pose any NSR concerns. This comparison was performed by one of Ameren Missouri's experts in the litigation in the Eastern District of Missouri. Expressing all costs in 2010 dollars and using the $/kilowatt metric to control for the different size of units, the expert calculated that the aggregated costs of the projects on Unit 1 at Rush Island were less than a fifth of the WEPCO project and less than a third of the Beckjord Unit 3 life extension project, which EPA examined and found not to violate NSR. Report of Jerry L. Golden (redacted) at 136 (May 16, 2014).[4] Similarly, the aggregated cost of the projects on Unit 2 at Rush Island were less than a quarter of the cost of the WEPCO project and just over a third of the cost of the Beckjord Unit 3 life extension project. Id. at 161.

**Q. Do subsequent court decisions mean that Ameren Missouri's application of the RMRR exclusion was unreasonable?**

A. No. On the contrary, they support Ameren Missouri. District courts in Tennessee (National Parks Conservation Association v. TVA) and Pennsylvania (Pennsylvania, Department of Environmental Protection v. Allegheny Energy Inc.) found similar projects were excluded as RMRR. And even though the District Court ultimately reached a different conclusion here, it is important to note that this required a trial on the matter, indicating that reasonable minds could differ on the RMRR question. On EPA's motion for summary judgment, the District Court denied EPA's attempt to establish that the projects were not RMRR as a matter of law. Ameren Missouri, 2016 WL 728234, at

[4] I understand that the Report of Jerry L. Golden contains information claimed as confidential by third parties. That information was redacted from the version of Mr. Golden's report that was provided to me, and the only confidential information in the redacted report given to me belongs to Ameren Missouri.

*6-8. The District Court held that there were genuine issues of fact that could support a finding that the Rush Island projects were RMRR, even if aggregated. The District Court's summary judgment decision is consistent with the fact that there are few bright lines with respect to the RMRR exclusion. Thus, as an original member of EPA's enforcement initiative team testified, "reasonable people can come to different conclusions" regarding the applicability of the RMRR exclusion. Tr. of Dep. of John Hewson, United States v. Ala. Power Co., No. CV-01-HS-0152-S at 44 (N.D. Ala. June 8, 2009) ("Hewson Dep.").

## VI. INDUSTRY PRACTICE CONFIRMS THE REASONABLENESS OF AMEREN MISSOURI'S DECISIONS

**Q. You testified above that Ameren Missouri's Rush Island projects were common in the utility industry. Did the electric utility industry generally seek NSR permits for such projects?**

A. No, based upon my experience from 1986 to 2015, utilities were not seeking NSR permits for such activities, despite the litigation positions developed by EPA after 1999. NSR is a self-implementing program, in which pre-approval of applicability decisions is neither required nor practical (given the large number of such decisions that must be made annually). EPA guidance on application of the RMRR exclusion called for utilities to consider all the relevant facts and make a "common-sense" decision. Similarly, the NSR regulations allowed utilities the flexibility to apply their own engineering judgment and operational experience in evaluating "all relevant information" to project emissions increases and identify any projected increases that would be caused by a non-routine physical change. At all relevant times, it was widely understood across the utility industry that performing like-kind component replacements on existing units, to maintain the availability, reliability and safety of these assets, would not trigger NSR.

**Q. Before the industry-wide enforcement initiative launched by EPA in 1999, did EPA take the position that NSR permits were required for such projects?**

A. At no point prior to 1999 were projects like these alleged to trigger NSR. As an original member of EPA's enforcement initiative described it, this initiative "certainly it was designed to force the companies to fundamentally change the way that they do maintenance activities, because they would be forced to get a permit for a vast majority of the maintenance activities which they hadn't been forced to do in the past." Hewson Dep. at 21.

**Q. How did the utility industry react to the enforcement initiative?**

A. EPA's litigation positions concerning the meaning and application of the NSR rules conflicted with the official statements coming from EPA's program office with responsibility for the NSR program. EPA's litigation position also conflicted in many instances with the state NSR programs, and those state NSR programs were the law—regardless of litigation positions that one part of EPA may choose to take. The projects targeted in the enforcement initiative are critical to the continued operation of vital power infrastructure and required by prudent utility practice. Utilities therefore continued to perform projects like those at Rush Island, consistent with the guidance provided by EPA's program office, the agency's senior leaders, and the relevant state authorities.

**Q. What have the results of EPA's enforcement initiative been?**

A. As the U.S. Court of Appeals for the Third Circuit recognized, the NSR enforcement initiative against electric utilities has been "'the largest, most contentious industry-wide enforcement initiative in EPA history.'" United States v. EME Homer City Generation, L.P., 727 F.3d 274, 281 (3rd Cir. 2013) (citation omitted). In the course of

this enforcement initiative, many courts have rejected EPA's unpromulgated enforcement interpretations of the NSR rules and held that projects like those Ameren Missouri performed do not trigger NSR. For example:

- EPA launched its enforcement initiative with a proceeding in its Environmental Appeals Board ("EAB") against the federal government's own electric utility, the Tennessee Valley Authority ("TVA"). The EAB issued an order that attempted to change the settled meaning of the NSR rules. TVA challenged the EAB order in the U.S. Court of Appeals for the Eleventh Circuit, which rejected EPA's attempt as a "patent violation of the Due Process Clause" that "lacked the virtues of most agency adjudications." Tenn. Valley Auth. v. Whitman, 336 F.3d 1236, 1245-46, 1258-59 (11th Cir. 2003). The Eleventh Circuit therefore declared EPA's order to be "legally inconsequential" and held that "TVA is free to ignore [it]." Id. at 1239-40.

- On cross-motions for summary judgment, the U.S. District Court for the Middle District of North Carolina rejected EPA's litigation positions on RMRR and emissions increase. United States v. Duke Energy Corp., 278 F. Supp. 2d 619 (M.D.N.C. 2003), aff'd on other grounds, 411 F.3d 539 (4th Cir. 2005), vacated sub nom. Envt'l Def. v. Duke Energy Corp., 549 U.S. 561 (2007). The District Court found EPA's new interpretation of the NSR program contrary to "EPA's statements in the Federal Register, its statements to the regulated community and Congress, and its conduct for at least two decades . . . ." Id. at 637. In ruling against EPA's unsuccessful attempt to relitigate this decision, the U.S. District Court for the Middle District of North Carolina noted EPA's propensity to "sp[eak] out of both sides of its mouth" on the issue of NSR applicability. Order at 3, United States v. Duke Energy Corp., No. 1:00-cv-01262-WO-JEP (M.D.N.C. Feb. 23, 2004), ECF No. 294. Although the U.S. Supreme Court ultimately reversed the decision concerning the proper emissions increase test under the NSR rules, it also held that whether EPA could apply its emissions increase test remained an issue to be decided under the doctrine of fair notice. Envtl. Def. v. Duke Energy Corp., 549 U.S. at 581-82. After remand, EPA was again unable to get the court to adopt its litigation position on RMRR. United States v. Duke Energy Corp., No. 1:00CV1262, 2010 WL 3023517, at *6-7 (M.D.N.C. July 28, 2010). EPA then dropped most of its claims, Stipulation of Dismissal of Certain Claims and Defenses, United States v. Duke Energy Corp., No. 1:00-cv-01262-WO-JEP (M.D.N.C. Aug. 5, 2011), ECF No. 418, and after additional litigation settled the remainder.

- In ruling against EPA on the meaning and application of the NSR rules, the U.S. District Court for the Northern District of Alabama criticized EPA for the "zigs and zags represented by its contradictory . . . statements and rules"

and its failure to speak "with one voice, or a consistent voice, or even a clear voice" on the application of the NSR program. United States v. Ala. Power Co., 372 F. Supp. 2d 1283, 1306 (N.D. Ala. 2005), order vacated in part, No. 2:01-cv-00152-VEH, 2008 WL 11383702 (N.D. Ala. Feb. 25, 2008). The same court characterized EPA's enforcement initiative as a "sport, which is not exactly what one would expect to find in a national regulatory enforcement program." Id. at 1306 n.44. The court conducted an extensive review of EPA's prior statements about the RMRR exclusion and compared them to EPA's litigating position. Applying the factors set out by the United States Supreme Court in United States v. Mead Corp., 533 U.S. 218 (2001), the court found that EPA's litigation position on RMRR failed four of the five Mead factors and was not, therefore, entitled to deference. Id. at 1306. The court therefore rejected EPA's litigation position on the scope and application of the RMRR exclusion. Id. at 1290, 1307.

- In the Memorandum Opinion on Sierra Club Motion to Reconsider Stay and Referral to Mediation, Sierra Club v. TVA, No. 3:02-cv-2279-VEH, slip op. at 9 (N.D. Ala. July 5, 2006), ECF No. 117, the District Court stated "I do not see how anyone can say with a straight face that EPA's" litigation position on NSR was the same as the published regulations.

- In denying summary judgment to EPA, the U.S. District Court for the Eastern District of Kentucky held that EPA's enforcement interpretations deserve no deference because the agency "takes an inconsistent view of the regulations, makes inconsistent statements with respect to the regulation, and also enforces the regulation with no discernable consistency."). United States v. E. Ky. Power Coop., 498 F. Supp. 2d 976, 993 (E.D. Ky. 2007).

- In reaffirming its rejection of EPA's litigation position in 2008, the United States District Court for the Northern District of Alabama stated "[i]t would take a strained reading" of the relevant history to support EPA's litigation position.

> This court believes it is superficial and insufficient to quote the Clay Memorandum [on WEPCO] and say it forecloses all further discussion. The EPA continued to publish statements about enforcement and RMRR after the Clay Memorandum [in 1988]. Those statements did not occur in a vacuum; the court believes the EPA meant what it said when it called the modifications in *WEPCO* extraordinary and that the EPA did not anticipate bringing additional enforcement actions because of *WEPCO*. The fact that years passed before it did so speaks for itself. The electric utility industry was reading what the EPA was publishing, *e.g.*, EPA's response to Congressman Dingell's "inquiry."

…

> [EPA] could not tell Congress it envisioned very few *future WEPCO*-type enforcement actions on the one hand, and then argue in subsequent enforcement actions that the utility industry was unreasonable in relying on those, or similar, EPA statements.

United States v. Ala. Power Co., 681 F. Supp. 2d 1292, 1309, 1310 (N.D. Ala. 2008).

- In a 2008 trial in the Southern District of Indiana, the jury largely rejected the emissions increase methodology that EPA later used at trial against Ameren Missouri. Verdict Form, United States v. PSI Energy, Inc., No. 1:99-cv-01693-LJM-JMS (S.D. Ind. May 22, 2008), ECF No. 1339 (finding for defendants on 10 of 14 projects).

- In denying summary judgment to Plaintiffs, the U.S. District Court for the Western District of Pennsylvania held that the emissions increase opinions offered by EPA's experts were insufficient as a matter of law to establish liability. Pennsylvania, Dep't of Envtl. Prot. v. Allegheny Energy, Inc., No. 02-05cv885, 2008 WL 4960090, at *6-7 (W.D. Pa. Nov. 18, 2008). That same court also rejected the narrow enforcement initiative interpretation of RMRR advanced by EPA. Pennsylvania, Dep't of Envtl. Prot. v. Allegheny Energy Inc., No. 05-885, 2008 WL 4960100, at *7 (W.D. Pa. Sept. 2, 2008).

- When given a second bite at the apple, on retrial of six of the projects for which the jury in 2008 found for Defendants, EPA again lost on four of the six projects. Verdict Form, United States v. PSI Energy, Inc., No. 1:99-cv-01693-LJM-JMS (S.D. Ind. May 19, 2009), ECF No. 1742 (finding for defendants on four of the six re-tried projects). The special verdict form makes it clear that the jury rejected EPA's emissions increase methodology on these projects. Special Verdict Form, United States v. PSI Energy, Inc., No. 1:99-cv-01693-LJM-JMS (S.D. Ind. May 19, 2009), ECF No. 1744.

- In ruling on summary judgment, the United States District Court for the Eastern District of Tennessee also rejected the narrow interpretation of RMRR advanced in the enforcement initiative. Nat'l Parks Conservation Ass'n v. Tenn. Valley Auth., 618 F. Supp. 2d 815, 825 (E.D. Tenn. 2009). After trial, that same court held that projects like those Ameren Missouri performed at Rush Island were RMRR and therefore excluded from NSR review. Nat'l Parks Conservation Ass'n v. Tenn. Valley Auth., No. 3:01-CV-71, 2010 WL 1291335, at *24-31 (E.D. Tenn. Mar. 31, 2010).

- In reversing a jury verdict for EPA, the Seventh Circuit held that the emissions increase opinions offered by EPA's experts at trial were

unreliable and inadmissible. United States v. Cinergy Corp., 623 F.3d 455, 458-61 (7th Cir. 2010).

At the time that construction of the last projects at Rush Island commenced in 2010, courts had largely rejected the litigation position that EPA had advanced in the enforcement initiative. Ameren Missouri was well aware of this. Schedule SCW-D11, Schedule SCW-D15, Schedule SCW-D16. Although a few courts had deferred to EPA's litigation position early in the enforcement initiative, by 2007 the U.S. Supreme Court had started drawing lines illustrating that such deference was inappropriate. Compare Long Island Care at Home, Ltd. v. Coke, 551 U.S. 158, 170-71 (2007) (deferring to new interpretation that "create[d] no unfair surprise" because agency had adopted it through notice-and-comment rulemaking) with Christopher v. SmithKline Beecham Corp., 567 U.S. 142, 156 (2012) (citing Long Island Care, 551 U.S. at 170-71, and refusing to defer to agency interpretation announced for the first time in an enforcement proceeding); see also Duke Energy, 549 U.S. at 581-82 (remanding with instructions to address the issue of whether EPA had provided "fair notice" of its regulatory interpretations).[5] The landscape of court cases arising from the enforcement initiative provided additional context at the time Ameren Missouri made its decisions about Rush Island and reinforce the reasonableness of those decisions.

**Q. If Ameren Missouri knew about EPA's utility enforcement initiative, does that make it imprudent in not seeking permits for the Rush Island Projects?**

A. No. In the relevant timeframe (2005-2010), our industry certainly understood the NSR enforcement initiative, EPA's litigation theories, and the

[5] The U.S. Supreme Court cited both Long Island Care and Christopher in severely limiting the applicability of the doctrine of deference to agency interpretation of regulations. Kisor v. Wilkie, 139 S. Ct. 2400, 2417-18 (2019).

methodologies that EPA's hired expert witnesses were employing to claim near-universal non-compliance. But the Commission should also understand that the Koppe-Sahu emissions methodology used in all these cases was not a product of a notice-and-comment rulemaking—it was devised ***for litigation*** by EPA. Moreover, the Koppe-Sahu formula can only show an increase in emissions—it cannot predict a decrease—because it excludes from consideration all other factors that go into dispatch of a unit, which is contrary to the plain language of the NSR regulations. 40 C.F.R. § 52.21(b)(41)(ii) (requiring operator to consider "all relevant information" in making its emissions projections). For these reasons, the testimony of Koppe and Sahu was challenged in every case brought against a defendant utility.[6] And in the 2005 to 2010 period, the utilities were winning as many cases as they were losing.

Although Ameren Missouri was aware of the NSR enforcement initiative and EPA's use of the Koppe-Sahu formula within it, that body of law as a whole—which I summarize above—does not show that Ameren Missouri's decisions were unreasonable or imprudent. This is uniquely true because none of those cases involved the Missouri SIP or a similar requirement in state law that limits PSD permitting to the modification causing an increase in potential emissions. The Missouri SIP put Ameren Missouri in a stronger legal position than most other utilities in the enforcement initiative.

[6] The District Court's liability opinion supports the conclusion that it was reasonable for utilities, including Ameren Missouri, to challenge the Koppe-Sahu methodology. 229 F. Supp. 3d at 1014 (noting that after-the-fact emissions calculations performed for the purpose of litigation may lack credibility).

## VII. AMEREN MISSOURI'S ENVIRONMENTAL COMPLIANCE PLANNING

**Q. What does the record show regarding Ameren Missouri's thoroughness in planning for environmental compliance at its coal-fired power plants?**

A. I have reviewed Ameren Missouri's reports and presentations concerning its Environmental Compliance Plans. From my review of its processes, I can state that Ameren Missouri's approach to environmental compliance was ongoing, thorough and consistent with good utility practices. Each calendar year Ameren Missouri produced an Environmental Compliance Plan ("ECP") and shared its results with the Commission's Staff and in some cases with the Commission itself. For example, the Executive Summary of the 2009 ECP describes Ameren Missouri's approach:

> Environmental compliance planning at AmerenUE is a dynamic and robust process. Consequently, this Environmental Compliance Plan (ECP) will continue to change as conditions and environmental laws, rules and regulations change. AmerenUE uses the experience of both external resources to develop a plan that ensures that the company will prudently meet regulatory requirements. By using this expertise, the planning process ensures AmerenUE will not only maintain compliance with new and existing regulations, but also considers likely environmental and operating constraints that the company will face in the future.

See 2009 AmerenUE ECP, ES-1. To inform the ECP process, Ameren Missouri also developed an "AmerenUE Twenty (20) year Environmental Compliance Strategy Air Analysis Report" that provided the basis for the company's compliance plan for major air quality issues at its generating plants. That Report also provided the basis for Ameren Missouri's four (4)-year environmental plan. In 2009, for example, that meant that Ameren Missouri considered 1) New Source Performance Standards and NSR issues, 2) the Acid Rain program, 3) the Clean Air Interstate Rule ("CAIR"), 4) Section 126 petitions, 5) the Regional Haze Rule, and 6) a possible new mercury MACT standard.

The result of these efforts was that Ameren Missouri could inform the Commission that it estimated total costs for the Ameren Missouri twenty (20)-year environmental plan of approximately $2,738,600,00 divided between capital investments and O&M expenses and $494,200,000 for the four (4)-year plan. Given the enormity of the future costs and regulatory uncertainties, Ameren Missouri revised the ECP annually and used the ECP process to develop in-depth studies and reports. In turn, Ameren Missouri reported its ECP findings to the Commission's Staff each year and successfully sought rate recovery for the projects approved and developed following the ECP.

**Q. Did Ameren Missouri act prudently in developing its Environmental Compliance Plan (ECP) for its coal-fired power plants?**

A. In conducting my review of that annual process, I weighed the validity of the following assertion by Ameren Missouri about the ECP:

> The ECP meets the corporate goal of environmental stewardship, demonstrates environmental leadership through innovative solutions and technologies where possible, reflects prudent compliance with environmental laws, rules and regulations, taking into account operating contingencies, and is developed to be as cost-effective as possible. In meeting these criteria, this ECP is designed to operate in the interest of the company's ratepayers and shareholders.

2009 AmerenUE ECP, ES-3. To aid me in assessing that claim, I reviewed thousands of pages of internal planning documents and studies. As a former utility executive and counsel—who participated in nearly all phases of similar sophisticated compliance planning efforts—I believe that Ameren Missouri and its executives acted prudently in charting Ameren Missouri's immediate and twenty-year compliance path for Clean Air Act compliance through the ECP process.

**Q. What consideration of New Source Review took place in Ameren Missouri's Environmental Compliance Planning process?**

A. Each year, Ameren Missouri opened its Environmental Compliance Plan with an initial focus on New Source Performance Standards (NSPS) and New Source Review (NSR), including the Prevention of Significant Deterioration (PSD) program and it made the following statement about NSR and PSD:

> [These] control requirements on new and modified major sources [are] to protect ambient air quality. **These programs do not apply to various actions at existing major sources, including routine repair & replacement of equipment, and changes which do not increase emissions.**

2009 AmerenUE ECP, p. 3-2 (emphasis added). This stated view of NSR represented what Ameren Missouri (and other Missouri companies) believed and acted on in good faith under the Missouri SIP. Although Ameren Missouri did not believe that it had triggered NSR at Rush Island or any of its other plants, it nevertheless considered future NSR claims as a sensitivity in its environmental compliance planning process. Consideration of such scenarios was another example of prudent utility practice.

## VIII. AMEREN MISSOURI'S RESPONSE TO EPA'S NOTICES OF VIOLATION

**Q. Did Ameren Missouri act imprudently upon receipt of EPA's Notice of Violation?**

A. No. This is something I can state with confidence, having worked at EPA and at a utility that received EPA Notices of Violation.

A notice of violation does not have the weight of law. It is simply an allegation, as courts have recognized. See e.g., Luminant Generation Co. v. EPA, 757 F.3d 439, 442-43 (5th Cir. 2014) (noting the "intermediate, inconclusive" nature of an EPA NOV, that "no legal consequences flow from the issuance of [a] notice," and that "it makes no sense to say that an entity must comply with a notice").

EPA itself discounted the importance of its NOVs to Ameren Missouri. After Ameren Missouri received EPA's NOVs alleging multiple NSR violations, Ameren Missouri sought production of EPA's emissions analyses supporting those allegations. EPA resisted production of those emissions analyses, and Ameren Missouri filed suit seeking their production under the Freedom of Information Act. In arguing to the district court and to Ameren Missouri that it did not have to produce the emissions analyses undergirding the NOV allegations, EPA stated that an NOV "is not final agency action" and "no legal consequences flow from the issuance of a notice of violation." Schedule KRM-D15 (Tr. of Motion Hearing)

Finally, one should keep in mind that at the time Ameren Missouri undertook its projects, other courts had rejected allegations of violations and found that the same types of projects did not trigger NSR.

For all these reasons, there was no requirement (and no basis) for Ameren Missouri to do anything upon receipt of EPA's NOVs. The typical response by a utility in receipt of an NOV like those EPA issued to Ameren Missouri is to gather as much information as the utility can about the allegations and evaluate whether any new information causes the utility to change its position.

**Q. Does it make any difference that Ameren Missouri received an NOV while the Unit 2 outage was in progress?**

A. No, for three reasons. First, EPA issued the NOV after the Unit 2 project started. But Ameren Missouri was required to, and did, make its compliance determinations pre-project. Because the NOV was not available at that time, it is not

relevant to whether the pre-project decisions were reasonable.[7] The District Court confirms this fact in finding that pre-project analyses are the ones that matter. 229 F.3d at 1014 (rejecting "afterthought analyses"). Second, the January 2010 NOV did not allege any violation in the ongoing outage at Unit 2. In fact, EPA kept changing the alleged violations over the course of the litigation, adding new ones and dropping others. This inconsistency reinforces the fact that no weight should be placed on any allegations made in an NOV. Third, many utilities have successfully contested EPA's NOVs, and as a result EPA's allegations have frequently failed to result in the imposition of any additional controls. This is illustrated in Schedule KRM-D16 (attached), which summarizes the NOVs issued by EPA to electric utilities for alleged NSR violations prior to January 1, 2010, and the results of any resolution of those claims within that period. Of the 39 companies receiving an NOV for an alleged NSR violation between November 3, 1999 and January 1, 2010, only a third of them (13) had settled with EPA—and most of these settlements were only partial, leaving some NOV allegations against the settling company unresolved. Schedule KRM-D16. Of the over 260 units alleged to have triggered NSR in the pre-2010 NOVs, only 65 such units (i.e., 25%) had their NSR claims settled by the start of 2010. Id.

For all these reasons, the fact that EPA issued an NOV after the relevant period, in which Ameren Missouri made the necessary decisions, is irrelevant in determining the reasonableness of the company's permitting decisions.

[7] The same is true for the emission calculations by Michael Hutcheson. The Hutcheson calculations were not part of the pre-project evaluations Ameren Missouri performed to decide whether permitting requirements applied. 229 F. Supp. 3d at 978 (FOF 398). Rather, they were done later at the request of the legal department. Id. (FOF 399). Given the context of EPA's ongoing investigation of Ameren Missouri, it was reasonable for the Ameren Missouri legal department to have requested an evaluation of certain projects from EPA's perspective.

**Q. What did Ameren Missouri do with the NOV after receiving it?**

A. None of the various NOVs EPA issued to Ameren Missouri described how or why the identified projects triggered NSR. Although projects must cause emissions to increase in order to trigger NSR, the NOVs lacked any description of how or why that was the case here. The NOVs did not describe any of the calculations that EPA contends Ameren Missouri could have or should have done to evaluate a project for potential emissions impact. And EPA has never issued regulations (or even informal guidance) describing how it expects electric utilities to evaluate whether projects would cause increases in annual emissions.

Ameren Missouri therefore requested that EPA provide that information. EPA refused, prompting Ameren Missouri to bring suit under FOIA to compel the production of EPA's emissions analyses. EPA's arguments in that FOIA case are remarkable, illustrating the extent to which the NSR enforcement initiative strayed from the normal regulatory process. EPA argued that it should not have to produce its emissions evaluations underlying the NOVs to Ameren Missouri because "EPA used the same analysis for all of its emissions calculations, so from the Government's perspective, as soon as you disclose any of the calculations you can figure out pretty much how the analysis was performed for any of the plants or any of the time frames." Schedule KRM-D15 (Tr. at 41, lines 8-12). When asked by the District Judge how that would harm EPA, the agency's lawyer responded that production of its emission calculations would allow utilities to "take EPA's work product, EPA's hard work in determining how to analyze all these different factors and data points" in calculating emissions, "and get a short cut to figuring out what the

enforcement risks are." Id. at 45, lines 8-11. One would think that a regulator would want regulated entities to understand "what the enforcement risks are."

Instead, EPA argued that Ameren Missouri would have to wait—Ameren Missouri could learn how EPA identifies an NSR violation only "through the Clean Air Act litigation" brought against Ameren Missouri in the Eastern District of Missouri:

> THE COURT: Why shouldn't Ameren be able to learn why you have decided that it is subject to a Notice of Violation?
>
> MR. LAY [Counsel for EPA]: From the Government's perspective, Ameren is learning that through the Clean Air Act litigation.
>
> THE COURT: You've got other plants, and no Clean Air Act litigation has been filed with respect to those, and maybe no Clean Air Act litigation will ever be filed with respect to those, and yet a Notice of Violation has been issued, and I assume you can't tell me standing here today whether a Clean Air Act case will or will not be filed with respect to the other plants.
>
> MR. LAY: That's true.
>
> THE COURT: So why shouldn't Ameren be able to learn?
>
> MR. LAY: Through FOIA rather than the Clean Air Act case?
>
> THE COURT: But the Clean Air Act case only pertains to Rush. With respect to Ameren's other three plants, why should Ameren not be entitled to learn why the EPA has issued a Notice of Violation, apart from you saying, well, because we issued a Notice of Violation, and we think you should expected that the emissions would increase? Why shouldn't they get to know why you believe it should have known?

Unfortunately, Ameren Missouri was unsuccessful in its attempt to learn the factual basis for Ameren Missouri's allegations of violations across its system, as set forth in the

NOVs. EPA resisted disclosing its contentions regarding emissions increase until it was required to do so in expert disclosures.

Because EPA hid the ball in this manner, there was nothing more that Ameren Missouri could reasonably do with the NOV—other than using what information it had to re-examine all the projects identified by EPA as potential violations. And that is what it did, producing emissions calculations that confirmed its pre-project view that the projects identified would not cause emissions to increase.

Having re-confirmed its initial (pre-project) determinations that the projects would not trigger NSR, Ameren Missouri contested EPA's allegations. That is just what a prudent utility should have done in these circumstances.

**Q. Why is that?**

A. As I have already described above, Ameren Missouri's applicability determinations were consistent with the plain language of the SIP and its settled application by MDNR. In addition, as I have described above, Ameren Missouri understood even in jurisdictions where the Missouri SIP did not apply, EPA's enforcement initiative was on very shaky ground—its conflict with the settled law and decades of practice, its unprincipled theory of universal liability, and the difficulties that EPA had with advancing these policy positions through litigation. Having done a "gut check" and re-confirmed its initial conclusions through the production of emission calculations that still demonstrated no emissions increase, Ameren Missouri contested EPA's allegations. That was the most reasonable course of action for Ameren Missouri. Had Ameren Missouri done otherwise and acceded to EPA's demands, that would not have been in the best interest of its

customers and would have risked disallowance of the billions of dollars in unnecessary control costs as an imprudent course of action.

## IX. E.D. MISSOURI LITIGATION

**Q. It sounds as if you are arguing that the Eastern District of Missouri got it wrong in finding that Ameren Missouri has violated NSR. Is that correct?**

A. No. I did not and do not offer any opinion on whether Ameren Missouri violated the Clean Air Act's New Source Review ("NSR") provisions. That has already been established by the District Court and is not at issue in this proceeding. Instead, the question I address is whether it was reasonable at the time in question (2005-2010) for Ameren Missouri to believe that its Rush Island projects would not trigger NSR. As I stated above, Ameren Missouri reasonably believed that it was applying the NSR rules to the projects it undertook at Rush Island. The decisions to proceed with the Rush Island projects were based upon the understanding that they did not trigger NSR, and in my experience that understanding was consistent across the industry. It was particularly appropriate given the terms of the governing Missouri SIP. The decisions of Ameren Missouri were consistent with those of made by electric utilities with whom I worked at the time.

**Q. Do the District Court litigation and the resulting opinions support your conclusions at all?**

A. Yes, in several respects. First, the history of that litigation demonstrates that Ameren Missouri had a solid case for believing what it did. When EPA filed suit in January 2011, it did not even include the 2007 and 2010 projects in its Complaint, even though EPA had investigated the plant for the prior three years. Instead, EPA filed suit on

other projects (performed at Rush Island in 2001 and 2003) which EPA later dropped. EPA did not add the 2007 and 2010 projects to the litigation until June 2011. Then, after extensive discovery, EPA moved for summary judgment, asking the District Court to find that the Unit 2 projects in 2010 constituted a major modification. The District Court denied that motion in 2016, finding that a trial was necessary because the facts were in dispute. United States v. Ameren Missouri, No. 4:11-cv-00077-RWS (E.D. Mo.), ECF No. 724 at 16 ("I cannot say that no reasonable factfinder could find for Ameren"). EPA's re-shuffling of its claims, and the District Court's conclusion at summary judgment that reasonable minds could differ concerning Ameren Missouri's liability under the Clean Air Act, underscore that Ameren Missouri had solid grounds for believing as it did.

Second, after the full liability trial, the District Court made several important factual findings that support the prudency of Ameren Missouri's decisions. The first such finding was that Ameren Missouri evaluated the Rush Island projects for NSR applicability before undertaking them. 229 F. Supp. 3d at 926 (FOF 385). Ameren Missouri did not ignore NSR requirements. Second, that evaluation included a consideration of whether the projects would cause any emissions increase. *Id.* at 926-27 (FOF 391, 395).[8] Third, Ameren Missouri did not believe that a component replacement project would cause an annual emissions increase if the unit was capable of generating the higher level of emissions before the project. *Id*. at 978, 981 (FOF 403, 423, 426). Finally, the District Court found that Ameren Missouri's compliance process was based upon "a fundamental misunderstanding of the PSD program," in that it did not reflect the Court's later

[8] Although the District Court did not address Ameren Missouri's pre-project evaluation that found the Rush Island projects excluded from permitting requirements as routine maintenance, repair or replacement ("RMRR"), the testimony cited by the District Court made it clear that Ameren Missouri in fact made such a determination. See Birk Dep. at 220, lines 14-21.

understanding of the program in 2017. *Id*. at 1010. Nowhere did the District Court find that Ameren Missouri failed to act in good faith in its attempts to comply with the law as it understood that law ***at the time***, or in asserting its right to contest EPA's claims based upon positions that had been accepted and ratified by other courts.

**Q. Does the District Court's determination at the liability trial that Ameren Missouri had "a fundamental misunderstanding of the PSD program" mean that Ameren Missouri was imprudent?**

A. No. The District Court's rejection of Ameren Missouri's understanding of the law does not mean that Ameren Missouri was unreasonable in its position on what the law was at the time it made its decisions. After all, in other cases, that very same understanding of the NSR program that Ameren Missouri shared with industry was upheld by both district courts and circuit courts across the country. Those cases supported Ameren Missouri's pre-project permitting decisions.

A further decision by the District Court, following conclusion of the remedy trial, underscores the fact that the case involved close questions, including issues of first impression. The District Court stayed implementation of its remedy order, pending Ameren Missouri's appeal to the Eighth Circuit. In doing so, the District Court recognized that its liability decision presented close questions of first impression. In other words, it was reasonable to believe that Ameren Missouri could have prevailed on appeal.

**Q. But didn't the District Court find that Ameren Missouri had acted unreasonably in its liability opinion?**

A. No. The District Court found that Ameren Missouri has "a fundamental misunderstanding of the PSD program" and accordingly its "method of assessing PSD does

not comply with the rules, EPA's instructions or the case law." 229 F. Supp. 3d at 1010, 1011. In this context, the District Court's reference to "method of assessing PSD" referred only to the method of assessing whether an actual annual emissions increase would be caused by a project. Because Ameren Missouri's NSR analysis did not comply with the District Court's view of the applicable NSR requirements, that analysis "therefore was not reasonable under the law." Id. at 1012. This does not resolve the question of whether Ameren Missouri's ***understanding*** of the law was reasonable at the time that it made the pre-project decisions on NSR applicability. That is the key question here, and it was not addressed by the District Court litigation.[9]

In fact, both EPA and the District Court made clear that the NSR case was not about whether Ameren Missouri had acted negligently or imprudently or violated some standard of care for a reasonable utility. While briefing cross-motions for summary judgment, Ameren Missouri argued that EPA's claims failed because EPA presented no evidence on the standard of care on how a reasonable power plant operator would have applied the NSR regulations to the projects at issue. In other words, Ameren Missouri pointed out EPA failed to establish how a prudent power plant operator would have applied the law to the facts. EPA argued in opposition that no such "standard of care" evidence was offered because no such evidence was required. The Clean Air Act is a strict liability statute that does not employ negligence principles such as "standard of care" or breach of such standard

[9] As noted previously, Ameren Missouri had three independent reasons for concluding no permitting was required. Characterizing Ameren Missouri's actual annual emissions calculations as "unreasonable" for not conforming to the law in no way undermines the reasonableness of Ameren Missouri's separate conclusion that it need not seek a permit because the projects would not cause potential emissions to increase. Nor does it undermine the reasonableness of Ameren Missouri's separate conclusion that the RMRR exclusion also applied, and that it need not seek NSR permits for that reason alone. As I have already explained, those independent bases for Ameren Missouri's actions were reasonable given the facts known to Ameren Missouri at the time.

of care. The District Court agreed, concluding that standard of care was irrelevant to liability.

In short, the District Court did not decide the question presented here: whether Ameren Missouri acted prudently in its approach to compliance under the Clean Air Act. For the reasons I have explained, I believe that the Company's actions were justified and supported by the text of the law, EPA's and MDNR's prior statements and application of the law, widespread utility industry practice and understanding, and the majority of NSR cases.

* * *

**Q. Does this conclude your direct testimony?**

A. Yes, it does.

**BEFORE THE PUBLIC SERVICE COMMISSION**
**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of the Petition of Union Electric Company d/b/a Ameren Missouri for a Financing Order Authorizing the Issue of Securitized Utility Tariff Bonds for Energy Transition Costs Related to Rush Island Energy Center. | ) ) ) ) ) ) | Case No. EF-2024-0021 |

**AFFIDAVIT OF KARL R. MOOR**

**WASHINGTON, D.C. ) ss**

Karl R. Moor, being first duly sworn states:

My name is Karl R. Moor, and on my oath declare that I am of sound mind and lawful age; that I have prepared the foregoing *Direct Testimony*; and further, under the penalty of perjury, that the same is true and correct to the best of my knowledge and belief.

Karl R. Moor

Karl R. Moor

Sworn to me this 13th day of November, 2023.

District of Columbia
Signed and sworn to (or affirmed) before me
on 11-15-2023 by Karl R. Moor
Date Name(s) of Individual(s) making Statement
Victoria A. Wood
Signature of Notarial Officer
Notary Public
Title of Office
My commission expires: 12-14-2027

VICTORIA A. WOOD
NOTARY PUBLIC
MY COMMISSION EXPIRES
12/14/2027
DISTRICT OF COLUMBIA

Karl R Moor
933 Westminster Street, NW
Washington, DC 20001
404-279-0086
karlmoor.us@gmail.com

**Professional Experience**

*Deputy Assistant Administrator for Policy* - OFFICE OF AIR & RADIATION AT THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Washington D.C. (2019-2021)

*Counsel* - BALCH & BINGHAM LLP, Birmingham, Alabama (2016-2018)

*Sr. Vice President & Chief Environmental Counsel* - SOUTHERN COMPANY SERVICES INC., Birmingham, Alabama (2012-2015)

*General Counsel & Compliance Officer* - SOUTHERN TRANSMISSION, (SOUTHERN COMPANY) Atlanta, Georgia (2005-2011) - Additional role while performing other duties.

*Vice President & Associate General Counsel for Litigation & Public Policy* - SOUTHERN COMPANY, Washington, D.C. (1998-2012)

*Partner,* BALCH & BINGHAM LLP, UTILITY, LEGISLATIVE & REGULATORY SECTION, Washington D.C. (1986-1998)

*Special Assistant for Legislative Affairs*, *Political Appointee* (Reagan Administration) UNITED STATES DEPARTMENT OF EDUCATION (1985-1986)

*Senior Legislative Assistant*, UNITED STATES SENATE - Advising Senator J.A. Denton (R-AL). (1985-1985)

*Staff Director*, UNITED STATES SENATE, LABOR AND HUMAN RESOURCES COMMITTEE, SUBCOMMITTEE ON FAMILY AND HUMAN SERVICES. (1984-1985)

*Professional Staff Member*, UNITED STATES SENATE, LABOR AND HUMAN RESOURCES COMMITTEE, SUBCOMMITTEE ON AGING, FAMILY AND HUMAN RESOURCES. (1982-1984)

*Professional Staff Member*, UNITED STATES SENATE, COMMITTEE ON THE JUDICIARY, SUBCOMMITTEE ON SECURITY AND TERRORISM. (1981-1982)

*Professional Staff Member*, UNITED STATES SENATE, LABOR AND HUMAN RESOURCES COMMITTEE, SUBCOMMITTEE ON AGING, FAMILY AND HUMAN SERVICES (1981-1981)

**Bar Memberships**

*Member*, Alabama State Bar Association, United States District Court for the Northern District of Alabama, The United States Court of Appeals for the Eleventh Circuit, the United States Court of Appeals for the District of Columbia Circuit and the United States Supreme Court.

**Education**

1986 J.D., Georgetown University Law Center, Washington, D.C.

1982 M.A., The George Washington University, Washington, D.C.
Public & International Affairs; Science, Technology and Public Policy, Scottish Rite Fellow

1979 B.A., University of Montevallo, Montevallo, Alabama
Phi Kappa Phi

1974 University of Haifa, Haifa, Israel
Middle East Studies

Married, father of five adult daughters.

**Biography**

Mr. Moor has represented utilities and other businesses, and managed industry coalitions both as outside counsel and as a senior executive. On environmental matters, he has provided decision-making on major legislation, led industry efforts to influence the development of regulations, and helped lead joint defense efforts at the district court, circuit court, and at the U.S. Supreme Court levels. He has had executive legal management authority in defending clients in federal enforcement matters involving the control, use, and development of CO2 and other emissions as both a policy and business matter.

Early in his career, Mr. Moor played a lead role in the development of the Clean Air Act Amendments of 1990 as a loaned executive to the Clean Air Working Group (CAWG) and also as counsel to Southern Company Services, Inc. Additionally, as a utility regulatory lawyer, he has extensive experience with the Federal Power Act and the Tennessee Valley Authority Act.

During his time at Southern Company, Mr. Moor led industry efforts to fight EPA's New Source Review enforcement initiative and to defend against global climate change mass tort suits. He has extensive experience advising on climate and carbon dioxide (CO2) policy. At Balch & Bingham LLP, he advised clients on CO2 policies and international economic and regulatory developments related to CO2 policy and carbon capture utilization and storage.

Mr. Moor played a principal role in Southern Company's international activities, with a particular focus on environmental and technology issues. On behalf of the Company he attended in numerous UN Conference of the Parties meetings, designed to help implement the 1997 Kyoto Protocol and the development of the various successor accords. He helped lead efforts to interest governments, state owned enterprises and private companies in new clean coal generation technologies (with support from the Department of Energy). That effort necessitated extensive travel and work in China, Japan, Norway and the European Union. For example, he was part of a U.S. Trade Delegation to China (joint between the Departments of Commerce and Energy) for the same purpose of promoting the clean coal technology known as TRIG and for the construction of TRIG facilities in southern China and Eastern Europe. During this period, he served as a member of the board of directors for the Atlantic Council.

Mr. Moor served as Co-Convener (co-chief executive) of the Carbon Sequestration Council, an association of companies primarily in the petroleum, electric power utility and coal mining industries designed to build cross-industry and multi-stakeholder consensus on the key CCUS-related issues, including policy, funding, and messaging. The Council facilitated information sharing and coordination to promote policies, legislation and regulatory frameworks that foster the use of CO2 for enhanced oil recovery as well as the early use and commercial deployment of CCUS as an accepted and creditable means of addressing greenhouse gas mitigation. In addition, he served as chair of the Edison Electric Institute Task Force on Carbon Capture and Sequestration.

At the EPA, Mr. Moor had the policy lead for the development of final rules with respect to 1) establishing a pollutant-specific contribution threshold for evaluating when stationary sources of GHGs trigger New Source Performance Standards (NSPS) under the Clean Air Act; 2) the SAFE Rule regulating GHG emissions from automobiles under CAFE, and, 3) the OOOOa NSPS regulatory and policy packages governing the regulation of methane emissions from oil and gas sources. In addition, Mr. Moor worked on the implementation of the Affordable Clean Energy Rule (ACE).

**SCHEDULE KRM-D1**

**UNITED STATES DISTRICT COURT**
**EASTERN DISTRICT OF MISSOURI**
**EASTERN DIVISION**

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| **UNITED STATES OF AMERICA,** | ) | |
| | ) | |
| **Plaintiff,** | ) | |
| | ) | **Case No. 4:11-CV-00077-RWS** |
| **v.** | ) | **Judge Rodney W. Sippel** |
| | ) | |
| **AMEREN MISSOURI,** | ) | |
| | ) | |
| **Defendant.** | ) | |
| | ) | |

**AMEREN MISSOURI'S SUMMARY JUDGMENT MOTIONS**

# EXHIBIT A1

PORTIONS REDACTED PURSUANT TO ECF # 90

PART 1 OF 3

**SCHEDULE KRM-D2**

**UNITED STATES DISTRICT COURT**
**EASTERN DISTRICT OF MISSOURI**
**EASTERN DIVISION**

| | | |
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| **UNITED STATES OF AMERICA,** | ) | |
| | ) | |
| **Plaintiff,** | ) | |
| | ) | **Case No. 4:11-CV-00077-RWS** |
| **v.** | ) | |
| | ) | **Judge Rodney W. Sippel** |
| **AMEREN MISSOURI,** | ) | |
| | ) | |
| **Defendant.** | ) | |
| | ) | |

**DECLARATION OF STEVEN WHITWORTH**

I, Steven Whitworth, am over 18 years of age and make the following declaration pursuant to 18 U.S.C. § 1746:

1. I make this declaration on behalf of Ameren Missouri ("Ameren") based on my personal knowledge, and the records of Ameren or information available through employees of Ameren. I am prepared to testify to the following facts if called as a witness.

2. I am employed by Ameren Services Company, which provides services to Ameren Corporation's operating companies, including Ameren Missouri (which I will generally refer to below as "Ameren"). I have worked in Ameren's Environmental Services Department for over 16 years, and since 2007 I have managed and directed that Department. My title is Senior Director, Environmental Policy and Analysis. I am familiar with Ameren's emissions assessments for the 2007 and 2010 Projects at issue in this case.

**Assessment of Projects for Construction Permitting Applicability**

3. Ameren's Environmental Services Department ("Environmental Services") plays a lead role in evaluating whether environmental permits are required for activities Ameren

**SCHEDULE KRM-D2**

undertakes, including whether major New Source Review ("NSR") or other construction permits are required under the Missouri State Implementation Plan ("SIP") Construction Permitting Rule, 10 C.S.R. 10-6.060. Typically, we reach a consensus decision within Environmental Services on permit applicability through collaborative discussion.

4. To assess the nature of a project and to determine whether it should be considered for air construction permitting, Environmental Services typically works in conjunction with Ameren engineering personnel in the Project Engineering and Performance Engineering departments. We will also consult other Ameren departments (for example, Corporate Planning) as needed.

5. Environmental Services staff have considerable knowledge and experience with assessing permit applicability regarding all manner of projects at Ameren, including component replacements at Ameren's power plants, like Rush Island. We used that prior experience with similar activities in assessing any emission impact of the 2007 and 2010 Projects.

6. Environmental Services also relies on the subject matter expertise of our engineering colleagues to identify projects that have the potential, from an engineering point of view, to result in emissions increases, due to their nature and scope. Ameren had conducted dozens of similar boiler component replacement projects at its other plants prior to performing the 2007 and 2010 Projects. Our experience with and knowledge gained from those similar projects informed our decision-making and analysis with respect to the 2007 and 2010 Projects.

7. Ameren assesses the impact that a project is expected to have on unit operations well before beginning construction, as part of its project planning and justification processes. Consistent with normal practice, Ameren assessed the expected impact of the 2007 and 2010 Projects before beginning construction of those projects.

**SCHEDULE KRM-D2**

**Ameren's Emissions Assessment for the 2007 Projects at Rush Island Unit 1**

8. Ameren conducted a planned unit outage at Rush Island Unit 1 from approximately February to May 2007. During this outage, I understand that Ameren performed nearly 100 discrete projects. I understand that just four of those projects are at issue in this case: the replacements of the reheater, economizer, lower slope and air preheater components (the "2007 Projects"). While Ameren made emissions assessments with respect to all of the activities taking place during the 2007 Outage as a whole, to simplify the following discussion, I will refer to the 2007 Projects.

9. I understand from David Boll, currently Ameren's Consulting Engineer in Ameren's Environmental Project Engineering Department, that before the 2007 Outage, Ameren engineering personnel assessed the nature and scope of the 2007 Projects and the other projects planned to be undertaken during the 2007 Outage, and concluded that none of those projects would increase the unit's maximum annual rated design capacity given continuous year-round operations. Based on our considerable experience with NSR permitting under the Missouri SIP, and the language of the SIP, we understand that such projects would not increase the unit's annual rate of potential emissions, and therefore did not constitute "modifications" under the Missouri SIP. Accordingly, we determined that such Projects would not trigger the application of the Missouri Construction Permit Rule, meaning no construction permit was required.

10. As explained in Mr. Boll's declaration, Ameren engineering personnel had also determined that the 2007 Projects were routine in nature because, among other reasons, they were like-kind replacements of existing components with new components that were functionally equivalent. Ameren was aware that such replacements were commonly performed throughout the industry. I and my colleagues in Environmental Services knew that Ameren had conducted

dozens of similar component replacements at its other generating units in prior years. Accordingly, I and my colleagues in Environmental Services determined, prior to the 2007 Projects, that Ameren's routine boiler component replacements such as the 2007 Projects constituted routine maintenance repair and replacement activities that are excluded from NSR permitting under the Missouri SIP.

11. In addition to assessing the applicability of the Missouri SIP and whether the 2007 Projects constituted routine maintenance repair and replacement, Ameren also assessed any impact of the Projects on projected actual future emissions. We had experience with and knowledge of the similar projects described above, and were familiar with the Rush Island units' operational characteristics. This included our knowledge that Ameren's coal-fired generating units operate below their available capacity and thus have a large amount of unused capacity to generate. Based on these and other considerations derived from our experience, knowledge and judgment, and based on the judgment of Ameren's engineering personnel, we in Environmental Services concluded that the 2007 Projects would not cause actual emissions to increase.

**Ameren's Emissions Assessment for the 2010 Projects at Rush Island Unit 2**

12. Ameren conducted a planned unit outage at Rush Island Unit 2 from approximately January to April 2010. During this outage, I understand that Ameren performed over 100 discrete projects. I understand that only 3 of these projects are at issue: the replacements of the reheater, economizer, and air preheater components of Rush Island Unit 2 (the "2010 Projects"). While Ameren made emissions assessments with respect to all of the activities taking place during the 2010 Outage as a whole, to simplify the following discussion, I will refer only to the 2010 Projects.

13. I understand from Mr. Boll that before the 2010 Outage, Ameren engineering personnel assessed the nature and scope of the 2010 Projects and the other projects planned to be

undertaken during the 2010 Outage, and concluded that none of those projects would increase the unit's maximum annual rated design capacity given continuous year-round operations. Based on our considerable experience with NSR permitting under the Missouri SIP, and the language of the SIP, we in Environmental Services understand that such projects would not increase the unit's annual rate of potential emissions, and therefore did not constitute "modifications" under the Missouri SIP. Accordingly, we determined that such Projects would not trigger the application of the Missouri Construction Permit Rule, meaning no construction permit was required.

14. As explained in Mr. Boll's declaration, Ameren engineering personnel had also determined that the 2010 Projects were routine in nature because, among other reasons, they were like-kind replacements of existing components with new components that were functionally equivalent. Ameren was aware that such replacements were commonly performed throughout the industry. I and my colleagues in Environmental Services knew that Ameren had conducted dozens of similar component replacements at its other generating units in prior years. Accordingly, I and my colleagues in Environmental Services determined, prior to the 2010 Projects, that Ameren's routine boiler component replacements such as the 2010 Projects constituted routine maintenance repair and replacement activities that are excluded from NSR permitting under the Missouri SIP.

15. In addition to assessing the applicability of the Missouri SIP and whether the 2010 Projects constituted routine maintenance repair and replacement, Ameren also assessed any impact of the Projects on projected actual future emissions. We had experience with and knowledge of the similar projects described above, and were familiar with the Rush Island units' operational characteristics. This included our knowledge that Ameren's coal-fired generating

units operate below their available capacity and thus have a large amount of unused capacity to generate. Based on these and other considerations derived from our experience, knowledge and judgment, and based on the judgment of Ameren's engineering personnel, we in Environmental Services concluded that the 2010 Projects would not cause actual emissions to increase.

16. In addition to the foregoing assessment of actual emissions, Ameren also documented an assessment of whether there was a reasonable possibility, within the meaning of the relevant rules, that the 2010 Projects would increase emissions from the unit. The Missouri state permitting rules had changed in late 2009, requiring Missouri operators to perform in certain instances a numerical calculation of emissions, a requirement that had not applied under either the applicable state or federal regulations prior to that. While we believed (see above) that no construction permit of any kind was required under the Missouri Construction Permitting Rule, and that the 2010 Projects were excluded from New Source Review permitting because they constituted routine maintenance repair and replacement, we nonetheless prepared a numerical calculation out of an abundance of caution.

17. To determine whether there was a reasonable possibility of an emissions increase from the 2010 Outage, Environmental Services prepared a numerical emissions projection. A true and correct copy of the results of that projection, titled "Rush Island Unit 2 – Spring 2010 Outage – Reasonable Possibility Analysis Summary" is attached hereto as Attachment 1. (The document attached as Attachment 1 is the summary or conclusion page of a much larger document containing all the details of Ameren's analysis. Ameren produced the entire analysis during discovery in this case, but given its volume has not attached it here. Ameren stands ready to provide it to the Court upon request.)

18. Pursuant to 40 C.F.R. 52.21(b)(48) (as incorporated by reference in the Missouri SIP at 10 C.S.R. 10-6.060(8)), Ameren first calculated Unit 2's "baseline actual emissions" rate by taking the average annual rate from the 24-month period of April 2005 through March 2007. That rate was 14,288 tons per year.

19. Pursuant to 40 C.F.R. 52.21(b)(41)(i) (incorporated by reference in the Missouri SIP at 10 C.S.R. 10-6.060(8)), Ameren then determined Unit 2's "maximum annual rate" of future actual emissions in the five years following the date Unit 2 would resume regular operation after the 2010 Outage. That maximum annual rate was 16,818.88 tons per year. In Attachment 1, this is shown under the column labeled "Projected Actual Emissions (tons/year)." This calculation of emissions following the Projects did not yet account for causation, which the NSR regulations require be accounted for through application of the "capable of accommodating" provision.

20. We did not believe that any relevant fugitive emissions were quantifiable, and so did not project them according to 40 C.F.R. 52.21(b)(41)(ii)(b) (incorporated by reference in the Missouri SIP at 10 C.S.R. 10-6.060(8)). Emissions associated with startups, shutdowns and malfunctions were included in the projection of the maximum annual rate of projected future emissions following the 2010 Outage.

21. Finally, as required pursuant to the "capable of accommodating" provision (sometimes called the demand growth provision), 40 C.F.R. 52.21(b)(41)(ii)(c) (as incorporated by reference in the Missouri SIP at 10 C.S.R. 10-6.060(8)), Ameren determined the amount of emissions following the 2010 Projects that was unrelated to the 2010 Projects. We initially determined the amount of emissions that Unit 2 could have accommodated during the baseline period above and beyond those it actually emitted during the baseline period. That amount was

3,275.11 tons per year. In Attachment 1, this is shown under the column labeled "Capable of Accommodating Emissions (tons/year)."

22. Ameren determined that additional amount of $SO_2$ emissions (3,275 tons per year) was unrelated to the Projects because it could have been emitted during the baseline period and was related to: (a) increased utilization due to increased market demand, up to a level not exceeding the unused capacity that actually was available during the baseline period; and/or (b) normal variations in hourly emissions rates due to a combination of factors unrelated to the 2010 Projects, none of which were expected to affect hourly emissions rates.

23. To determine the amount of emissions (if any) following the Projects that were related to the Projects, Ameren then excluded (*i.e.*, subtracted) a portion (2,531.15 tons per year, "Excluded Emissions" on Attachment 1) of the unrelated $SO_2$ emissions from the difference between baseline emissions (14,287.73 tons per year) and the emissions following the Projects (16.818.88 tons per year).

24. The result of this calculation was zero, and is shown as the "Net Change" on Attachment 1. Stated mathematically: 16,818.88 *minus* 14,287.73 *minus* 2,531.15 *equals* 0.00, the emissions related to the Project. (We did not subtract all 3,275.11 tons per year of unrelated emissions because that would have resulted in a negative number.)

25. Because, after following the requirements of the regulation, any amount of projected $SO_2$ emission increase related to the 2010 Projects was less than the 40-ton significance threshold for $SO_2$, Ameren determined that the 2010 Projects (and the 2010 Outage as a whole) would not cause a significant increase in emissions of $SO_2$.

26. Pursuant to 40 C.F.R. 52.21(b)(41)(ii)(a) (incorporated by reference in the Missouri SIP at 10 C.S.R. 10-6.060(8)), when determining the annual rate of "projected actual

emissions," (as defined under 40 C.F.R. 52.21(b)(41)(i), Ameren considered all relevant information. In addition to the considered judgment and expertise of Environmental Services, we relied (as described above) on the judgment and expertise of Ameren's engineering personnel, performance engineering personnel, and Corporate Planning department, among others. Ameren considered all relevant information regarding Unit 2's historical operational data, Unit 2's expected business activity and Ameren's highest projections of business activity. Ameren also considered the amount of unused, but available generating capacity that was available to it during the baseline period, and which Unit 2 could have utilized had the market called upon it to do so. Ameren also considered the normal variations in hourly emission rates that occur during the normal operations of Unit 2.

27. Ameren retained records of this calculation. Since well before the Projects took place, Ameren reports the $SO_2$ emissions from both Rush Island units to EPA as part of its submission of CEMS data (see below).

**Rush Island Emissions and Generation Over Time**

28. Ameren's Environmental Services Department plays a role in monitoring the emissions of each of Ameren's plants, including Rush Island.

29. Rush Island's Continuous Emissions Monitor Systems (CEMS) measure and record emissions data on a continuous basis during Rush Island's operations. Ameren gathers that data and reports it to EPA. EPA keeps this data in databases and publishes it on the internet, where it can be accessed by the general public. The CEMS data contains multiple data points in addition to emissions, including gross generation. I am familiar with CEMS Data and use it routinely in carrying out my job responsibilities.

30. I reviewed the CEMS data for $SO_2$ emissions, NOx emissions, and gross generation over time. As the below table demonstrates, compared to 1990 levels, Rush Island's

**SCHEDULE KRM-D2**

annual emissions of $SO_2$ in 2014 were just 39% of their 1990 levels, a decrease of over 27,500 tons per year. That decrease came about even though Rush Island's annual generation of electricity has increased and is now 152% of their 1990 levels, an increase of over 3 gigawatt-hours per year. Likewise, Rush Island's emissions of NOx are at just 28% of their 1995 levels, a decrease of nearly 9,000 tons per year.

**Rush Island Generation and Emissions 1990-2014**

| Year | Unit 1 Generation | Unit 1 $SO_2$ | Unit 1 NOx | Unit 2 Generation | Unit 2 $SO_2$ | Unit 2 NOx |
|---|---|---|---|---|---|---|
| | (MWH) | (TPY) | (TPY) | (MWH) | (TPY) | (TPY) |
| 1990 | 2,786 | 21,343 | - | 3,101 | 23,609 | - |
| 1995 | 3,614 | 21,412 | 4,593 | 2,821 | 22,209 | 7,734 |
| 1996 | 3,401 | 13,225 | 4,077 | 3,917 | 14,044 | 3,922 |
| 1997 | 3,735 | 13,484 | 3,826 | 3,222 | 11,659 | 3,032 |
| 1998 | 3,936 | 13,485 | 3,396 | 4,281 | 13,924 | 3,710 |
| 1999 | 3,721 | 12,653 | 2,711 | 4,276 | 14,543 | 2,981 |
| 2000 | 4,228 | 13,643 | 2,801 | 4,107 | 13,257 | 2,589 |
| 2001 | 3,169 | 8,963 | 1,824 | 3,794 | 10,912 | 2,295 |
| 2002 | 4,426 | 12,744 | 2,092 | 3,506 | 10,511 | 1,900 |
| 2003 | 4,565 | 13,127 | 1,928 | 3,797 | 11,866 | 1,856 |
| 2004 | 3,916 | 11,725 | 1,602 | 3,995 | 11,193 | 1,665 |
| 2005 | 4,467 | 14,070 | 1,971 | 4,952 | 14,315 | 2,098 |
| 2006 | 4,613 | 14,584 | 1,991 | 4,638 | 14,090 | 1,976 |
| 2007 | 2,936 | 9,126 | 1,268 | 4,484 | 13,336 | 2,019 |
| 2008 | 4,794 | 15,492 | 2,086 | 4,456 | 14,102 | 2,106 |
| 2009 | 4,484 | 14,754 | 1,927 | 4,000 | 13,573 | 1,934 |
| 2010 | 4,506 | 14,964 | 1,935 | 3,360 | 11,103 | 1,449 |
| 2011 | 3,802 | 12,272 | 1,587 | 4,853 | 15,764 | 1,853 |
| 2012 | 4,455 | 10,642 | 1,549 | 4,097 | 9,780 | 1,405 |
| 2013 | 4,359 | 9,595 | 1,525 | 4,581 | 9,992 | 1,542 |
| 2014 | 4,161 | 8,846 | 1,456 | 4,171 | 8,598 | 1,394 |

**SCHEDULE KRM-D2**

**Rush Island Emissions Variations Over Time**

31. The amount of $SO_2$ emitted at Rush Island varies significantly from year to year. In my experience, such fluctuations are normal at coal-fired power plants and are caused by a variety of factors including variations in market demand. I have reviewed the emissions data for Rush Island for the decade from 1996 to 2006. I then determined the changes in emissions from year-to-year. Below is an accurate summary of the amount of $SO_2$ emitted at Rush Island from 1996 to 2006.

**Rush Island $SO_2$ Emissions Variations Over Time**

| | Unit 1 | | Unit 2 | |
|---|---|---|---|---|
| Year | $SO_2$ Emissions | Change from previous year | $SO_2$ Emissions | Change from previous year |
| 1996 | 13,225 | -- | 14,044 | -- |
| 1997 | 13,484 | 259 | 11,659 | -2,385 |
| 1998 | 13,485 | 1 | 13,924 | 2,265 |
| 1999 | 12,653 | -832 | 14,543 | 619 |
| 2000 | 13,643 | 990 | 13,257 | -1,286 |
| 2001 | 8,963 | -4,680 | 10,912 | -2,345 |
| 2002 | 12,744 | 3,781 | 10,511 | -401 |
| 2003 | 13,127 | 383 | 11,866 | 1,355 |
| 2004 | 11,725 | -1,402 | 11,193 | -673 |
| 2005 | 14,070 | 2,345 | 14,315 | 3,122 |
| 2006 | 14,584 | 514 | 14,090 | -225 |

32. I reviewed the $SO_2$ emissions data for Rush Island Unit 1 for 2007 to 2014. I have provided a chart of the $SO_2$ emissions by year for the unit, below. The data for 2007 only includes a partial year of service because the plant was not operating during the Spring 2007 outage. Annual emissions are now about 5,000 tons per year below their averages before the 2007 Projects.

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**Unit 1 $SO_2$ Emissions After the 2007 Projects**

| Year | $SO_2$ (TPY) |
|---|---|
| **2007** | 9,126 |
| **2008** | 15,492 |
| **2009** | 14,754 |
| **2010** | 14,964 |
| **2011** | 12,272 |
| **2012** | 10,642 |
| **2013** | 9,595 |
| **2014** | 8,846 |

33. I reviewed the $SO_2$ emissions data for Rush Island Unit 2 for 2010 to 2014. I have provided a chart of the $SO_2$ emissions by year for the unit, below. The data for 2010 only includes a partial year of service because the plant was not operating during the Spring 2010 outage. As with Unit 1, annual emissions are now about 5,000 tons per year below their averages before the 2010 Projects.

**Unit 2 $SO_2$ Emissions After the 2010 Projects**

| Year | $SO_2$ (TPY) |
|---|---|
| **2010** | 11,103 |
| **2011** | 15,764 |
| **2012** | 9,780 |
| **2013** | 9,992 |
| **2014** | 8,598 |

**Title V**

34. Environmental Services is responsible for obtaining and securing the renewal of Title V Permits for the Rush Island plant. The applicable permit for the Rush Island units at the

**SCHEDULE KRM-D2**

time of the 2007 and 2010 outages, Operating Permit No. OP2000061, was issued on May 18, 2000. A true and correct copy of the Title V permit is attached hereto as Attachment 2 (AM-02511339).

35. It is my understanding that before issuing a Title V Permit, the Missouri Department of Natural Resources provides the draft permit to EPA for comment or objection. EPA did not make any objection to Ameren's Title V operating permit before it was issued on May 18, 2000.

36. Generally, Title V permits have a 5-year term length. Although Title V permits must be renewed before they expire, because of permitting delays, permit renewals often take years to complete.

37. On or about November 18, 2004, Ameren filed an application to renew the May 18, 2000 Title V permit (Permit No. OP2000061).

38. On or about May 29, 2010, the Missouri Department of Natural Resources provided EPA a copy of the draft Rush Island Title V Permit. EPA did not object to the permit renewal.

39. On August 30, 2010, MDNR renewed Ameren's Title V Permit for the Rush Island Units, Operating Permit No. OP2010-047. A true and correct copy of the Title V permit is attached hereto as Attachment 3 (AM-00424093).

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 23, 2015

Steven Whitworth

**SCHEDULE KRM-D2**

**UNITED STATES DISTRICT COURT**
**EASTERN DISTRICT OF MISSOURI**
**EASTERN DIVISION**

| | | |
|---|---|---|
| **UNITED STATES OF AMERICA,** | ) | |
| | ) | |
| **Plaintiff,** | ) | |
| | ) | **Case No. 4:11-CV-00077-RWS** |
| **v.** | ) | **Judge Rodney W. Sippel** |
| | ) | |
| **AMEREN MISSOURI,** | ) | |
| | ) | |
| **Defendant.** | ) | |
| | ) | |

**AMEREN MISSOURI'S SUMMARY JUDGMENT MOTIONS**

# EXHIBIT A2

PORTIONS REDACTED PURSUANT TO ECF # 90

**SCHEDULE KRM-D3**

**UNITED STATES DISTRICT COURT**
**EASTERN DISTRICT OF MISSOURI**
**EASTERN DIVISION**

| | | |
|---|---|---|
| **UNITED STATES OF AMERICA,** | ) | |
| | ) | |
| **Plaintiff,** | ) | |
| | ) | **Case No. 4:11-CV-00077-RWS** |
| **v.** | ) | |
| | ) | **Judge Rodney W. Sippel** |
| **AMEREN MISSOURI,** | ) | |
| | ) | |
| **Defendant.** | ) | |
| | ) | |

**DECLARATION OF DAVID BOLL**

I, David Boll, am over 18 years of age and make the following declaration pursuant to 18 U.S.C. § 1746:

1. I make this declaration on behalf of Ameren Missouri ("Ameren") based on my personal knowledge, and the records of Ameren or information available through employees of Ameren. I am prepared to testify to the following facts if called as a witness.

2. I have been employed by Ameren since 1981 and I currently hold the position of Consulting Engineer in Ameren's Environmental Project Engineering Department. I received a B.S. in Mechanical Engineering from Washington University in St. Louis in 1981. I am a licensed Professional Engineer in the States of Missouri and Illinois.

3. My responsibilities during the time relevant to this case included justifying capital projects; preparing documents associated with such justifications such as project justification and work order documents; assessing the impact of component replacements on the performance and operations of the unit; preparing requests for proposal to be let out for bids; and supervising the construction of capital projects, including the component replacements at issue in this case.

**SCHEDULE KRM-D3**

**The Projects**

4. Ameren replaced portions of the reheater, economizer, lower slope and air preheater components of Rush Island Unit 1 (the "2007 Projects") during the outage that took place from approximately February to May, 2007.

5. Ameren replaced portions of the reheater, economizer, and air preheater components of Rush Island Unit 2 (the "2010 Projects") during the outage that took place from approximately January to April, 2010.

**The Effect of the Projects on the Units' Maximum Design Capacity**

6. I am familiar with the projects to replace the reheater, economizer, lower slope and air heater components that occurred during Ameren's planned unit outage at Rush Island Unit 1 from approximately February to May 2007 (the "2007 Projects"). I am also familiar with the projects to replace the reheater, economizer and air heater components that occurred during Ameren's planned unit outage at Rush Island Unit 2 from approximately January to April 2010 (the "2010 Projects").

7. The nature of these component replacement projects is such that they would not reasonably be expected to, and Ameren did not expect them to, increase the Unit's maximum design capacity or maximum annual-rated capacity assuming continuous year-round operation (or, as the concept is expressed in the electric power industry, the Unit's "maximum continuous rating.") Nor would they be expected to increase the Unit's designed steam flow rating or designed heat input capacity.

8. I have reviewed the actual effects of the Projects, and they did not actually increase the Units' maximum design capacity, maximum annual-rated capacity assuming

continuous year-round operation, or maximum continuous rating. They did not increase the Unit's designed steam flow rating or designed heat input capacity.

**The Scope of the 2007 and 2010 Outages**

9. Ameren conducted a planned unit outage at Rush Island Unit 1 from approximately February to May 2007 (the "2007 Outage"). During such outages, Ameren attempts to schedule as many activities as possible to be completed, in order to minimize overall unit downtime, and because such outages are generally planned to occur only once every six years. During the 2007 Outage, Ameren conducted 93 discrete maintenance, repair and replacement projects at Unit 1. Some of these other projects are of the same size and scope as the Projects at issue. Ameren generally prepares a Post Outage Report detailing the work that is performed during an outage. A true and correct copy of the 2007 Unit 1 Post Outage Report is attached hereto as Attachment 1.

10. Of the 93 projects conducted during the 2007 Outage, I understand that only 4 are at issue in this case: the replacement of the reheater, economizer, lower slope and air heater components. Moreover, in addition to these 93 projects, during the same 2007 Outage, Ameren performed innumerable tasks as part of the boiler overhaul, all designed to improve the long-term reliability, availability, and efficiency of the boiler. These tasks are not captured in detail in the Post Outage Report.

11. Ameren conducted a planned unit outage at Rush Island Unit 2 from approximately January to April 2010 (the "2010 Outage"). During such outages, Ameren attempts to schedule as many activities as possible to be completed, in order to minimize overall unit downtime, and because such outages are generally planned to occur only once every six years. During the 2010 Outage, Ameren conducted 108 discrete maintenance, repair and

replacement projects at Unit 2. Some of these other projects are of the same size and scope as the Projects at issue. Ameren generally prepares a Post Outage Report detailing the work that is performed during an outage. A true and correct copy of the 2010 Unit 1 Post Outage Report is attached hereto as Attachment 2.

12. Of the 108 projects conducted during the 2010 Outage, I understand that only 3 are at issue in this case: the replacement of the reheater, economizer, and air heater components. Moreover, in addition to these 108 projects, during the same 2010 Outage, Ameren performed innumerable tasks as part of the boiler overhaul, all designed to improve the long-term reliability, availability, and efficiency of the boiler. These tasks are not captured in detail in the Post Outage Report.

**The Expected Effect of the Projects on the Units' Actual Post-Project Generation of Electricity**

13. In my experience, Ameren assesses the impact that a project is expected to have on unit operations well before beginning construction, as part of its project planning and justification processes. Consistent with its normal practice, Ameren assessed the impact of the 2007 and 2010 Projects before beginning construction of those projects. As one of the engineers who had responsibility for preparing the project justification documents for these Projects, I was one of several Ameren personnel who assessed these issues. Typically, we assessed such issues together as a group, and reached a group consensus.

14. Prior to the Projects, I had been involved with dozens of projects at Ameren's other plants that were similar in nature and scope to the Projects. In particular, I had experience with reheater replacements at Labadie; economizer replacements at Labadie, Sioux and

Meramec; lower slope replacements at Labadie and air preheater replacements at Labadie and Meramec.

15. In my experience, replacement activities such as the Projects do not cause the unit's generation to increase. These are all like-kind replacements, substituting one component for another, sometimes with minor changes in design that made the units more efficient. I understood that my colleagues at Ameren shared the same views.

16. I expected that these replacement projects would improve the efficiency of the units. The economizer replacements were specified to be more efficient than the designs they replaced. Moreover, by replacing the economizer and air preheater with new components with slightly changed designs that could better handle the low-sulfur coal that Rush Island was burning, the auxiliary power demands on the units would be reduced, making the units more efficient overall.

17. I did not expect the Projects to increase the equivalent availability of the unit as compared to the pre-project periods. (Equivalent availability is a measure of the unit's availability to operate and produce electricity. It is a common metric for availability that is used throughout Ameren, and to my knowledge the electric utility industry.) I understood that my colleagues at Ameren shared the same views.

18. This is true for at least two reasons. First, the equivalent availability of the Rush Island units before these Projects was already exceptional – above 90% and at times reaching annual rates of 95% to 96%. In my experience, it is unlikely for any coal-fired unit to achieve sustained equivalent availability above those levels. Second, generating units are complex machines that consist of thousands of components, most of which can and do fail at some point. It is the combined operation of all of these component parts that determines the level of unit

availability. Based on decades of experience, I knew that these other components would continue to fail, limiting the overall availability of the unit. I understood that my colleagues at Ameren shared the same views.

19. I did not expect the Projects to increase the stated generating capability of the unit as compared to the pre-project periods, other than by increasing the units' efficiency. When ordering the components (reheater, lower slope, economizer, and air preheater) Ameren specified that the new components have the same thermal performance as the old components, meaning that the new components would not increase capability.

20. I am informed and believe that the documents set forth on Attachment 3 hereto, and attached as exhibits to Ameren's various motions being filed contemporaneously, are copies of Ameren's business records, made at or near the time of the occurrence of the matters set forth by, or from information transmitted by, a person with knowledge of those matters, kept in the course of regularly conducted activity, and made by the regularly conducted activity as a regular practice.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 23, 2015

David Boll

**SCHEDULE KRM-D3**

# ATTACHMENT 1

# ATTACHMENT
# REDACTED

**SCHEDULE KRM-D3**

# ATTACHMENT 2

# ATTACHMENT
# REDACTED

**SCHEDULE KRM-D3**

# ATTACHMENT 3

**SCHEDULE KRM-D3**

Attachment 3 to the Declaration of David Boll

| *Exhibits* | |
|---|---|
| C1 | Unit 1 RELS Project Justification Package, AM-00072570 |
| C2 | Unit 1 Air Preheater Project Justification Package, AM-00072850 |
| C3 | Unit 2 RELS Project Justification Package, AM-00072829 |
| C4 | Unit 2 Air Preheater Project Justification Package, AM-00072906 |
| C5 | Ameren 2005 Unit Capabilities Tables, AM-00943285 |
| C6 | Ameren 2006 Unit Capabilities Tables, AM-00175922 |
| C7 | Ameren 2009 Unit Capabilities Tables, AM-00067238 |

**SCHEDULE KRM-D3**

IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION

| | | |
|---|---|---|
| UNITED STATES OF MISSOURI, | ) | |
| Plaintiff, | ) | |
| vs. | ) | Civil Action No. |
| | ) | 4:11-CV-00077-RWS |
| AMEREN MISSOURI, | ) | |
| Defendant. | ) | |

VIDEOTAPED 30(b)(6) DEPOSITION OF KYRA MOORE
TAKEN ON BEHALF OF AMEREN MISSOURI
SEPTEMBER 18, 2013

VIDEOTAPED 30(b)(6) DEPOSITION OF KYRA MOORE, produced, sworn, and examined on September 18, 2013, between the hours of 8:30 a.m. and 7:10 p.m. of that day at the offices of Stinson Morrison Hecker, LLP, 230 W. McCarty Street, Jefferson City, Missouri,before Jennifer L. Leibach, CCR No. 1108, within the state of Missouri, in a certain cause now pending in the United States District Court, Eastern District of Missouri, Eastern Division, wherein United States of America is the plaintiff and Ameren Missouri is the defendant.



**SCHEDULE KRM-D4**

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ALSO PRESENT: Sam Schneiders, Videographer
Steven C. Whitworth

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**SCHEDULE KRM-D4**

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correct?
MR. HANSON: Objection, lack of foundation, document speaks for itself.
THE WITNESS: This -- this would be -- yes, the first place I would go if I was a source to look for applicability of permitting.
BY MR. BONEBRAKE:
Q. And when you were a permit engineer and then a manager in the construction permitting section, did you look to the applicability section of the construction permitting rules as a starting place to determine whether or not a construction permit would be required?
A. Yes.
Q. And if you could turn with me to the definition section, which is 6.020 and the definition of modifications, which is in section capital M, item number 9 on page 11. And is this the definition of a modification that would trigger a construction permitting requirement under the Missouri Construction Permitting Rules?
A. Yes, if that term modification is used in the 6.060, that's correct.
Q. And just to refresh your recollection, if we go back to page 21, section 1(C), I believe the first sentence in that section begins, no owner or operator shall commence construction or modification. Do you see that,

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ma'am?
A. Yes.
Q. So would it be correct, then, that for purposes of that -- defining that term modification in section 1(C), you would look to the definition on M9 on page 11?
MR. HANSON: Objection, the document speaks for itself.
THE WITNESS: Yes.
BY MR. BONEBRAKE:
Q. And a modification as defined by the rules provides as follows: Any physical change or change in method of operation of a source operation or tenant air pollution control equipment which would cause an increase in potential emissions of any air pollutant emitted by the source operation.
Now, are potential emissions also defined in the rule?
MR. HANSON: Objection, same objection.
BY MR. BONEBRAKE:
Q. And I can give you a shortcut to page 13.
A. I was going to say in 1996, it should.
Q. Section P, 18.
A. Yes.
Q. Is that the definition of potential emissions

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that's used for purposes of defining -- determining whether or not a modification would be expected to occur?
MR. HANSON: Same objection.
THE WITNESS: Eighteen is the definition of potential to emit, yes.
BY MR. BONEBRAKE:
Q. So would that be the definition that a permit engineer or permit manager at MDNR would use to determine whether a modification would be expected to occur that would trigger a construction permit requirement?
A. It would be the definition we would use to define what the potential emissions of the source are. And that is one piece of the modification, yes.
Q. And when you say "one piece of the modification," what do you mean?
A. Well, it says any physical change or change in method of operation, so you need to determine that first and then go to the potential emissions. It's all tied together.
Q. Okay. So MDNR first needs to determine whether or not there's a physical or operational change; is that correct?
A. Yes.
Q. And -- and assuming the answer is yes, it then would need to determine whether that physical or operational change would cause an increase in potential emissions; is

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that correct?
A. Yes.
Q. And those things must be true in order for there to be a modification of an existing source that requires a construction permit. Is that also true?
MR. HANSON: Objection, the document speaks for itself.
THE WITNESS: Let me read the definition of modification again. So yes.
BY MR. BONEBRAKE:
Q. And the term potential emit indicates that the potential emissions of the unit are the emissions operating at full capacity every hour of every day of year; is that correct?
MR. HANSON: Same objection.
THE WITNESS: Yes, the potential emissions is defined as continuous operation.
BY MR. BONEBRAKE:
Q. At maximum capacity?
A. Yes.
Q. And so the concept of changes in utilization are really irrelevant for that definition, right, because the definition assumes constant utilization at full capacity; is that right?
MR. HANSON: Objection, vague and ambiguous.



**SCHEDULE KRM-D4**

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THE WITNESS: Yeah, I'm not understanding the question. The -- could you repeat that?
BY MR. BONEBRAKE:
Q. Sure. I think we talked about the fact that the concept of potential emissions assumes utilization at full capacity every day, every hour, in a year; right?
A. Yes.
Q. So if you're looking at changes in potential emissions, whether or not the facility would change its utilization, in fact, is irrelevant because the definition assumes you're running all out all the time?
MR. HANSON: Vague and ambiguous, lack of foundation, objection.
THE WITNESS: The -- when we calculate potential emissions, we need to calculate the potential based on the operation that's occurring.
BY MR. BONEBRAKE:
Q. Uh-huh.
A. So yes, the potential emissions of that particular project we will review. So if that project operated this certain way, that's the potential emission calculations that we would review. So I'm not understand -- understanding the semantics, I guess.
Q. Well, when MDNR makes a determination of -- of potential emissions, does it consider the source's actual

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anticipated utilization or does it simply assume maximum utilization?
A. We would calculate the maximum potential of -- of the operation that is presented to us. I'm not understanding.
Q. Okay. Well, if the source -- if the source wasn't willing to take a synthetic minor limitation --
A. Right.
Q. -- you, in making a potential to emit determination, you would not consider actual plant utilization, you would assume maximum utilization every day of the year; right?
A. Yeah.
MR. HANSON: Objection, lack of foundation, vague and ambiguous.
BY MR. BONEBRAKE:
Q. I'm sorry, what was your answer?
A. Yes, I mean, the potential emissions is just that. It's the potential -- the maximum amount possible that they could emit with that equipment without any conditions.
Q. And -- and when we go back to the definition of the term modification, it talks about any physical change or change in method of operation and it goes on to say which would cause an increase in potential emissions.
A. Uh-huh.

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Q. So under MDNR's construction permit rules to determine whether a modification would occur, was MDNR then looking to determine whether a proposed activity at an existing source would change the potential to emit of that source?
MR. HANSON: Objection, lack of foundation.
THE WITNESS: I'm not understanding the direction of the question, if you could rephrase.
BY MR. BONEBRAKE:
Q. Okay. We'll try again.
A. Okay.
Q. The definition of modification uses the words which would cause an increase in potential emissions.
A. Right.
Q. Right?
A. Yes.
Q. That suggests to me that when MDNR makes a determination of whether a modification would be expected to occur, it is looking at whether the physical or operational change causes the potential emissions of the emission unit at issue to change. Is that your understanding as well?
A. I would phrase it as we are looking at any modification that is going to increase emissions. And the source would be providing that information to us, that they are going to change this equipment, change this method of

Page 73

operation and in doing so, this is the change of emissions that we anticipate. That's how I would phrase that. I don't know if that answered your question or not.
Q. Well, the definition of modification refers specifically to potential emissions; correct?
A. Yes.
Q. So when we're looking at whether emissions are going to change, as you put it, isn't the rule directing MDNR and sources to look at whether there's going to be a change in potential emissions?
A. Yes, that's -- definition of modification does state potential emission.
Q. And so when MDNR made applicability determinations under this rule, was it looking at changes in potential emissions, if any, of an emission unit?
MR. HANSON: Objection, lack of foundation.
THE WITNESS: Based on the definition, we would look at the increase in potential emissions, yes.
BY MR. BONEBRAKE:
Q. And is that consistent with your understanding of MDNR's actual applicability determination practice from the mid-1990s up until the reform rule changes which you mentioned earlier were adopted?
A. Right.
MR. HANSON: Objection, vague and ambiguous.

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THE WITNESS: That would fit my understanding of -- of what we did and that we would look at a project that was submitted to us as a modification and look at the increase in potential emissions, yes.
BY MR. BONEBRAKE:
Q. Okay. So if there were a physical or operational change, but that physical or operational change would not be expected to change the emission unit's potential to emit, there would be no modification --
MR. HANSON: Objection, lack of foundation.
BY MR. BONEBRAKE:
Q. -- correct?
A. I would -- it -- I would need to look at a specific case for that, but in general, that would fit the definition of modification, yes. But it's hard to say that that would apply in every case without looking at a case by case example.
Q. I'll have a few for you.
A. I'm sure you will.
Q. And absent a modification, there's no construction permit requirement, I think we talked about that before, but that's correct as well; is it not?
A. Yes.
Q. Is it -- is it true that the potential emissions of a unit can change in only one of two ways;

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either an increase in design production capacity or a change in the emission rate?
A. The potential emissions of the entire installation or just a --
Q. Of the emission unit is where I'm focused.
A. Of the emission unit? There is one other situation that would come to mind and we refer to that as a removal of a bottleneck. So if you have a piece of equipment that has a maximum amount of design rate but is limited lower than their maximum design rate by a previous piece of equipment and then you remove that piece of equipment and so the bottleneck is gone, that could also increase potential emissions.
Q. Okay. So those are the three scenarios in which the potential emissions of an emission unit could change?
A. Those are the most common.
Q. Okay. But otherwise, changes to an existing emission unit that do not eliminate a bottleneck, do not change emission rate and do not change production capacity, don't change the potential to emit of the emission unit; is that correct?
MR. HANSON: Objection, compound, lack of foundation.
THE WITNESS: I would say that covers most of

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the situations, but there are a lot of specifics that I may not be thinking of that -- that could. So it -- everything is case by case in our world.
BY MR. BONEBRAKE:
Q. Uh-huh. Well, can you think of any others than those three?
A. Well, what you state like I can think of if you change the type of fuel, and I don't know if that fits in one of your categories.
Q. Emission rates was one of my categories.
A. Yeah, so that would probably fall into that.
Q. Let me go back to the manual, which we had marked earlier as Exhibit No. 5. And if I could turn your attention to page 20 of that manual, it's internal 20 of 53 page marking.
A. Okay.
Q. And I think we determined earlier that this was the August 7, 2000 revised version of this -- of this manual; is that correct?
A. Yes. It appears to be the case.
Q. All right. And does figure 3, applicability flowchart, does that -- does that provide an indication of how construction permit applicability is to be determined?
A. This is one version of many flowcharts created to try and explain the applicability process in permitting,

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yes.
Q. Okay. The first -- is the first step to find the existing installation potential emissions?
A. That's correct.
Q. And the installation, is that MDNR's version of the -- the word "source?"
A. I don't know the definition of source, but the definition of installation for MDNR is the -- it encompasses the entire plant, if you will.
Q. So when we talked earlier about whether or not a facility was a major source, it would be -- at MDNR, the question would be whether the installation was major; is that correct?
A. Yes, our regs use the term installation.
Q. So installation would include all emission units at a given facility?
A. That's correct.
Q. And then the second step in the applicability determination flowchart is to calculate the potential emissions of the project; is that correct?
A. Yes.
Q. And as referred to I think in this document is capital P small c?
A. Uh-huh.
COURT REPORTER: Is that a yes?



**SCHEDULE KRM-D4**

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signed this letter, would that have been an inquiry you would have expected MDNR to make of a source proposing this kind of project?
A. Not necessarily. If the project engineer did not find that relevant to the determination, no, she would not have asked that.
Q. And there's nothing in the file, is there, that indicates that the project engineer thought that was relevant?
A. I'm not seeing that.
MR. HANSON: Objection, the document speaks for itself.
BY MR. BONEBRAKE:
Q. About halfway down the first page of your letter, there's a -- there's a letter to reconstruction. Do you see that?
A. Yes.
Q. Is that an NSPS concept?
A. Yes.
Q. That's capital N-S-P-S. Is the concept of reconstruction relevant for construction permitting applicability assessments?
MR. HANSON: Objection, vague and ambiguous. Also vague as to time.
THE WITNESS: Well, it was part of the

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determination in this letter that it was not reconstruction and therefore no construction permit is required. So it is relevant in this situation.
BY MR. BONEBRAKE:
Q. Do you know if -- if the NSPS program has any permitting requirement?
A. The NSPS --
MR. HANSON: Objection, outside the scope.
THE WITNESS: The NSPS program, if you will, is just different sets of rules and standards that sources have to comply with. It has a role in permitting, but your question is does it require a permit?
BY MR. BONEBRAKE:
Q. Correct, when triggered.
MR. HANSON: Same objection.
THE WITNESS: Not necessarily. It would be case by case. The new source -- the new source performance standard is not going to trigger a permit by itself, so.
BY MR. BONEBRAKE:
Q. Okay. All right. And then the next paragraph after the quote of reconstruction, I'd like to talk about that paragraph --
A. Okay.
Q. -- a little bit. The second sentence in that paragraph reads, since there will be no increase in the

Page 100

potential to emit, according to the applicant, the change cannot be considered a modification per Missouri state rule. Do you see that?
A. Yes.
Q. And the Missouri state rule that you are referencing in your letter here is 10 CSR 10-6.060; is that correct? And you can see --
A. The particular state rule --
Q. Just point you to the first paragraph as well, if that's helpful for you.
A. Right, the -- I mean, the answer's yes, but because the definition of modification is technically in 6.020, but yes, the 6.060 is the permit rule.
Q. So in your letter, then, you were -- you were finding, you were making a determination -- strike that.
In this MDNR letter signed by you, MDNR was making a determination that the replacement of cyclone burners would not be a modification under Missouri's construction permitting rules, correct?
A. That's correct.
Q. And that would mean there was no permit -- construction permit of any kind required for this project, including no PSD permit; is that correct?
A. That is the determination made at this time.
Q. Okay. And the sentence that I just read

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refers to the fact that there will be no increase in the potential to emit. Do you see that?
A. Yes.
Q. And is it correct, then, that MDNR was looking for applicability review purposes at whether the proposed cyclone burner project would change the potential to emit of the emission units effected by the cyclone burner project?
A. Yes.
Q. And in this case, MDNR found that the proposed replacement of cyclone burners would not change the potential to emit of Units 1 and 2 at the Thompson -- at the Thomas Hill plant; is that correct?
A. There was no increase in the potential emissions, that is correct.
Q. And as we discussed earlier in connection with the -- the rule, when there is no increase in the potential to emit of the emission unit, there is no modification under Missouri's construction permitting rules; is that correct?
A. Yes.
Q. And do you know in reference to the -- the phrase "increase in the potential to emit," whether MDNR was looking at the annual potential to emit of Units 1 and 2 at the Thomas Hill plant?
MR. HANSON: Objection, vague and ambiguous.
THE WITNESS: It looks like it was the -- yes,



**SCHEDULE KRM-D4**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEPUTY ADMINISTRATOR

MEMORANDUM

Subject: Fiscal Years (FY) 2005-2007 National Program Managers Guidance--Supplement

From: Marcus Peacock, Deputy Administrator

To: Regional Administrators
State Environmental Commissioners

We need to accelerate the pace of environmental protection. In order to do that, we must achieve substantial emission reductions from the U.S. coal-fired power sector. Since the 1990s the Agency has worked on a comprehensive strategy to reduce these emissions. That strategy is working: power sector air emissions are regulated more strictly now than ever before, producing significant environmental benefits for the American people.

Over the past few years, EPA has accelerated progress in improving air quality through targeted enforcement and aggressive rulemakings. For instance, substantial financial and human resources have been dedicated to our power plant enforcement initiative. In addition, since May 2004, EPA promulgated two rules that will significantly reduce coal-fired power plant emissions: the Clean Air Interstate Rule (CAIR) and the Clean Air Visibility rule. CAIR will reduce emissions in the eastern U.S. by approximately 70 percent, resulting in $85 billion to $100 billion in health benefits. In addition, Clean Air Visibility rule controls will result in annual estimated NOx reductions of about 600,000 tons, and emission reductions for SO2 of approximately 400,000 tons annually.

These rulemakings, particularly CAIR, will reduce powerplant emissions deeper, faster, and more efficiently than would be achieved by continuing costly and uncertain litigation in case-by-case enforcement actions of existing NSR regulations. CAIR offers a more comprehensive approach, resulting in more significant and more certain emissions reductions and greater environmental benefits.



SCHEDULE KRM-D5

Consequently, it is time to update the agency's coal-fired NSR enforcement strategy. I have asked EPA's Office of Enforcement and Compliance Assurance (OECA) to modify the FY 2005 to 2007 National Program Managers Guidance and refocus its resources on other areas that will likely produce significant environmental benefits. EPA should continue to pursue existing filed utility cases and those matters in ongoing negotiations. In deciding which additional cases to pursue, it is appropriate to focus on those that would violate our NSR reform rules and our latest NSR utility proposal, which the Agency is releasing today.

If adopted, this proposed rule would make the NSR applicability test for coal-fired power plants very similar to the existing New Source Performance Standards applicability test (*i.e.*, a maximum achievable hourly test). This proposed rule would continue the agency's efforts to improve the NSR program in ways that reduce the prospect of litigation, and instead encourage installation of new, innovative technologies that promote energy efficiency and reliability.

EN.TH.1690.100
— FILE —

STATE OF MISSOURI
Bob Holden, Governor • Stephen M. Mahfood, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.state.mo.us

MAY 15 2003

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MAY 19 2003

AECI
ENGINEERING & OPERATIONS

Mr. Charles S. Means, P.E.
Manager, Environmental Services
Associated Electric Cooperative, Inc.
2814 S. Golden
P.O. Box 754
Springfield, MO 65801-0754

RE: New Source Review Permit Application - Project Number: 2003-04-049
Installation ID Number: 175-0001

Dear Mr. Means:

This letter is in response to your inquiry as to the need of a permit for the replacement of the front half of the Thomas Hill Unit 3 boiler floor. According to your letter, Unit 3 is experiencing excessive slag build-up in the boiler. Large pieces of hardened slag have broken from the furnace section and fallen to the boiler floor. The impact of these repeated slag falls over time has caused premature damage to the inclined sections of the boiler floor. It is AECI's position that the impacts of the slag falls are causing operational problems and poses safety problems.

In an attempt to rectify the problem, AECI is proposing the replacement of the membrane of tubes located on the slope of the boiler bottom. The new boiler tubes will have walls that are approximately an eighth of an inch thicker. The water flow inside the tubes should not change since the inside diameter of the tubes will not be altered. The new tubes will not result in an increase in utilization of the boiler.

In addition to the new tubes, beam supports (crush tubes) will be added between the new membrane of bottom boiler tubes and the structural support beams. These crush tubes will absorb the impact of any slag falls rather than damage occurring to the structural support beams. The crush tubes will need to be replaced over time.

Before determining whether a permit is needed, an assessment has to be made of whether the project would constitute reconstruction of the boiler. Reconstruction is defined in 10 CSR 10-6.020 (2)(R)2 as:

> Where the fixed capital cost of the new components exceeds fifty percent (50%) of the fixed capital cost of a comparable entirely new source of operation or installation. . .

The fixed capital cost of the project is estimated to be $1,790,049. The fixed capital cost of a new comparable boiler with foundations is estimated at $250,000,000. Based upon these numbers, the cost of the new project is less than fifty percent (50%) of the cost of an entirely new boiler.



**SCHDULE KRM-D6**

In summary, the replacement of the membrane water tubes and the installation of crush tubes are necessary in an attempt to stave off possible safety issues and equipment damage due the slag falling to the boiler bottom. AECI will only be replacing only the water tubes that are being damaged by the slag falls, and not all of the water tubes in the boiler. The project will not result in an increase in emission, increase in utilization of the boiler, and does not constitute reconstruction. Thus, no construction permit is required from the Missouri Air Pollution Control Program. By copy of this letter and attachments, we are informing U.S. EPA of our determination.

A copy of this letter should be kept with the unit and be made available to Department of Natural Resources' personnel upon verbal request.

If you have any questions regarding this determination, please contact Kendall Hale at the Air Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102 or you may phone (573) 751-4817. Thank you for your time and cooperation.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Randy Raymond

Randy E. Raymond
Permit Section Chief

RER:khl

c: Northeast Regional Office
Jon Knodel, EPA
PAMS File 2003-04-049

Enclosures

**SCHEDULE KRM-D6**

**Minnesota Pollution Control Agency**

Air Quality Division
520 Lafayette Road
Saint Paul, MN 55155-3898

# *FACSIMILE TRANSMITTAL SHEET*

To: Dennis Niemi

Company or Agency: Minnesota Power

Facsimile Number: (218) 723-3916

Subject: Pre & Post Modification Emission Analysis

From: ED HOEFS

Company or Agency: MPCA/AIR QUALITY DIVISION

Telephone Number: (612) 296-8632

Facsimile Number: 297-7709

Date: 8/21/92

Pages to Follow: (4)
(Please Number ALL Pages)

If you have questions regarding this transmittal, please call: (612) 296-8632

Dennis - Please review and provide comments as soon as possible.
Thanks, Ed.

SCHEDULE KRM-D7

Minnesota Pollution Control Agency

| | | |
|---|---|---|
| Project: Minnesota Power | | Page (1) |
| Location: Clay Boswell No. 2 - Air Heater | | File No. 73B |
| Calculations for: Determine | Prepared by: EAH | Date: 8/20/92 |
| Pre. & Post. Mod. Emissions | Reviewed by: | Date: |

REFERENCE: March 27, 1991 Letter from Minnesota Power to Lisa Thorvig of MPCA, with several attachments. (cc:'d to Ron VanMersbergen, EPA V)

## (1) Determine Pre-Modification Baseline Emissions

NOTE: Per 40 CFR 52.21 (b)(21)(ii), actual emissions can be taken as the average emission rate for any representative two year period within the five year period preceding a physical change.

Per Attachment 4 of the above mentioned reference, the years 1989 - 1990 can be taken to be a representative baseline period. Emissions in this period were:

| | HEAT INPUT (MM BTU/YR) | ACTUAL EMISSIONS, TPY PM | SOx | NOx | CO |
|---|---|---|---|---|---|
| 1989 | 3,277,116 | 27 | 2439 | 1978 | 57 |
| 1990 | 3,350,140 | 27 | 2306 | 2006 | 57 |
| AVG. | 3,313,628 | 27 | 2372 | 1992 | 57 |

∴ These values can be taken as a representative, pre-modification Baseline

NOTE: 1991 was not chosen as a representative year due to a 3000 Hour Shutdown for a turbine overhaul (See MP's 8/18/92 Letter to MPCA)

Minnesota Pollution Control Agency

| | | |
|---|---|---|
| Project: Minnesota Power | | Page (2) |
| Location: Clay Boswell No. 2 - Air Heater | | File No. 73B |
| Calculations for: Determine | Prepared by: EAH | Date: 8/20/92 |
| Pre & Post-Mod. Emissions | Reviewed by: | Date: |

(2) Determine Post-Modification Emissions

Per Attachment 2 of the previously listed Reference, projected emissions for the two-year period after the modification can be shown to be:

Expected Coal Burn:

1993: 230,900 TONS
1994: 221,300 TONS
1993-94 AVG: 226,100 TONS (3,934,140 MM BTU/YR @ 8700 BTU/LB)

Using Emission Factors shown in Attachment 2 of Reference:

PM) $\frac{0.016 \text{ LB PM}}{\text{MM BTU}} \times \frac{3,934,140 \text{ MM BTU}}{\text{YR}} \times \frac{\text{TON PM}}{2000 \text{ LB}} = 31 \text{ TPY}$

$SO_x$) $\frac{1.44 \text{ LB}}{\text{MM BTU}} \times \frac{3934,140 \text{ MM BTU}}{\text{YR}} \times \frac{\text{TON } SO_x}{2000 \text{ LB}} = 2833 \text{ TPY}$

$NO_x$) $\frac{1.21 \text{ LB}}{\text{MM BTU}} \times \frac{3,934,140 \text{ MM BTU}}{\text{YR}} \times \frac{\text{TON } NO_x}{2000 \text{ LB}} = 2380 \text{ TPY}$

CO) $\frac{0.035 \text{ LB}}{\text{MM BTU}} \times \frac{3,934,140 \text{ MM BTU}}{\text{YR}} \times \frac{\text{TON CO}}{2000 \text{ LB}} = 69 \text{ TPY}$

∴, AVERAGE POST-MODIFICATION EMISSIONS ARE:

| | PM | $SO_x$ | $NO_x$ | CO |
|---|---|---|---|---|
| for 3,934,140 MM BTU/YR: | 31 | 2833 | 2380 | 69 |

(ALL VALUES IN TPY)

NOTE: Per 40 CFR 52.21 (b)(21)(v), post modification emissions from electric utility steam generating units can be taken as the representative actual annual emissions

SCHEDULE KRM-D7

BMN5272-01 (4/91)

Minnesota Pollution Control Agency

| | | | |
|---|---|---|---|
| Project: Minnesota Power | | | Page (3) |
| Location: Clay Boswell No. 2 - Air Heater | | | File No. 738 |
| Calculations for: Determine Pre & Post-Mod. Emissions | | Prepared by: EAH | Date: 8/20/92 |
| | | Reviewed by: | Date: |

## (3) Determine Emission Increases from Baseline Period to Post-Modification Period

From (1) & (2) above, emissions can be seen to increase from the 1989-90 baseline period to the 1993-94 post-modification period by the following amounts:

| | HEAT INPUT (MMBTU/YR) | REPRESENTATIVE ACTUAL EMISSIONS (TPY) PM | SOx | NOx | CO |
|---|---|---|---|---|---|
| 1993-94 | 3,934,140 | 31 | 2833 | 2380 | 69 |
| 1989-90 | 3,313,628 | 27 | 2372 | 1992 | 57 |
| INCREASE: | 620,512 | 4 | 461 | 388 | 12 |

## (4) Determine Emission Increases RESULTING FROM proposed Physical Change

Per 40 CFR 52.21 (b)(33)(ii), the Administrator shall exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.

(CONTINUED)

SCHEDULE KRM-D7

Minnesota Pollution Control Agency

| | | |
|---|---|---|
| Project: Minnesota Power | | Page (4) |
| Location: Clay Boswell No. 2 - Air Heater | | File No. 73B |
| Calculations for: Determine | Prepared by: EAH | Date: 8/21/92 |
| Pre-Post. Mod. Emissions | Reviewed by: | Date: |

(4) CONTINUED.

It can be shown that none of the increased emissions shown in (3) can be attributed to the physical change now proposed, for the following reasons:

1. MP has shown that the deteriorated condition of some parts of the existing Air Heater in no way prevented Unit No. 2 from producing power at the projected post-modification rates. (See December 13, 1991 Letter from MP to Lisa Thorvig, MPCA)

2. MP has shown that the replacement air heater is thermally equivalent to the existing air heater. Therefore no change in emissions per unit of power produced is expected.

3. Minnesota Power has shown that the priority dispatch ranking of CB No. 2 will not change as a result of this modification. In other words, the reliability of this unit will not increase over that of another unit, and hence, no emissions will be displaced from another plant.

4. ALL of the emission increases from 1989-90 levels to 1993-94 levels can be attributed to a projected increased coal use of approximately 620,500 tons per year, (See (3) above). This is due solely to increased electric demand.

For these reasons, it can be seen that the proposed physical change will RESULT IN no increase in emissions. Therefore, the project should be considered EXEMPT from New Source Review.



SCHEDULE KRM-D7

ENVIRONMENTAL

A-80-05

II-B-10

OCT 3 1978

MEMORANDUM

SUBJECT: PSD-Routine Maintenance Repair and Replacement

FROM: Director
Division of Stationary Source Enforcement

TO: Howard G. Bergman, Director
Enforcement Division (6AE)
Region VI

This is in response to your memo of September 15, 1978, requesting an interpretation of the term "routine maintenance, repair and replacement" as it is used in §52.21(b)(2)(i). In particular you request guidance on what should be considered routine replacement. Routine replacement means the routine replacement of parts, within the limitations of reconstruction, and would not include the replacement of an entire facility (i.e., an old heater at a petrochemical plant which has ended its normal useful life).

If you have any further questions, please contact Libby Scopino at FTS 755-2564.

/s/ W. F. Johnson
for Edward E. Reich

cc: Mike Trutna
Peter Wyckoff

bcc: D. Rochlin
L. Scopino DSSE:EN-341:LScoipino:ncb:10/2/78



FILE

SCHEDULE KRM-D8

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D C 20460

OCT 14 1988

THE ADMINISTRATOR

Mr. John W. Boston
Vice President
Wisconsin Electric Power Company
Post Office Box 2046
Milwaukee, Wisconsin 52301

Dear Mr. Boston:

As you requested in our meeting on September 15, 1988, I have made final determinations regarding the applicability of the Clean Air Act's New Source Performance Standards (NSPS) and Prevention of Significant Deterioration (PSD) requirements to the proposed life extension project at the Port Washington steam electric generating station, which is owned and operated by Wisconsin Electric Power Company (WEPCO). For the reasons discussed below, I have determined that, as proposed, the renovations at Port Washington are subject to both PSD and NSPS requirements. However, EPA remains willing to work with you regarding methods of compliance. As we have discussed, one alternative would be to reconfigure the project such that no emissions increases would occur. My staff is ready to meet with you to discuss these matters at any time.

## I. BACKGROUND

On September 12, 1988, David Kee, Director, Air and Radiation Division, EPA Region V, wrote you regarding PSD and NSPS coverage of the Port Washington renovations. Enclosed with that letter was a memorandum dated September 9, 1988 from Don R. Clay, Acting Assistant Administrator, addressing the background of the Port Washington project, and analyzing at some length the relevant interpretative issues. For purposes of brevity, I will not repeat that material here, but rather incorporate it by reference.

The September documents concluded that the life extension project, as proposed, likely would be subject to PSD and NSPS requirements. However, EPA also stated that final applicability determinations could not be provided at that time in the absence of certain factual information. In our subsequent meeting you requested that EPA furnish final determinations, and agreed to provide the necessary additional information. You also asked EPA to reconsider certain of the conclusions in Don Clay's memorandum. These matters are discussed below.

SCHEDULE KRM-D9

II. FINAL DETERMINATIONS

Your staff has responded to our requests for additional information, and I want to thank you for WEPCO's continued cooperation in doing so. Based on this, and the other information in EPA's files, I now make the following final determinations:

(1) The life extension project, as proposed, will render WEPCO's Port Washington plant subject to the PSD requirements of Part C of the Clean Air Act as a major modification within the meaning of the Act and the EPA regulations at 40 C.F.R. § 52.21.

(2) The proposed life extension project will render each of the five steam generating units at the Port Washington plant subject to the NSPS requirements of section 111 of the Clean Air Act as a modification within the meaning of the Act and the EPA regulations at 40 C.F.R. Part 60.

In reconsidering the memorandum and letter of September 9 and 12, I have taken a careful look at the issues you raised in our meeting: whether the renovations are routine; whether EPA has treated similar projects in a different fashion; and whether there would be an emissions increase due to a physical or operational change. However, I find no reason to depart from the reasoning of the September documents. Accordingly, I conclude that WEPCO's life extension project, if carried out as proposed, will involve a substantial and non-routine renewal of the Port Washington facilities that will significantly increase both hourly maximum and annual emissions of air pollutants.

Specifically, regarding the nature of the proposed work at Port Washington, I find that these renovations constitute physical changes for PSD purposes within the meaning of 40 C.F.R. § 52.21(b)(2)(i), and physical and operational changes for NSPS purposes within the meaning of 40 C.F.R. § 60.14(a). I find further that these changes do not come within the PSD and NSPS exclusions for routine maintenance, repair, and replacement, nor the exclusions for increases in production rate or hours of operation. (See 40 C.F.R. §§ 52.21(b)(2)(iii) and 60.14(e)).

Regarding the emissions changes from the life extension project, based upon the emissions data and certain factual assertions submitted by WEPCO, I find that the Port Washington renovations will result in a significant net increase in emissions of several pollutants for PSD purposes within the meaning of 40 C.F.R. § 52.21(b)(2)(i), (b)(3), and (b)(21). I find further that the renovations will result in an increase in the emission rate of several pollutants at each of units 1-5 for NSPS purposes within the meaning of 40 C.F.R. § 60.14(a) and (b).

Enclosures A and B detail the emissions changes underlying these findings for PSD and NSPS purposes. As indicated above, EPA's calculations and determinations are based on data supplied by WEPCO. We will use the data in Enclosures A and B in the event you would like to work with us to establish an acceptable arrangement for satisfying PSD and NSPS requirements through the addition or enhancement of pollution control equipment, physical capacity restrictions, or, in the case of PSD, federally enforceable limitations on potential emissions.

## III. DISCUSSION

As you requested, I have reconsidered the question of whether the physical and operational changes at Port Washington are routine, whether applying PSD and NSPS here would be inequitable in light of EPA's past treatment of renovation projects, and whether the renovations will result in emissions increases. These matters are addressed below, as is EPA's reasoning with respect to the baselines for calculating the PSD and NSPS emissions increases reflected in Enclosures A and B.

Regarding the question of routineness, the renovations involve the replacement of steam drums, air heaters, and other major components that are integral to the continued operation of the source. The work will not simply maintain the facilities in their current state, but rather will significantly enhance their present efficiency and capacity, and substantially extend their useful economic life. In addition, the work called for here is rarely, if ever, performed. Moreover, this work is costly, both in relative and absolute terms. Based on these and other factors, I reaffirm Don Clay's findings on the non-routine character of the Port Washington changes. The September 9 memorandum contains a complete discussion of EPA's reasoning on this issue.

On the related equity question, I find no inconsistency here with EPA's prior determinations regarding routine and non-routine changes. I note initially that PSD and NSPS applicability determinations are made on a case-by-case basis. Thus, it is very difficult to analogize to other projects, which almost inevitably present significant factual differences. Nevertheless, my staff has reviewed the additional material you submitted on September 19, and September 27, 1988 regarding certain other renovation projects, and has informally surveyed EPA Regional Offices and state agencies.

I have concluded that none of the four steam drum replacements identified in your September 19 submission are sufficiently similar to the Port Washington project to support determinations of nonapplicability in this matter. The Carolina

Power and Light case involved a faulty steam drum replaced prior to the initial start-up of a new unit, and would not have increased emissions for PSD or NSPS purposes. The Great Western Sugar example did not involve a utility boiler, and was too small to be affected by NSPS. The Ashland Oil facility was not at a utility, involved a waste heat boiler that was not fossil-fuel fired, and hence, was not an emissions unit subject to PSD or NSPS. The Algoma Steel Co. facility was not a utility boiler, and not located in the United States.

In addition, the informal survey conducted by the Office of Air and Radiation disclosed no closely analogous cases that were ever reviewed by EPA headquarters for purposes of PSD or NSPS applicability. In particular, EPA found no examples of steam drum replacement at aged electric generating facilities. Moreover, EPA could find no examples in which the Agency had analyzed and issued an applicability determination for a "life extension project" for any category of major source. Regarding the four utility projects identified in your September 27 submission, I note that they do not involve steam drum replacement. In addition, permit applications were not submitted to the state agencies for the Duke Power and Texas Utilities projects you cite. Consequently, they were not reviewed by any air pollution control agency. The Cincinnati Gas and Electric project was reviewed by the state, but not EPA. The state determined, and EPA Region II concurred, that the Hydraco Enterprises project was not subject to PSD based on a net decrease in emissions of all pollutants. Our informal survey and review of the projects you identified reveal that major construction activities undertaken by utilities that may be subject to Clean Air Act requirements have not been brought to the attention of EPA. The Agency is considering what steps may be necessary to address this situation.

EPA has discovered only two state agency determinations addressing life extension questions in a manner possibly inconsistent with EPA's analysis of the Port Washington project. These instances, which apparently were not brought to EPA's attention prior to the states' determination, do not create an inequity that would justify a different conclusion by EPA in this case.

As to the question of emissions increases at Port Washington, I believe that EPA has properly interpreted the PSD and NSPS regulations as applying to increases in emissions due to increases in hours of operation or production rate, where, as here, such operational or production increases are closely related to physical or operational changes. A contrary interpretation would allow even massive emissions increases stemming from significant new capital investment -- as distinguished from routine fluctuations in the business cycle --

to escape scrutiny under the Clean Air Act simply because the new investment did not involve an inherently more polluting production process. I do not believe that Congress intended such a result.

I would like to point out that the figures on emissions increases in Enclosures A and B reflect my conclusions regarding the proper points in time from which to calculate emissions changes. For PSD, I have determined under 40 C.F.R. § 52.21(b)(21)(ii) that the two-year period of 1983 and 1984 -- prior to the source curtailments due to discovery of cracks in the rear steam drums -- are more representative of normal source operations than the most recent two-year period. This conclusion is appropriate in light of WEPCO's historical operations.

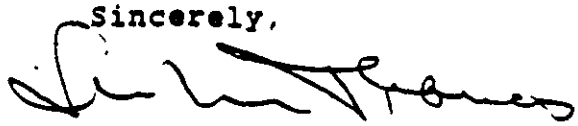
As to NSPS, there is no "representative emissions" concept under that program. Rather, under the circumstances presented by this case, the baseline emission rates for units 1-5 are determined by hourly maximum capacity just prior to the renovations. At this time, EPA is relying on the actual operating data you submitted to determine current maximum capacity. Although EPA is certainly open to further discussion on this point, the information contained in your September 27 and October 11, 1988 submissions is inadequate to support WEPCO's assertions that higher-than-actual capacities could be achieved on an economically sustainable basis. For example, you indicate that operation at higher levels at units 1-4 "could increase equipment deterioration thus causing further damage." Regarding Unit 5, you state that "safety concerns" dictated the decision to shut down that unit. Based on this information, we are unable to rely on WEPCO's statements as to maximum "achievable" capacity in determining the emissions changes at each of these units. Thus, for example, in the case of unit 5, the current capacity must be regarded as zero.

## IV. CONCLUSION

In adopting the PSD and NSPS programs, Congress intended to address the type of long-term capital investments in pollution-emitting facilities at issue in the Port Washington life extension project. Thus, as proposed, these renovations would be subject to the requirements of both programs. However, as indicated above, my staff remains ready to work closely with WEPCO to discuss specific pollution control equipment and permitting measures that would minimize the cost to WEPCO of complying with the requirements of the Clean Air Act. I have asked Don Clay to work with you in seeking a final resolution of the compliance issues by December 1.

Again, thank you for your cooperation in this matter.

Sincerely,



Lee M. Thomas

Enclosures

cc: Senator Robert W. Kasten, Jr.
Representative F. James Sensenbrenner, Jr.
Don Clay, EPA (ANR-445)
David Kee, Air & Radiation Div., Region V

Enclosure A

PSD Applicability

Port Washington Power Plant Renovation Project

(all emissions calculations are in tons per year)

| Pollutant | Actual Emissions Baseline (1) | Potential Emissions (2) | Net Emissions Increase | PSD Level | Subj to P Revi |
|---|---|---|---|---|---|
| Total suspended particulate | 170 | 283 (3) | 108 | 25 | yes |
| Sulfur dioxide | 24,236 | 52,621 (3) | 28,385 | 40 | yes |
| Nitrogen oxides | 2,991 | 8,201 | 5,210 | 40 | yes |
| Carbon monoxide | 144 | 397 | 253 | 100 | yes |
| Hydrocarbon | 17 | 47 | 30 | 40 | no |
| Beryllium | 0.0016 | 0.005 | 0.0034 | 0.0004 | yes |
| Fluorides | 38 | 98 | 60 | 3 | yes |

NOTE: PSD applicability for the other PSD regulated pollutants listed at 40 CFR Section 52.21 (b)(23)(i) and (ii) has not been determined at this time.

1) Average emissions for two-year period defined by calendar years 1983 and 1984.

2) As calculated by WEPCO based on 1992 coal type, actual emissions after ESP, and an annual capacity utilization factor of 90%.

3) An EPA estimate of potential emissions, based on existing federally enforceable limits (i.e., applicable SIP), may be higher. The indicated PSD applicability determination would, however, not change.

SCHEDULE KRM-D9

Enclosure B

NSPS Applicability
Port Washington Power Plant Renovation Project

FULL LOAD EMISSIONS AT CURRENT CAPACITY
(BEFORE RENOVATION)

| | UNIT-1 | UNIT-2 | UNIT-3 | UNIT-4 | UNIT-5 |
|---|---|---|---|---|---|
| SO2 (LBS/HR) | 1417 | 1828 | 2043 | 1580 | -0- |
| PM (LBS/HR) | 15 | 16 | 12 | 12 | -0- |
| NOx (LBS/HR) | 480 | 352 | 289 | 221 | -0- |

FULL LOAD EMISSIONS AT FUTURE CAPACITY
(AFTER RENOVATION)

| | UNIT-1 | UNIT-2 | UNIT-3 | UNIT-4 | UNIT-5 |
|---|---|---|---|---|---|
| SO2 (LBS/HR) | 2046 | 2037 | 2088 | 2269 | 2695 |
| PM (LBS/HR) | 16 | 16 | 12 | 17 | 15 |
| NOx (LBS/HR) | 696 | 392 | 297 | 316 | 369 |

SUBJECT TO NSPS (AFTER RENOVATION)

| | UNIT-1 | UNIT-2 | UNIT-3 | UNIT-4 | UNIT-5 |
|---|---|---|---|---|---|
| SO2 (LBS/HR) | YES(a) | YES(a) | YES(a) | YES(a) | YES |
| PM (LBS/HR) | YES(b) | NO | NO | YES(b) | YES |
| NOx (LBS/HR) | YES(c) | YES(c) | YES(c) | YES(c) | YES(c) |

Notes:

(a) With less add-on control than NSPS requirement, emissions (lb/hr) would not increase and NSPS would not apply.

(b) Because of planned ESP upgrade, PM emissions (lb/MM Btu) after renovation are expected to be less than NSPS requirement. However, NSPS would require CEMS for opacity.

(c) Because arch-fired boilers are used at Port Washington, current NOx emissions (lb/MM Btu) are expected to be less than NSPS requirements. However, NSPS would require a CEMS for NOx.

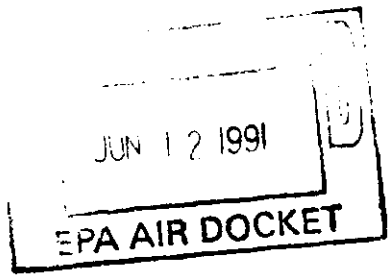
**SCHEDULE KRM-D9**

A-90-06
II-C-13

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 19 1989

THE ADMINISTRATOR




Honorable John D. Dingell
Chairman, Subcommittee on Oversight
and Investigations
Committee on Energy and Commerce
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

This is in response to your December 21, 1988 letter to Lee M. Thomas, former Administrator of the Environmental Protection Agency (EPA), regarding the applicability of the Clean Air Act's prevention of significant deterioration (PSD) and new source performance standards (NSPS) provisions to the proposed life extension project at the five coal-fired steam-electric generating units at the Port Washington power plant, which is owned and operated by Wisconsin Electric Power Company (WEPCO).

On February 15, 1989, EPA issued a revised final determination to WEPCO regarding the applicability of the PSD and NSPS regulations to the Port Washington project. The revised determination supplements the determination set forth in EPA's October 14, 1988 letter to WEPCO from Lee M. Thomas on the subject. In it, EPA reaffirmed its initial decision on the question of PSD and NSPS applicability and provided a further detailed discussion of the issues. Consequently, a number of your inquiries regarding the status of EPA's position on WEPCO's Port Washington project are contained in the February 15, 1989 determination. A copy is enclosed for your reference.

Regarding WEPCO, you also asked about EPA's offer to work with the company in determining PSD and NSPS requirements. There are a variety of options available to WEPCO for legally meeting the PSD and NSPS requirements, some of which are likely to be less costly than others. In offering to discuss measures that could minimize the cost of compliance, EPA was simply indicating a willingness to expeditiously review with WEPCO the appropriateness of any options that WEPCO might want to consider for complying with the Clean Air Act requirements. The December 1, 1988 date was a target for completion of these discussions based on WEPCO's request for a timely response; it had no other significance.

You have asked about the meaning of certain terms used to describe the nature of the work proposed by WEPCO. The PSD and NSPS regulations do not define the terms "renovation" or "life extension." The regulations recognize and define essentially two actions at an existing facility that could subject that source to PSD or NSPS review. These are "modification" (both the PSD and NSPS rules) and "reconstruction" (NSPS rule only). "Renovation" and "life extension" are terms which WEPCO used in referring to the Port Washington project, but these terms are not used in the Clean Air Act or EPA's regulations. A project described in these terms can, however, qualify as either a modification or a reconstruction, depending on the specific work planned.

In your letter, you had several questions and requested information regarding EPA's "informal survey" of similar projects. Specifically, you asked for a summary of the survey, why some surveyed projects had not been brought to EPA's attention sooner, what the status of those projects was relative to Clean Air Act requirements, and what steps may be necessary to address this situation.

The EPA conducted an informal telephone survey of the EPA Regional Offices last year to find out if these offices were aware of any modification or reconstruction projects at power plants, or if they had received any applications for permits or requests for applicability determinations for modifications or reconstruction projects at power plants. Seven of the ten Regional Offices answered affirmatively, and a total of ten sources with such actions were identified. The survey did not result in the detection of any violations. Regarding the Duke Power and Texas Utilities power plants, we are in the process of determining if permit applications were required. Memoranda have been sent to the Regional Offices responsible for these sources, instructing them to make a full investigation, but we are not aware of any violations at this time. The EPA was not aware of any projects other than those included in the survey.

Your question about why EPA was not aware of these permits involves the appropriate role of States and EPA in permit reviews and approvals. In most cases, enforcement authority for the NSPS and PSD programs has been delegated or transferred to the State, and the State has primary responsibility for implementing and enforcing these programs. The EPA acts as a partner with the State, giving guidance and technical and financial assistance, and providing oversight of the State programs.

Although the EPA oversees the States' review of new source permit applications, EPA's role is designed in such a way as not to duplicate the States' work. States are required to send EPA copies of their PSD permit applications and provide notice of every action related to consideration of the permit. Also, all proposed decisions for new major source permits are required to go through public notice. The EPA policy directs Regional Offices to review all major source permits and certain minor source permits issued by State and local agencies.

The above reviews apply only to major (and certain minor) permits. States are not required to notify EPA of every construction project (e.g., most minor modifications); thus, it is not necessarily an "oversight" for EPA to be unaware of a construction project. The EPA's biannual audit of State programs (which includes file reviews and inspections of a portion of the sources already inspected by the States) provides a vehicle for discovering a State's failure to properly classify an action or initiate permitting procedures for a particular source.

In response to the Utility Week article, it is important to note that the potential applicability of NSPS and PSD review to any type of proposed construction at a power plant (or any major source of air pollution) is a case-by-case determination and is a function of numerous factors. For example, the work (regardless of its timing) could be routine in nature or could result in no emissions increase, either of which could exempt the source from review.

The Department of Energy (DOE) letter you asked for is enclosed. I believe EPA's position as set forth in the October 14, 1988 and February 15, 1989 letters to WEPCO provides our position on the matters addressed in the DOE letter, as well as the contentions raised by the Utility Air Regulatory Group in the Utility Week article.

Your interest in this matter is greatly appreciated.

Sincerely yours,

William K. Reilly

William K. Reilly

2 Enclosures

cc: General Accounting Office

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 19 1991

OFFICE OF
AIR AND RADIATION

Honorable John D. Dingell
Chairman, Subcommittee on Oversight
and Investigations
Committee on Energy and Commerce
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Thank you for enclosing a copy of the September 1990 GAO report entitled "Electricity Supply -- Older Plants' Impact on Reliability and Air Quality" with your October 9, 1990 letter. Your letter raises several questions concerning the impact of older power plants' "life extension" on the reliability of electricity supply. Enclosed are responses to your questions.

If you have any further questions, please do not hesitate to contact us.

Sincerely yours,

William G. Rosenberg
Assistant Administrator
for Air and Radiation

Enclosure

cc: Honorable Charles A. Bowsher
Comptroller General, GAO



**SCHEDULE KRM-D11**

Question 1.

Please explain what measures (other than life extensions) will be used to meet "future demand". What will be the role of conservation and new plants?

Response 1.

The role of renewable resources and especially conservation in meeting current demand is significantly higher than 10 years ago, despite regulatory obstacles, inequitable incentives and insufficient research and development support. In fact, few conventional electric generation options can today compete with energy efficiency investment to meet future demand. Recent estimates suggest that energy demand can be halved by 2010 with a savings of over 4300 billion to the U.S. economy.

The cost-competitiveness of conservation and renewable resources will be further increased by the Clean Air Act Amendments of 1990 and assessments of environmental externalities. Preventing significant increments of pollution through energy efficiency can be an important supplement to "end of smokestack/scrubber" technologies.

In addition to lower capital costs, lower financial risks, high reliability and pollution prevention benefits, energy efficiency is achieved by investing in the operation and maintenance of the various energy-consuming sectors of the economy. Any improvements in energy productivity (increasing economic output with stable or declining energy input) will simultaneously enhance national energy security and the international competitiveness of American business. Finally, the development of a competitive "efficiency and renewable resource industry" to compete with such German and Japanese initiatives will be another by-product of this quicker, cheaper, cleaner approach to future demand.

Question 2.

Are such (life) extensions going to be cheaper and less time consuming with the enactment of title I of the Clean Air Act bill, S. 1630? Please explain.

Response 2.

Title I does not have much direct bearing on life extension projects. New source review is only implicated by life extension projects to the extent that they increase emissions and are thus considered modifications under Part C or D. As discussed in the answer to question 5, companies have and use discretion in

project design and permitting to avoid increasing emissions and triggering the modification provisions. However, even if they could not or did not "net out" of new source review, power plant modifications would not face any significantly different treatment under the amendments in SO2 or PM-10 nonattainment areas. Of course, if, due to a SIP call in a nonattainment area the state required the power plants to reduce their emissions, presumably the state would apply such a requirement to existing sources without regard to whether they were undergoing modification. In that case the cost of pollution controls would be attributed to the nonattainment program rather than the new source review program.

In ozone nonattainment areas where major stationary sources of NOx would be required to meet the same requirements as major stationary sources of VOC, under Section 182(f) of the amendments, power plants would be subject to the RACT provisions. Power plants undergoing a covered modification (under the new source review program) would have to achieve LAER instead. Like all major stationary sources in these areas, they would also have to procure offsets at the ratios stipulated for the various nonattainment severity categories. The cost of NOx offsets (if they were required) would thus increase the cost of a modification.

Question 3.

Please discuss in greater detail the "reliability of the electricity supply" from life extensions, taking into account the "different approaches to life extensions" discussed in the GAO report. Is there reason to be concerned about the reliability of these plants in meeting demand? Please explain. If they are not reliable, what are the contingencies?

Response 3.

EPA has not looked into the issue of "reliability of electricity supply" from life extensions.

Question 4.

Do you agree with the demand figures? What are the real and timely alternatives to life extension to meet this anticipated demand?

Response 4.

The demand figures are included in a statement, quoted below, that appears on page 8 of the GAO report.

> The Department of Energy (DOE) and industry experts predict that demand for electricity will increase through the 1990s, outstripping planned additions to generating capacity. In 1989 the nation's total electric generating capacity was about 684,000 megawatts (MW). DOE projects a need for an additional 102,000 MW capacity by the year 2000, and utilities have made plans to construct plants that will produce only about one-third of this additional amount. Also, in 1989 the North American Electric Reliability Council (NERC) projected that utilities' planned additions would be insufficient by 1998. Moreover, according to NERC, some areas of the eastern United States will be at serious risk of supply disruptions in the early 1990s if the demand for electricity reaches the high end of the organization's forecast.

First of all, it is important to note the distinction between the capacity supply and capacity demand estimates. Increase in electric demand (in gigawatts) between 1989 and 2000 refers to the increase in annual peak demand by 2000. Increase in "capacity demand" is defined to include the change in peak demand plus a planning or required reserve margin. The increase in generating capacity needed (or "capacity supply") estimates reflect the difference between current (1989) electric generating capacity estimates (including cogeneration and imports) and future capacity needs (which are assumed to equal the "capacity demand" estimates). Because there is excess capacity in some areas of the country today, the required increase in supply will be less than the forecasted increase in demand. The DOE statement cited by GAO appears to refer to a required increase in capacity supply, and the NERC forecasts refer only to capacity demand (as well as planned capacity additions).

Growth in capacity demand (1989-2000) forecasted by NERC and adjusted for 2000 is about 207 gigawatts, and falls within the range forecasted in the EPA high and low base cases for the new acid rain provisions in the Clean Air Act (about 138-213 gigawatts). EPA agrees with the NERC demand capacity figure.

The increase in generating capacity supply needed (1989-2000) cited by GAO as DOE's forecast is 102 gigawatts. This is less than assumed in the EPA base cases. Note however, according to DOE/EIA "1990 Annual Energy Outlook", the increase in capacity supply needed was forecasted to be 186 gigawatts,

which is in the upper end of the range assumed in the EPA base cases. So EPA is unsure of GAO's statement regarding DOE's forecast of 102 gigawatts.

Question 5.

I am uncertain about this EPA comment as reported by EPA. I can read it several ways, particularly with the word "significantly." What does EPA intend or mean? What is DOE's view? How will WEPCO affect acid rain legislation plants? Please explain. What is the Administration doing to clarify the matter? To what extent is the matter fully in EPA's control? What legal or other challenges are possible or likely? What relevant interpretative rulings has EPA issued or planned? What is their legal effect? How are they helpful? Please consider in your reply the enclosed letter from the National Independent Energy Producers.

Response 5.

Some background on the NSPS and PSD programs and the life extension project at WEPCO's Port Washington, Wisconsin facility, may be helpful to respond to these questions. As noted in the GAO report, Congress dictated that modifications at existing plants be treated as new sources for purposes of the NSPS and PSD (as well as nonattainment new source review) provisions of the Clean Air Act. The Act defines modification as: 1) a physical or operational change that 2) increases emissions. Under the NSPS program, emissions increases are measured in terms of hourly potential emissions, while PSD considers increases in annual actual emissions. EPA's regulations contain several limitations on the broad statutory language, including, for example, an exemption for routine changes.

In addition, EPA regulations contain broad "netting" provisions that enable source owners to offset emissions increases with equivalent reductions and thereby avoid the applicability of new source emissions standards or BACT limits. Under NSPS, netting may occur within the affected facility (e.g., an individual utility boiler) and involve physical restrictions on emissions capabilities (such as addition of pollution control equipment). Under PSD and nonattainment area new source review, netting may occur within the entire plant and may involve operational as well as physical restrictions on the plant's emissions.

Prior to the WEPCO court decision, EPA applied a "current actual" to "future potential" test to all nonroutine changes at existing plants in determining emissions increases under the PSD

bubble rule. That is, EPA assumed initially that following the changes, the plant would operate at its full potential to emit. Source owners could -- and frequently did -- avoid PSD applicability, however, through legally binding physical or operational limitations restricting actual emissions to levels not significantly greater than levels prior to the change. The owner would estimate the source's actual emissions following the change. If the owner projected that the source likely would not increase its actual emissions following the change, it would accept an actual emissions "cap." However, if the projection later proved inaccurate, and the owner desired to increase the source's actual emissions, it would need to obtain a new source permit at that time. As a result of the WEPCO court decision, modifications involving "like-kind" replacements, such as the WEPCO life extension project itself, now will be able to use a "current actual" to "future actual" test for PSD applicability purposes. In essence, this means that EPA, rather than the source owner, is responsible for accurately projecting a plant's actual emissions following a modification to determine whether the plant's emissions are within the bubble. If EPA projects no actual emissions increase, the source's emissions would not be legally capped.

Regarding WEPCO's life extension project, due to age-related deterioration and loss of efficiency, both the physical capability and actual utilization of the WEPCO power plant had greatly declined over time. The project involved the replacement of major internal components at all five of WEPCO's existing coal-fired steam electric boilers at its Port Washington plant. This project would restore the physical and economic viability of the existing powerplant and extend its useful life for approximately 20 years. In its decision regarding WEPCO, EPA determined that the physical changes contemplated by the proposed project were nonroutine in nature and consequently were not categorically excluded from PSD or NSPS modification requirements. As indicated in the GAO report, it is expected that most utility projects will not be similar to the WEPCO situation. That is, EPA believes that most utilities conduct an ongoing maintenance program at existing plants which prevents deterioration of production capacity and utilization levels. To the extent that life extensions at such plants involve only an enhanced maintenance program, new source requirements may not apply for two reasons. First, the life extension may involve no nonroutine physical or operational change. If so, it would be excluded from new source provisions for that reason alone. Even if the life extension did involve nonroutine changes, it still would not trigger new source requirements if it did not increase pollution on an hourly basis (for NSPS purposes) or an annual basis (for PSD and nonattainment new source review purposes). It should also be noted that WEPCO is not a Clean Coal Technology or repowering project, nor is it (1) being implemented to comply with Title IV or any other Clean Air Act requirements, or (2) a

basis (for PSD and nonattainment new source review purposes). It should also be noted that WEPCO is not a Clean Coal Technology or repowering project, nor is it (1) being implemented to comply with Title IV or any other Clean Air Act requirements, or (2) a voluntary pollution control project or research project of any kind. EPA's WEPCO decision only applies to utilities proposing "WEPCO type" changes, i.e., nonroutine replacement that would result in an actual emissions increase. This is the basis for the EPA statement that the ruling is not expected to significantly affect power plant life extension projects.

In addition, it is important to point out that GAO was incorrect in its formulation of the choice that utility companies actually face. GAO stated that the utility company judgment on whether to build a new plant or instead to extend the service life of an existing plant depends on the relative costs of "two sources emitting pollution at a low rate, and not on a comparison of the high cost of a new plant emitting pollution at a low rate and the lower cost of an older plant emitting pollution at a higher rate." In fact, as explained above, due to EPA's netting rules, the owner of an existing source almost always has the choice of merely avoiding increases in emissions at existing plants, and is not required to meet the stringent emissions limits that apply to wholly new sources. Thus, using the nomenclature of the GAO report, the utility's choice is indeed between a new, "lower" emitting plant and an older, "higher" emitting plant. The only condition EPA has ever placed on the latter option is to insist that the source owner prevent the older plant from emitting at even higher levels.

EPA recently proposed a rule (copy enclosed) that would revise the agency's Prevention of Signficant Deterioration (PSD) and nonattainment New Source Review regulations for the addition, replacement or use of pollution control projects (a project undertaken at a utility unit to reduce emission) at existing electric utility steam generating units. Changes that occur at a source that are intended to restore capacity or to improve the operational efficiency of the facility are not considered to be part of a pollution control project for purposes of this proposal. The proposal would not include pollution control projects as modifications, unless the reviewing authority determines that the project will render the unit less environmentally benefirical. Until the proposal is final, EPA will continue its current policy of determining of pollution control projects are excluded from NSR on a case-by-case basis. The implementation of the proposed rule should not cause any negatice environmental effects.

II-C-46

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

MAY 31 1995

Mr. William H. Lewis
Morgan, Lewis and Bockius
1800 M Street, N.W.
Washington, D.C. 20036-5869

Dear Mr. Lewis:

As you know, the Environmental Protection Agency (EPA) is committed to working with industry and other stakeholders to develop flexible solutions to address the implementation concerns raised with our programs. Thanks in a large part to your initiative, we were able to hold a successful meeting with you and over 55 of your colleagues to discuss implementation issues of concern. I am providing our responses to the issues raised by the industry representatives at the April 12, 1995 meeting.

The EPA has made considerable progress in developing rules and guidance that take into consideration many of your concerns. Several of the concerns you raised are being addressed in rulemaking packages that are underway for new source review reform and operating permits. In addition, we are holding stakeholder meetings on enhanced monitoring and section 112(g). EPA is also developing guidance in several areas that will help clarify a number of the uncertainties that have been raised in the industry comments.

I look forward to continue working with you as we move forward in developing rules that work for all parties and foremost in achieving clean air for all our citizens.

Sincerely yours,

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Attachment

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ENVIRONMENTAL PROTECTION AGENCY
(EPA)

# RESPONSE TO ISSUES RAISED BY INDUSTRY ON CLEAN AIR ACT IMPLEMENTATION REFORM

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EPA'S RESPONSE TO ISSUES RAISED BY INDUSTRY ON CLEAN AIR ACT IMPLEMENTATION REFORM

## EPA'S RESPONSE TO INDUSTRY CONCERNS ON CLEAN AIR ACT IMPLEMENTATION REFORM

On April 12, 1995, EPA met with 55 industry representatives to discuss issues they had raised and to indicate what actions EPA intends to take on the issues. The specific issues raised by the various industry representatives and EPA's responses to those issues are attached. The vast majority of issues raised by industry were not new to EPA; the Agency has been working with industry representatives and other stakeholders for several months trying to find cost-effective, common sense solutions to these often complex issues.

It is also important to note that the responses included in this document reflect the Agency's positions as of mid-May 1995. On several of these issues, notably operating permits and 112(g), EPA is in the midst of reevaluating its programs in light of recent feedback from various stakeholders. In June 1995 EPA will meet with the Clean Air Act Advisory Committee to discuss options for addressing section 112(g). EPA is also currently working out final details of a proposed supplemental rule on operating permits and will shortly make available additional information about that proposal.

Enhanced Monitoring

In general, EPA agrees with concerns raised about the enhanced monitoring rule and has withdrawn the package from review by the Office of Management and Budget. EPA hopes to develop a strategy that will allow it to issue compliance assurance requirements that build on the requirements of existing rules and ensure that the environmental results expected from those rules are being achieved. EPA received an extension of the court-ordered deadline until June 30, 1995. EPA intends to seek a further extension of at least a year to allow time for stakeholder involvement in development of the rule. One of the first steps EPA will take is to hold a stakeholders' meeting on May 31, 1995. EPA will work with representatives from industry, states, and environmental groups to obtain their assistance in developing a new flexible approach for the enhanced monitoring rule.

Operating Permit Program

Over the next month EPA plans to make several significant improvements to the permit program that will enhance a facility's ability to make process or operational changes without revising its Title V permit, make far greater use of existing State permit programs for purposes of Title V, and reduce the costs and burdens of developing permit applications. Some of these changes are described below. EPA intends to make available information about the other changes shortly.

In the last several months EPA has been working with representatives from industry, states, and environmental groups to find a solution that will allow a more streamlined process for permit revisions and provide more flexibility to states and industry. EPA plans to issue a supplemental proposed rule on operating permit revisions in June 1995. EPA has already shared a draft of the supplemental proposal with industry, states and other stakeholders to get their comments on the revised approach.

EPA is currently in the process of working out final details about what will be in the supplemental proposal, so it is not possible to fully describe the extent of the changes in that document here. However, in general the supplemental proposal will include a streamlined system for permit revisions that builds on existing successful State programs. Under this process, States would have greater flexibility to decide the amount of public review and EPA review for most permits, by matching the level of review to the environmental significance of the changes. A State would not be required to provide any EPA or public review for changes that it can show are de minimis.

EPA is also working on a series of guidance documents that will address many implementation issues raised by industry and states. This guidance is expected to clarify the flexibility allowed under the current rule and provide guidance on ways to reduce the costs and effort in preparing permit applications, which in turn will reduce the administrative and economic burdens of this program. As a result of concerns about the size and cost of some permit applications that have recently come to EPA's attention, the Agency plans to hold meetings with industry and State stakeholders in June to clarify the requirements on permit application content and ensure that State or local agencies do not request needless information in the applications.

New Source Review

EPA has worked through the Clean Air Act Advisory Committee to obtain independent advice and counsel on policy and technical issues associated with reforming the New Source Review program. Through these efforts, EPA provided a draft NSR reform rule for stakeholders' comment in 1994. Based on input received from the industry, states, environmental and other groups, EPA has revised the draft rule and intends to propose the reform rule in July 1995. The proposed revisions provide stakeholders with more certainty and flexibility to comply with EPA's NSR requirements, and promote the use of innovative control technologies and pollution prevention.

While EPA views the NSR proposal package as being balanced and as not sacrificing environmental protection, this package provides industry with several important benefits. To name just

a few, EPA plans to exempt certain "clean" emission units, and pollution control and pollution prevention projects from NSR altogether. EPA also plans to provide an approach that promotes voluntary use of plant-wide applicability limits which allows industry to operate without changes to its' permit as long as the plant's emissions do not exceed a cap.

Air Toxics

EPA recognizes that states and industry need lead time to be able to implement the modification provisions contained in section 112(g). EPA published an interpretive notice in February 1995 advising states that they are not required to implement the modification provisions until EPA issues the final rule. This reversed an earlier EPA legal interpretation. In developing the final section 112(g) rule, EPA will consider the need for additional lead time to implement the modification provisions following promulgation of the rule.

In response to comments received on the proposed rule, EPA is considering making several significant changes. EPA plans to discuss these proposed changes at the June meeting of the Clean Air Advisory Committee meeting. As it develops the final rule, EPA plans to hold meetings with industry, states and other stakeholders about potential changes to the proposed rule. EPA plans to issue the final rule in early 1996.

Potential to Emit

EPA's requirements for a source's limits on its potential to emit to be federally enforceable is currently in litigation. In that litigation EPA has taken the position that it has the legal authority to require federal enforceability. EPA believes there should be a credible system to ensure adherence to restrictions which allow a source to avoid federal requirements. Federal enforceability provides EPA the opportunity to ensure compliance; it also provides citizens the opportunity to ensure that sources in their communities are taking steps to reduce toxic air pollution.

In January 1995, EPA issued a memorandum outlining alternative ways that restrictions on potential to emit could be less burdensome. For example, EPA identified approaches such as general rules and general permits to create restrictions on large numbers of sources without having to resort to individual permits. To ensure that states have sufficient time to implement these approaches, EPA provided a two-year transition period. During the transition period, sources emitting less than 50 percent of the major source threshold would be excluded from having federally enforceable limitations, as long as appropriate records are kept. Sources above the 50 percent threshold that have State permit limits can simply submit certifications that

accept their State limits as federally enforceable. EPA is giving serious consideration to extending the provision for sources emitting less than the 50 percent cutoff beyond the two-year period.

Fugitive Emissions

EPA continues to conduct section 302(j) rulemakings where required under the Act, but believes section 112 does not require such a rulemaking. A court decision on the legal issue of whether such rulemaking is required under section 112 is expected to be issued shortly. EPA is interested in specific concerns about the technical feasibility of measuring fugitive hazardous air pollutant emissions, and in providing guidance in this area.

EPA has committed to issue guidance in May 1995 on treatment of co-located sources of fugitive emissions that have not been listed under section 302(j).

EPA'S RESPONSE TO ISSUES RAISED BY INDUSTRY ON
CLEAN AIR ACT IMPLEMENTATION REFORM

Operating Permit Program

REDUCING PERMIT APPLICATION BURDENS

**Issue 1: To reduce the burden of the permit application, EPA should issue guidance to confirm that sources are not required to include a substantial level of detail in their permit applications. Specifically covered should be limiting detail on emissions and reviews related to identification of applicable requirements.**

**Response:**

- EPA agrees and is creating guidance on this and many other implementation issues.

- EPA's guidance will address the extent to which emissions must be quantified for purposes other than determining a facility's potential emissions. EPA will clarify that extensive emission inventories are not the main goal of the Title V operating permit program, and that documentation of emissions may be reduced where the purpose is for cataloging emissions rather than, for example, determining whether a State or federal rule applies.

- EPA will clarify that emissions of very small amounts of pollutants could be reported as present in "trace" amounts, instead of calculating the actual quantity of emissions. The guidance will clarify that calculation of tons per year emissions of pollutants covered under the accidental release program [section 112(r)] is not required, unless the pollutant is also a hazardous air pollutant (HAP) under the air toxics provisions in section 112(b).

- Although not part of industry's recommendation, another means of reducing the burden of permit applications is to allow part of an application to be submitted within the one year deadline and the remaining information to be submitted nearer the date of permit issuance for sources whose required date for permit issuance is significantly later in the state's 3-year transition period. EPA will clarify that permit authorities may initially deem an application complete, provided core information is included, and then allow submittal of additional necessary information nearer the date of permit issuance. The application shield will continue to be provided to applications deemed complete in this manner.

UPDATED EMISSIONS ESTIMATES

**Issue 2: EPA should issue guidance that, at a minimum, establishes the following:**

**1) If emissions estimates developed in preparing Title V applications differ from prior good faith estimates, then use of the prior estimates should not be called into question by the new estimates, and**

**2) If emission limits were based on prior good faith estimates that are lower than current estimates, then the previous emission limits may be revised using the Title V permit process to reflect estimates based on current methodologies.**

**Response:**

- EPA recognizes the need for fair and appropriate measures under these circumstances.
- EPA is developing guidance on what effect new emission factors or information would have on a previously submitted permit application. This guidance is expected to be issued very shortly.
- EPA agrees that good faith estimates are an important factor in this issue. EPA is soliciting comments from industry on how it should address the issue of "good faith" estimates.
- EPA also agrees that changes to emission estimates should not require a revision of the operating permit if the new estimate has no affect on what requirements apply. If new requirements apply, the existing rule defines the procedures for incorporation into the permit.

INSIGNIFICANT ACTIVITIES

**Issue 3: EPA should allow States to exclude as insignificant activities any units with emissions below the State-established significance thresholds -- even if the units are subject to an applicable requirement.**

**Response:**

- EPA will provide additional guidance to States concerning exclusion of certain activities from the obtaining a permit.

- EPA will clarify through guidance that States may reduce the level of information in the application for activities subject to a generically applicable State implementation plan (SIP) requirement, such as small units subject to general SIP opacity requirements.

MINOR NEW SOURCE REVIEW/TITLE I MODIFICATIONS

**Issue 4: EPA should immediately issue a ruling that Title I modifications include only changes explicitly defined as modifications under the Act, and do not include changes not covered by those definitions that are governed by State or local minor new source review (NSR) programs.**

**Response:**

- EPA is continuing to consider how best to address this issue in the supplemental proposal it plans to issue in June 1995. In the meantime, EPA has approved a number of state permit programs that have not treated minor changes under their new source review program as "Title I modifications." These programs allow minor NSR changes to be processed as minor permit modifications under their Title V program.

- EPA's interpretation of the phrase "Title I modifications" in the current rule allows this approval and EPA will continue to grant similar approvals.

- As part of its supplemental proposal EPA currently intends to offer for public comment a streamlined two-tracked system for permit revisions that builds on existing successful State new source review programs. Under this process, States would have greater flexibility to decide the amount of public and EPA review for most permit revisions, by matching the level of review to the environmental significance of the change. The new system for permit revisions will reduce the importance of the phrase "Title I modifications" because consideration of whether the change is a Title I modification would not be a factor in determining what revision process is necessary.

APPLICABLE REQUIREMENTS - EXCLUSION OF CERTAIN TERMS

**Issue 5: EPA should issue guidance confirming the following:**

- **States can limit minor NSR terms included in title V permits to those that they deem to be environmentally significant (but States would have the option to treat**

minor NSR and Title V separately), and

- States are only required to include state implementation plan (SIP) terms that are necessary elements of an EPA-required nonattainment or maintenance plan.

Response:

- EPA agrees that some minor NSR terms may be obsolete or inappropriate for operating permits.

- EPA intends to clarify through guidance that, for example, the permit would not need to incorporate the NSR application by reference or include certain other terms determined by the source and permit authority to be extraneous. This guidance will indicate the types of terms that may be extraneous and would suggest ways in which States may drop these requirements from NSR and Title V permits.

[For treating minor NSR and Title V separately, see response to the next issue.]

APPLICABLE REQUIREMENTS - LEVEL OF DETAIL

Issue 6: EPA should allow States to include a basic requirement to comply with a particular general program in the Title V permit, with an acknowledgment that compliance with the underlying requirements, as revised from time to time, will be required. These general programs would include:

- minor NSR

- monitoring and enhanced monitoring

- categories of de minimis reasonably available control technology (RACT) requirements and determinations of RACT non-applicability

- 112(r) risk management plans

EPA should issue guidance to confirm that applicable requirements may be incorporated into Title V permits using citations (i.e., references) rather than narrative restatement.

Response:

- While EPA believes this approach could lead to permits that would not have specific, enforceable conditions for some of

these requirements, EPA is continuing to consider varying ways in which states may incorporate new source review requirements into Title V permits.

- Some requirements do lend themselves to generic treatment. In the March 1994 supplemental proposal on accidental releases under section 112(r), EPA proposed standard permit conditions that would assure compliance with requirements of the accidental release program. Under this approach the risk management plan would not be a part of the application or the permit. Changes to the risk management plan would not require revising the permit.

- EPA agrees that a citation-based approach to identifying underlying requirements is needed and will be issuing guidance on the use of citations in June 1995.

- EPA described for public comment an approach to cross-referencing in its August 29, 1994 proposal, and intends to expand on this approach in the guidance document mentioned above. Under the August proposal, the permit would need to include the emission limits and monitoring requirements, while test methods and lengthy procedures could be referenced. Any citation would need to ensure that judgements required in an underlying requirement are identified in the permit.

OPERATIONAL FLEXIBILITY AND PERMIT REVISION PROCEDURES

**Issue 7: EPA should promulgate the operating permit revision procedures that reflect the approach set out in industry's "straw proposal."**

**Response:**

- EPA's supplemental rule on Title V permit revisions, which will be issued in June 1995, will address this issue. This proposal will include an alternative, streamlined system for permit revisions that builds upon existing state permit programs.

- It will give States great flexibility to decide the amount of public and EPA review for most permit revisions, by matching the level of review to the environmental significance of the change. A State is not required to provide any review for changes that it can show are de minimis. The public, affected States, and EPA would have an adequate opportunity to review and comment on more environmentally significant actions.

- Under the June proposal, changes that do not require

approval under State minor NSR would be allowed to proceed with no further review upon submittal of a notice to the State, provided the change would not conflict with the Title V permit.

- The permit revision procedures are expected to avoid duplication with existing State permit programs. For changes subject to preconstruction review, any public, affected State or EPA review would occur prior to construction of the project. This is where State review is already provided under new source review, and would avoid second-guessing of a preconstruction permit by EPA.

TITLE V MONITORING

Issue 8: EPA should issue Title V monitoring guidance that provides:

1) Existing monitoring established as part of an applicable requirement should satisfy the Title V monitoring requirement.

2) If no such monitoring is provided in the underlying requirement, states can establish Title V monitoring as part of the permitting process, subject to the following constraints:

- monitoring data that is sufficient to determine compliance with the underlying applicable requirement shall be the objective of any new monitoring, and where the applicable requirement was established through rulemaking, should only serve as indicator monitoring until the compliance determination aspects of the underlying requirement can be formally reviewed and revised through rulemaking.

- costs shall be taken in account in determining such monitoring, expressly recognizing that monitoring may not be feasible for certain units because any benefits will be outweighed by associated costs.

- monitoring must be established in a manner that will assure that an increase in stringency of the underlying requirement will not result.

3) States should be able to exempt small units from monitoring.

Response:

- Several of the points raised are related to EPA's enhanced monitoring proposed rule which EPA is currently reexamining. Either as part of that reexamination, or in separate guidance EPA will clarify what is necessary to meet the operating permit rule requirements on periodic monitoring.

- EPA agrees directionally with the points that periodic monitoring should be satisfied by monitoring included in an applicable requirement.

- EPA also agrees that periodic or enhanced monitoring is not intended to increase the stringency of the underlying requirement.

RESEARCH AND DEVELOPMENT ACTIVITIES

**Issue 9: EPA should exclude research and development (R&D) and related activities from coverage under Title V and section 112(g). At a minimum, the current Title V rule must be implemented consistent with the preamble to make clear that states have authority to treat co-located R&D facilities and related activities separately in determining whether they are a Title V major source.**

**Response:**

- In the June 1995 supplemental proposal on permit revisions, EPA will clarify that under the current rule, R&D facilities may be considered separately from the manufacturing facility at which they are located. This means that R&D laboratories would not be required to obtain a permit, unless the R&D facility alone is a major source.

## New Source Review

### SUMMARY OF RECOMMENDATIONS

Issue 1: New source review (NSR) is triggered by two types of activities at existing sources: installing new emissions units and changing existing emissions units. With respect to new units, the NSR "emission increase" tests exclusively govern NSR applicability. As to existing units, the NSR "exclusions" from "physical or operational change," as well as the "emissions increase" tests determine applicability. EPA's July NSR reform package addressed both types of activities and contains certain solutions that industry supports. It contains other provisions that industry does not support in their present form. Finally, the July package omits provisions that industry believes are essential to meaningful reform.

"One size does not fit all" is a principle that needs to be recognized in the NSR program. Both "exclusion" provisions and "the emission increase" tests must reflect this principle.

The "exclusions" to NSR either focus on conduct that existing facilities normally undertake during their useful life or on conduct that the Agency wishes to encourage because it is in the public interest. Different "exclusions" are needed in order to reflect different conditions that exist in different facilities. The "exclusion" options need to be expanded.

Options are also needed under the emissions increase test. An allowable-to-allowable test should be provided for sources that have undergone NSR review and for sources where the State implementation plan (SIP) is consistent with that approach. EPA should also confirm the existing discretion of sources to use an actual-to-actual approach. Source owners should also have discretion to choose from a menu that includes, at a minimum, these tests and plantwide applicability limits (PALs).

Response:

- EPA began a comprehensive reassessment of its NSR program over two years ago. That process involved extensive discussions with representatives from all the stakeholder groups and resulted in recommendations forwarded to EPA from the Clean Air Act Advisory Committee (CAAAC).

- EPA has developed a regulatory package addressing the recommended changes and expects the proposed rules to be signed by the Administrator within the next few months.

- While EPA views the package as being balanced and as not sacrificing the environmental protection inherent in the New Source Review program, there is no doubt that the package will provide industry with several important benefits including:

  - Deregulation of many changes at "clean" emissions units and pollution control and pollution prevention projects -- Sources that have clean emissions units or are undertaking projects to clean up air pollution would generally not be targeted for federal new source review.

  - Promotion of voluntary plant-wide limits -- Rather than face potentially complicated, piecemeal applicability decisions every time a change at a plant is contemplated, most plant managers prefer to work with an emissions cap or budget, an annual emissions limit that allows managers to make almost any change any time as long as the plant's emissions do not exceed the cap. EPA will include this option in the proposed rule.

  - Help for cyclical industries such as the automobile manufacturing companies -- Industry alleges that existing regulations unintentionally penalize industries that have suffered recent downturns and inhibit modernizing changes that are vital to their recovery, even when changes at a plant lower emissions. EPA's proposal will level the playing field for these sources by extending the range of years they can use to establish their emissions baseline.

  - Encouragement of pollution prevention and innovative control technologies -- The proposed changes will ensure that bona fide pollution prevention qualifies for the pollution control project exclusion and revamp the under-used innovative control technology waiver to simplify the process and eliminate penalties for good faith failures.

- Better coordination of permits impacting Class I areas -- EPA will clarify the role of the Federal Land Manager, the State permitting authority and the applicant with regard to the NSR permitting process. Other changes establish de minimis levels for air quality impacts and provide mitigation alternatives for sources whose proposed new emissions threaten Class I areas. The changes should dramatically reduce delays and disputes currently associated with permitting near federal Class I areas.

- Increased State flexibility -- Instead of one-size-fits-all solutions to applicability and other issues, States would be explicitly allowed for the first time to choose applicability and implementation approaches from a menu of alternatives.

EXCLUSIONS FROM PHYSICAL AND OPERATIONAL CHANGES

Issue 2: Pollution Control Project (PCP) Exclusion: The exclusion should follow the Wisconsin Electric Power Company (WEPCO) exclusion by dropping the following from the July draft:

- The requirement that the source owner seek and obtain a prior state determination that the pollution control project exclusion applies "up-front" before commencing construction on a project.

- The mandatory control requirements of collateral emissions increases.

- The "offset" requirement for nonattainment areas.

- The "air toxics" risk evaluation.

Response:

- EPA generally agrees and as mentioned above, EPA will be proposing a broad pollution control project exclusion as part of its NSR reform package to allow exemptions for sources that have clean emission units or undertaking projects to clean up air pollution.

- This exclusion will not include any specific requirement for State pre-authorization. EPA expects that most projects will be reviewed by states as part of their minor NSR programs. As with EPA's existing NSR exclusions, the timing and nature of this state minor NSR approval will be left for states to determine.

- The proposed exclusion will include the following safeguard used in the WEPCO rule to ensure that pollution control projects do not have an adverse environmental impact: The project cannot cause or contribute to a violation of a national ambient air quality standards (NAAQS), or prevention of significant deterioration (PSD) increment or have an adverse impact on air quality related values (AQRVs) in a Class I area.

    - Under this test, states are to consider the collateral emissions from a project and ensure that new emissions of nonattainment pollutants do not contribute to the existing problem. EPA regulations will not specify how the state must deal with increases that do not contribute to a nonattainment problem.

- EPA will not require an evaluation for toxic emissions for pollution control projects that are add-on or fuel switches to a less polluting fuel. EPA's experience with such projects has shown that a toxics safeguard is not needed. Given the uncertain nature of many pollution prevention projects, EPA believes that it is a reasonable environmental safeguard to confirm that such projects result in an environmental benefit before a pollution control project exemption is granted. As part of an evaluation of whether a project is environmentally beneficial, EPA would expect states to consider any increase in toxic emissions.

**Issue 3: Pollution Prevention Exemption: As EPA has recognized in numerous public statements, "pollution prevention" projects (i.e., projects that allow a facility to produce a product with less environmental discharges per unit of product made) must be encouraged. To effectuate this policy, the "pollution prevention" exclusion proposed by the Agency should:**

**- Eliminate the July draft requirement that the project not improve efficiency nor increase annual utilization.**

**- Exclude all "pollution prevention" projects from NSR unless the project increases the source's "potential to emit."**

**Response:**

- The pollution control project exclusion included in the NSR Reform rulemaking will extend the exclusion to pollution prevention projects. Any pollution prevention project will qualify as long as it is "environmentally beneficial" and will not cause or contribute to a violation of a NAAQS or PSD increment, or cause a Class I adverse impact.

- These conditions are patterned after the WEPCO rule and will create a broad, flexible exclusion for pollution prevention projects.

- An exclusion of projects that do not increase a source's potential to emit would create an exclusion that could considerably reduce the effectiveness of the NSR program. Almost any modernization that a source undertakes has the incidental effect of lowering emissions. A new emissions unit or modernization generally has fewer emissions that one built 40 years earlier. Since these types of changes would not likely increase a source's potential to emit, industry would claim this as a pollution prevention project -- even though its' pollution prevention aspects are likely to be negligible and actual emissions may increase dramatically due to increased utilization.

Issue 4: **A New "Cross Media" Project Exclusion: EPA should recognize that pollution control projects required under other laws may result in "collateral" emissions increases of air pollutants. The PCP exclusion for air pollution projects should be extended to these projects.**

Response:

- Cross media project exclusions are under consideration by EPA. EPA will solicit comments on extending the PCP exclusion to cover these types of projects, provided they do not cause or contribute to NAAQS violation, PSD increment violation or adverse impact on Class I area.

- Also this issue may be addressed in multi-media permitting pilot initiative currently underway.

Issue 5: **"Routine Maintenance, Repair and Replacement" Exclusion: The July guidance on this exclusion should be dropped. Instead, the following guidance should be included in the proposal:**

> **"Routine maintenance, repair, and replacement means maintenance, repair and replacement projects occurring on a regular basis, on a cyclical basis, or due to unanticipated failure of equipment, which are undertaken in an industrial category to maintain competitive position or reliable operation."**

Response:

- EPA agrees with removing the routine maintenance, repair and replacement language from the proposal package.

- With other changes being made to NSR applicability, this issue becomes less important. Both PALs and the Clean Unit Test (included in the NSR Reform proposal rule) will provide clear distinction of the types of changes that can be undertaken without triggering NSR.

Issue 6: **A "Restoration" Exclusion: A new exclusion, based on the "results in" language in the modification definition, should be included for activities that restore a unit to the highest capacity achievable in the previous five years. The exclusion would be limited in time and would recognize that requirements governing the timing of capital expenditures vary depending upon market conditions, and may not allow an industry to make a capital investment to restore operations immediately after a problem occurs. It would also recognize that units that have deteriorated over more than a five year period of time should be evaluated under other tests. This is consistent with the WEPCO rule's implementation of the "causal link" requirement though the rule's focus on "representative baseline" year conditions in the definition of "representative actual annual emissions."**

Response:

- EPA believes the issue of how restoration of lost capacity should be treated for NSR applicability purposes is better resolved by the PAL, the Clean Unit Test, and other mechanisms in the NSR Reform package that provide sources with considerable flexibility to make changes. EPA believes that the routine maintenance exclusion already included in the existing NSR regulations also has the effect of excluding "routine restorations."

Issue 7: **"Clean Unit" Exclusion: Establish an exclusion for sources that have installed BACT equivalent level of control or MACT or reasonably available control technology (RACT) or their equivalent, under a state or voluntary control program. Units that have undergone NSR should be subject to the "allowable-allowable" test discussed in the following issue.**

**Response:**

- EPA agrees and has included a new clean unit exclusion which allows an operator of a unit to make changes to the unit provided the change does not increase hourly emissions (and is allowed under permit). EPA is taking comment on several alternative definitions for "clean unit" including the industry's suggested definition.

**Issue 8: Non-Emissions Unit Exclusion: Industry supports EPA's suggestion in draft NSR package of last summer that a NSR exclusion be created for non-emitting units.**

**Response:**

- After consultation with a number of state permitting authorities, EPA determined that a regulatory change is not required to exclude units that are generally not targeted as emitters of air pollutants. Moreover, there was concern that the draft non-emitting unit regulations could subject units, currently excluded as a matter of common sense, to major NSR due to the narrow exclusion that was being proposed. To preserve the permitting authority's existing flexibility, EPA is not proposing a regulatory exclusion for nonemitting units. EPA will continue to evaluate this issue, particularly with regard to changes to units that affect the emissions at other units, and if warranted, provide guidance in the future.

EMISSIONS INCREASE TESTS

**Issue 9: EPA's proposal should include a menu of alternative emissions increase tests. If a source owner could show that there would be no significant emission increase under a particular test, NSR would not be triggered.**

**(1) "Allowable-to-allowable" test for units that have undergone NSR. The "allowable-to-allowable" treatment for units that have undergone NSR review is a clarification of current law -- these units have been evaluated and permitted under the NSR program at the allowable level and have been evaluated for BACT or LAER at that level. Any changes in the unit that allow the unit to achieve permitted levels have been authorized by the NSR permit.**

**(2) An "actual-to-actual" test for units that have "begun normal operations" with a 5 year look-back and explicit preamble language recognizing that if a projected or actual increase in production rate or hours of operation above past actual levels is not**

caused by a change, the hours of operation production rate increase exclusions applies.

(3) An actual-to-potential test with a 10 year look-back that applies to units that are new greenfield units, and at the option of the source owner, to units that have begun normal operations.

(4) Plant-wide applicability limits -- as in the July draft rule.

Response:

- EPA is for the first time proposing to give States a series of applicability options including versions of all four of these tests for determining whether an increase in emissions will follow from a proposed change. As a result, States may offer all of these options to industry with the only limitation that sources will not be allowed to "game" the system by switching between incompatible options. For instance, if a source chooses a PAL, it may not go above the PAL limit because it wants to use a "clean unit" test.

CLASS I AREAS

Issue 10: Permitting Authority Control: EPA's NSR rules must make it clear that it is the permit issuing agencies -- not Federal Land Managers (FLM) -- that have the authority to determine if a PSD permit applicants' proposed new source will have an adverse impact on air quality related values (AQRVs) in Class I areas.

Response:

- EPA's draft NSR Reform package sets up criteria for the permitting authority to consider when rejecting a FLM's finding of adverse impact. The draft preamble and regulations make clear that this is ultimately the permitting authority's decision when the proposed source does not cause or contribute to a Class I increment exceedance.

Issue 11: Class I Size/Distance Cut-Offs: EPA should set reasonable size/distance cut-offs so that sources can avoid all aspects of the Class I area review process if they are small enough or propose to locate far enough away from Class I areas.

Response:

- EPA's draft NSR Reform package for the first time proposes Class I increment significance levels which will allow small

sources to demonstrate that they will have a de minimis impact on the Class I increment. Since AQRVs may be specific to the Class I area and involve secondary impacts that are considerably more complicated to assess than an increment, EPA does not set national significance levels for AQRVs. EPA expects that the existence of the Class I significance levels will help considerably in eliminating delays for small sources.

**Issue 12: Early FLM Coordination: Permit applicants should be encouraged, but not required, to notify FLMs early on of major sources proposing to locate within 100 km of a Class I area. This may be accomplished through establishment of a bulletin board service.**

**Response:**

- EPA's draft proposal does address the establishment of a bulletin board system and calls for States to list projects on the data base. States are also required to include FLMs in any pre-application meetings involving projects within 100 kilometers (kms) of a Class I area and provide copies of permit applications for proposed sources within 100 kms of a Federal Class I area. For new, large projects outside of 100 kms, States are encouraged, but not required, to include the FLM in any pre-application meeting as appropriate.

**Issue 13: EPA Approval of Models and Modeling Techniques: EPA should make it clear that permit issuing agencies need <u>not</u> give any deference to FLM claims of adverse impacts on AQRVs in a Class I area when the FLM claims are not based on use of EPA-approved models or modeling techniques for evaluating the impacts of a proposed new source on AQRVs.**

**Response:**

- EPA's draft proposal distinguishes between modeling to determine air quality impacts and an AQRV analysis. EPA does approve models used to predict the impact of emissions from a source on the surrounding air quality, and generally requires the use of an EPA-approved model for this showing. However, AQRV analyses generally start with the ambient loadings predicted by the EPA-approved models and then determine what the impact of that loading will be on the AQRV in question, such as the impact of ambient sulfur dioxide (and its derivatives) on visibility. In general, EPA has no approval procedures in place for these conversion methodologies and does not require that FLMs, States, or sources secure EPA approval. In the draft NSR Reform package, EPA provides that conversion methodologies be subject to public notice and comment, either before its use

by a source or FLM or in conjunction with a determination on a specific permit.

**Issue 14: Mitigation of Source Impacts Through Offsets: EPA should provide States in rules for a broad range of approaches for assessing the adequacy of offsets in mitigation of adverse AQRV impacts.**

**Response:**

- The draft NSR Reform Rule sets out general principles for assessing offsets. EPA is also taking comment on whether offsets for sources impacting Class I areas may include "double-counting" emissions reductions needed by a source to comply with other Clean Air Act requirements.

**Issue 15: Existing Source Problems: EPA should not use the NSR process to address problems that may be caused by existing sources (including existing mobile sources) impacts on Class I areas.**

**Response:**

- EPA is in the process of developing regional haze regulations that are focused on existing sources and Class I area visibility degradation caused by these existing emissions. Assuming all other applicable PSD requirements are met, the draft NSR Reform package would require permit denial for Class I area concerns if the new emissions will have an adverse impact on AQRVs. It is the state or other permitting authority, and not the FLMs, that will make the final determination as to whether the proposed source's emissions will have these proscribed results (for AQRVs, the state decides when the proposed source does not cause or contribute to a Class I increment exceedance).

TOP-DOWN BEST AVAILABLE CONTROL TECHNOLOGY

**Issue 16: Eliminate Top Down BACT: The top-down BACT approach removes from the States discretion that the Clean Air Act has given to them to make BACT determinations. EPA should substantially revise or eliminate the "top down BACT" approach.**

**Response:**

- EPA does not require states to use the top down methodology for making BACT determinations in its draft NSR Reform package. Instead, EPA's proposed regulations for state programs will identify certain core criteria that BACT determinations must meet. These criteria include that the applicant consider the most stringent technology and provide an acceptable rationale if the most stringent technology is

not accepted. EPA would propose a top-down approach in its PSD regulations which are applicable to states without SIP-approved PSD programs.

**Issue 17: Require Exclusive Use of Incremental Costs: EPA should specify that incremental rather than average costs should be the basis for selection and rejection of control technologies under the BACT process.**

**Response:**

- Since EPA's draft provides states with discretion in making BACT determinations and in evaluating the factors that go into that decision, it would be inappropriate for EPA to mandate that states use only incremental costs in assessing BACT options. The draft NSR Reform package would not change EPA's current policy that recommends states consider both average and incremental costs in selecting the final BACT level.

**Issue 18: BACT "Cut-Off:" EPA must establish a "cut-off" date for considering undocumented new technologies in the BACT selection. EPA should retain the proposed provision requiring commenters on draft PSD permits to show that technologies have been "demonstrated in practice," i.e., that a new or emerging technology must have six months of operating performance history to verify its claimed effectiveness.**

**Response:**

- In the draft NSR Reform package, EPA is including a presumptive cut-off date and a provision that undocumented new technologies considered in determining BACT must have six months of operations to verify claimed effectiveness.

AIR QUALITY ISSUES

**Issue 19: EPA should delete pre-construction monitoring requirements from the PSD rules. Where post-construction monitoring can produce useful data, it may be appropriate for EPA to require such monitoring.**

**Response:**

- Section 165(e)(1) of the CAA requires each PSD source (or permitting authority) to conduct a preconstruction analysis of the ambient air quality at the proposed site and in areas which may be affected by the source's emissions, in accordance with regulations issued by EPA. EPA believes that it is appropriate to reevaluate the regulatory requirements for preconstruction monitoring for proposed PSD

construction where air quality data cannot feasibly be used to analyze a source's impact upon air quality standards. In the draft NSR Reform Rule, EPA is soliciting comment on the appropriateness of providing an exemption for some cases from PSD preconstruction monitoring.

- Existing regulations [e.g., 51.166(m)(2)] provide for the use of post-construction monitoring when in the opinion of the permitting authority such monitoring is necessary to determine the effect emissions may have, or are having, on air quality in any area. However, existing regulations do not specify that such ambient monitoring may include the monitoring of air quality-related impacts in Federal Class I areas. In the draft NSR Reform Rule, EPA is proposing to amend its PSD regulations to clarify that post-construction ambient monitoring may be required for the purpose of determining the effect emissions from a facility may have, or are having, on AQRVs in a Federal Class I area.

**Issue 20: Since the Clean Air Act specifically exempts from PSD review pollutants that are regulated under section 112, EPA should drop its proposal for air quality impact analyses for section 112 pollutants.**

**Response:**

- Section 112(b)(6) of the Act provides that part C requirements for prevention of significant deterioration (PSD) do not apply to hazardous air pollutants (HAPs) listed under section 112. In a March 11, 1991 memorandum, EPA stated that it would no longer consider HAPs to be individually regulated under the Federal PSD regulations at 40 CFR 52.21. However, EPA also indicated that any HAP that is a constituent of a more general pollutant listed under section 108 of the CAA (e.g., VOC, particulate matter) remains regulated under PSD as part of that regulated pollutant. See 57 FR 18070 at 18074-75 (April 28, 1992) (publication of March 11, 1991 memorandum). This policy will be addressed in EPA's rulemaking initiative to update the PSD and NSR regulations based on the 1990 CAA Amendments, scheduled for proposal this summer. EPA has removed additional discussion of HAPs/PSD implementation issues from the draft NSR Reform rule and will evaluate the need for further guidance over the next several months.

LOWEST ACHIEVABLE EMISSION RATE

**Issue 21: Lowest Achievable Emission Rate (LAER) determinations should factor in economic considerations.**

**Response:**

- As opposed to BACT, the definition of LAER does not provide for the consideration of economics. However, EPA's existing guidance provides, in a generic sense, for limited consideration of economic factors in a LAER determination. EPA's policy is that if an emission limit will preclude construction of new plants within a class or category of sources, then there is justification for the permitting authority to reevaluate that particular LAER limit for that class or category of source. If another plant in the same (or comparable) industry already uses that control technology, then such use constitutes evidence that the cost to industry of that control technology is not prohibitive. Thus, LAER costs are considered only to the degree that they reflect unusual circumstances which, in some manner, differentiate the cost of control for a source from control costs for the rest of the industry.

UNDEMONSTRATED CONTROL TECHNOLOGY/APPLICATION (UT/A) AND DEMONSTRATED POLLUTION PREVENTION

**Issue 22: EPA must extend the UT/A waiver to LAER decisions for sources in nonattainment areas. Although the UT/A waiver provides evidence that the LAER definition can be interpreted to provide for "comparability," the concept was not properly extended to projects that employ demonstrated pollution prevention technologies in nonattainment areas.**

**Response:**

- EPA agrees that applicability of the UT/A should be extended to nonattainment areas and is proposing to do so in the draft NSR Reform Rule.

- The UT/A waiver does not provide evidence that the LAER definition can be interpreted to provide for "comparability" and that it should be extended to demonstrated control techniques or applications. The draft UT/A waiver regulations, consistent with the Agency's interpretation of LAER, require an undemonstrated control technique installed in a nonattainment area to achieve applicable LAER limits. The comparability concept is applicable only to an undemonstrated technique that marginally fails to achieve its permitted limit. As crafted, the permitting authority

establishes marginal failure emission limits which are included in the UT/A's permit and subject to public review and comment. This concept is designed to enhance and encourage the installation of undemonstrated control techniques or applications by providing the permitting authority with increased flexibility to either accept or reject an UT/A that marginally fails to achieve its permitted limit. This flexibility is not available under existing innovative control technology waiver regulations.

**Issue 23: The concept of "comparable emission reductions" which EPA has proposed for UT/A waivers in nonattainment areas should be extended to demonstrated pollution prevention technologies in nonattainment areas.**

**Response:**

- The concept of "comparable emission reductions" and its application to demonstrated pollution prevention technologies in nonattainment areas is addressed in the Agency's response to Issue 22 above.

EPA'S RESPONSE TO ISSUES RAISED BY INDUSTRY ON
CLEAN AIR ACT IMPLEMENTATION REFORM

Air Toxics - Section 112

**Issue 1: The Section 112 program being developed and implemented by EPA is contrary to Congress's plan for regulating air toxics, and is fundamentally unfair to the regulated community because controls are required sooner, apply more broadly, and are more stringent than Congress intended. EPA must adopt an air toxics program that reflects the gradations and distinctions mandated by Congress. By imposing overly-broad regulations EPA is severely complicating the implementation of Section 112 and forcing regulated sources to commit substantial human and financial resources to meet standards that are neither justified nor authorized by the Clean Air Act.**

Response:

- Section 112 is a common sense approach to the regulation of air toxics across the Nation. For 20 years, the Clean Air Act directed EPA to use risk assessment to regulate hazardous air pollutants to an "ample margin of safety" level. By 1990, there was broad consensus that this approach had failed. Due to controversy and litigation over risk assessments and "how safe is safe," EPA had managed to set standards for only seven toxic air pollutants and a handful of sources. More than two-and-one-half billion pounds of toxic chemicals were still released into the air each year, according to industry-reported Toxics Release Inventory (TRI) data. Thus, industry, environmentalists, States and EPA broadly agreed in 1990 to use a technology-based approach as the primary means of reducing emissions of air toxics.

- Congress created the Maximum Achievable Control Technology or MACT program as a practical approach: based on evaluation of existing control technologies, EPA must establish control requirements to assure all major sources of hazardous air pollutants (HAPs) achieve the level of control already being achieved by the better performing similar sources. The MACT program provides for environmental equity by leveling the playing field for industry so that cleaner facilities are not at a competitive disadvantage relative to their dirtier competitors.

- EPA believes the MACT program is working. In the four years since 1990, the air toxics program has achieved more than was accomplished during the prior 20 years. EPA already has set standards for 10 major industries, which when fully implemented will reduce toxic emissions by more than one

billion pounds per year. In doing so, EPA is implementing the MACT program in a creative and flexible manner to ensure that the standards are practical, make common sense, and focus on environmental results.

- EPA has worked closely with industry and others on each MACT standard. Where high costs or other problems are identified, EPA is taking a cooperative and problem-solving approach. The statute provides a menu of tools EPA is actively using to smooth the rough edges that can sometimes occur with a technology-based approach. These include:

  - Applicability cutoffs
  - Subcategorization
  - Emissions averaging
  - Breadth of affected source definition
  - Compliance schedule beyond three-year compliance date when environmental benefits warrant it
  - Prohibitory (exclusionary) rules in MACT standards (which serve as limits on potential emissions)

- EPA remains committed to working with industry and other stakeholders in the development of its air toxics rules to assure common sense approaches can be implemented.

## I. THE DEFINITION OF MAJOR SOURCE AND THE APPLICABILITY OF MACT AND GACT

**Issues 2, 3 and 4:**

**Major sources must be defined with reference to section 112(c) source categories.**

**MACT for Categories of Major Sources must apply only to co-located sources of HAPs in a given source category that together have the potential to exceed the 10/25 tons per year major source thresholds. MACT for a given major source category must not extend to co-located area sources or in co-located major sources in different source categories.**

**MACT and GACT for Categories of Area Sources -- Area sources (including area sources co-located with major sources) should be subject to MACT or GACT for categories of area sources only after EPA demonstrates that the area source category presents a threat of adverse effects to human health or the environment that warrants regulations.**

**Response:**

- These three issues concern the definition of major source, which is the subject of a pending court decision. EPA agrees that it is important to resolve this issue as soon as possible because of its broad implications for the section 112 program.

- The Agency believes that its definition of major source makes common sense, is consistent with the law, and addresses public concerns about air toxics. Under EPA's definition, the determination of whether a facility is a major source depends upon total HAP emissions from the entire facility, not just from equipment within the same source category. Congress selected the 10/25 tons per year threshold based on the common sense view that all the emissions from a plant site contribute to health and environmental threats.

- EPA's program ensures that air toxics controls are required for all industrial and commercial plant sites that emit major amounts. This would not be true under the suggested alternative, which would carve plants into pieces and consider whether each piece emits major amounts.

- Take for example a facility that emits multiple HAPs and is composed of three 20-ton sources in different source categories. Under the suggested alternative, this facility would be considered to be a trio of area sources. It would be exempt from major source controls although its toxic emissions would total 60 tons a year -- far above the 25-ton major source threshold. This would not result in a credible air toxics program nor satisfy public concerns about toxic emissions.

- With regard to area sources, EPA has made findings under section 112(c)(3) for the area sources EPA has regulated.

- EPA is working to ensure that MACT requirements are reasonable and cost-effective. The Agency is using tools available under the statute -- such as applicability cutoffs, subcategorization and emissions averaging -- to achieve this result. EPA is willing to explore concepts such as broader emissions averaging within plant sites to provide additional flexibility.

**Issue 5: New and Existing Source MACT for Categories of Major Sources - New source MACT for categories of major sources must only apply to *constructed* or *reconstructed* major sources (i.e., a greenfield major source or the reconstruction of at least 50% of an existing major source). Similarly, existing source MACT for categories of major sources applies to existing *major sources* and *modified major sources*. Section 112(g) is the gatekeeper that determines whether and where new and existing source MACT for categories of major sources apply -- i.e., section 112(g) guides the identification of major source constructions and reconstructions to which new source MACT applies, and major source modifications to which existing source MACT applies.**

**Response:**

- EPA has agreed to discuss the relationship of section 112(g) to sections 112(d) and 112(j) in upcoming meetings with litigants on this issue, as well as with other stakeholders.

- In EPA's view, for purposes of 112(d) and 112(j) new source MACT applies when an affected source is constructed or reconstructed. The scope of the affected source is defined in each MACT standard, after notice and comment. This approach provides flexibility to tailor the applicability of new source MACT to the source category in question.

- Although the Agency's interpretation of the statute differs from the alternative interpretation above, EPA agrees that new source MACT should be applied to units for which new source MACT is reasonable. Where appropriate, EPA has defined the "affected source" broadly, preventing small changes at existing sources from being subject to new source MACT. EPA believes that proposed and promulgated MACT standards would apply new source MACT to appropriate units, but is willing to consider and discuss any information to the contrary.

- EPA is carefully considering voluminous comments on this issue that were received during the public comment period on the proposed section 112(g) rule. The Agency is considering a very broad definition of major source for purposes of that rule, which would limit the applicability of new source MACT for that rule.

**Issue 6:** Consistency Among Key Section 112 Programs - The three MACT standard setting provisions - sections 112(d), (g), and (j) - must be co-extensive. That is, a major source with a section 112(g) case-by-case MACT limitation by definition satisfies subsequent 112(d) or (j) MACT requirements. Likewise, a major source with a section 112(j) MACT limitation by definition satisfied subsequent sections 112(d) requirements.

**Response:**

- This issue is part of the ongoing litigation on the section 112(j) rule. EPA will address it in the context of that litigation.

## II. DETERMINING POTENTIAL TO EMIT

**Issue 7:** Potential to Emit -- All controls and limitations (including voluntary controls approved by the State) must be considered when determining the potential to emit HAPs under section 112 -- not just those that are federally enforceable.

**Response:**

- This topic is addressed under the potential to emit issues section.

**Issue 8:** Fugitive emissions may not be considered for purposes of determining a source's potential to emit under section 112 until EPA conducts a section 302(j) rulemaking.

**Response:**

- This topic is addressed under the fugitive emissions issues section.

## III. MACT STANDARD SETTING ISSUES

**Issue 9:** The MACT Floor for New Major or Area Sources must be set at the emissions limitation achieved by the best controlled similar source in the same source category.

**Response:**

- In general EPA agrees with this issue. While the Clean Air Act allows EPA to select the best controlled similar source (without limitation to a source within the regulated source category), this source is almost always going to be found in

the source category being regulated. EPA is not aware of situations where it has gone outside the regulated source category for new source MACT.

**Issue 10: The MACT Floor for Existing Major or Area Sources - First, the MACT floor for existing sources must be set at the average emissions limitation achieved by all of the best performing 12 percent of sources in the relevant source category or, for categories with fewer than 30 sources, the average emissions limitation achieved by all of the best performing 5 sources in the relevant source category. Second, if data is not available on every source in the category, EPA must demonstrate that the floor that is calculated on the basis of the partial data is the same as the floor that would be calculated if data were available on every source in the source category. Additionally, EPA must validate all data used to support a MACT floor determination to ensure its quality.**

**Response:**

- The Clean Air Act states that the MACT floor for existing sources must be based on the average emission limitation achieved by the best performing 12% of the sources in the regulated source category. The term "all" does not appear in the Act. EPA's approach to determining the MACT floor was developed after a very open discussion and EPA has not been litigated over this issue. In each rule, EPA develops the data used to support the MACT floor and its validity and use are subject to review and comment.

- As stated in the Federal Register notice enunciating EPA's position on determining the MACT floor (59FR29200), EPA plans to retain its discretion in setting MACT floors. For example, the CAA authorizes EPA to establish subcategories of sources, which results in a separate floor determination for sources in the subcategory.

**Issue 11: The Theoretical "Superfacility" (EPA "Model Plant") -- New and existing source MACT floors are based on the average emission limitation achieved by major sources in the relevant source category. In other words, MACT limitations are not separately calculated for each emission unit of major sources in the source category such that only a fictional "superfacility" can comply without installing additional controls.**

**Response:**

- EPA is using the best information it can gather in developing MACT floors. Usually the best information EPA can obtain is on an emission unit by emission unit basis.

With this information EPA determines the MACT floor for the emission unit. If industry representatives believe EPA should use an emissions database based on plant-wide estimates to establish MACT floors and then MACT, EPA is willing to discuss this approach to help affected industries collect the appropriate data needed for this approach.

## IV. ADDITIONAL SECTION 112 IMPLEMENTATION ISSUES

### Section 112 General Provisions

**Issue 12: The section 112 General Provisions should apply only as expressly specified in each promulgated MACT standard.**

**Response:**

- EPA agrees and is attempting to do this already.

**Issue 13: HAPs should be listed by regulation and a procedure should be provided by which pollutants may be delisted if an applicant demonstrates that a listed HAP alone, or in a particular use, does not pose a threat to public health or the environment. If new HAPs are added to the list, they must not be subject to regulation under previously promulgated MACT standards.**

**Response:**

- The Clean Air Act contains provisions to delist HAPs from the list in section 112(c). EPA has developed a set of procedures and provided those to the public. EPA has used these procedures to evaluate delisting petitions such as the pending caprolactam petition as called for under the Act. As a result, EPA is now planning to delist caprolactam.

- With respect to "particular use," EPA believes the Act provides that HAPs are either covered or not covered under section 112. However, section 112(c) also provides that a particular source category can be delisted if the appropriate findings are made.

- With respect to the last question, EPA notes that there has been no petitions to list new HAPs. EPA will consider whether existing MACT standards should apply to any newly listed HAPs as new HAPs are listed. EPA would only consider applying MACT standards to newly listed HAPs after taking public comment and making final decisions on the finding that such application is reasonable and appropriate for affected sources.

**Issue 14: The definition of "affected facility" must be consistent with the definition of major source to ensure that the given standard is not applicable to area sources or other categories of major sources.**

**Response:**

- EPA uses the term "affected source" to clearly define which equipment are affected by the MACT standards. The substance of this issue is handled under Issues 2, 3, and 4 of this section.

**Issue 15 Existing major sources must not be subject to new source MACT when modified.**

**Response:**

- EPA agrees that existing sources are not subject to new source MACT when modified. When a large readily segregated unit or collection of equipment is constructed (readily identified by the States and the public as a new affected source), however, this equipment can be defined as a new source and therefore subject to new source MACT under section 112(d). Generally EPA has defined "affected sources" broadly, thus eliminating small changes at existing sources from being subject to new source MACT. For example in the Hazardous Organic NESHAP (HON), EPA defines the chemical manufacturing process unit for purposes of setting what pieces of equipment are subject to new source MACT requirements.

**Issue 16: Nonapplicability determinations must not be required.**

**Response:**

- EPA generally agrees with this issue based on an initial review of 40 CFR 63.1(b)(3). EPA has discussed this issue with affected interests and plans to review and, perhaps, revise this requirement in light of recent discussions on potential to emit.

**Issue 17: Sources must be able to bypass for brief periods during malfunction while minimizing emissions in the extent feasible.**

**Response:**

- Whether a bypass action is permissible or a violation depends on the definition of malfunction and the factual circumstances of the action. The definition in the General Provisions governs although specific standards may supersede the General Provisions. If an operator experiences a

sudden, infrequent and not reasonably preventable event, then activities (such as bypassing control system) are permissible provided the operator takes action to minimize emissions. Generally, activities such as bypasses would be addressed in the startup, shutdown, and malfunction plan.

**Issue 18: Startup, shutdown, and malfunction plans are not applicable requirements that must be included in Title V operating permits.**

**Response:**

- EPA agrees that these plans do not need to be included in a Title V permit. The requirement to have the plans and the criteria governing the adequacy of the plans are referenced from the applicable requirements in the MACT General Provisions. The plans and actions required by the plans can be enforced independent of the Title V permit.

Modification Provisions [Section 112(g)]

**Issue 19: Section 112(g) must not become effective until 18 months after promulgation of the section 112(g) regulation or until the relevant State promulgates a rule to implement section 112(g), whichever is later.**

**Response:**

- EPA recognizes that states and industry need lead time to be able to implement section 112(g). The effective date of the section 112(g) program already has been delayed. EPA published an interpretive notice in February indicating that states and industry do not have to implement section 112(g) EPA issues a final rule. In developing the final 112(g) rule, EPA will consider the need for lead time for state development of section 112(g) programs. EPA is open to considering a reasonable time period after promulgation.

**Issue 20: Section 112(g) must not apply to stationary sources that are not included in a section 112(c) category of major sources.**

**Response:**

- EPA believes sections 112(c) and 112(g) are meant to apply broadly to all major sources of toxic air emissions. All categories that contain major sources are meant to be listed on the source category list. EPA recognizes the need to amend the list if it finds sources that are not in listed categories. In the interim, section 112(g) ensures control of toxic emissions from constructed, reconstructed, and modified major sources in the category. The fact that EPA

has inadvertently overlooked a source category should not mean that citizens lose the protection from toxic emissions that is provided by section 112(g).

**Issue 21: Research and development facilities should be exempt from section 112(g).**

**Response:**

- EPA received many comments expressing this concern during the public comment period. EPA is working on alternative approaches to exempting research and development facilities in the final rule.

**Issue 22: Broad and self-implementing exclusions must be provided to effectuate Congressional intent that only significant changes should trigger the application of existing source MACT. An exclusion for operations that the major source is designed to accommodate is essential to the workability of section 112. Sources are "designed to accommodate" any activity that is permissible under the source's design specifications or Title V operating permit application or permit.**

**Response:**

- The "designed to accommodate" language in the section 112(g) proposed rule was the result of intensive collaborative thinking among EPA staff and the Clean Air Act Advisory Committee. This issue also received voluminous comment during the public comment period. EPA is considering those comments as the final rule is developed.

- EPA does not believe, however, that it is appropriate to automatically exempt those changes that are represented only in a permit application, but not in an approved permit which has not been reviewed by the state or EPA.

**Issue 23: Reasonable emission estimation techniques must be adopted that realistically assess whether a proposed change will cause an emissions increase.**

**Response:**

- EPA understands the concern that it or a permitting authority could second-guess the methodology used in a de minimis determination after the fact, and possibly then bring enforcement action. EPA intends to address this concern in the final rule more directly than was done at proposal. EPA is looking for a way for sources to have more certainty that their emission estimates will be acceptable.

**Issue 24: De minimis emission levels must be established at 10 tons per year unless it is demonstrated that a lower level is necessary to protect human health or the environment. Any de minimis level must be measurable..**

**Response:**

- At proposal, many de minimis levels were set at 10 tons. Pollutants of relatively higher toxicity were given lower de minimis values based upon greater hazard. EPA is carefully considering comments received on this issue, including the concern that emissions be measurable, as stated above.

- In order to address the concern that small changes not overwhelm the system, EPA has provided numerous other exclusions, such as those for raw materials switches ("operations the major source is designed to accommodate") and those for production rate increases and routine maintenance, repair, and replacement.

**Issue 25: A simple, streamlined offset procedure is required under section 112(g)(1). Sources only need to submit an "offset showing" - preapproval is not required. Sources must be able to claim offset credits for reductions taken under other programs and sources must be able to take credit for shutdowns and curtailments.**

**Response:**

- Rather than require preconstruction review of offsets, as is required for case-by-case MACT determinations, the proposal only requires pre-operation review of offsets. EPA did not intend that this review be onerous. However in the final rule, EPA intends to address the concern that the offset procedures be simpler and more straightforward.

- As stated above, EPA is considering adopting a broad definition of major source that provides maximum flexibility for offsets. Should EPA do so, the definition would be linked to an approach that allows only those offsets which provide additional emission reductions.

**Issue 26: Modified major sources must have three years after MACT is determined to achieve compliance.**

**Response:**

- The proposed rule grants the permitting agency/authority to determine the time need to comply on a case-by-case basis. The permitting authority has the discretion to allow up to 3 years for compliance. Common sense would suggest that there are many MACT emission limitation measures, such as source

reduction projects, that may not require 3 years for compliance.

- The new source review program, for example, provides no such lead time for compliance. MACT standards under section 112(d) require different compliance periods, up to three years maximum, on a source category by source category basis. Therefore, EPA believes it is reasonable to grant the permitting authority discretion to use common sense in making case-by-case compliance decisions -- just as they can approve MACT determinations on a case-by-case basis.

**Issue 27: EPA has no authority to veto section 112(g) determinations made by States that have received section 112 delegation.**

**Response:**

- The supplemental title V proposal contains a list of more environmentally significant permit revisions including section 112(g) determinations for which EPA will require an opportunity to review and object to the revision if appropriate. This does not mean that EPA intends to veto section 112(g) determinations; but rather is retaining the right to do so.

- It is to the source's advantage to provide an EPA veto opportunity upfront when making a section 112(g) determination. This is because the title V operating permit process provides for EPA veto opportunity when new requirements are entered into the permit. If that opportunity has been provided, then the source can more confidently incorporate 112(g) requirements into its permit. EPA is also considering ways to reduce the administrative burden associated with such permit changes.

**Issue 28: Case-by-case MACT determinations must be streamlined, be based on information reasonably available to sources, and allow the use of MACT for similar sources.**

**Response:**

- EPA agrees that case-by-case MACT determinations should be practical and based on reasonably available information. EPA is considering comments on its case-by-case MACT guidance and will address this issue in the final rule.

Section 112(j)

Issues 29 and 30:

> Applications for section 112(j) limitations are due 12 months after the section 112(j) deadline (i.e., 30 months after the section 112(e) scheduled promulgation date). Source category applicability must be defined before the section 112(j) deadline so that sources have notice that section 112(j) applies.

Response:

- These issues are part of the ongoing litigation on the section 112(j) rule. EPA does need to understand the issue better and will address it in the context of the litigation.
- In the final section 112(j) rule, EPA committed to sharing information with sources as the section 112(j) deadline approaches and information about a source category has been gathered, or EPA has made a presumptive MACT determination. EPA intends to work with stakeholders should section 112(j) ever become a reality for a source category.

# EPA'S RESPONSE TO ISSUES RAISED BY INDUSTRY ON CLEAN AIR ACT IMPLEMENTATION REFORM

## Enhanced Monitoring

**Issue 1:**

- EPA's proposed "enhanced monitoring" ("EM") regulations have a number of serious flaws that have not been adequately addressed by the Agency.
  - The proposed program focuses improperly on monitoring to detect small changes in emissions, which may be the result of the normal variability associated with the underlying process, emission control technology, and analytical methods, rather than on monitoring to detect large, and environmentally significant, excess emissions incidents.
  - The proposed program, which requires development of complicated and controversial new monitoring requirements on a case-by-case basis through the Title V permitting process, would impose huge burdens on industry and the state; would "gridlock" the permitting process; and would inevitably lead to the imposition of inconsistent requirements on similar sources.
  - The proposed program would impose enormous compliance costs on industry, that easily could exceed $1 billion/year, with little, if any, environmental benefit.
  - Despite Agency claims to the contrary, the proposed program would increase the stringency of many emission standards, contrary to law.
  - The proposed program would severely restrict emissions trading, averaging and netting, thereby compromising use of market-based incentives -- a critical tool for implementation of the 1990 amendments.
  - Monitoring approaches that would satisfy the criteria in the proposed rule are simply not available for some source categories (e.g., fugitive emission sources and batch processes). For other source categories (e.g., those subject to mass limits), companies would be required to use undemonstrated techniques.
- EPA should seek an extension of the deadline to engage in a meaningful stakeholder dialogue to develop a reasonable EM program. In order to allow time for this dialogue to unfold, the Agency must seek a 12 month extension of the April 30, 1995 court-ordered deadline.

- EPA should propose a reasonable EM program with the following elements:
  - The Agency should develop an EM program that uses legislative rulemakings - not the Title V permit program - as the process for determining EM for any emission standard that was originally established through rulemaking.
  - At most, the Agency should use the current EM rulemaking to articulate criteria for identifying emission standards with insufficient monitoring, and criteria for enhancing them to the point of sufficiency. The Agency could also use the current rulemaking to establish a schedule with deadlines for completing a review of existing standards, under an appropriate prioritization scheme.
  - The criteria articulated in this rulemaking should:
    - Establish as a goal selection of monitoring techniques that will provide data sufficient to prevent and detect large excess emission incidents, which have significant environmental impact, rather than monitoring techniques to detect small changes in emissions.
    - Include adequate safeguards to address costs and cost-effectiveness (1) by clearly providing for selection of the least-cost method that satisfies the criteria, and (2) by providing for rejection of any monitoring methods as EM that result in unreasonable costs.
    - Require use only of demonstrated monitoring techniques.
    - Provide clear and unequivocal safeguards to assure that changes in monitoring methods will not change the stringency of the standard. These safeguards would include requiring consideration of the following: (1) the need for appropriate averaging times to take into account variability in emissions; (2) the need for a change in the numerical expression of standards; and (3) the need to establish start-up/shutdown/malfunction exemptions.

- Once the criteria and schedule are established, EPA (for Federal standards) and the states (for state standards) would apply the criteria, and identify insufficient monitoring compliance methods. These standards would be candidates for rulemaking proceedings to enhance them.

**Response:**

- EPA agrees and has withdrawn from the Office of Management and Budget its proposed rule for enhanced monitoring. It has received a 60-day extension of the court-ordered deadline and intends to seek a further extension of at least a year after it holds a meeting with interested stakeholders. EPA plans to issue a Federal Register notice that announces the process it intends to follow in reproposing and issuing the final enhanced monitoring rule. EPA has withdrawn the enhanced monitoring protocols from the Technology Transfer Network (TTN) computer bulletin board and in the upcoming Federal Register notice will clarify that those protocols are no longer applicable.

- On May 31, 1995, EPA is meeting with representatives of industry, states and environmental groups to discuss further options for developing a new flexible approach for the enhanced monitoring rule.

- EPA hopes to develop an approach that will build on the requirements of existing rules and ensure that the environmental result expected from those rules are being achieved.

- One approach EPA is considering would focus on improving current pollution control equipment operating and maintenance monitoring requirements. An enhanced operating and maintenance monitoring protocol would require that a source owner provide documentation that it has operated and maintained a pollution control device or process operation in accordance with established, reliable operating and maintenance practices and that any necessary corrective actions have been implemented to ensure that emissions have been reduced. At the May 31 stakeholders meeting, EPA anticipates discussing this option as well as any other options or issues raised by stakeholders.

# EPA'S RESPONSE TO ISSUES RAISED BY INDUSTRY ON CLEAN AIR ACT IMPLEMENTATION REFORM

## Potential to Emit

Issue 1: Federal Enforceability: EPA should eliminate "Federal enforceability" in determining a source's potential to emit because:

-- The requirement has no legal basis.

-- The requirement needlessly forces sources with real-world maximum emissions potential below the statutory thresholds to comply with the burdensome requirements designed for "major" sources or to attempt to render existing controls and limitations "federally enforceable" by entering a tedious and costly -- and often unavailable -- federal documentation process. Moreover, existing sources face lengthy and costly delays when making even routine changes because of the need to create or revise "federally enforceable" restrictions.

-- The requirement forces states to expend significant time and resources to develop and administer processes for non-major sources to render controls and limitations "federally enforceable."

-- The requirement is unnecessary for effective enforcement. States and localities can enforce restrictions imposed by their laws and permits. Moreover, if a source operates above a statutory threshold without complying with applicable "major" source requirements, EPA and citizens have enforcement tools available.

Response:

- EPA is currently in litigation on the federal enforceability issue. In that litigation EPA has taken the position that it has legal authority to require federal enforceability.

- Equally important, EPA believes that the provision for federal enforceability makes sense. For sources that have the capability to emit major amounts, and avoid federal permits and federal emission reduction requirements by restricting their operations, EPA believes it is reasonable to ensure adherence to those restrictions by providing that they be enforceable by the federal government and citizens. The requirement for federal enforceability increases the credibility of the system by giving EPA the opportunity to address patterns of noncompliance. It also provides citizens an opportunity to ensure that sources in their

communities are not inappropriately avoiding requirements that, if complied with, would decrease exposures to hazardous pollutants.

- There are many ways to ensure that the creation of federally enforceable restrictions does not create a burden on industry. In a January 25, 1995 guidance memorandum, EPA identified approaches such as general rules and general permits that allow restrictions to be created for large numbers of sources without having to resort to individual permits. To ensure that states have sufficient time to implement any needed approaches, EPA has provided a two-year transition period. Under this transition policy, sources emitting less than 50 percent of the major source threshold would not be required to get permits but must only keep records reflecting their actual emissions. Sources emitting more than 50 percent of the major source threshold, and for which there are state permits limiting their emissions to less than major amounts, can submit a certification accepting the state limits as federally enforceable.

**Issue 2: The transition policy announced by EPA on January 25 is not an adequate response to the public and private burdens imposed by the "federal enforceability" requirement.**

**Response:**

- EPA believes that the transition policy eliminates any short-term administrative burden that would be imposed by the requirement. The policy does require sources emitting less than the 50 percent threshold to keep appropriate records of their operations sufficient to demonstrate that the 50 percent level is being adhered to. In most cases, such records will be related to the amount of materials used or processed and should not require any new recordkeeping activities. EPA does not intend to second-guess the actual emissions findings of sources and states. Sources that are very close to the major source threshold must merely certify that they have a permit that effectively restricts emissions and accept the limits in the permit as federally enforceable.

- EPA believes that the various approaches to eliminating the burden over the longer term (limitations by rule, general permits, clarifications regarding realistic worst-case activities) should be in place by the end of the transition period. EPA is open to reviewing this assessment as the end of this 2-year period approaches. EPA is also giving serious consideration to permanently extending the exemption for sources emitting less than the 50 percent cutoff.

**Issue 3:** **EPA should develop general principles for realistic determinations of "maximum design capacity" which recognize inherent physical, operational, and other restrictions.**

**Response:**

- EPA agrees that realistic assumptions of this nature need to be made and has initiated an effort to evaluate several categories of small sources (grain elevators, gas stations, automobile body shops, and emergency generators). EPA plans to follow up this effort with more general guidance on principles that can be used to evaluate additional categories.

**Issue 4:** **EPA should allow sources to rely on objectively reasonable estimates of potential to emit, and issue presumptively acceptable methods for estimating potential emissions.**

**Response:**

- EPA agrees that sources should use objective and reasonable methods, and that a general hierarchy for these methods has been established. Source-specific testing is generally preferred. Where no source-specific information is available or feasible to obtain, tests on similar facilities or emission factors can be used.

**Issue 5:** **EPA should adopt an enforcement policy which does not penalize a source when post hoc application of an updated estimation method results in a determination that the source's potential to emit, as calculated today, would exceed an applicable threshold, where reliance on the prior estimation method was, at the time, objectively reasonable.**

**Response:**

(Refer to Issue 2 in the Operating Permit Program section for response to this issue.)

# EPA'S RESPONSE TO ISSUES RAISED BY INDUSTRY ON CLEAN AIR ACT IMPLEMENTATION REFORM

## Fugitive Emissions

**Issue 1: EPA must apply the 302(j) rulemaking requirement across the board to all Clean Air Act programs that apply to major sources, including the section 112, title V, PSD, and nonattainment NSR.**

**Response:**

- EPA continues to conduct section 302(j) rulemakings where required under the Act, but EPA believes section 112 does not require such a rulemaking. A court decision on this legal issue should be issued shortly. EPA is interested in hearing specific concerns about the technical feasibility of measuring fugitive HAP emissions, and in providing guidance in this area.

**Issue 2: In a section 302(j) rulemaking, EPA must demonstrate that the benefits of regulating a source of fugitive emissions would outweigh the costs of such regulation.**

**Response:**

- EPA historically has considered economic feasibility in rulemakings conducted under section 302(j).

**Issue 3: EPA should issue guidance regarding the proper treatment of co-located sources of fugitive emissions that have not been listed pursuant to section 302(j). EPA committed to issue this guidance promptly in a February 10, 1995 motion to the D.C. Circuit.**

**Response:**

- EPA has committed to issue this guidance in May 1995.

Attendees at Meeting with
Assistant Administrator Mary Nichols
April 12, 1995

EPA:

1. Mary Nichols - OAR/IC
2. David Doniger - OAR/IC
3. Bill Tyndall - OAR/IC
4. Rob Brenner - OAR/IC
5. Nancy Sutley - OA
6. Alan Eckert - OGC
7. Michael Winer - OGC
8. Greg Foote - OGC
9. Lydia Wegman - OAQPS
10. Jeff Clark - OAQPS
11. John Seitz - OAQPS
12. Fred Dimmick - OAQPS
13. Mike Trutna - OAQPS
14. Tim Smith - OAQPS
15. Kathie Stein - OECA
16. Winston Smith - Region IV
17. Julie Domike - OECA
18. Jim Ketcham-Colwill

Industry Representatives:

1. Gena Ashe - AT&T
2. Robert D. Bessette - Council of Industrial Boiler Owners
3. Dorothy Bowers - Merck & Co.
4. Shannon Broome - GE
5. Bill Burkhart - The Procter & Gamble Company
6. Kevin Butt - Toyota, Mgr of Envt'l Affairs
7. Georgia Callahan - Texaco Inc.
8. Nancy Cookson - Chemical Manufacturers Association
9. Ted Cromwell - Chemical Manufacturers Association
10. John Dege - E.I. duPont de Nemours & Co., Inc.
11. Edan Dionne - IBM
12. Sherry Edwards - SOCMA
13. Michael Faulkner - Fluor Daniel
14. Joseph Flaherty - Kaiser Aluminum
15. David Friedland - Beveridge & Diamond
16. Barry Garelick - Solar Turbines, Inc.
17. Denise Grant - Chemical Manufacturers Association
18. Julia A. Hatcher - Latham & Watkins
19. Maureen Healey - The Society of the Plastics Industry, Inc
20. Patricia Hill - Georgia-Pacific Corporation
21. Joseph C. Hovious - Union Carbide
22. Mike Innerarity - Tenneco Gas
23. Ed Jaffee - Primary Glass Manufacturers Council
24. Douglas Kliever - Cleary, Gotlieb





**SCHEDULE KRM-D12**

25. Chuck Knauss - Swidler & Berlin
26. Karil Kochendorfer - American Textile Manufact. Institute
27. Theresa K. Larsen - National Association of Manufacturers
28. Bill Lewis - Morgan, Lewis & Bockius
29. A. Walt Long - Owens-Illinois
30. Ken Markowitz - Kilpatrick & Cody
31. Jack McClure - Shell Oil Company
32. Michael McCord - Morgan, Lewis & Bockius
33. John Medley - Mobil Oil Corporation
34. Tim Mohin - Intel Government Affairs
35. Jeffry C. Muffat - 3M
36. Henry Nickel - Hunton & Williams
37. Frank Partee - Ford Motor Co., Dearborn, MI
38. Paul Patlis - United Technologies Corporation
39. Bill Pedersen - Shaw, Pittman
40. Dick Penna - Van Ness Feldman
41. Richard C. Phelps - Eastman Chemical Company
42. Michael Pucci - AT&T
43. Patrick Rahrer - Hogan & Hartson
44. John E. Reese - American Petroleum Institute
45. Leslie Ritts - NEDA/CARP
46. Arline M. Seeger - Morgan, Lewis & Bockius
47. Eva Seydell - United Technologies Corporation
48. Quin Shea - National Mining Association
49. Ellen Siegler - American Petroleum Institute
50. Susan Smith - Owens-Illinois
51. Corey Snyder - The Procter & Gamble Company
52. Scott Styles - Air Products and Chemicals
53. Brian Taranto - Exxon Chemical
54. Dina Vizzaccarro - AAMA, Washington Office
55. Rasma I. Zvaners - Chemical Manufacturers Association
56.
57.
58.
59.

Attendees at Meeting with
Assistant Administrator Mary Nichols
April 12, 1995

Requests for Conference Call Hookup:

1. Mitch Baer - API
2. Vicki Arrovo Cochran - Kilpatrick & Cody
3. Eric Groten - Brown, McCarroll & Oaks Hartline
4. Eugene Praschan - AAMA (North Carolina)
5. Jackie Savage - Chrysler Corporation
6. Larry Slimak - AAMA, Detroit Office

WA01/213129.1



**SCHEDULE KRM-D12**

Bob Holden, Governor • Stephen M. Mahfood, Director
STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
www.dnr.state.mo.us

DEC 23 2003

Mr. Tad Johnsen
Power Production Superintendent
Columbia Municipal Power Plant
P.O. Box 6015
Columbia, MO 65205

RE: Applicability Determination Request - Project Number: 2003-11-040
Installation ID Number: 019-0002

Dear Mr. Johnsen:

Your request for a determination of permit need for the replacement of boiler tubes was reviewed by my staff. According to Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, **no construction permit is required** from the Missouri Air Pollution Control Program.

The City of Columbia, Missouri proposes to replace the boiler tubes on the back wall and in the lower part of the economizer of boiler no. 7. The boiler is coal-fired, capable of producing 240,000 pounds per hour of steam, and connected to a 22-megawatt steam turbine-generator. This procedure is necessary maintenance to the boiler to ensure the safety and operational effectiveness of the unit. The boiler capacity, fuel-input rate, heat rate, and efficiency will remain unchanged. Replacement of the boiler tubes is considered to be routine maintenance by the State of Missouri and is excluded from permitting per Missouri State Rule 10 CSR 10-6.061(3)(B)1.D.

The new tubes for this project are expected to cost $1.2 million dollars with an upper limit of $1.7 million dollars. The $1.7 million dollars represents approximately seven percent of the DOE derived costs. The actual expected expense ($1.2 million) compared to a more realistic boiler replacement cost of $50 million is approximately 2 ½ percent. Both the expected and conservative percentages are less than the 20 percent average Environmental Protection Agency (EPA) uses for criteria definition of maintenance activities.

The installation has also requested concurrence with the EPA's routine maintenance, repair and replacement (RMRR) guidance in regards to tube replacement. The State of Missouri has not adopted the guidance in to the State Implementation Plan at this time. Therefore, concurrence is unnecessary.

You are still obligated to meet all applicable air pollution control rules, Department of Natural Resources' rules, and any other applicable federal, state, or local agency regulations. Specifically, you should avoid violating 10 CSR 10-3.090, *Restriction of Emission of Odors*, 10 CSR 10-6.170, *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-3.030, *Open Burning Restriction*, and 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants.*



AM-00025849-MDNR

**SCHEDULE KRM-D13**

A copy of this letter should be kept with the unit and be made available to Department of Natural Resources' personnel upon verbal request.

If you have any questions regarding this determination, please contact Lina Klein at the Air Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102 or you may phone (573) 751-4817. Thank you for your time and cooperation.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kyra L Moore

Kyra L. Moore
Interim New Source Review Unit Chief

KLM:LK l

c: Northeast Regional Office
PAMS File 2003-11-040

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

JUL 1 7 2009

Ms. Dayla Bishop Schwartz
Deputy City Counselor
City of Independence
111 East Maple, P.O. Box 1019
Independence, MO 64051-0519

RE: New Source Review Applicability Determination –
Project Number: 2009-04-050
Installation ID: 047-0096

Dear Ms. Schwartz:

Your notification for replacement of a portion of the boiler tubes and all of the superheater pendant tubes on Independence Power & Light's (IPL's) Missouri City Unit 2 was reviewed by my staff. According to Missouri State Rule 10 CSR 10-6.060, *Construction Permit Required*, **no construction permit is required** from the Missouri Air Pollution Control Program.

In a letter dated April 9, 2009, IPL notified the Air Pollution Control Program that they are intending to remove portions of the boiler tubes and all of the superheater pendant tubes in the Missouri City Unit 2 (MC2). A boiler tube wall thickness survey indicated that areas of both the front and rear boiler wall tubes and the superheater pendants have reached minimum wall thickness and should be replaced. The replacements in the existing boiler tubes and superheater pendant tubes will be replaced with like-kind tubes and pendant assemblies as available. No modification to the design or material will be implemented. However, corrective technology / engineering and design or material changes will be incorporated as a result of market availability. The boiler wall tubes that will be installed will be thicker based on availability. No modification to the operating design, layout, performance or process is planned. IPL forecasts that usage of MC2 will decrease in years beginning in 2009. Thus, IPL is not projecting any increase in capability or operating hours due to the project. IPL is performing preventative maintenance to ensure that operations during the MC2 operating season can be maintained. The following describes the details of the project:

Table 1: Replacement Tube Project

| Tube Location | Original Tube O.D. | Replacement Tube O.D. | Original Tube Wall Thickness | Replacement Tube Wall Thickness | Original Tube Material | Replacement Tube Material |
|---|---|---|---|---|---|---|
| Front Boiler Wall | 3.00" | 3.00" | 0.180MWT | 0.203MWT | SA 210 A1 | SA 210 A1 |
| Rear Boiler Wall | 3.00" | 3.00" | 0.180MWT | 0.203MWT | SA 210 A1 | SA 210 A1 |
| Primary Superheater | 2.00" | 2.00" | 0.0165MWT | 0.0165MWT | SA 213-T22 | SA 213-T22 |
| Secondary Superheater | 2.00" | 2.00" | 0.0165MWT | 0.0165MWT | SA 213-T22 SA 210 A1 | SA 213-T22 SA 210 A1 |

The Air Pollution Control Program concurs that the replacement of the boiler tubes and superheater pendant tubes appear to be routine repair. However, since there is no clear definition or policy on what should be consider routine maintenance and repair, the Program is also relying on "projected actuals to actuals" information supplied by IPL showing that this project is not a major modification.

IPL has performed an emission analysis based on the projected actuals to actuals test as outlined in 40 CFR 52.21(a)(2)(iv)(c). The baseline actual emissions (BAE) were calculated using coal heat input, coal burned, coal sulfur content and AP-42 emission factors. Project actual emissions (PAE) associated with the project were calculated based on forecasted energy production, annual fuel use and emission levels accounting for the project annual utilization of MC2 through the next 5 year period. IPL selected the highest BAE found for each pollutant in the 5 year period immediately preceding construction of this project which is the same 24-month period of July 2005 through June 2007 for each pollutant. (The project is anticipated to begin in October of 2009.) As summarized in the table below, the calculated project emissions change is a decrease for each New Source Review (NSR) pollutant. Thus, there will not be a significant net emission increase as a result of the project.

Table 2: Future Actuals to Actuals Summary

| NSR Pollutant | PAE (tpy)* | Selected BAE (tpy) | Change (tpy) | PSD Significant Level (tpy) | Major Modification? (Yes/No) |
|---|---|---|---|---|---|
| NOx | 420.3 | 514.9 | -94.6 | 40.0 | No |
| VOC | 0.5 | 0.7 | -0.2 | 40.0 | No |
| $PM_{10}$ | 16.0 | 21.9 | -5.9 | 15.0 | No |
| PM | 42.1 | 57.6 | -15.5 | 25.0 | No |
| $SO_2$ | 2,032.3 | 2,209.7 | -177.4 | 40.0 | No |
| CO | 6.8 | 8.3 | -1.5 | 100.0 | No |

*The PAE emissions are the highest projected for any one of the succeeding five years.

Since an emissions increase is not expected from the replacement of the boiler tubes and all of the superheater pendant tubes at MC2, the project is not considered a major modification and no permit is required. However, in order to demonstrate that the actual-to-projected actual applicability tests will result in no net increase, IPL shall maintain all records of the baseline and annual emissions information as outlined in 40 CFR 52.21. IPL shall maintain these records for 5 years after the modification outlined in this project is completed.

Additionally, staff requested IPL to evaluate whether the planned replacement of the boiler tubes constituted reconstruction of the boiler with regards to the New Source Performance Standards (NSPS). The MC2 unit was put into service in 1954. Since the boiler was constructed prior to September 18, 1978, it is not currently subject to the NSPS, Subpart Da, *Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978.* For the unit to be considered reconstructed, the replacement of the components of the existing facility must be to the extent that the fixed capital costs of the new components will exceed 50 percent of the fixed capital cost that would have been required to construct a comparable entirely new facility. According to additional information submitted by IPL, the replacement cost of the boiler tube project is estimated to be $3,553,000 and complete replacement of MC2 is estimated to be $22, 273,143. The boiler tube replacement project makes up less than 20% of the total replacement costs. Therefore, the boiler tube replacement does not constitute reconstruction and the boiler remains not subject to the NSPS.

Lastly, in the course of the technical review, staff noticed discrepancies between submitted data from the spreadsheets included in the letter dated April 9, 2009, and the Emission Inventory Questionnaire (EIQ) submittals. The discrepancies are due to differences in the amounts of coal burned in the MC2 unit as reported in the spreadsheets and the EIQs. In addition, IPL did not report condensable emissions on their 2008 EIQ. Since IPL is projecting a significant decrease in the future operational hours of MC2, correction to the baseline actuals will only lead to a different negative emission increase and inclusion of condensable $PM_{10}$ emissions will also result in a negative increase. Therefore, we are moving forward with our determination that this project is not a major modification. However, IPL shall submit information to the Emission Inventory Questionnaire unit reconciling differences in the total coal burned in MC2 as well as submit the required condensable emission data for the boilers for the 2008 EIQ.

You are still obligated to meet all applicable air pollution control rules, Department of Natural Resources' rules, or any other applicable federal, state, or local agency

regulations. Specifically, you should avoid violating 10 CSR 10-6.170, *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin;* 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants;* 10-6.045, *Open Burning Restriction*; and 10 CSR 10-2.070, *Restriction of Emission of Odors.*

A copy of this letter should be kept with the unit and be made available to Department of Natural Resources' personnel upon verbal request.

If you have any questions regarding this determination, please do not hesitate to contact Susan Heckenkamp at the Departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kyra L. Moore
Permits Section Chief

KLM:shk

c: Ms. Wendy Vit, PE, Emissions Inventory Unit Chief
Kansas City Regional Office
PAMS File: 2009-04-050

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF MISSOURI

AMEREN MISSOURI,

Plaintiff,

vs. NO. 4:11-CV-2051 AGF

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Defendant.

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

PRESENT: The Honorable Audrey G. Fleissig, Presiding

ATTORNEYS FOR PLAINTIFF: Neal H. Weinfield, James J. Virtel

ATTORNEYS FOR DEFENDANT: Andrew J. Lay, Andrew Hansen

Motion Hearing

July 26, 2010

TERI HANOLD HOPWOOD, RMR, CRR
Thomas F. Eagleton Courthouse
111 South Tenth Street
St. Louis, Missouri 63102

THE COURT: Good morning. We are here in the matter of Ameren Missouri versus United States Environmental Protection Agency, case number 4:11-CV-2051 AGF, and the plaintiff is represented by Mr. Neal Weinfield?

MR. WEINFIELD: Yes, Your Honor.

THE COURT: Is it Weinfield?

MR. WEINFIELD: Weinfield, Your Honor.

THE COURT: Thank you, sir. And James Virtel?

MR. VIRTEL: Yes, Your Honor.

THE COURT: And the defendant is represented by Andrew Lay, and do you have someone else with you?

MR. LAY: Yes, Your Honor, sitting with me at counsel table in case I need help is Andrew Hansen from the Department of Justice in Washington D.C.

THE COURT: Okay. All right. And this case as you all know involves a request for documents under FOIA, and the parties have filed cross motions for summary judgment, and have fully briefed the matter. I have reviewed those briefs, I want to let you know that before we get started, and now we are here, I believe, at plaintiff's request for oral argument on the cross motions for summary judgment.

MR. WEINFIELD: Yes, Your Honor.

THE COURT: Now, before we get going on your arguments, I would like each of the parties to take just a couple of minutes and educate me on what is the purpose and

effect of a Notice of Violation because I'm not sure that I fully understand that, and I'm going to start with the EPA, and then I'm going to hear from the plaintiff.

MR. LAY: Your Honor, thank you for the opportunity to argue this morning. From the Government's perspective, the purpose of what a Notice of Violation is has been already resolved by Court cases. I'm looking at my notes for the actual cite. The Union Electric case, 593 F2d 89, points out that a Notice of Violation is not a final agency action. There is another case cited in the EPA's briefs, the Royster-Clark case, 391 F.Supp 2d 21, that discusses that no legal consequences flow from the issuance of a Notice of Violation.

THE COURT: Now you've told me what it's not, and I'd like you to tell me what it is.

MR. LAY: A Notice of Violation, Your Honor, is something that puts an emitter of potential pollution on notice that they may have Clean Air Act liability. It is not a final agency action that resolves for all time the agency's ultimate finding that the Clean Air Act has been violated. Instead, it is the beginning of the process. In plain language basically it says, "Watch out, wake up, there may be problems with your emissions."

THE COURT: From the EPA's perspective, the purpose of the Notice of Violation is simply to put the prospective defendant on notice?

MR. LAY: Yes, enable the potential defendant to take action.

THE COURT: Does the EPA then move forward with enforcement proceedings on some of those Notices of Violation and not others?

MR. LAY: That's exactly what happens.

THE COURT: When a Notice of Violation is filed, are there further proceedings between the parties? In other words, is there the ability of a regulated entity to dispute that, come forward, deal with that in any administrative sense?

MR. LAY: Typically at the same time that a Notice of Violation is issued, EPA also makes requests for documents and information with no pending lawsuit to the potential violator of the Clean Air Act, and there is generally a dialogue going on over not just what would be produced but what the significance of it is, and sometimes that dialogue leads to no Clean Air Act suit, and sometimes it leads to a referral to DOJ and a filing of a Clean Air Act suit.

You can see that process here because a number of violations of were issued for a number of plants, but the Clean Air Act case is a much narrower subset of those NOV's.

THE COURT: Right. If I understand Mr. Smith's affidavit correctly, the prospect of further litigation as a result of some of those NOV's was still there.

MR. LAY: True.

THE COURT: Let me just hear from the plaintiff with respect to that same issue. What is your understanding of the purpose and effect of an NOV?

MR. WEINFIELD: Good morning, Your Honor. Neal Weinfield for Ameren Missouri. Your Honor, our understanding is different. What we heard today was different from what I've heard from 25 years of practice. A Notice of Violation is a numbered document that looks a lot like a complaint filed before this Court. It's got findings of fact, it's got conclusions of law, it's got allegations, and it also sets forth potential penalties that can be secured.

Typically, in most cases, the Notice of Violation is the end of the road for the parties. Sometimes cases are referred, but usually negotiations revolve around the NOV and its allegations.

That is what parties usually see. They are issued by EPA in every branch, air, water, land. Penalties are often issued under them.

THE COURT: Penalties issued under them because the parties agreed to those penalties as a resolution of the Notice of Violation, or because some form of administrative proceedings permit the EPA unilaterally to levy penalties?

MR. WEINFIELD: That's a good question, Your Honor. The Notice of Violation the way it's docketed does permit the parties to take the matter through the administrative

proceedings before the agency. Typically, the parties negotiate a result, but not always. There is an EPA docket where they list the various penalties that have been assessed by the parties.

THE COURT: And did the parties go through administrative proceedings in connection with this matter?

MR. WEINFIELD: The Notices of Violation were issued, there were no hearing-like proceedings in this matter.

THE COURT: Because why?

MR. WEINFIELD: I guess the EPA was apparently satisfied, maybe, with the Notices of Violation, and decided to refer some up to the Judicial Circuit, perhaps because the EPA hasn't decided how to proceed with the other allegations in the NOV.

THE COURT: Could Ameren have requested administrative hearing-like proceedings with respect to the NOV's? Please understand, folks, I'm not suggesting that any of what I'm asking you is necessarily pertinent. I just want to understand the lay of the land a little bit better before we launch into the issues that are specifically related to FOIA.

MR. WEINFIELD: Ameren did not request --

THE COURT: Could Ameren have requested that?

MR. WEINFIELD: I guess so. If the parties had reached an impasse, typically it's the agency that refers internally to itself, actually, to an ALJ to resolve the

proceedings. I've never had a case where a client has said, "I want to go the before the ALJ." The parties are very pleased to get it resolved. I guess Ameren could have, if it felt it was necessary, but if EPA hadn't pursued, I don't know why it would.

THE COURT: So on a particular Notice of Violation, we have several options. One is that the EPA is going to refer that Notice of Violation to DOJ, or DOJ is going to want to pursue it, and we will have litigation like is currently pending before Judge Sippel.

MR. WEINFIELD: Correct.

THE COURT: Another option is that a Notice of Violation will be issued, and either through negotiations or through remediation that is taken by the regulated entity, that there is nothing further that happens with respect to the Notice of Violation.

MR. WEINFIELD: Another possibility.

THE COURT: And another possibility is that either the agency itself or the regulated entity could want further administrative proceedings with respect to the Notice of Violation which could have the effect of narrowing, changing whatever the findings are with respect to that Notice of Violation.

MR. WEINFIELD: Correct, that's the third angle.

THE COURT: All right, am I missing an option?

MR. WEINFIELD: Just resolution is part of any of those.

THE COURT: A negotiated resolution through mediation or through negotiation.

MR. WEINFIELD: Yes.

THE COURT: All right. Does the EPA have anything further that it wants to add on just this one narrow issue?

MR. LAY: One minor point on the Notice of Violation, if we choose the administrative option, only EPA can request the administrative option. The potential power plant emitter cannot trigger the administrative option.

THE COURT: And let me pull you back up here. What's the purpose of going through the administrative action?

MR. LAY: You end up before an Administrative Law Judge that creates a record, and my guess is, and let me make sure, you could ultimately get judicial review on the administrative record.

MR. HANSEN: No, I can correct that.

THE COURT: Could you obtain penalties then as a result of that administrative action?

MR. HANSEN: Yes.

THE COURT: So with just the issuance of the violation, there would not be penalties that would result from the issuance of a Notice of Violation.

MR. LAY: You would have to go to the administrative

law --

THE COURT: If in fact EPA is going to seek penalties, a different type of proceeding than currently exists before an enforcement proceeding before Judge Sippel, you could take it through the administrative process to attempt to have penalties levied. Okay.

MR. LAY: Stated another way, you could get penalties from either an administrative law judge or an Article III judge handling a Clean Air Act case.

THE COURT: But it is your understanding that a regulated entity like Ameren could not have elected to go through the administrative process rather than either have the NOV sit out there, or have an enforcement proceeding brought.

MR. LAY: That's right.

THE COURT: But the regulated entity and the EPA would typically engage in discussions with respect to the NOV to see if a negotiated resolution of that NOV could be achieved, is that fair?

MR. LAY: Exactly.

THE COURT: If a negotiated resolution is not achieved, then the NOV either sits out there, or some form of enforcement proceeding or administrative proceeding would be brought.

MR. LAY: Correct.

THE COURT: Okay. All right. Thanks. Now, I'm

going to get to the issues that you all came here prepared to argue, and I'm going to begin with the plaintiff. As I stated, you all should assume I have read the briefs --

MR. WEINFIELD: All right.

THE COURT: -- because I have read the briefs.

MR. WEINFIELD: Good morning, Your Honor.

THE COURT: Good morning.

MR. WEINFIELD: Your Honor, what Ameren is trying to obtain in this case is the information critical to defending itself in those very -- those NOV's that you discussed just a few moments ago. Ameren has brought a motion for summary judgment under the Freedom of Information Act to provide the Court with several alternatives and rulings to address the request for information that has been sought. We offer the Court the alternative of simply looking at the documents in camera in their unredacted form in deciding whether the information in those comports with the representations and beliefs set forth in the motions; the Court can order EPA to issue a Vaughn log which describes the information in more detail, which will allow more briefing by the parties; and to offer limited discovery to test the veracity of the statement of the affidavits put forward by the Government.

The information that Ameren is seeking is plainly showed on the exhibit that I've presented for Your Honor's review. It is factual information. It is numeric information. It is

compiled by the agency pursuant to statute. It has been placed squarely at issue in the three NOV's that are covered before this Court.

Ameren has made efforts and taken pains to reduce the number of documents that are in dispute currently in this litigation. Out of the hundreds of documents that were sought, Ameren is seeking only 78, and those look like the example that I've put up in front of you which is the redacted documents. This is one page that you see.

THE COURT: All right.

MR. WEINFIELD: And this is the second page. This is just one example of the 78 documents, and you can see this page is completely --

THE COURT: For the record, tell us which exhibit you are displaying. It's on the top of there. So it's Document 24-15.

MR. WEINFIELD: That's correct, and the filing number is listed on it as well.

THE COURT: And the second page, I'm sorry, I wasn't focusing on it, that's totally blank?

MR. WEINFIELD: That's the second page of this particular document.

This case arises -- this FOIA action deals with these NOV's, and it arises out of the Clean Air Act's new source review requirements. The Clean Air Act's new source review

requirements provide -- they are very complex regulations, Your Honor, but provide in essence that if a company installs a piece of equipment or modifies a piece of equipment, and the resultant emissions exceed certain statutory thresholds, usually set forth in tons, if you exceed 40 new tons of a particular chemical, or 100 tons, that the company would be compelled to either obtain or modify a permit, or perhaps even install very expensive pollution control equipment.

The question is whether the project constitutes a major modification. Those are the buzz terms. There are two components to this analysis. The first component is whether the plant, the piece of equipment caused actual emissions to exceed a particular threshold, and that can occur -- there are a number of issues and sub-issues that play into that, but that's, I'd say, half the equation, did the replacement of Equipment A yield certain emissions, do certain emissions increase. As you can imagine, there is a lot of back and forth on causality, whether the equipment caused the emission or some other piece of equipment caused it.

The agency has -- do you want me to stop there?

THE COURT: No.

MR. WEINFIELD: The agency has in this exhibit disclosed the actual emissions increases. That's the first piece of the puzzle. The second piece of the puzzle regards something called projected emissions.

THE COURT: Now I do want to interrupt you. Do you have any reason to believe based upon the documentation that you received that you -- that there are -- there is data reflecting actual admissions that was not disclosed to you?

MR. WEINFIELD: No, Your Honor.

THE COURT: Okay.

MR. WEINFIELD: In fact, the information that EPA sent to us is exactly the same information that Ameren sent to the EPA, they just kicked it back.

THE COURT: It may be in different chart form.

MR. WEINFIELD: Yes, Your Honor. The second piece of the puzzle is whether Ameren should have considered whether its piece of equipment would have caused emissions. These are called projected emissions.

Ameren did not submit to the agency projected emissions calculations. The agency developed these projected emissions calculations, and that is what they are refusing to provide to us. You can see on the table, it says, "Projected Actual Emissions," and then the table for Projected Actual Emissions looks pretty similar to the table above it, as best we can tell. It looks tabular in nature. There does not appear to be any attorney's notes or attorney's instructions. It looks to be factual. We can't tell because it's been redacted, but we believe it to be factual based on its appearance and based on the fact that projected actual emissions increases are

inherently factual in nature.

As you know, there are three Notices of Violation. They cover 78 projects and four plants. These Notices of Violation --

THE COURT: By projects, you mean some sort of modification or new equipment or something?

MR. WEINFIELD: I would rather say something in open court, but yes, something, a type of equipment.

THE COURT: Some form of modification or change or something.

MR. WEINFIELD: Yes, equipment installation or change. The Notices of Violation contained very little if any facts, although they should have, and very little detail. They didn't specify the amount of emissions. The only way for Ameren to really defend ourselves on these Notices of Violation is to obtain the information that is requested here.

FOIA is an excellent vehicle to obtain this information. We are not before a Court right now on most of these Notices of Violation. It is routine. EPA issues Notices of Violation all the time. The only way to get this information is through the Freedom of Information Act. In fact, EPA's own regulations, 40 CFR Section 2, EPA provides for the Freedom of Information Act as the vehicle to obtain this information.

THE COURT: In this case, did Ameren and the EPA engage in this attempt to resolve the Notices of Violation?

Were there discussions and negotiations?

MR. WEINFIELD: Yes, Your Honor. There were discussions and negotiations. They have not been resolved.

THE COURT: Are those negotiations still ongoing, or did they come to an end?

MR. WEINFIELD: They have not come to an end. The NOV's sit out there waiting someday to come back to life, or who knows, or be referred up. We just don't know. They do hang there and sitting on company disclosures.

THE COURT: All right.

MR. WEINFIELD: Under the Freedom of Information Act, Your Honor, the presumption is in favor of disclosure. The agency bears the burden of having to establish that the requested information falls within certain narrowly prescribed exceptions. We take these one at a time.

The first exception that EPA has raised is something called the law enforcement privilege. In essence, the law enforcement privilege provides that an agency, typically somebody like the FBI, or the SEC in a very vigorous enforcement matter involving current witnesses and real time, need not produce information that could lead to intimidation of witnesses, falsification or destruction of evidence, or the creation of false alibis.

THE COURT: But it hasn't been limited to those three categories, has it, in the case law?

MR. WEINFIELD: Well, Your Honor, there are exceptions to that, to those very sorts of reprehensible activities, but the case of Goodrich versus EPA is instructive on this. In Goodrich versus EPA, a 2009 District of Columbia case, the Court stated, "Here there is no evidence for plaintiffs to destroy, nor are there witnesses for them to intimidate. The contamination at the site took place decades ago. Releases of the model would not threaten the integrity of EPA's enforcement actions by enabling the plaintiff to engage in any inappropriate means to undermine it."

While it is somewhat, under certain circumstances it is a little broader, in certain unrelated issues here, there is no possibility that evidence could be changed or witnesses intimidated. EPA has the evidence. It's already presented to them by Ameren pursuant to a request for information. EPA has the lists of the witnesses. There is nobody that's going to be changing their testimony here. This is all past information, what's done is done.

THE COURT: All right.

MR. WEINFIELD: Okay. The next exception is the attorney work product privilege, or -- and it's bundled with the attorney/client communication privilege.

THE COURT: I mean, and before you move on to there, I mean, do you agree with me that typically Vaughn indices are not required with respect to the law enforcement exception?

MR. WEINFIELD: No, I'm sorry, Your Honor. The Vaughn indices are typically required whenever EPA declines to withhold documents.

THE COURT: So you don't think there is any distinction in the requirement of a Vaughn in the law enforcement versus the attorney/client work product.

MR. WEINFIELD: Not that I've seen, Your Honor. We get Vaughn indices that will list the exceptions it's being held under, that's certainly one column, usually it's a table, lists documents, Bates numbers, identity of the document, the reason -- some brief description of the contents, the reason it's being withheld, and the author.

THE COURT: All right.

MR. WEINFIELD: It's more detailed than a privilege log in court.

THE COURT: You were going to move on to the attorney/client work product.

MR. WEINFIELD: Right. The attorney/client work product doctrine and the attorney/client communication privilege, which are set forth in Exemption 5 of FOIA here does not appear to be applicable, and I'll go through it. Basically we're not seeking a lawyer's mental impressions. These numbers that you see, these calculations, there is no evidence that a lawyer did these. We're not seeking the memorandum of counsel. These calculations and the numbers are mandated by regulation.

This seems to be the work, the best we can tell, put together by scientists.

THE COURT: Are you saying that none of these documents involve memoranda of counsel?

MR. WEINFIELD: That's correct, not what we're seeking here, not the 78.

THE COURT: Let me just make sure that I understand what is at issue here. The 78 documents at issue here are all documents that contain or discuss the projections, whatever formula, they either show the application of the formulas and methodology used to set forth EPA's assessment of the second prong that we've talked about here, namely should the entity have considered whether it would cause an increase in emissions.

MR. WEINFIELD: I would agree with that, Your Honor. The only thing I would add is we're just seeking the tables.

THE COURT: Is that everybody's understanding of the documents at issue here?

MR. LAY: I think counsel is correct that there were 78 documents withheld that are very similar to Exhibit 15. I wasn't clear until the hearing that that's all that they are seeking. For example, there is 136 documents that were withheld that are correspondence, text documents.

THE COURT: I did not understand that from the briefing, either, which is why it's very helpful for us to

narrow what is being sought here, if in fact that is the case.

MR. LAY: I don't want to interrupt his argument, but the cite in the record would be paragraphs 29 and 33 of Mark Smith's declaration, which is Exhibit H to Docket 34, and that explains 275 total documents, 78 are the charts, another 100 and --

THE COURT: And I understood that there were these various categories. I did not understand in my reviews of the briefs, and I'm sorry if I missed it, that the only real question at issue here is those 78 documents.

MR. WEINFIELD: To clarify for the Court, yes.

THE COURT: Good, yes.

MR. WEINFIELD: It's been an evolving process with both entities to narrow what's being sought before this Court today. We believe that the information in this table deals with such technical numeric information as BTUs per megawatt hour, the amount of coal needed to make a megawatt of electricity at the various plants, the annual hours of operation, the annual hours of availability of the equipment, and the megawatt capacity, and there are more. We believe the equation which is mandated by regulation and statute, should be something similar to E=mc squared.

THE COURT: Why do you say the equation is mandated by regulation and statute?

MR. WEINFIELD: The regulation sets forth the

various criteria that need to be considered.

THE COURT: So when you were listing things like the annual hours of operation, megawatt capacity, you're saying the regulations require consideration of those factors?

MR. WEINFIELD: The regulations use words that require -- they may not specify those particular factors, but those are the factors that are considered by the agency, so they don't get quite that specific. They look into what should have been projected by the agency, or by the party, actually, in putting together their equipment installations.

THE COURT: All right.

MR. WEINFIELD: EPA states that it did a fact specific analysis applying numerous factors and variables. We are looking for the facts and the variables. A variable is nothing more than a fact, it's nothing more than a number in an algebraic equation, and that's what we're looking for.

There is no special sauce that we can see that the agency could have applied here or should have applied here and they didn't. If they did, I think we would be curious to know it. It seems to us that this is a purely objective analysis that the agency has done. If they are going to claim it's a subjective analysis, I think we would like to hear it, but from what we can tell, it's just an objective recording of numbers. Presumably, these numbers serve as the factual basis for the Notice of Violation. That's what they said, that's what we

requested. We requested all documents and information that discuss or memorialize the emission calculations performed or used in connection with USEPA's finding that physical changes identified in the NOV's constituted major modifications. As far as we can tell, these should be final.

Even if they are not final, Your Honor, FOIA does not by its terms limit the requesting party to just final documents. FOIA productions are often tens of thousands or hundreds of thousands of pages long. We had a case recently where the agency produced over a million pages pursuant to a Freedom of Information Act request. It is designed to get at the information behind the final decision so that the parties can -- or final document or records so the party can discuss it and learn what the Court -- what the Government has secured against it.

The information is easily segregable. That's another key criteria. We're not talking about a couple words in a memorandum, we're talking about easily segregated tables.

Now EPA has raised a number of defenses. One of them is that disclosing this information will impact its national NSR compliance strategy, and I want to read the sentence because I think it's rather stark. "Moreover on a national scale, revealing the information through this FOIA request will also enable other similarly-regulated entities to gain insight into the agency's nationwide NRS compliance investigation, methods,

and strategy."

Your Honor, first of all, we're looking at just our information, but second of all, there is no case law to support this argument. Almost any document in any case would allow somebody somewhere to figure out where the agency is going. Perhaps disturbing, Your Honor, is EPA seems to have lost sight of its mission.

This is a rather remarkable position. What the agency is saying is we don't want to tell you how to comply with the law. Instead, we want you, the regulated community, to go out, do your thing, do whatever you think is right, and then play gotcha. They would rather not tell the regulated community how to comply, but instead just keep this hidden, secret approach, and then attack the regulated community after the fact.

Even if this information flunks the past test of not being numeric or factual in nature, the information still must be disclosed because EPA put the information at issue in the Notices of Violation. They have clearly alleged that Ameren's projected emissions violated the Clean Air Act's new source review provision when it issued the Notices of Violation. These are just EPA's historic working papers which are clearly produceable under FOIA. The numeric information pertains exactly to projected information put forward in the NOV's. It doesn't matter whether the information is final or not.

Your Honor, in many ways, I think of this information,

if Your Honor will permit, is similar to any -- similar to a criminal case or any other enforcement case, but I use the criminal type case situation, not that there is an allegation of criminal wrong doing, certainly there is not, because it provides a very simple analogy.

In a criminal case, the EPA puts forward an indictment, the EPA -- the Government puts forward an indictment. Preceding that indictment are various documents, the police report, the investigator's documents. All of that information is put forth pursuant to Brady. This information in a way is exactly what FOIA was designed to accomplish. If FOIA -- if the Government had no such obligation, FOIA wouldn't have existed. It was put in place back in the early '70s in response to Watergate. It is designed to create openness in Government.

EPA, on President Obama's first day in office, the first document he signed said there would be a new era of openness between the United States Government and its people. That is what FOIA is there to do, is to provide us with those documents that EPA considered in taking whatever action it wanted to, or indeed taking no action.

THE COURT: I'm a little bit confused by that analogy.

MR. WEINFIELD: Okay.

THE COURT: Because when we have a criminal

proceeding, there is a constitutional obligation to make Brady and Giglio disclosures. Right? Not necessarily at the start of the proceedings, but certainly you're going to have to disclose your Brady early on, and you're going to have to disclose your Giglio materials at least the Friday or after direct examination of the witness, all right? That's a constitutional requirement. Then we have civil litigation on the other side that permits the discovery of matters that are relevant and not privileged. But the FOIA, as I understand it, has a different standard than that, such that FOIA is not litigation specific, and would require the disclosure of documents that would routinely be disclosed in litigation without any showing of special need, and I know the wording may be a little bit different, but that is not Brady.

MR. WEINFIELD: No, it isn't, Your Honor. I was using Brady as a basic analogy that even as -- first of all, we've got a couple things going.

THE COURT: You've got some litigation going, and you may well be able to convince the Judge in that litigation that certain privileges have been waived, you may be able to convince the Judge in that litigation that you have a need for certain work product documents that require disclosure, or some of those work product documents may at appropriate times during the course of that civil litigation be disclosed because a witness will get on the stand or appear in a deposition and use

them, right?

MR. WEINFIELD: Yes, Your Honor.

THE COURT: But you're not normally entitled to the disclosure of those work product documents in that civil litigation until the civil litigation says you're entitled to them, right?

MR. WEINFIELD: That's correct, Your Honor, for the case before Judge Sippel.

THE COURT: And I don't understand that FOIA is at all like Brady, and that the fact that you have ongoing litigation with the EPA does not give you any different rights with respect to these documents than any other member of the public would have, unless I am misunderstanding FOIA.

MR. WEINFIELD: No, you are correct. FOIA is an interesting vehicle. Every statute springs from the constitution, and FOIA is no different than that. FOIA is a doctrine that is used against the United States, not a document that's used in typical litigation.

I was just trying -- what I was focusing on with that analogy is EPA has claimed here -- maybe we don't have final documents, and we're not entitled to their papers that were analyzed or their facts that were developed or scrutinized in coming up with some sort of final approach. All I'm saying is that like any case, the civil cases, the criminal case, it's a fundamental premise that parties are entitled to documents

supporting or being considered by the agency in issuing a Notice of Violation, a civil complaint, a criminal indictment, or anything like that. The analogy to Brady was misplaced. No, I wouldn't say it was misplaced. It was done by analogy only to show that across all types of litigation, FOIA, Brady, and NOV's, judicial litigation, parties are entitled to the information that supports those provisions.

THE COURT: Well, where does it say that a party is entitled to disclosure of the thought process that went into issuing an NOV?

MR. WEINFIELD: The way the statute is worded, Your Honor, is it says the party is entitled to request information subject to various disclosures. It's a very broadly-worded provision. Now there are the exceptions that are set forth there. It does not say NOV. A party can obtain documents regarding themselves in any matter. It can obtain documents regarding almost anything, the location of a theme park, it could go on. I think it's an infinite provision. It does not specify NOV. I believe the provisions would have to be so numerous that I guess it would take pages and pages.

THE COURT: All right.

MR. WEINFIELD: It's a very broad provision with limited exceptions that the Government has to intend to follow.

THE COURT: You're talking about FOIA now as opposed to some EPA regulation.

MR. WEINFIELD: I'm talking about FOIA which is incorporated not just by reference but spelled out in the EPA regulations as well. It has its statutory site that sets alone, and has its regulatory provision within EPA's regulations, 5 USC Section 552, and 40 CFR Section 2.

THE COURT: All right.

MR. WEINFIELD: That is it. We request the right to respond or rebut what EPA presents.

THE COURT: I'll give you that, but I have some more questions for you first.

MR. WEINFIELD: Proceed, ma'am.

THE COURT: So I noticed that the parties had entered into a stipulated protective order in Judge Sippel's case. Tell me how if at all you believe the discovery in Judge Sippel's case affects the outcome here.

MR. WEINFIELD: Judge, as in Judge Sippel's case, Judge Sippel is handling his own docket his own way. EPA has logged the same documents before Judge Sippel, at least the ones related to the matter -- just limited to the ones I should say to the matter before Judge Sippel. We are requesting a broader range of documents here.

THE COURT: Because we're dealing with more plants?

MR. WEINFIELD: More plants, yes, Your Honor.

THE COURT: But we're requesting the same nature of documents, requesting the same nature of documents as with

respect to this plant and projects, the Rush plant, am I recalling it correctly?

MR. WEINFIELD: Rush is before Judge Sippel. These are other plants.

THE COURT: So you are requesting the same category of documents with respect to the other plants and projects, and a portion of those are before Judge Sippel.

MR. WEINFIELD: About eight of the projects are before Judge Sippel, and the answer to your question is we believe so.

THE COURT: And is Judge Sippel right now determining whether those documents should be released?

MR. WEINFIELD: My understanding is the negotiation over those documents has not proceeded that far. We are ahead of him in our resolution here.

THE COURT: But the parties did enter into a protective order that did reference these FOIA docs, right? I wasn't sure I totally understood what it was saying about them, but it says, "Ameren Missouri administrative confidential information in paragraph 2.4," and says here, "shall mean all items or information provided by Ameren or its affiliates to the EPA in connection with information requests issued by the EPA under the section of the Clean Air Act, and for which Ameren Missouri has asserted and not withdrawn its request that such documents be protected from disclosure under the Freedom

of Information Act." Now is that simply to define documents that you gave to Ameren -- that you gave to the EPA, excuse me, that you have requested that the EPA not disclose under FOIA?

MR. WEINFIELD: I'm trying to understand. Does it deal with the same documents? Yes, for just the Rush Island plant.

THE COURT: In defining confidential documents there, that was solely to reference confidential documents that your client gave to the EPA, and you requested that no disclosure be made of them under FOIA, is that fair?

MR. WEINFIELD: That is correct.

THE COURT: I wanted to make sure I understood.

MR. WEINFIELD: That's a different provision.

THE COURT: I wanted to make sure I understood that properly. Some subset of these very documents the parties believe is at issue for disclosure in Judge Sippel's case. Have the parties engaged in discovery?

MR. WEINFIELD: They have engaged in discovery.

THE COURT: I take it that these documents have been withheld under some claim of privilege.

MR. WEINFIELD: Yes, Your Honor, it's been logged as such.

THE COURT: All right. Has a privilege log been created with respect to those documents?

MR. WEINFIELD: With respect to the Judge Sippel

documents. Just to clarify, Your Honor, I think the provision you read out of the protective order, that dealt with a different issue.

THE COURT: I thought that, but I thought I better make sure before I went on.

MR. WEINFIELD: That was the quizzical look on my face.

THE COURT: You all have the protective order, you both have the ability to designate documents as technical, as confidential, or super secret confidential, and a subset of the documents at issue here have been requested in that civil litigation, a privilege log has been created with respect to them, and currently the EPA is withholding production of those documents, and no Motion to Compel is yet before Judge Sippel. Is that fair, or there has been a Motion to Compel?

MR. WEINFIELD: I cannot say with certainty, Your Honor.

THE COURT: Okay. All right. Do you believe there is a difference in the analysis of attorney/client and work product privilege in that litigation versus this FOIA request?

MR. WEINFIELD: The standards are somewhat different, Your Honor. I did look into that.

THE COURT: How?

MR. WEINFIELD: Certainly not to put at issue the standard, but one of the standards regarding the attorney work

product doctrine. Actually, I take it back. It does deal in part with whether information is put at issue in the attorney work product doctrine, that's the primary focus, and I have a recent decision that came out, and we just saw it, and it deals with discovery in civil litigation, which we thought might be analogous here, and will be raised before Judge Sippel. It's the United States District Court for the Southern District of New York, and if I can read the quote, this is a Clean Air Act case. Actually, I'm sorry, an MTEB case, a water pollution case. It states, "Moreover," and let me read the citation into the record. It's state of New Jersey versus -- wait a minute. It's In Re: Methyltertiary butylether, M-E-T-H-Y-L-T-E-R-T-I-A-R-Y space B-U-T-Y-L-E-T-H-E-R products liability litigation, and it's got a file number of 1:00-1898 MDL 1358. M 28 -- strike that. M 21-88. The decision came down June 15th, 2012.

THE COURT: This is unpublished?

MR. WEINFIELD: It is unpublished as of the date of this document.

THE COURT: Do you have copies for the defendant and for the Court?

MR. WEINFIELD: I will obtain copies. I can give you mine. It's got a markup on it. The reason it's relevant is it was sought to be included in a civil proceeding regarding the state of New Jersey versus RRI Energy Mid Atlantic, which

is in the Eastern District of Pennsylvania, which is an air case, an NSR case, and in it the Court said, "When a party puts its confidential," and this is the state of New Jersey, "puts its confidential communications directly at issue in litigation, any privilege qualified or not may be waived. This at-issue doctrine serves to avoid the inherent inequity in permitting litigants to use the privilege as a sword rather than as a shield, which is the result whenever litigants are permitted to divulge whatever information is favorable to their position, and assert the privilege to preclude disclosure of detrimental facts."

I believe, Your Honor, that that statement which is out of civil discovery and is the same sort of issue of whether information is put at issue would apply here for the Government to --

THE COURT: Do you have case law suggesting that that same at-issue principle applies in the FOIA context?

MR. WEINFIELD: Yes.

THE COURT: Have you cited that in your brief?

MR. WEINFIELD: Yes, absolutely. So, this is the case where the agency is disclosing one piece of information, but not including the back of the coin, which lists the rest of the story that sits behind their NOV's.

THE COURT: All right. Let me ask you one last question. Assuming that we were engaged in litigation and

let's just pick something simple, let's have a traffic accident on a highway, and the question is whether or not the defendant was negligently operating that vehicle.

MR. WEINFIELD: Yes, ma'am.

THE COURT: And the parties, lawyers, and experts go out to the scene and they take all of the information that was provided in the police report, and from other people, and they take all those bits of information, all right, and those are facts, we can all agree that those are facts, you know, how long the tire tread tracks were on the highway that appeared to come from the vehicle, the defendant's vehicle, and which direction the cars were facing after the accident, and how far they were, and people go out to the scene, and the experts go out to the scene, and they take all those bits of information, and the expert for the plaintiff makes calculations, their own calculations based upon all those bits of information, comes to the conclusion and offers the opinion that the car was moving too quickly, all right? Driving faster than the speed limit, and maybe making some determination that it wasn't in its lane based upon where the cars ended up and how fast they collided, and what the laws of physics would have to do with all of that, and if I understood physics, I wouldn't be a lawyer, so they make all of those determinations.

Now, are those calculations, the calculations that go into the determination that the -- on the defendant's part

because the defendant goes and does the same thing, of course, and the defendant's expert is going to testify that the car was not in its lane and was exceeding the speed limit, based upon that expert's formulas that it has applied to all of these facts --

MR. WEINFIELD: I can respond.

THE COURT: -- now is that attorney work product?

MR. WEINFIELD: First, there are three responses. First of all, there is a separate -- Rules of Civil Procedure were recently amended to address the fact of calculations put forth by experts, but I don't believe that's where Your Honor was going.

We've got two -- I would like to address two things. First of all, we're seeking the tire track length and the direction of the tire track. Second of all --

THE COURT: I'm having trouble with that because it seemed to me from the exhibit that we have here that you have the tire track lane, and the tire tracks, and the -- what you don't have is the particular mix and analysis of that data that's been done by the EPA that causes the EPA to feel that it's justified in making the assertion that Ameren should have considered whether it would have caused an increase in emissions.

MR. WEINFIELD: Your Honor, we don't necessarily know what facts EPA has considered.

THE COURT: I understand that.

MR. WEINFIELD: We don't know what's in the police report. The calculations are prescribed by regulations. That's the most important part of your answer. This isn't an expert's subjective machinations and manipulation or evaluation, whatever, of the tire track length.

THE COURT: When you say the calculations are prescribed by statute, tell me what you mean. Tell me what statute you're talking about. I will need to look at it.

MR. WEINFIELD: The regulations, I should say. 40 CFR part 60 point --

THE COURT: Is that in your brief?

MR. WEINFIELD: It is.

THE COURT: We'll search it and find it.

MR. WEINFIELD: 40 CFR Section 52.21(a)(2)(iii) and related regulations, and what that provision provides is a number of criteria for the regulated entity, or in this case, EPA as well, to consider in determining whether projected emissions will exceed various limitations. We would just like to know the factors that went into that evaluation.

THE COURT: Does it tell the EPA how to weight those criteria or how to apply them?

MR. WEINFIELD: It does not. It tells them how to -- what needs to be evaluated to make its decision, but in -- let me rephrase that. It tells them what the end result needs

to be to make its determination as to whether Ameren violated the new source review provisions.

THE COURT: The end result?

MR. WEINFIELD: Was Ameren -- should Ameren have known that its emissions would have exceeded let's say 40 tons per day extra as a result of replacing this piece of equipment.

THE COURT: And do you believe that that is an objective or a subjective determination or some combination of the two?

MR. WEINFIELD: It should be objective, Your Honor.

THE COURT: All right.

MR. WEINFIELD: That is all, Your Honor.

THE COURT: Thank you.

MR. LAY: Judge, subject to your thoughts, I would like to start just by asking the basic question in any Freedom of Information Act case, which is what does the requester want? What is the agency withholding? This was the issue the Court was just grappling with. I think the Court's task here is complicated because Ameren's motion takes two logically inconsistent positions about what they are requesting.

The first part of the motion, the first part of the argument today portrays what is withheld as purely numerical information, it's just numbers, it's just the mechanical objective application of the regulation, kind of like a recipe, to set factors that produces an easy hard number. This purely

numerical approach is designed to make sure that this material could never be privileged. If it's just math, if it's just numbers, that's not legal advice, that's not anything performed under the supervision of a lawyer.

At the same time, Ameren's motion calls the same information evidence of a hidden secret agenda by the agency. Throughout the motion of Ameren, you can see that they begin to describe it as numerical, just numbers, they later characterize it, even in their own motion, as projections, calculations, the term EPA would prefer would be analyses, but clearly when you get to the end of the motion, when you get to the end of the argument today, the regulation by itself, 40 CFR 52.21, doesn't provide explicit guidance on how to evaluate the various criteria to plug into the analysis of whether or not somebody has violated the Clean Air Act.

The analysis has to include some degree of subjective analysis, some degree of judgment, and in the end, even Ameren's motion, I think, establishes the same fact that EPA is making on the record here with Mark Smith's declaration that there is more going on here than just pure math.

If you look at this document, which is Exhibit 15, all base line numbers are there. To the extent this is just math, to the extent it's just simple application of the regulation, you know, just like a subtraction problem that always yields the same answer, they have all the inputs. They provided the

inputs. It came from their underlying data. If you had to know the cost of the economizer replacement for the pre-H2M five years database like, it's all there for each year. I think getting their arms around what is being requested here is key to resolving the motion.

The Court has read the briefs so I won't make a lengthy and detailed discussion, but I will highlight a procedural issue. In any case, in this case, any civil case, the classic rules of summary judgment apply, including Celotex, and one of the unusual parts about this case is under Exemption 5, obviously the agency has to establish that this material is privileged, that it's prepared by lawyers, that it's kept in a manner that suggests it's privileged. If you look at Exhibit 15, which is Ameren's exhibit, you can see the documents that are the subject of the FOIA request are explicitly labeled by EPA, "attorney/client work privilege, enforcement sensitive."

In the record, the only admissible evidence, the only record evidence that establishes what these documents are is the declaration of Mark Smith which is Exhibit H to Docket 34, paragraphs 32, 33, and 35 to 52. There is no contrasting declaration. There is only assertions of counsel on the Ameren side of the pleadings before the Court. Under Celotex, this is a problem. You can't rest on your pleadings and just stick to attorney assertions to meet your burden.

THE COURT: But the fit there is a little bit funny in a FOIA case. You're generally conducting a de novo determination of the issue in a case where normally no discovery is taking place, and where you're not disclosing the documents to the requesting party that could permit them to do anything else.

Now, I understand there could be a situation where based upon other documents that an individual has received from other sources, that they could come in and try to refute the affidavit of someone like Mr. Smith to show, well, you couldn't have done a thorough review because had you done a thorough review, you would have disclosed these documents that we got from another source, and therefore da-da-da-da.

Absent your letting them come in and look at all your documents, there really is not much of an ability to refute many of the paragraphs that are contained in Mr. Smith's affidavit.

MR. LAY: In the FOIA case law, the way you usually pierce an Exemption 5 request is to say that draft consent degree was already shared with these third parties, you know, these calculations were taken to a meeting. You do see that.

THE COURT: You can show some misconduct on the part of the parties, or you show that there was already some disclosures.

MR. LAY: My point is a limited one. There is no

affidavit from the trade industry group saying, "Hey, that same stuff, they were talking about it in the meeting two weeks ago."

THE COURT: The mere fact that they can't put forth an affidavit to show it's not attorney/client privilege, or it's not work product --

MR. LAY: It's a little bigger than that. Under the typical way FOIA cases are resolved, if the affidavit is sufficient to describe in detail what happened --

THE COURT: I understand.

MR. LAY: -- and that's typically the basis, and there is evidence in the record, I'm just pointing out there is no contrary evidence.

THE COURT: Okay.

MR. LAY: Talking briefly about the second independent reason why EPA believes the documents were properly withheld, which is Exemption 7, the law enforcement exception, I have copies of selections of the case management order, and some discovery from the ongoing Clean Air Act litigation. Your Honor, may I approach the bench?

THE COURT: This is from Judge Sippel's case?

MR. LAY: Yes. I have copies for defense counsel, too. The Court previously asked the question, what's going on in the Clean Air Act litigation, are the documents at issue in this FOIA case also at issue at the same time in the Clean Air

Act litigation? And from the Government's perspective, the answer is yes. Defense counsel or plaintiff's counsel in this case is correct, Ameren's counsel is correct that the fight in the Clean Air Act litigation is over the emissions calculations just for the plants and the time frames at issue in that Clean Air Act litigation, and the FOIA is in some respects broader as it looks at other plants and other time frames.

That being said, EPA used the same analysis for all of its emissions calculations, so from the Government's perspective, as soon as you disclose any of the calculations, you can figure out pretty much how the analysis was performed for any of the plants or any of the time frames.

What's most important about the case management order in the pending Clean Air Act case is the expert deadline. Under Judge Sippel's case management order, plaintiff, which in that case is EPA, is supposed to disclose its expert reports June 3rd, 2013, and you'll see it's a typical case management order. After that the defendants disclose theirs in August, 2013, and there is deposition discovery afterwards.

The Government anticipates in the Clean Air Act litigation that the primary discovery about the emissions calculations will occur through experts, and that those experts will produce reports and be disclosed. That leads me back to Exemption 7. In the Eighth Circuit, you don't have to --

THE COURT: Is it your belief that in the context of

that litigation, the 78 documents that we're talking about will be disclosed to the extent that they relate to the Rush plant?

MR. LAY: These calculations from EPA's perspective are screening calculations. They are designed to determine whether or not EPA is going to make a referral to DOJ under the Clean Air Act, so I don't think these specific calculations absent an order from the Court will be disclosed as what the Government will use at trial to prove damages.

THE COURT: So the analysis done might differ in some respects.

MR. LAY: In theory, EPA will get additional discovery from Ameren over the next year that will sharpen and broaden the calculations. But looking at Exemption 7, in the Eighth Circuit, the standard for whether or not you can use Exemption 7 is just a showing that production would generally interfere with enforcement proceedings.

THE COURT: And how would it generally interfere with enforcement proceedings in some reasonably articulable manner here?

MR. LAY: If you look at the legislative history, and I'm reading from the Barney case, the primary purpose of Exemption 7 is to prevent harm to the Government by not allowing litigants earlier or greater access to agency investigatory files than they would otherwise have. So here from the Government's perspective, the harm we're talking about

is exactly what the Eighth Circuit was talking about in Barney. What Ameren is trying to do through this case is get broader and earlier discovery than they would under Judge Sippel's case management order. Judge Sippel said disclose it through experts next year, but they want it now through this claim.

In this sense, Ameren's motion presents the Court with a pure legal issue, what is the scope of Exemption 7. Does the EPA in this case have to prove that a witness is going to be threatened, or a car is going to be blown up? Can the EPA produce, you know, the type of witness obstruction concerns you might see in a classic Mafia criminal trial, or is the standard more generous under FOIA, and from the United States's perspective, looking at Eighth Circuit cases like Parton, if you can use FOIA to prevent disclosure of investigatory materials years after the investigation has concluded, the criminal trial has concluded, the defendant has been convicted, and you can still use FOIA years after all that to protect investigatory records when they might reveal how the agency investigates something, how it gets ready for enforcement proceedings, even when there is never going to be a trial, there is no way witness obstruction, actual witness obstruction could occur with that procedural posture where the trial is already over, when the FOIA request comes in. If Parton is good law in the Eighth Circuit, which EPA believes it is, it's clear that the Goodrich approach, where you need proof of

actual witnesses being obstructed, is too stringent a test. It's primarily a legal issue presented by Ameren's motion, what is the scope of Exemption 7.

THE COURT: Let's put aside for the moment the harm that you assert would occur by allowing a disclosure that might be different and earlier than parties to litigation would otherwise receive. So let's put that aside for a moment. In your briefs, you assert that disclosures of this information would harm your enforcement activities not just with respect to Ameren, but also with respect to other regulated entities nationwide. How so?

MR. LAY: We were talking about the analysis, and what EPA is doing with all the inputs and data points that Ameren provided.

THE COURT: How does that harm the EPA? Assume that you've got a magic formula that you've all used that says we're going to look at these 17 factors, and we're going to weight this one this way, and we're going to weight that one that way, and we're going to weight that one that way, assume that's all done, and it's disclosed, how does that impact EPA's enforcement activities, either here or elsewhere?

MR. LAY: Mr. Smith's declaration establishes that EPA is currently using that same general analysis approach with other power plant emitters, so if it's forced to disclose how it conducts investigations through this case, other power plant

companies can then look at that formula and think about what kind of data they are going to create, what kind of data they are going to produce, and they can begin to --

THE COURT: It's your belief that people would be able to -- regulated entities would somehow be able to circumvent the regulatory purposes by working around that formula?

MR. LAY: Basically, they would take EPA's work product, EPA's hard work in determining how to analyze all these different factors and data points, and get a short cut to figuring out what the enforcement risks are.

THE COURT: Isn't that going to come out in your litigation with Judge Sippel anyway?

MR. LAY: I think obviously in the Clean Air Act litigation, ultimately a damage model will be produced that contains emission calculations, but that's a different issue than the beginning screening level calculations that the EPA and DOJ used to determine which if any of the Notices of Violation should be turned into a Clean Air Act case.

I think the Court is correct, looking at the issue from 20,000 feet up, so much of Ameren's motion is focused on need, we have to be able to defend against these Notices of Violation. The Government agrees, and the only point is, there is already a forum where the parties are actually doing that, and there is a schedule set up that Ameren agreed to where they

are going to get all of the discovery they need.

The case law of the Eighth Circuit is clear. FOIA is not a substitute for civil discovery, and from a judicial resources concern, or a pragmatic concern, there is no good reason for this Court to basically supplement what Judge Sippel is doing and have two federal judges trying to decide at the same time what's privileged and what isn't privileged, what is disclosed in the expert report, what isn't.

THE COURT: Well, if in fact the damage model that is ultimately going to be produced is different than the screening model that is used, and I think we're all in agreement now that the only documents at issue in this piece of litigation is those screening calculations, the screening analysis, if the damage calculation is different than the screening analysis, why do you assert that this litigation should be stayed because Judge Sippel's case would tend to moot the issue? Why would it moot the issue?

MR. LAY: What they are asking for are the emissions calculations currently in discovery, so given the way all discovery disputes go, they are either going to decide for whatever reason they are not going to pursue those document requests, or they are going to file a motion to compel, and Judge Sippel sooner or later will have an opportunity to determine whether or not they get the screening calculations that are the subject of this motion.

THE COURT: Your position is that because the approach is generally the same, that if they receive those documents with respect to the Rush plant, they would be able to replicate the analysis with respect to the other projects and plants?

MR. LAY: That's right, but the big picture in the Clean Air Act case, if there is a trial and a finding of liability, sooner or later, the Judge, the parties will have to have adequate disclosure on what the emissions calculations are for trial purposes, and the issue of whether or not the power plants emitted too much of the wrong chemicals, that's going to be resolved one way or the other in the Clean Air Act case. It will be mooted by virtue of just the inevitable progress of the Clean Air Act case.

THE COURT: In the Clean Air Act case, is the foreseeability a issue?

MR. LAY: Foreseeability of --

THE COURT: Whether Ameren should have anticipated that those emissions would increase?

MR. LAY: I think for penalty purposes.

MR. HANSEN: If I may, Your Honor, Andrew Hansen, counsel for the United States in the enforcement case before Judge Sippel. The analysis in that case is whether or not the company at the time of the projects should have expected that its major projects would result in significant net emissions

increases, so in that sense foreseeability is part of the analysis.

THE COURT: All right.

MR. LAY: I have nothing further, unless there is questions from the Court.

THE COURT: Well, I might have some more for you. Let me go down my little list here.

What is your response to Ameren's arguments with respect to Coastal States and the Tax Analysts case, that what's happening here is contrary to the proper enforcement activities of EPA, that EPA ought to be letting its regulated entities know what factors are being applied here so that people can conduct themselves in a reasonable manner?

MR. LAY: I would have a two-part answer to that. In terms of guidance for regulated agencies, there are a number of public materials that the agency has provided, there are the regulations, the case law. From a broad scope, EPA believes that it has provided regulated entities with enough information about how to comply.

THE COURT: Certainly I assume in Tax Analysts the IRS had plenty of regulations before that case, too.

MR. LAY: On a more focused level for Ameren, they are in the process of understanding what the agency's position is. There is a very large case management order, there is a huge amount of discovery going on. The EPA's position is not

that Ameren is not entitled to any information about why they were selected for Clean Air Act enforcement, it's a much more limited point. The proper forum for that is the Clean Air Act litigation, and the reason for that approach is coming from the Eighth Circuit, cases like Barney.

FOIA is not a substitute for civil discovery. All of their need arguments in the case before this Court are keyed off the need to understand and defend against the Notices of Violation which are currently at issue in front of Judge Sippel.

THE COURT: What is your response to the at-issue argument made by Ameren? If I'm understanding that argument correctly, Ameren is arguing that the EPA has essentially waived its right to assert these privileges by putting the matter at issue by issuing its Notices of Violation.

MR. LAY: EPA by filing a Clean Air Act suit has put emissions calculations at issue, and there is a methodology in process in place in Judge Sippel's case for how those disclosures will be made. To the extent EPA makes a mistake in Judge Sippel's case, they would have a remedy to get an appropriate amount of discovery. But simply filing a Clean Air Act case or sending a Notice of Violation, which from the EPA's perspective is not final agency action, does not waive the attorney/client privilege.

THE COURT: Why not, and what do you have that tells

me that's true?

MR. LAY: Mark Smith's declaration talks about how these documents were created and prepared. The Notice of Violation itself doesn't contain an emission calculation assertion, or an argument about damages that's keyed off the screening analysis we talked about. It sets the stage for either no action or the type of action we were discussing. Simply filing a lawsuit or sending a Notice of Violation, there is no case law that says that by itself waives the attorney/client privilege.

THE COURT: Do we have the Notices of Violation in the record here?

MR. WEINFIELD: I believe, Your Honor.

THE COURT: That's all right.

MR. WEINFIELD: I believe, Your Honor, that they are in appendices.

THE COURT: Okay, thanks.

MR. WEINFIELD: If not, I will get them. There have been voluminous appendices filed.

THE COURT: I want to see one for my own edification. I'm not suggesting that it has any impact on the determination, but I'd like to see one.

Okay, why should the EPA not create a Vaughn index with respect to these documents?

MR. LAY: Judge, under Exemption 7, to show that it

applies, you have to prove two things. You have to prove that the records were investigatory records compiled for law enforcement purposes, and that production would interfere with pending enforcement proceedings. Here I don't think there is any dispute between the parties about why these documents were created. They are clearly by all accounts screening calculations that EPA and DOJ were using to determine whether or not to refer Ameren for Clean Air Act enforcement.

The second part of the test, would production interfere with pending enforcement proceedings. We have already talked about that with the harm in the ongoing discovery in the case.

Once you've proved those two things in the Eighth Circuit, the precedent is clear, and I'm talking about the Parton case and the Barney case. You don't have to produce a Vaughn index when Exemption 7 is properly claimed.

THE COURT: Do you disagree with plaintiff's assessment that the necessity for a Vaughn index is different in a Section 5 versus a Section 7 case?

MR. LAY: I respectfully do, Your Honor. Crancer versus Department of Justice, 999 F2d 1302, would be one of those cases. Barney would be another case. I think it's clear in the Eighth Circuit that's not the law.

That being said, the Mark Smith declaration is detailed and lengthy, and does provide the Court and the parties with an overview of what kind of documents we're talking about, who

created them.

THE COURT: All right. Anything further?

MR. LAY: No, Your Honor.

THE COURT: I said I would give you time to reply.

MR. VIRTEL: Your Honor, if I may?

THE COURT: You may.

MR. VIRTEL: Your Honor, a few matters in response. In terms of the affidavit, how could we possibly file an affidavit? We haven't seen the documents that we're trying to so desperately have an opportunity to review. It seems to me that as we look at what the Government's position is --

THE COURT: Let me interrupt you for just a second because unless I'm missing something here, there isn't a whole lot of dispute about what these documents are, how they were created, and what purpose they were used for. Do you have any reason to think that these are something other than documents that take information and apply certain formulas and analyses to that information that was used for screening purposes for EPA to make a determination as to whether to issue a Notice of Violation?

MR. VIRTEL: We agree with that. That is that EPA's technical staff, according to Mr. Smith's affidavit, took Ameren's information and applied factors and variables with a number of technical judgments by the staff, not by the lawyers, and came up with some calculations. That's what we -- and then

based upon that technical screening calculation, now remember, Your Honor, this is a screening calculation done before any decision is made whether any further litigation is going to pursue. They don't even know if there is a violation. How that can be work product at the screening level makes no sense to me. This is their initial screening level which then -- and when the calculations are done, that information is then sent to the EPA lawyers. The EPA lawyers then look at it and then they make a decision whether they want to issue the NOV's based on how they perceive the screening analysis. Then before any litigation is instituted, that information is sent to the Justice Department, and the Justice Department makes its own independent evaluation. And then what we're told by the Government in their law memorandum is that none of this information is going to be offered into evidence. So the screening analysis is just that, it's a screening analysis. It's an action taken before any decision is made whether to issue an NOV, or whether to send it to Justice, or before Justice decides they want to proceed with litigation.

It seems to me that it's -- all we're asking for is that initial evaluation that their technicians have engaged in, and I agree, Your Honor, they are going to be applying variables, but they have to be variables within the world of science and within the world of relative relationship to the science.

As Your Honor pointed out when you're doing calculations

on speed and stopping distance, you have to look at the coefficient of friction, you may select 2.4, and I may select 3, or whatever the number is, but they have to pick a number. We ought to be entitled to see the screening evaluation and analysis, not only in the Rush Island data, but in the other three plants so we understand the basis on which our data is being used.

The idea that we can somehow manipulate our data going forward is absurd. We have to produce whatever data the EPA asks for. We're bound to do that. We are not some fly-by-night operation operating out of some garage. We're a utility that has been in business for 100 plus years. All those records are maintained. There is no opportunity for us to manipulate the data.

So to me, here we have screening information, which is then passed up to the lawyers at the EPA who in turn made their evaluation, issued the NOV, and put at issue the way in which we did our repairs. We ought to be able to see that screening information.

The fact that some of those same issues are being looked at by Judge Sippel in a case that the Justice Department down the road said we're going to bring against you, the fact that those things are now seemingly on a parallel track, yes, they are, but the fact of the matter is one is limited to Rush Island, and we're here asking for information we think we're

basically entitled to across all of our plants and across all of the NOV's that the Government submitted.

THE COURT: Why are you entitled to it?

MR. VIRTEL: Because the whole purpose behind the Freedom of Information Act is to make information available to us the public. We're part of the public. There is nothing about the exemptions that I think the Government has offered that gives them protection. This isn't work product, not at the screening evaluation level. How can it be, Judge? They haven't decided -- the screening is done before they decide whether there is a problem. Then in terms of this protection from, you know, their whole enforcement strategy --

THE COURT: Moving this into civil litigation, are you suggesting to me that if somebody goes to their lawyer and says that they think they might have a claim against somebody, and the lawyer directs someone to perform some analysis, and nobody has filed any suit yet, that that's not work product?

MR. VIRTEL: If you go to a lawyer and have the lawyer do it, it isn't, but let's say in my business, I have my accountants do some primary analysis, and then I go to a lawyer and ask the lawyer to file an action.

THE COURT: But EPA has an enforcement obligation, right? I mean, that's the difference, is that EPA has an enforcement obligation, and at some point along the way, they must make determinations about what violations -- they have to

determine whether there has been a violation, and whether to pursue it, and they do that within the agency in conjunction with their discussions with counsel.

MR. VIRTEL: Yes, and we're not asking for those conversations with counsel. We're not asking for the judgment of the lawyers.

THE COURT: I understand, but what you're asking for is the analyses that were then provided to the lawyers so that they could make that determination. We're assuming a lawyer -- in the hypothetical I gave you, the lawyer isn't able to do that on his own, and he asks that -- he retains some technical people to run numbers for him so that he can analyze those numbers, and he's saying, "Well, if the numbers come out this way, that way, and that way, oh, I think we'll have a claim." Now are you saying to me that the numbers that got run for that lawyer to assess whether it was a good enough claim to bring are not work product?

MR. VIRTEL: I'm saying that the numbers are run by the agency, not by the lawyers of the agency, and that the screening calculations are done by the technical staff per Mr. Smith's affidavit, and then that information is given to lawyers, and they decide based on that information whether they think they have an action, that they can issue an NOV, and I think that's a difference.

The idea that this screening information is not going to

be part of the evidence in the case against Ameren in the Rush Island --

THE COURT: It may or may not. It remains to be seen.

MR. VIRTEL: No, no, no, they specifically say, page 9 of their memorandum, and let me read it to you, "The withheld documents will not be offered into evidence in court to support EPA's prima facie case or to rebut an affirmative defense."

THE COURT: I understand, but if I understand correctly, you requested those documents in the litigation, and if in fact Judge Sippel ordered that they be produced to you, it's possible they could be used in the litigation, and they might be used by you.

MR. VIRTEL: They might be used by me, they might be, but until we see them we don't know, and until we see these documents as it relates to our other plants that are not involved in litigation, we are at least entitled to understand why the Government is putting us on notice. Our shareholders are entitled. This all has to be reported in our security reporting. It puts a cloud over the company, and it seems to me we ought to be able to get some sense through the Freedom of Information Act as to the risk and exposures we have based on what the Government is doing. That's our position, Your Honor.

We think we clearly should be entitled to the screening calculations, not the lawyer's interpretation of the screening

calculations, not their judgments, not their questions, just the calculations.

THE COURT: All right.

MR. WEINFIELD: Can I have one or two points? I'll be very short here.

THE COURT: All right.

MR. WEINFIELD: Your Honor, any piece of litigation is more than just trial through experts. The case entitles the parties to review the documents put together by their own people, in addition to the affidavits that the Government wants to put on. Just saying, just by saying that the EPA wants to put on its whole case through experts does not give them a basis to preclude Ameren from obtaining the other documents in EPA's possession.

Now we've still got all of the other exclusions, and we talked about those, but saying that we don't have to -- that EPA doesn't have to disclose their information because it's going to be put on or some different information is going to be put on by their experts is not a grounds.

THE COURT: But Judge Sippel is a real capable judge, and I assume he's capable of making the determination whether within the scope of the Rules of Evidence and the Federal Rules of Civil Procedure the information that you're seeking with regard to the Rush plant is relevant and not privileged, and so he's going to make that determination in

your litigation, and he's a real smart, capable guy, and he'll give you a ruling on that, so you don't need these documents -- you have a forum to obtain a determination of whether these documents are necessary for you properly to defend yourself in litigation. That's not this forum.

MR. WEINFIELD: Right, we have a forum for Rush. The other NOV's, they are still out there. We have no way of getting these documents. The only other thing that I want to --

THE COURT: So why shouldn't I delay ruling on this until Judge Sippel makes that determination in the enforcement action because it may well be that, one, you'll get those Rush documents, and if in fact the formula is the same, we probably won't need them with respect to your other plants.

MR. WEINFIELD: No, we still don't have the facts, and there could be different equations with respect to the other plants. I think your analysis, Your Honor, is very valuable with respect to Rush.

THE COURT: I didn't understand that that's what the Government was saying about -- that's what the EPA was saying about them. I think what the EPA was saying was the forum was the formula.

MR. WEINFIELD: I heard them say they thought the formulas were subjective. I don't believe that, if they are using subjective formulas, and those were the first 30 seconds

of their opening, we could have subjective formulas with respect to Rush -- well, to all the plants. So we really have two, we've got that, and we've also got different facts.

Again, we believe this is objective, they have said it's subjective, but we're talking about two different groups of documents, if you will, the Rush documents before EPA, and these other documents basically before Your Honor in this FOIA action.

THE COURT: All right.

MR. WEINFIELD: The next is that we have -- EPA is advocating that they should not have to disclose the documents because Ameren is learning the law through litigation. I don't believe that an agency should have to be sued for potentially millions of dollars to learn the law. Parties should be able to have a full and complete understanding of EPA's procedures, documentation, methodology, without having to be sued. Learning through litigation I do not believe is a policy that is approved by anybody. It's the first I've heard of it today.

THE COURT: All right.

MR. WEINFIELD: That is it.

THE COURT: Thank you.

MR. LAY: Briefly, Your Honor, I just want to make sure the Government's perspective on the regulations is clear. We don't believe the regulations are subjective, we think they provide the industry with clear guidance, but we do agree with

counsel from Ameren that applying the regulations to specific factual scenarios which was done in the screening calculations always involves a degree of judgment and analysis, and a selection of which facts to use, just like the Court's hypothetical with the expert trying to figure out how the accident happened, but to be clear, we don't think the regulations are subjective.

THE COURT: Why shouldn't Ameren be able to learn why you have decided that it is subject to a Notice of Violation?

MR. LAY: From the Government's perspective, Ameren is learning that through the Clean Air Act litigation.

THE COURT: You've got other plants, and no Clean Air Act litigation has been filed with respect to those, and maybe no Clean Air Act litigation will ever be filed with respect to those, and yet a Notice of Violation has been issued, and I assume you can't tell me standing here today whether a Clean Air Act case will or will not be filed with respect to the other plants.

MR. LAY: That's true.

THE COURT: So why shouldn't Ameren be able to learn?

MR. LAY: Through FOIA rather than the Clean Air Act case?

THE COURT: But the Clean Air Act case only pertains

to Rush. With respect to Ameren's other three plants, why should Ameren not be entitled to learn why the EPA has issued a Notice of Violation, apart from you saying, well, because we issued a Notice of Violation, and we think you should have expected that the emissions would increase? Why shouldn't they get to know why you believe it should have known?

MR. LAY: The Court is right to start with the presumption of transparency and openness, but FOIA as enacted by Congress contains important exceptions. The law enforcement exception specifically discusses this issue. What do you get from the agency when they are just investigating, and the Eighth Circuit and Congress are clear, it is a legitimate basis to withhold. The Government does have some breathing room to explore enforcement options, and look at a number of factors when trying to investigate something.

THE COURT: You're saying that sending a target letter would not entitle the defendant to get discovery as to the claim.

MR. LAY: And I'm saying from a more important point, just like you were talking about with the Brady evidence at trial, the need for the information about the plants that are not the subject of a CAA case is less, and it's unclear at this point how much of a need they will ever have for that.

THE COURT: Now, you have one of the other points that was just raised by the plaintiff here was that the

argument that disclosure of this information can somehow hamper the enforcement and investigation activities is -- does not have a basis because EPA tells the entities what data to produce, and they have to produce that, so how is it that having this information can permit them to circumvent what EPA is requesting when EPA gets to request what EPA wants to request? And I think co-counsel is trying to get your attention.

MR. LAY: May I have a moment?

THE COURT: You may.

MR. LAY: Judge, this is addressed to some extent already in Mr. Smith's declaration, but from EPA's perspective, the stakes are high with Clean Air Act litigation. The potential penalties, injunctive relief to fix the plants can be extremely expensive. In EPA's experience, for better or for worse, faced with those big odds, companies have a strong motive to shade their data, to stop creating certain types of data, to create more or other types of data, if they knew going into a potential request for information from the agency what was most important to the agency, and if the Court wanted, we could provide a supplemental declaration with some examples from other cases, you know, historically in other districts, but as the Court has seen in many civil cases, discovery is not always a perfect process, documents get lost. From an Exemption 7 perspective, the agency is entitled to some degree

of latitude with ongoing investigations, which no one disputes is what is going on here.

THE COURT: All right. Anything further?

MR. WEINFIELD: I don't think so. This is extremely expensive, Your Honor. The NOV's sit out there on the company's disclosures. We would like to be able to have the information to deal with that with our shareholders, with the public, and that is it.

THE COURT: All right. Thank you. I do understand that, you know, obviously the question that's before me is whether FOIA properly believes that these documents must be produced so that Ameren can know that question. Right, isn't that the question before me?

MR. WEINFIELD: That is correct, Your Honor.

THE COURT: All right, unless there is anything further then, I thank you all. We'll continue to work our way through this and get you a decision as soon as we can.

MR. WEINFIELD: Thank you, Your Honor.

MR. LAY: Thank you, Your Honor. (Court adjourned.)

REPORTER'S CERTIFICATE

I, TERI HANOLD HOPWOOD, RMR, CRR, Official Court Reporter for the United States District Court for the Eastern District of Missouri do hereby certify that the foregoing is a true and correct transcript of the proceedings had in this cause as same appears from my stenotype notes made personally during the progress of said proceedings.

/S/ Teri Hanold Hopwood, RMR, CRR
TERI HANOLD HOPWOOD, RMR, CRR
Official Court Reporter

**Notices of Violation (NOVs) Issued by EPA to Electric Utility Companies from 1999 to December 31, 2009 and Resolutions of Such Claims Within That Period**

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| 11/3/1999 | American Electric Power Service Corp.;<br>Indiana Michigan Power Company, d/b/a American Electric Power (AEP);<br>Ohio Power Company, d/b/a AEP;<br>Appalachian Power Company, d/b/a AEP<br>Columbus & Southern Ohio Electric Company, d/b/a AEP;<br>Cardinal Operating Company;<br>Central Operating Company | Cardinal Power Plant (OH) Unit 1<br>Cardinal Power Plant (OH) Unit 2<br>Cardinal Power Plant (OH) Unit 3<br><br>Conesville Power Plant (OH) Unit 1<br>Conesville Power Plant (OH) Unit 2<br>Conesville Power Plant (OH) Unit 3<br><br>Mitchell Plant (WV) Unit 1<br>Mitchell Plant (WV) Unit 2<br><br>Muskingum River Station (OH) Unit 1<br>Muskingum River Station (OH) Unit 2 | *United States v. American Electric Power Service Corp.*, No. 99-1182 (and consolidated cases) (S.D. Ohio lodged Oct. 9, 2007, Order directing entry Dec. 13, 2007) | Yes, for AEP east | All |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Muskingum River Station (OH) Unit 3<br>Muskingum River Station (OH) Unit 4<br>Muskingum River Station (OH) Unit 5<br><br>Philip Sporn Plant (WV) Unit 1<br>Philip Sporn Plant (WV) Unit 2<br>Philip Sporn Plant (WV) Unit 3<br>Philip Sporn Plant (WV) Unit 4<br>Philip Sporn Plant (WV) Unit 5<br><br>Tanners Creek Plant (IN) Unit 2<br>Tanners Creek Plant (IN) Unit 3<br>Tanners Creek Plant (IN) Unit 4 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| 11/3/1999 | Cinergy Corporation, PSI Energy, Inc., and Cincinnati Gas & Electric Company | Beckjord Plant (OH) Unit 1<br>Beckjord Plant (OH) Unit 2<br>Beckjord Plant (OH) Unit 3<br>Beckjord Plant (OH) Unit 4<br>Beckjord Plant (OH) Unit 5<br>Beckjord Plant (OH) Unit 6<br><br>Cayuga Plant (IN) Unit 1<br>Cayuga Plant (IN) Unit 2<br><br>Gallagher Plant (IN) Unit 1<br>Gallagher Plant (IN) Unit 2<br>Gallagher Plant (IN) Unit 3<br>Gallagher Plant (IN) Unit 4<br><br>Wabash River Plant (IN) Unit 1 | *United States v. Cinergy Corp.*, No. 99-1693 (S.D. Ind. lodged Dec. 22, 2009, entered Mar. 18, 2010) | No | Gallagher Units 1-4 (after liability trial) |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Wabash River Plant (IN) Unit 2<br>Wabash River Plant (IN) Unit 3<br>Wabash River Plant (IN) Unit 4<br>Wabash River Plant (IN) Unit 5<br>Wabash River Plant (IN) Unit 6 | | | |
| 11/3/1999 | First Energy Corporation, Ohio Edison Company, and Pennsylvania Power Company | W.H. Sammis Plant (OH) Unit 1<br>W.H. Sammis Plant (OH) Unit 2<br>W.H. Sammis Plant (OH) Unit 3<br>W.H. Sammis Plant (OH) Unit 4<br>W.H. Sammis Plant (OH) Unit 5<br>W.H. Sammis Plant (OH) Unit 6<br>W.H. Sammis Plant (OH) Unit 7 | *United States v. Ohio Edison Co.*, No. 99-1181 (S.D. Ohio lodged Mar. 23, 2005, Order directing entry July 11, 2005) | No | Sammis Units 1-7 (after liability trial) |
| 11/3/1999 | Illinois Power Company | Baldwin Plant (IL) Unit 1 | *United States v. Illinois Power Co.*, No. 99-833 | Yes | All (after liability trial) |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Baldwin Plant (IL) Unit 2<br>Baldwin Plant (IL) Unit 3 | (S.D. Ill. entered May 27, 2005) | | |
| 11/3/1999 | Southern Company Services, Inc. / Alabama Power Company | Barry Steam Plant (AL) Unit 5<br><br>Gaston Steam Plant (AL) Unit 5<br><br>Gorgas Steam Plant (AL) Unit 10<br><br>Greene County Plant (AL) Unit 2<br><br>Miller Plant (AL) Unit 3<br>Miller Plant (AL) Unit 4 | *United States v. Alabama Power Co.*, No. 01-152 (N.D. Ala. lodged Apr. 24, 2006, entered June 19, 2006) | No | Miller Units 3, 4 (Note: Miller involved "commence construction" NSR claims) |
| 11/3/1999 | Southern Company Services, Inc. / Georgia Power Company | Bowen Plant (GA) Unit 2<br><br>Scherer Plant (GA) Unit 3<br>Scherer Plant (GA) Unit 4 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | | | | |
| 11/3/1999 | Southern Company Services, Inc. / Gulf Power Company | Crist Plant (FL) Unit 7 | | | |
| 11/3/1999 | Southern Company Services, Inc. / Mississippi Power Company | Watson Electric Generating Plant (MS) Unit 5 | | | |
| 11/3/1999 | Southern Company Services, Inc. / Savannah Electric & Power Company | Kraft Plant (GA) Unit 3 | | | |
| 11/3/1999 | Southern Indiana Gas and Electric Company (SIGECO) | F.B. Culley Station (IN) Unit 1<br>F.B. Culley Station (IN) Unit 2<br>F.B. Culley Station (IN) Unit 3 | *United States v. Southern Indiana Gas & Elec. Co.*, No. 99-1692 (S.D. Ind. entered Aug. 19, 2003) | No | Culley Units 1-3 |
| 11/3/1999 | Tampa Electric Company (TECO) | Big Bend Station (FL) Unit 1<br>Big Bend Station (FL) Unit 2 | *United States v. Tampa Electric Co.*, No. 99-2524 (M.D. Fla. entered Feb. 29, 2000) | Yes | All |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Gannon Station (FL) Unit 3<br>Gannon Station (FL) Unit 4<br>Gannon Station (FL) Unit 6 | | | |
| 3/9/2000 | Tennessee Valley Authority (TVA) | Allen Steam Plant (TN) Unit 3<br><br>Bull Run Steam Plant (TN) Unit 1<br><br>Colbert Steam Plant (AL) [no unit number identified]<br><br>Cumberland Steam Plant (TN) Unit 1<br>Cumberland Steam Plant (TN) Unit 2<br><br>John Sevier Steam Plant (TN) Unit 3<br><br>Kingston Steam Plant (TN) Unit 6<br>Kingston Steam Plant (TN) Unit 8 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Paradise Steam Plant (KY) Unit 1<br>Paradise Steam Plant (KY) Unit 2<br>Paradise Steam Plant (KY) Unit 3<br><br>Shawnee Steam Plant (KY) Unit 1<br>Shawnee Steam Plant (KY) Unit 1<br><br>Widows Creek Steam Plant (AL) Unit 5 | | | |
| 4/24/2000 | Virginia Electric and Power Company | Mount Storm Power Plant (WV) Unit 1<br>Mount Storm Power Plant (WV) Unit 2<br>Mount Storm Power Plant (WV) Unit 3 | *United States v. Virginia Elec. & Power Co.*, No. 03-517 (E.D. Va. entered Oct. 3, 2003) | Yes | All (note: Mount Storm Units 1-3 already had FGD) |
| 5/9/2000 | Duke Energy Corporation | Allen Plant (NC) Unit 1<br>Allen Plant (NC) Unit 2 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Allen Plant (NC) Unit 3<br>Allen Plant (NC) Unit 4<br>Allen Plant (NC) Unit 5<br><br>Belews Creek Plant (NC) Unit 1<br>Belews Creek Plant (NC) Unit 2<br><br>Buck Steam Station (NC) Unit 3<br>Buck Steam Station (NC) Unit 4<br>Buck Steam Station (NC) Unit 5<br><br>Cliffside Steam Plant (NC) Unit 1<br>Cliffside Steam Plant (NC) Unit 2<br>Cliffside Steam Plant (NC) Unit 3<br>Cliffside Steam Plant (NC) Unit 4<br>Cliffside Steam Plant (NC) Unit 5 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Dan River Steam Station (NC) Unit 3<br><br>Marshall Steam Plant (NC) Unit 2<br>Marshall Steam Plant (NC) Unit 3<br>Marshall Steam Plant (NC) Unit 4<br><br>Riverbend Steam Plant (NC) Unit 4<br>Riverbend Steam Plant (NC) Unit 6<br>Riverbend Steam Plant (NC) Unit 7<br><br>W.S. Lee Steam Plant (SC) Unit 3 | | | |
| 6/28/2000 | Cinergy Corporation, Cincinnati Gas and Electric, and PSI Energy, Inc. | Gibson Generating Station (IN) Unit 1<br>Gibson Generating Station (IN) Unit 2 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Miami Fort Generating Station (OH) Unit 5<br>Miami Fort Generating Station (OH) Unit 7 | | | |
| 6/30/2000 | Dayton Power and Light Company | J.M. Stuart Generating Station (OH) – four units | *Sierra Club v. Dayton Power & Light Co., Duke Energy Ohio, Inc., & Columbus Southern Power Co.*, No. 04-905 (S.D. Ohio entered Oct. 23, 2008) | No | Stuart Units 1-4 |
| 6/17/2002 | Minnkota Power Cooperative, Inc. | Milton R. Young Station (ND) Unit 1<br>Milton R. Young Station (ND) Unit 2 | *United States v. Minnkota Power Coop.*, No. 06-34 (D.N.D. entered July 27, 2006) | No | Milton R. Young Units 1-2 (Note: units already had one FGD) |
| 6/26/2002 | Xcel Energy | Comanche Station (CO) Unit 1<br>Comanche Station (CO) Unit 2 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Pawnee Station (CO) – has one boiler unit | | | |
| 1/24/2003 | East Kentucky Power Cooperative | Spurlock (KY) Unit 2 | *United States v. East Kentucky Power Coop.*, No. 04-34 (E.D. Ky. entered Sept. 24, 2007) | Yes | All |
| 7/2/2003 | East Kentucky Power Cooperative | Dale (KY) Unit 3<br>Dale (KY) Unit 4 | *United States v. East Kentucky Power Coop.*, No. 04-34 (E.D. Ky. entered Sept. 24, 2007) | Yes | All |
| 1/22/2004 | Mirant Potomac River, LLC | Potomac River Power Plant (VA) | *United States v. Mirant Potomac River, LLC*, No. 04-1136 (E.D. Va. lodged Sept. 27, 2004, amended consent decree entered Apr. 20, 2007) | No | Potomac River Units 3-5 |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| 1/22/2004 | Westar Energy, Inc. | Jeffrey Energy Center Unit 1<br>Jeffrey Energy Center Unit 2<br>Jeffrey Energy Center Unit 3 | | | |
| 4/1/2004 | Cinergy Corporation; PSI Energy, Inc.; and Cincinnati Gas & Electric Company | Gallagher Unit 1<br>Gallagher Unit 3<br><br>Gibson Unit 2<br><br>Miami Fort Unit 7 | | | |
| 4/1/2004 | Cinergy Services, Inc. | Beckjord Plant (OH) Unit 1<br>Beckjord Plant (OH) Unit 2<br>Beckjord Plant (OH) Unit 3<br>Beckjord Plant (OH) Unit 4<br>Beckjord Plant (OH) Unit 5<br>Beckjord Plant (OH) Unit 6<br><br>Cayuga Plant (IN) Unit 1 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Cayuga Plant (IN) Unit 2<br><br>Gallagher Plant (IN) Unit 1<br>Gallagher Plant (IN) Unit 2<br>Gallagher Plant (IN) Unit 3<br>Gallagher Plant (IN) Unit 4<br><br>Gibson Plant (IN) Unit 1<br>Gibson Plant (IN) Unit 2<br><br>Miami Fort Plant (OH) Unit 5<br>Miami Fort Plant (OH) Unit 7<br><br>Wabash River Plant (IN) Unit 1<br>Wabash River Plant (IN) Unit 2<br>Wabash River Plant (IN) Unit 3 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Wabash River Plant (IN) Unit 4<br>Wabash River Plant (IN) Unit 5<br>Wabash River Plant (IN) Unit 6 | | | |
| 6/18/2004 | American Electric Power Service Corp.;<br>Indiana Michigan Power Company, d/b/a American Electric Power (AEP);<br>Ohio Power Company, d/b/a AEP;<br>Appalachian Power Company, d/b/a AEP<br>Columbus & Southern Ohio Electric Company, d/b/a AEP;<br>Cardinal Operating Company;<br>Central Operating Company | Cardinal Power Plant (OH) Unit 1<br>Cardinal Power Plant (OH) Unit 2<br><br>Conesville Power Plant (OH) Unit 5<br>Conesville Power Plant (OH) Unit 6<br><br>John Amos Power Plant (WV) Unit 2<br><br>Kammer Power Plant (WV) Unit 1<br>Kammer Power Plant (WV) Unit 2<br>Kammer Power Plant (WV) Unit 3 | *United States v. American Electric Power Service Corp*., No. 99-1182 (and consolidated cases) (S.D. Ohio lodged Oct. 9, 2007, order directing entry Dec. 13, 2007) | Yes | All |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Muskingum River Station (OH) Unit 1<br>Muskingum River Station (OH) Unit 2<br>Muskingum River Station (OH) Unit 3<br>Muskingum River Station (OH) Unit 4<br>Muskingum River Station (OH) Unit 5<br><br>Philip Sporn Plant (WV) Unit 1<br>Philip Sporn Plant (WV) Unit 2<br>Philip Sporn Plant (WV) Unit 5<br><br>Tanners Creek Plant (IN) Unit 4 | | | |
| 9/29/2004 | Northern Indiana Public Service Company (NIPSCo) | Bailly Electric Generating Station Unit 7 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Bailly Electric Generating Station Unit 8<br><br>Michigan City Station Unit 12<br><br>R.M. Schahfer Station Unit 4<br>R.M. Schahfer Station Unit 15 | | | |
| 2/15/2005 | Louisiana Generating, L.L.C. | Big Cajun II Power Plant (LA) Unit 1<br>Big Cajun II Power Plant (LA) Unit 2 | | | |
| 4/26/2006 | E. ON U.S. (Kentucky Utilities) | E.W. Brown Plant (KY) Unit 3 | *United States v. Kentucky Utilities Co.*, No. 07-75 (E.D. Ky. entered Mar. 17, 2009) | No | Brown Unit 3 |
| 7/31/2007 | Midwest Generation, LLC and Commonwealth Edison Company | Crawford Station (IL) Unit 7<br>Crawford Station (IL) Unit 8 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Fisk Station (IL) Unit 19<br><br>Joliet Station (IL) Unit 6<br>Joliet Station (IL) Unit 7<br><br>Powerton Station (IL) Unit 5<br>Powerton Station (IL) Unit 6<br><br>Waukegan Station (IL) Unit 6<br>Waukegan Station (IL) Unit 7<br>Waukegan Station (IL) Unit 8<br><br>Will County Station (IL) Unit 1<br>Will County Station (IL) Unit 2<br>Will County Station (IL) Unit 3<br>Will County Station (IL) Unit 4 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| 9/17/2007 | Allegheny Energy, Inc.; Monongahela Power d/b/a Allegheny Energy; and West Penn Power d/b/a Allegheny Energy | Armstrong Generating Station (PA) Unit 1<br>Armstrong Generating Station (PA) Unit 2<br><br>Fort Martin (WV) Unit 1<br>Fort Martin (WV) Unit 2<br><br>Hatfields Ferry (PA) Unit 1<br>Hatfields Ferry (PA) Unit 2<br>Hatfields Ferry (PA) Unit 3<br><br>Willow Island (WV) Unit 2 | | | |
| 9/26/2007 | E.ON U.S. (Kentucky Utilities) | Ghent Station (KY) Unit 1<br>Ghent Station (KY) Unit 3 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| 3/10/2008 | Duke Energy Corporation | W.H. Zimmer Generating Station (OH) Unit 1<br>W.H. Zimmer Generating Station (OH) Unit B006<br>W.H. Zimmer Generating Station (OH) Unit B007<br>W.H. Zimmer Generating Station (OH) Unit B008 | | | |
| 8/5/2008 | Allete Inc. d/b/a Minnesota Power Company | Boswell Generating Station (MN) Unit 1<br>Boswell Generating Station (MN) Unit 2<br>Boswell Generating Station (MN) Unit 3<br>Boswell Generating Station (MN) Unit 4 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Laskin Generating Station (MN) Unit 2 | | | |
| 10/21/2008 | Consumers Energy | J.H. Campbell Plant (MI) Unit 1<br>J.H. Campbell Plant (MI) Unit 2<br><br>B.C. Cobb Plant (MI) Unit 4<br>B.C. Cobb Plant (MI) Unit 5<br><br>D.E. Karn Plant (MI) Unit 1<br>D.E. Karn Plant (MI) Unit 2<br><br>J.C. Weadock Plant (MI) Unit 8 | | | |
| 11/25/2008 | Unified Government of Wyandotte County/Kansas City, Kansas, acting through the Kansas City Board of Public Utilities | Nearman Creek Power Station (KS) Unit 1 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Quindaro Power Station (KS) Unit 1<br>Quindaro Power Station (KS) Unit 2 | | | |
| 12/8/2008 | Nebraska Public Power District (NPPD) | Gerald Gentleman Station (NE) Unit 1<br>Gerald Gentleman Station (NE) Unit 2 | | | |
| 3/19/2008 | E.ON U.S. and Kentucky Utilities Company (KU) | Ghent Station (KY) Unit 1<br>Ghent Station (KY) Unit 2<br>Ghent Station (KY) Unit 3<br>Ghent Station (KY) Unit 4 | | | |
| 3/26/2009 | Richmond Power and Light | Whitewater Valley Generating Station (IN) Unit 1<br>Whitewater Valley Generating | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Station (IN) Unit 2 | | | |
| 3/27/2009 | American Municipal Power-Ohio, Inc. and Elkem Metals, Inc. | Richard H. Gorsuch Generating Station (4 units) | | | |
| 4/16/2009 | Dominion Resources Services, Inc., Commonwealth Edison Company, Mirant Americas, Inc. | Kincaid Generating Station (IL) Unit 1<br>Kincaid Generating Station (IL) Unit 2<br><br>State Line Generating Station (IN) Unit 3<br>State Line Generating Station (IN) Unit 4 | | | |
| 7/24/2009 | DTE Energy | Belle River Electric Generating Station (MI) Unit 1<br>Belle River Electric Generating Station (MI) Unit 2 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Monroe Electrical Generating Station (MI) Unit 1<br>Monroe Electrical Generating Station (MI) Unit 2<br>Monroe Electrical Generating Station (MI) Unit 3<br>Monroe Electrical Generating Station (MI) Unit 4<br><br>River Rouge Electric Generating Station (MI) Unit 2<br>River Rouge Electric Generating Station (MI) Unit 3 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | St. Clair Generating Station (MI) Unit 2<br>St. Clair Generating Station (MI) Unit 3<br>St. Clair Generating Station (MI) Unit 4<br>St. Clair Generating Station (MI) Unit 6<br>St. Clair Generating Station (MI) Unit 7<br><br>Trenton Channel Generating Station (MI) Unit 9A<br>Trenton Channel Generating Station (MI) Unit 17<br>Trenton Channel Generating Station (MI) Unit 18 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Trenton Channel Generating Station (MI) Unit 19 | | | |
| 8/12/2009 | FirstEnergy Corporation | Ashtabula Generating Station (OH) Unit 5<br><br>Bay Shore Generating Station (OH) Unit 2<br>Bay Shore Generating Station (OH) Unit 3<br>Bay Shore Generating Station (OH) Unit 4<br><br>Eastlake Generating Station (OH) Unit 1<br>Eastlake Generating Station (OH) Unit 2 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Eastlake Generating Station (OH) Unit 3<br>Eastlake Generating Station (OH) Unit 4<br>Eastlake Generating Station (OH) Unit 5<br><br>Lake Shore Generating Station (OH) Unit 18 | | | |
| 8/18/2009 | Painesville Municipal Electric Plant, Painesville, OH | Boiler 3<br>Boiler 4<br>Boiler 5 | | | |
| 8/26/2009 | Hoosier Energy Rural Electric Cooperative | Merom Generating Station (IN) Unit 1<br>Merom Generating Station (IN) Unit 2 | | | |
| 8/26/2009 | White Pine Electric Power, LLC | White Pine Power Plant (MI) Boiler 1 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | White Pine Power Plant (MI) Boiler 2 | | | |
| 9/29/2009 | Indianapolis Power & Light Company | Eagle Valley (formerly H.T. Pritchard) (IN) Unit 3<br>Eagle Valley (IN) Unit 4<br>Eagle Valley (IN) Unit 6<br><br>Harding Street (formerly Elmer W. Stout) (IN) Unit 5<br>Harding Street (IN) Unit 6<br>Harding Street (IN) Unit 7<br><br>Petersburg Generating Stations (IN) Unit 1<br>Petersburg Generating | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Stations (IN) Unit 2<br>Petersburg Generating Stations (IN) Unit 3<br>Petersburg Generating Stations (IN) Unit 4 | | | |
| 11/18/2009 | Dayton Power and Light Company | O.H. Hutchings Generating Station (OH) Boiler 3<br>O.H. Hutchings Generating Station (OH) Boiler 6 | | | |
| 11/18/2009 | Wisconsin Public Service Corporation | J.P. Pulliam Generating Station (WI) Unit 8<br><br>Weston Generating Station (WI) Unit 1 | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Weston Generating Station (WI) Unit 2<br>Weston Generating Station (WI) Unit 3 | | | |
| 12/14/2009 | Wisconsin Power and Light Co.,<br>Alliant Energy Corp.,<br>Madison Gas and Electric Co.,<br>Wisconsin Electric Power Co.,<br>Wisconsin Public Service Corp. | Columbia Energy Center (WI) Unit 1<br>Columbia Energy Center (WI) Unit 2<br><br>Edgewater Generating Station (WI) Unit 4<br>Edgewater Generating Station (WI) Unit 5<br><br>Nelson Dewey Generating Station (WI) Unit 1<br>Nelson Dewey Generating | | | |

| NOV Date | Company | Units Named (State) | Consent Decrees Entered before Jan. 2010 | System-Wide Resolution? | Units Covered by the Settlement |
|---|---|---|---|---|---|
| | | Station (WI) Unit 2 | | | |