



**Before The
State Of Wisconsin
DIVISION OF HEARINGS AND APPEALS**

In the Matter of an Air Pollution Control
Construction Permit Issued to Wisconsin Electric
Power Company for the Elm Road Generating
Station, Permit No. 03-RV-166, located in Oak
Creek, Wisconsin

Case No.: IH-04-03

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

Background

Wisconsin Electric Power Company (“Wisconsin Electric”), 231 West Michigan Street, Milwaukee, Wisconsin, submitted an air pollution control permit application to construct a new electric generating station that would be located on or adjacent to property at its existing Oak Creek Power Plant (OCPP) site in Milwaukee County.

The proposed new facility is identified as the Elm Road Generating Station (ERGS). The ERGS as proposed would consist of two super-critical pulverized coal (SCPC) units and a single integrated coal gasification combined cycle (IGCC) unit, which would have a collective capacity of approximately 1,830 megawatts of coal-based generating power. The two proposed SCPC units are each sized at 615 megawatts, and the IGCC unit is sized at 600 megawatts. Wisconsin Electric originally proposed to construct the SCPC units first, placing one in service in 2008 and the other in 2009. Wisconsin Electric originally proposed to construct the IGCC unit thereafter, with an original planned in service date of 2011.

On January 14, 2004, the DNR issued a construction permit authorizing Wisconsin Electric to build the ERGS as proposed, with two SCPC units and one IGCC unit.

Wisconsin Electric sought also to have the Public Service Commission of Wisconsin (“PSC”) issue a Certificate of Public Convenience and Necessity (“CPCN”) for the ERGS project configured with the two SCPC units and the single IGCC unit. In a decision dated November 10, 2003, the PSC approved construction of the two SCPC units, but delayed by one year the respective dates for each to be placed in service. The PSCW denied the request for a CPCN to construct the IGCC unit.

By order dated November 29, 2004, the circuit court in Dane County vacated the PSC’s issuance of a CPCN and remanded the matter to the PSC for further proceedings. Appellate review of the circuit court order is presently pending before the Wisconsin Supreme Court.

Pursuant to due notice, a hearing was conducted by the Division of Hearings and Appeals in Milwaukee on October 18, 19 & 20, 2004 before the undersigned Administrative Law Judge (“ALJ”). The Parties filed simultaneous principal and responsive briefs pursuant to an established briefing schedule, with the final responsive briefs being filed on December 30, 2004. Also, the Northeast States for Coordinated Air Use Management (“NESCAUM”) was granted leave to file a brief as *amicus curiae*, which was filed on November 30, 2004.

In accordance with Wis. Stat. §§ 227.47 and 227.53(1)(c), the PARTIES to this proceeding are certified as follows:

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Summary of Issues and Rulings

On May 21, 2004, the Petitioners duly filed an “Issues List and Statement of Requested Relief.” By orders dated August 3, 2004, and August 30, 2004, the ALJ delimited the scope of the contested case hearing by striking certain issues and pre-filed evidence from consideration, and delimiting the scope of other certain issues. The ALJ recasts the issues that remain and that were litigated in the contested case hearing as follows:

1. Did the DNR err in excluding IGCC from its BACT/LAER analysis of the SCPC units? (Petitioners’ Issues 11 & 12).

RULING: The DNR did not err.

2. Did the DNR err in not establishing a more stringent mercury emissions limit for the IGCC unit? (Petitioners’ Issue 10).

RULING: The DNR did not err.

3. Did the DNR comply with the requirement that it determine that the benefits of the proposed project significantly outweigh its environmental and social costs based upon an analysis of alternative sites, sizes, production processes and environmental control techniques? (Petitioners’ Issues 6, 7 & 8).

RULING: The DNR complied with the requirement.

4. Did the DNR err in determining that all major stationary sources operated by Wisconsin Electric in the state were in compliance or on a schedule of compliance with all applicable emission limits? (Petitioner’s Issue 9).

RULING: The DNR did not err.

There being no demonstrated error in the DNR’s issuance of the Air Pollution Control Construction Permit number 03-RV-166, the issuance of the permit is accordingly AFFIRMED.

FINDINGS OF FACT

Background

1. On June 18, 2002, and in subsequent submittals, the applicant, Wisconsin Electric Power Company (“Wisconsin Electric”), submitted an application (the “Application”) to the Wisconsin Department of Natural Resources (“DNR”) for an air pollution control construction permit under Wis. Stat. § 285.60 and related administrative regulations. The DNR determined the Application to be complete in October 2003.

2. The Application sought a permit to construct a three-unit generating station located on and adjacent to property of Wisconsin Electric’s existing Oak Creek Power Plant (“OCPP”).

3. The proposed project is to be known as the Elm Road Generating Station ("ERGS"). The ERGS would be situated along the shore of Lake Michigan in both the City of Oak Creek and the Town of Caledonia.

4. All three generating units in the ERGS would use bituminous coal as the original fuel source.

5. Wisconsin Electric and certain affiliated entities also applied for a certificate of public necessity and convenience ("CPCN") for the proposed ERGS project from the Wisconsin Public Service Commission ("PSC") under Wis. Stat. § 196.491(3).

6. The PSC issued a CPCN on November 10, 2003. The PSC approved the construction of two super critical pulverized coal ("SCPC") units, with the first unit to be placed in service in 2009 and the second to be placed in service in 2010. The PSC denied the request to construct the IGCC unit, which Wisconsin Electric had proposed to construct after the SCPC units.

7. The PSC and the DNR prepared an environmental impact statement ("EIS") in conjunction with the CPCN and the various permits and approvals required from the DNR. The PSC issued its final decision on the EIS as part of its CPCN decision. The DNR issued a separate decision on the EIS on December 17, 2003.

8. The DNR issued air pollution control construction permit number 03-RV-166 (the "Permit") on January 14, 2004. The Permit authorizes Wisconsin Electric to construct the two SCPC units and the single IGCC unit as it had applied for, even though the DNR was aware that the PSC had earlier denied the request for a CPCN to build the IGCC unit.

9. The Petitioners requested a contested case hearing on the Permit on February 6, 2004. The DNR granted the hearing request on February 23, 2004.

IGCC as BACT/LAER for SCPC

10. The area in which the ERGS would be located is in attainment of national ambient air quality standards (NAAQS) for all criteria pollutants except for ozone, for which the area has been designated to be a severe nonattainment area.

11. The ERGS is required to be subject to the best available control technology (BACT) for all criteria pollutants except for ozone.

12. Emissions from the ERGS of an ozone precursor, volatile organic compounds (VOC's), must be at the lowest achievable emissions rate (LAER).

13. In the SCPC process, water is heated to higher temperatures and pressure so that the energy content of the steam delivered to the turbines is greater, thereby reducing the amount of fuel consumed per unit of electrical output. In the IGCC process, coal is "gasified" to produce a synthetic gas ("syngas"), which is used as fuel for combustion turbines. Waste heat from this process is also used to produce steam for steam turbine use.

14. The DNR determined not to include IGCC in the BACT/LAER analysis for the ERGS SCPC units for the stated reason that IGCC is a “different type of process technology” from SCPC.

15. The ERGS SCPC and IGCC units would use the same fuel stock of Pittsburgh No. 8 bituminous coal.

16. The ERGS IGCC unit would emit fewer pollutants per unit of power generated than either of the ERGS SCPC units.

17. Gasification of coal in the IGCC production process is not a combustion process. The chemical reactions that occur within an IGCC gasifier are different than the reactions that occur during coal combustion, and the products of those reactions are different.

18. Each of the ERGS SCPC units is composed of a power block, an air quality control equipment block, and the waste handling and byproduct systems.

19. The power block for the ERGS SCPC units is the portion of the plant where coal is burned and electricity is generated. Coal is pulverized to a powdery consistency and then transferred to the boiler where it is combusted as fuel for the steam generator to heat steam. The heated steam turns the steam turbine, which is connected to the electric generator that generates the desired end product -- electricity. The steam then passes through the steam condenser, where it is cooled and then routed to the steam generator.

20. In the air quality control equipment block of the ERGS SCPC units, the exhaust gases from the power block are routed through the air quality control equipment. This equipment includes the following: the baghouse, where particulate is removed; the flue gas desulfurization scrubber, which removes acid gases (SO₂); the selective catalytic reduction (SCR) system, which converts NO_x into nitrogen and oxygen gas; and the wet electrostatic precipitator, which removes sulfuric acid mist and fine particulates.

21. The waste handling and byproduct systems of the ERGS SCPC units include the forced oxidation gypsum plant, the limestone system, the stack, and the systems for handling gypsum and fly ash.

22. An IGCC unit has three separate components: the gasification block, the acid gas removal equipment, and the power block. The gasification block is composed of the air separation unit and the gasifier. The acid gas removal equipment is composed of the acid gas recovery unit and the sulfuric acid plant. The power block is composed of the combustion turbines, heat recovery steam generator, and the steam turbine generator.

23. The ERGS IGCC unit would include the following components: an air separation unit; three oxygen-blown coal gasifiers; two combustion turbines; two heat recovery steam generators; a steam turbine generator; an acid gas recovery unit; a sulfuric acid production facility; a coal slurry/preparation facility; slag handling equipment; and a flare.

24. In order to replace a SCPC coal unit with an IGCC unit, the following major equipment for the SCPC units would have to be removed: components of the power block (steam generator, steam turbine, generator, condenser); air quality control equipment (SCR, baghouse, flue gas scrubber, wet precipitator, stack and limestone handling system); and waste and byproduct handling systems (gypsum system, bottom and fly ash systems).

25. To complete the replacement of a SCPC unit with an IGCC unit, the following equipment would have to be added: an air separation unit; three oxygen-blown coal gasifiers; two combustion turbines; two heat recovery steam generators; a steam turbine generator; an acid gas recovery unit; a sulfuric acid production facility; the coal slurry/preparation facility; slag handling equipment; a storage facility for the slag; a 200-foot tall gas flare.

26. The footprint of an IGCC unit is 200% to 350% the size of an SCPC unit.

27. There are fourteen IGCC facilities generating electricity in the world. Of those fourteen, four are designed to operate with coal as the primary feedstock, and only three of these four are presently operating. These four facilities each have approximately 250 megawatts of generating capacity.

28. No permitting authority has established IGCC as the BACT or LAER for a coal fired power plant.

29. IGCC and SCPC are different process technologies for the production of electricity from coal feedstock. To substitute either of the ERGS SCPC units with an IGCC unit would redefine the design of the ERGS.

Mercury Emissions from ERGS IGCC

30. The Permit set the mercury emissions limit for the ERGS IGCC based upon a determination that the carbon bed filter or equivalent control technology to be employed was capable of achieving 95% removal of mercury from the syngas before combustion.

31. The use of a single carbon bed filter in an IGCC electric generating plant may achieve 99% mercury removal from the syngas, but a removal rate of greater than 95% has never been verified.

32. None of the four IGCC facilities existing worldwide that are designed to generate electricity from coal feedstock has employed carbon bed filter technology to remove mercury from syngas.

33. No IGCC facility anywhere has employed dual carbon bed filters to remove mercury from syngas. It is not known whether use of a dual carbon bed filter to remove mercury from syngas would achieve 99% or greater removal of mercury from the syngas.

Analysis of Alternatives to ERGS

34. The DNR determined that the benefits of construction of ERGS significantly outweighed the environmental and social costs imposed as a result of its location and construction.

35. The DNR summarized its analysis of alternatives in the preliminary determination for the ERGS air permit, which references information provided by Wisconsin Electric, and the Final Environmental Impact Statement (FEIS) that was prepared jointly by the DNR and the PSC.

36. The FEIS assessed the negative economic impact of developing additional generating capacity that risked being unreliable or too expensive.

37. The FEIS assessed the need for sizing the ERGS at approximately 1830 megawatts of generating capacity.

38. Wisconsin Electric considered alternate sites for locating the ERGS and settled on its existing location at OCPP, where there was existing infrastructure and existing land use compatible with the proposed project.

39. The DNR identified and assessed alternatives to the ERGS project in the FEIS. Alternatives considered included: increasing energy efficiency and conservation to reduce overall demand; renewable resources such as wind turbines, biomass, solar power, fuel cells; natural gas; and nuclear power. The FEIS included specific consideration of a proposed natural gas fired generating plant in Fond du Lac County, proposed by Calpine. The DNR also assessed the ERGS IGCC in the FEIS, including addressing the maturity and reliability of IGCC technology.

40. The DNR conducted air quality modeling and determined that emissions from the ERGS project would comply with the NAAQS for criteria pollutants, as well as the PSD increments for those Pollutants.

41. Wisconsin Electric set emissions limits for the ERGS that met all applicable air pollution control standards, including BACT/LAER and required emissions offsets for VOC's. The DNR determined that the ERGS would not likely pose a significant inhalation risk if operated according to required standards.

42. The DNR conducted an additional impact analysis to determine the effects of the project on visibility, secondary growth, soils, and vegetation, and found these impacts to be within acceptable levels under state and federal regulations.

43. The DNR did not attempt to quantify the potential human health impacts resulting either from ERGS air emissions or from alternative power sources or sites for the ERGS.

44. In its analysis of alternative energy sources and alternative sites, the DNR did not attempt to include among the environmental and social costs of the ERGS any quantification in dollar or human terms of the health impacts of the ERGS or of any alternative power sources or sites.

Compliance Status of Other Facilities

45. The DNR contacted its compliance engineers for each facility that Wisconsin Electric operates in Wisconsin. Based upon that review, the DNR determined that Wisconsin Electric's sources were in compliance with all applicable air regulations on the date the ERGS air permit was issued.

DISCUSSION

I. IGCC as BACT or LAER for SCPC Units

The DNR was required to determine that the proposed project utilized the best available control technology ("BACT") for criteria pollutants for which the area was in attainment of national ambient air quality standards (NAAQS). Wis. Stat. § 285.63(3)(a); Wis. Admin. Code Chap. NR 405. The area in which the ERGS is to be located is in attainment of the NAAQS for all criteria pollutants except for ozone.

As for ozone, the DNR was required to determine that the proposed project utilized the lowest achievable emission rate ("LAER"). Wis. Stat. § 285.63(2)(b); Wis. Admin. Code Chap. NR 408. In the case of the ERGS, the LAER would apply to emissions of the ozone precursor "volatile organic compounds" (VOC's).

BACT is defined generally in Wis. Stat. § 285.01(12) as follows:

"Best available control technology" means an emission limitation for an air contaminant based on the maximum degree of reduction achievable as specified by the department on an individual case-by-case basis taking into account energy, economic and environmental impacts and other costs related to the source.

BACT is defined more specifically within the DNR rule titled "Prevention of Significant Deterioration," Wis. Admin. Code Chapter NR 405, as follows:

"Best available control technology" or "BACT" means an emissions limitation, including a visible emissions standard, based on the maximum degree of reduction for each air contaminant subject to regulation under the act which would be emitted from any proposed major stationary source or major modification which the department, on a case-by-case basis, taking into account energy, environmental, and economic impacts, and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including clean fuels, fuel cleaning or treatment or

innovative fuel combination techniques for control of the air
contaminant. . . .

Wis. Admin. Code § NR 405.02(7).

The DNR rule titled “Construction Permits for Direct Major Sources in Nonattainment Areas,” Chapter NR 408 of the Wisconsin Administrative Code, contains the substantially identical definition of BACT in section NR 408.02(4) as that set forth above in Chapter NR 405.

The more detailed definition of BACT in the Wisconsin Administrative Code echoes the definition of BACT contained in the federal Clean Air Act, which is as follows:

The term "best available control technology" means an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this title emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant....

42 U.S.C. § 7479(3).

LAER, the emissions limitation that must be established for ERGS for VOC’s, is defined in Wis. Stat. § 285.01(23) as follows:

“Lowest achievable emission rate” means the rate of emission which reflects the more stringent of the following:

(a) The most stringent emission limitation which is contained in the air pollution regulatory program of any state for this class or category of source, unless an applicant for a permit demonstrates that these limitations are not achievable; or

(b) The most stringent emission limitation which is achieved in practice by the class or category of source.

The DNR employs EPA’s recommended “top down” methodology for BACT and LAER analysis. The “top down” methodology requires an applicant first to rank order control technologies in descending order of effectiveness. As to BACT analysis, the top alternative must be selected as the BACT for a pollutant unless it is shown that technical considerations, or energy, environmental, or economic impacts, justify a conclusion that this most stringent technology is not “achievable” in that case. If the most stringent technology is eliminated in this fashion, then the next most stringent alternative is considered, and so on, until the BACT is established. See ADEC v. EPA, 540 U.S. 461, 475-76 (2004), quoting EPA’s “New Source Review Workshop Manual (Draft Oct. 1990)” [hereinafter referred to as “NSR Manual”].

The principal difference in BACT and LAER analysis is that LAER analysis does not consider economic factors, except to the extent that LAER is not considered “achievable” if the cost of the control is determined to be prohibitive.

During the application review process, counsel for one of the Petitioners asked the DNR to consider IGCC in its analysis of BACT and LAER for the proposed SCPC units. (Ex. 53). The Secretary of the DNR provided a written response to this request, stating that BACT and LAER analysis “does not specifically allow for consideration of different process technologies.” (Ex. 54). The Secretary recognized that while SCPC and IGCC both utilize coal as feedstock, “they do so using very different methods.” The Secretary concluded that IGCC and SCPC were “different process technologies,” so that the DNR did not intend to include IGCC in the top down BACT/LAER review for the SCPC units. Consistent with the Secretary’s response, the DNR did not consider IGCC process technology in its analysis of BACT and LAER for the proposed SCPC generating units. The Petitioners contend that the DNR was required to do so by law.

The DNR and Wisconsin Electric assert that “production processes” or “available methods, systems and techniques” for pollutant reduction that would “redefine the design of the source” are not required to be included in BACT/LAER analysis. The most direct statement of this principle is set forth in the NSR Manual, which the Supreme Court had quoted at length in *ADEC v. EPA*. The salient portion of the NSR Manual provides as follows:

CONSIDERATION OF INHERENTLY LOWER
POLLUTING PROCESSES/PRACTICES

Historically, EPA has not considered the BACT requirement as a means to redefine the design of the source when considering available control alternatives. For example, applicants proposing to construct a coal-fired electric generator have not been required by EPA as part of a BACT analysis to consider building a natural gas-fired electric turbine although the turbine may be inherently less polluting per unit product (in this case electricity). However, this is an aspect of the PSD permitting process in which states have the discretion to engage in a broader analysis if they so desire. Thus, a gas turbine normally would not be included in the list of control alternatives for a coal-fired boiler. However, there may be instances where, in the permit authority's judgment, the consideration of alternative production processes is warranted and appropriate for consideration in the BACT analysis. A production process is defined in terms of its physical and chemical unit operations used to produce the desired product from a specified set of raw materials. In such cases, the permit agency may require the applicant to include the inherently lower-polluting process in the list of BACT candidates.

The evidence establishes that the design of the ERGS as proposed by Wisconsin Electric would be redefined if IGCC units were substituted for either or both of the

proposed SCPC units. The DNR did not err in not including IGCC in the BACT/LAER analysis for the SCPC units.¹

The SCPC and IGCC units employ radically different processes to produce electricity from coal. These different processes require radically different physical plants. The main commonality is that, as proposed by Wisconsin Electric, both types of units would use coal as the fuel stock (though IGCC plants can be constructed to use fuel stocks other than coal, such as petroleum coke). Beyond the fuel stock, however, there are few similarities between IGCC and SCPC units.

A SCPC unit combusts pulverized coal to create electricity. An IGCC unit “gasifies” the coal in a chemical reaction, and thereafter combusts the syngas product to power its combustion turbines.

An IGCC unit employs a chemical reaction to convert coal into a gaseous stream that consists primarily of hydrogen and carbon monoxide. The raw syngas is cleaned before it is fed to a combined cycle combustion turbine and combusted. This syngas combustion in a combined cycle combustion turbine bears greater similarity to a natural gas combustion turbine than it does to a coal-fired power plant boiler. (Tr. 839). Combustion turbines used to combust syngas in an IGCC plant are similar to those employed in a natural gas fired power plant. (*Id.*). Combustion turbines are designed for gaseous or liquid fuels and cannot burn pulverized coal. (Tr. 754). Combustion turbines designed for an IGCC plant could not be used in a SCPC plant. (*Id.*).

An IGCC unit includes a number of components that do not exist in a SCPC plant. These include the following: a cryogenic air separation unit, which generates oxygen for the gasifier and nitrogen for the combustion turbine (Tr. 752); coal gasifiers, which chemically convert a mixture of coal and water into synthetic gas (“syngas”) and acid gas (Tr. 753); an acid-gas recovery unit, which separates out the sulfur from the syngas (Tr. 755); a coal-slurry production facility (Tr. 755); slag handling equipment (Tr. 756); a sulfuric acid production facility (Tr.753); a 200-foot tall flare (tr. 756); a heat recovery steam generator (Tr. 754).

An SCPC unit includes components that do not exist in an IGCC unit. These include components of the power block (steam generator, steam turbine, generator, and condenser), the air quality control equipment (baghouse, flue gas scrubber, the forced

¹ The pre-hearing motions of Wisconsin Electric and the DNR for summary judgment on this issue were denied in the ALJ’s order dated August 3, 2004 upon the conclusions that the record on summary judgment was “insufficient to establish as a matter of law that DNR acted within the law in determining not to identify IGCC in the BACT/LAER analysis for the coal-fired SCPC units” and that “[d]evelopment of a fuller factual record will lead to a more informed decision on these potentially complicated and mixed questions of law and fact.” Order, p. 12. The factual record on this issue has now been fully developed and establishes that the DNR did not err in excluding IGCC from its BACT/LAER analysis for the SCPC units.

oxidation the wet precipitator, the limestone system, the stack), and the byproduct and waste handling systems, including the gypsum plant.

Because of the different processes and components of IGCC and SCPC, the footprint for an IGCC unit would be from two to three and one-half times the size of the footprint of an SCPC unit with similar generating capacity. Exhibits, 69, 70, and 71 aptly depict the different processes and components of the two types of power plants.

Another innate difference between IGCC and SCPC units is the different regulatory treatment of their respective combustion technologies. The new source performance standards (NSPS) for the combustion units of a SCPC unit are specified by Section NR 440.20 for “electric steam generating units,” Wis. Admin. Code, while the NSPS for the gas combustion turbines of the IGCC unit are specified by section NR 440.50, respecting “stationary gas turbines.” These different regulatory treatments support the conclusion that IGCC and SCPC are different process technologies, and that to substitute one for the other would redefine the design of the source.

The NSR Manual illustrates the “redefining the design of the source” limitation on BACT analysis with one concrete example. The manual instructs that requiring an applicant for a coal-fired power plant to construct a natural gas-fired plant would be an example of redefining the design of the source that BACT analysis does not require. Thus, the longstanding EPA protocol in administering the statutory BACT requirement under the federal Clean Air Act and implementing regulations (which are mirrored by Wis. Stat. Chapter 285 and DNR rules) is to exclude a natural gas-fired power plant from the BACT analysis for a coal-fired power plant.

The emissions from a syngas-fired IGCC unit would be significantly less than emissions from the proposed SCPC units, just as the emissions from a natural gas-fired plant are significantly less than from any coal-fired plant. Substantial design and process differences exist between syngas-fired and coal-fired plants, as they exist between natural gas and coal-fired plants. (Tr. 838-39). SCPC and IGCC thus represent “different process technologies,” as characterized by the Secretary of the DNR. (Ex. 54). The great weight of the evidence demonstrates that substitution of IGCC’s different process technology for either or both of the proposed SCPC units at the ERGS would “redefine the design of the source,” so that inclusion of IGCC in the BACT analysis for the SCPC units is not required.

The approach described in the NSR Manual is consonant with the regulatory definition of BACT, which requires considering the “*application* of production processes or available methods, systems and techniques” to control contaminants from a “proposed” source. Wis. Admin. Code §§ 405.02(7) [emphasis supplied]. The source as proposed by Wisconsin Electric included two coal-fired SCPC units. IGCC is not a “production process” or an “available method, system, or technique” that can be *applied* or incorporated into the design of an SCPC unit. Rather, IGCC is an altogether different

method of generating electricity that would involve the wholesale substitution of one type of physical plant for another. The definition of BACT allows for the exclusion from the top down analysis of a “production process or available method, system or technique” that can not be applied or incorporated into a proposed source without fundamentally altering the source as proposed. As the NSR Manual puts it, the BACT requirement is not “a means to redefine the design of the source when considering available control alternatives.”

The NSR Manual recognizes that permitting authorities may exercise discretion to require an applicant to include control technologies and processes in the BACT analysis that could result in a redefinition of the design of the source. It is apparent that this is what the permitting authorities in Illinois, New Mexico, and West Virginia have done by recently considering IGCC in the BACT analysis for coal-fired power plants.² In contrast, permitting authorities in Wyoming (Ex. 77), Montana (Ex. 76; Tr. 855-56), and Kentucky (Ex. 78) have recently determined not to include IGCC in the BACT analysis for a coal-fired plant on the rationale that selection of IGCC as BACT would redefine the design of the proposed coal-fired plants. The varying determinations of different state permitting authorities on inclusion of IGCC in a BACT analysis for a coal-fired plant reflect the discretion that the law accords them to include in the BACT analysis a production process that would redefine the design of the source. See *In re Kendall New Century Development*, PSD Appeal No. 03-01, 2003 WL 21213227, n.14 (E.P.A. April 29, 2003)(“redefinition of the source is not always prohibited” but “is a matter for the permitting authority’s discretion”).

The decision *In the Matter of Hawaiian Commercial & Sugar Co.*, PSD Appeal No. 92-1, 4 E.A.D. 95, 99-100, 1992 WL 191948 (July 20, 1992), is instructive on this issue. There the state permitting authority issued a permit for the construction of a boiler that would be fueled by coal, fuel oil, or biomass. The permit was challenged in part on the basis that the permitting authority should have required a combined cycle facility that would not be fueled by coal. The Environmental Appeals Board concluded that regulations for determination of BACT “do not mandate that the permitting authority redefine the source in order to reduce emissions.” *Id.* at 99. The board ruled that requiring a combined cycle facility over the coal-fired facility “would in effect redefine the source.” *Id.* at 100. The Board quoted at length the NSR Manual respecting “redefining” a source in BACT analysis, observing that “the [state] permitting authority is entitled to a wide latitude in how broad a BACT analysis it wishes to conduct in this regard.” *Id.* at 99-100. Accord, *In re Kendall New Century Development* (affirming state permitting authority’s determination that the addition of heat recovery steam generator to transform a single cycle

²Of these states, permitting authorities in Illinois and West Virginia have made BACT determinations, and neither selected IGCC as BACT or LAER for the proposed coal fired units. The permitting authority in New Mexico has yet to make its BACT determination.

gas turbine to a combined cycle turbine system would “redefine the source” and was not required in BACT analysis).

The range of control options evaluated under LAER is generally the same as those evaluated under a BACT analysis. (Tr. 237). The principal difference between the LAER and BACT analysis is the substantially diminished role that cost considerations have in establishing the LAER for a source or for a particular emissions unit within a source. As with BACT analysis, the DNR was not required to include IGCC in establishing the LAER for VOC’s for either or both of the SCPC units. To require this would likewise have resulted in a redefinition of the design of the source.

The DNR considered the Petitioners’ assertion that the DNR should consider IGCC in the BACT/LAER analysis for the proposed SCPC units. The DNR reasonably applied settled protocols in the conduct of the established methodology in determining not to include IGCC in the top down BACT/LAER analysis for the SCPC units.

II. IGCC Mercury Emissions

The Petitioners claim that the emission rate for mercury for the permitted IGCC unit is “insufficiently stringent because DNR failed to consider available techniques that could lower mercury emissions from IGCC units.” (Petitioners’ Issue 10). The Permit set the mercury emissions limit for the IGCC unit based upon a determination that “carbon bed filter” control technology would achieve 95% removal of mercury from the syngas before combustion. (Ex. 43, p. 118).

A verified 95% removal rate utilizing a single carbon bed filter has been achieved at an IGCC plant operated by Eastman Chemical Company. (Ex. 13). The Eastman Chemical plant is not an electricity generating facility, however, but rather it uses IGCC to create syngas to use as a feedstock to produce chemicals. No existing IGCC power plant utilizes the carbon bed filter technology to remove mercury from syngas, and thus there is no historical data on how this technology would perform as part of an IGCC power plant.

In Wisconsin Electric’s permit application, its analysis for mercury included discussion of the carbon bed filter technology employed at the Eastman Chemical plant, stating that “we expect that the use of carbon should provide approximately 99% overall mercury control.” (Ex. 39, Att. 4, p. 6). It is apparent that Wisconsin Electric viewed carbon bed filter technology to be capable of being applied in its proposed IGCC unit. (Ex. 13, p. 22). The DNR apparently agreed and included use of carbon bed filter or similar technology in establishing the mercury emissions limit.

In September 2002, a study prepared for the Department of Energy titled “The Cost of Mercury Removal in an IGCC Plant” indicated that mercury removal of better than 99% may be achievable by using *dual* carbon bed filters in a series, in contrast to a single carbon bed filter as employed at the Eastman Chemical plant. (Ex. 13). The report noted, however, that mercury removal from syngas at a rate higher than 95% has “not yet been

verified.” (Ex. 13, p. 5). The use of *dual* carbon bed filter technology has not been employed in any IGCC plant.

Section NN of the Permit requires Wisconsin Electric to “submit information for reevaluating BACT ... at least 18 months prior to the commencement of construction of any permitted processes that may have not begun construction within eighteen months from the date of the issuance of the final permit.” (Ex. 43, p. 140). The DNR’s formal response to a public comment that the proposed ERGS IGCC mercury emissions limit was insufficiently stringent makes it apparent that the DNR expected to revisit the mercury emissions limitation for the ERGS IGCC unit before construction of the unit began:

The BACT/LAER analysis for the IGCC unit is based on the current state of technology, the best engineering judgment of the performance of similar units and current expected economics, energy and other impacts. If construction of the IGCC unit does not begin within 18 months of the permit issuance, then Wisconsin Electric is required to undergo a reevaluation of the BACT/LAER in the future, but no later than 18 months prior to beginning construction. The current BACT/LAER analysis cannot predict what may be considered as BACT/LAER several years in the future.

(Ex. 40, Tab 4.D.).

Wisconsin Electric expected to be able to achieve “approximately 99% overall mercury control” with a single carbon bed filter. (Ex. 39, Attachment 4, page no. 6)(Tr. 818). However, since a mercury removal rate of greater than 95% has never been verified, the prospect of achieving a greater reduction is not a certainty. (Ex. 39, Attachment 4, page numbered “6”)(Tr. 818). With respect to the use of a single carbon filter, achieving 99% mercury removal remains a rate that is considered possible, but possible in theory only. (Tr. 818-19). And with respect to potential use of *dual* carbon filters, achieving 99% or better mercury removal is the unexplained and unconfirmed conclusion of the authors of the September 2002 DOE study. (Ex. 13).

When the Permit was issued it was a virtual certainty that Wisconsin Electric would not under any likely scenario begin construction of the permitted IGCC unit within eighteen months of the January 14, 2004 issuance of the Permit. Wisconsin Electric thus will likely be required to resubmit to the DNR updated information on control technology for mercury before commencing construction on the permitted IGCC unit. If the time ever comes for Wisconsin Electric to commence construction of the permitted IGCC unit, Wisconsin Electric’s reevaluation of control technology for mercury should explicitly address the efficacy of a dual carbon bed filter technology posited by the September 2002 study commissioned by the DOE. Given the expectation for achieving 99% reduction utilizing a single carbon bed filter, the DNR acted reasonably in establishing the IGCC mercury emissions limitation at an anticipated 95% removal rate to allow for a margin to assure that the permittee would achieve compliance consistently. See *In re Masonite Corp.*, 5 E.A.D. 551, 560-61 (EAB 1994)(where an expected optimal removal efficiency had never been proven, a permitting authority has “a certain degree of discretion to set the

emissions limitation at a level that does not necessarily reflect the highest possible control efficiency, but will allow the permittee to achieve compliance consistently”).

III. Alternatives Analysis

By virtue of the ERGS being located in a nonattainment area for ozone, the DNR was required to conduct an “analysis of alternatives” before issuing the permit. Section 285.63(2)(d), Stats., prescribes this “alternatives analysis” as follows:

(2) REQUIREMENTS FOR PERMITS FOR NEW OR MODIFIED MAJOR SOURCES IN NONATTAINMENT AREAS. The department may approve the application for a construction permit ... for a major source that is a new source or a modified source and is located in a nonattainment area if the department finds that all of the following conditions are met:

* * * *

(d) *Analysis of alternatives.* Based on an analysis of alternative sites, sizes, production processes and environmental control techniques for any major source that is located in an area designated under 42 USC 7407(d), that the benefits of the construction or modification of the major source significantly outweigh the environmental and social costs imposed as a result of the major source’s location, construction or modification.

In implementing this statutory requirement, the DNR has by rule required an applicant for a permit to “demonstrate to the satisfaction” of the DNR that the proposed source satisfies the required alternatives analysis:

By means of an analysis of alternative sites, sizes, production processes and environmental control techniques for proposed new or modified stationary source, the owner or operator of the proposed stationary source or modification can demonstrate to the satisfaction of the department that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction or modification.

Wisconsin Admin. Code § NR 408.08(2).

These provisions of state law establish the same requirement contained in the federal Clean Air Act, 42 U.S.C. 7503(a)(5), enacted in 1977, which imposed this and other requirements on proposed sources located in nonattainment areas. 42 U.S.C. §§ 7501-08.

The statutes and rules contain no express standards respecting the particular content of the “alternatives analysis,” and neither the DNR nor the EPA has promulgated a rule or regulation specifying a methodology for the required analysis. *In re Campo Landfill Project*, NSR Appeal No. 95-1, 6 E.A.D. 505, 1996 WL 344522 (EAB 1996); *City of Seabrook v. EPA*, 659 F.2d 1349, 1361-63 (5th Cir. 1981). The Environmental Appeals Board has characterized the “alternatives analysis” as “inherently subjective.” *Campo*

Landfill Project, 6 E.A.D. at 521. As recently as last year, EPA Region V (which encompasses Wisconsin) officially expressed its view that a “case-by-case” approach to the alternatives analysis comports with federal law. (Ex. 88).

In the DNR’s preliminary determination on Wisconsin Electric’s application, the DNR found that the ERGS project withstood this alternatives analysis. (Ex. 39: Vol. 1, p. 67; Vol. 2, Tab 13). The Department’s analysis referred to the Final Environmental Impact Statement (“FEIS”) dated July 2003 that was prepared jointly by the PSC and the DNR, particularly Chapters 3 and 4, which are respectively titled “Need for Baseload Capacity in Southeastern Wisconsin” and “Alternatives to Proposed Project.” The DNR relied as well on the PSC’s determination that increased capacity was needed to address energy needs in the state, and on the DNR’s own determinations that the proposed project would meet BACT/LAER emission limits and all applicable air quality requirements. (Ex. 40, Tab 4-D, response to comments 7 & 8). Upon issuing the Permit, the DNR made the ultimate finding that the application met the criteria of Wis. Stat. § 285.63, which includes the “alternatives analysis” requirement. (Ex. 39, p. 3, “Finding of Fact” 6).

The Petitioners claim the alternatives analysis was inadequate. The gist of their contention is that the DNR should have quantified the “environmental and social costs” resulting from the emissions from the proposed project as well as from “alternative sites, sizes, production processes, and environmental control techniques,” such as for example natural gas fired units or IGCC units. After having quantified the “environmental and social costs” of the various alternatives, the Petitioners contend that the DNR then should have weighed these alternative costs in determining whether the benefits of the proposed project “significantly outweighed” its environmental and social costs. The Petitioners assert that the required alternatives analysis is not complete until these alternative costs are quantified, compared, and then weighed against the benefits of the project. In their argument, the Petitioners have particularly focused on human health impacts as “environmental and social costs” that it asserts could have been empirically determined, including predicting the economic health care costs caused by emissions from a specific source.

The DNR certainly could have attempted to conduct such an alternatives analysis, if in its discretion it had deemed it possible, practicable, or necessary in assessing the environmental and social costs of the project. Nothing in the law or administrative rule, however, requires utilization of this form of analysis, either in general or with respect to this particular permit.

There was abundant information before the DNR from which it could reasonably (1) compare the proposed project with alternative sites, sizes, production processes and environmental control techniques, and then (2) weigh the environmental and social costs of the proposed project and alternatives against the benefits of the proposed project. This information included the material submitted and collected in the permitting process and in the preparation of the joint FEIS with the PSC. An air permitting authority may utilize an

environmental impact statement prepared by another agency in making an alternatives analysis under the federal Clean Air Act. See *In re Campo Landfill* (EPA regional office did not err in relying on an environmental impact statement prepared by another federal agency as part of its “alternatives analysis”). Wisconsin statutes contemplate the DNR and the PSC engaging in a coordinated process in the review and processing of applications for construction of an electric generating facility. See Wis. Stat. § 196.491(3).

A. Benefits of the proposed project.

In making its alternatives analysis, the DNR expressly relied on Chapter 3 of the FEIS, which explored the need for the proposed 1,830 megawatts of electricity generating capacity in southeastern Wisconsin in the coming years. The FEIS observed that the absence of sufficient baseline capacity in southeastern Wisconsin would lead to an “unreliable” electric system that “would impose a tremendous economic cost on the economy” that would be difficult to estimate but that “would likely be substantial in dollar and qualitative terms.” (Ex. 41, Vol. 1, p. 75).

B. Alternative Sites.

The FEIS recounts that Wisconsin Electric preliminarily considered 140 potential sites. Many of these were eliminated “through a process that evaluated the sites on various social, environmental, and technical/economic parameters that were embodied in 55 screening criteria and weighted according to their importance.” (Ex. 41, Vol. 1, p. 95). This winnowing process explicitly evaluated “environmental and social” factors (i.e., “costs”), as is required in an “alternatives analysis” under NR 408.08(2). From these 140 original site possibilities, five site alternatives were identified, each in a different county -- Milwaukee, Kenosha, Sheboygan, Ozaukee, and Oconto. An important factor in the selection of these five sites was the ability to locate all three proposed units at a single site, and the potential re-use of existing infrastructure, as at the “brownfield” sites in Milwaukee and Kenosha counties. (Ex. 41, Vol. 1, p. 95). The fact that a new facility is proposed on a brownfield site and will be able to utilize existing facilities is a valid basis upon which to reject other sites for purposes of the alternatives analysis. See *In re Operating Permit Formaldehyde Plant Borden Chemical, Inc.*, Permit No. 2631-VO, Petition No. 6-01-1 (Dec. 22, 2000).

C. Alternative Sizes

The FEIS concluded that Wisconsin Electric’s forecast of demand in ten years was “not unreasonable” but “may be on the high side.” (Ex. 41, p. 45). In its assessment of alternatives, the FEIS considered the option of not building the proposed project. The FEIS also considered the alternative of increasing “energy efficiency” (which connotes conservation, load management, fuel switching) as a means of reducing the need for additional generating capacity. (Ex. 41, Vol. 1, pp. 48-53). The FEIS provided sufficient information on the required size of the electric generating facility to enable the PSC to determine whether the proposed project was appropriately sized to meet future needs.

Before it issued the Permit, the DNR certainly knew that the PSC had determined not to issue a CPCN for the IGCC unit, applying its expertise in assessing the need and the state of IGCC technology for generating power. It was appropriate for the DNR to rely on the expertise of the PSC to determine the size of the project that would best serve the public convenience and necessity, and for the DNR to focus on the air quality impacts of the proposed project.

D. Alternative Production Processes and Environmental Control Techniques

The FEIS includes an assessment of fuel alternatives including noncombustible renewable resources (wind, solar, hydro), and combustible renewable resources (fuel cells fueled by hydrogen, and biomass fuel). (Ex. 41, Vol. 1, pp. 53-61). This analysis included a discussion of the availability and efficacy of these renewable resources and processes as well as recognition that they generally constituted a cleaner means of generating electricity than coal or gas combustion, particularly the noncombustible renewable resources.

Chapter 4 of the FEIS also included an analysis on the relative merits of natural gas combined cycle or simple cycle plants, or purchasing the electricity from an independent power producer, including specifically consideration of a natural gas fired project in Fond du Lac County. (Ex. 41, Vol. 1, pp. 65, 417-30). The FEIS included assessments of the relative environmental impacts of this Fond du Lac County project. *Id.*

Despite the present statutory prohibition on construction of new nuclear power plants, the FEIS nevertheless considered nuclear power among the potential alternatives because the construction bar could be lifted by the year 2010. (Ex. 41, Vol. 1, pp. 76-77).

The FEIS analyzed the environmental impacts of natural gas extraction and compared it with the impacts from coal mining and coal transport. The FEIS explored in detail the uncertainties that would accompany increased reliance on natural gas power plants. (Ex. 41, pp. 79-93). The FEIS also assessed the proposed ERGS IGCC and SCPC units, noting differences in capacity and efficiency factors, as well as obstacles to reliability of IGCC compared to SCPC. (*Id.* at 103-20).

The FEIS elsewhere includes extensive information on the differing levels of emissions from SCPC units and IGCC units (Ex. 41, Vol. 1, Chap 7), as well as a comparison of air emissions from the two proposed SCPC units compared emissions from similar sized natural gas-fired units. (Ex. 41, Vol. 1, pp. 429-430). Between the three processes, SCPC has the greatest volume of emissions per unit of power generated, while as between IGCC and natural gas, natural gas is less polluting for some pollutants but higher for others. The DNR recognized that fewer emissions means lower environmental and social costs, though it observed nonetheless that the inhalation risk posed by the proposed project would not “be likely to cause to a significant inhalation risk.” (Ex. 41, Vol. 3, p. 20).

The DNR certainly knew that natural gas and IGCC plants emit fewer pollutants than SCPC plants. As addressed above in part I of this Discussion, the DNR reasonably

determined not to include those production processes as control technologies in establishing the BACT/LAER for the SCPC units. The BACT analysis is by definition a case-by-case analysis that takes into consideration “energy, environmental and economic impacts and other costs,” Wis. Admin. Code § NR 408.02(4), and to this extent bears relevance to the environmental and social costs that are to be considered in an alternatives analysis. The DNR expressly took into account the effect of BACT/LAER analysis on the ERGS emissions in its assessment of the “environmental and social costs” in the alternatives analysis. (Tr. 387). This was an appropriate consideration, and it was similarly appropriate for the DNR to consider that the proposed project would comply with the “offset” requirements for VOC’s, which would lead to a net reduction of current levels of VOC emissions. See, e.g., Borden Chemical, at 39-40.

E. Environmental and Social Costs of the Proposed Project

Chapter 7 of the FEIS was authored principally by the DNR and extensively addressed the air quality impacts of the proposed project. (Ex. 41, Vol. 1). The FEIS recognized that “coal-burning power plants can create harmful impacts to the environment and to human health” and that “[r]egardless of whether the facility meets existing standards, there is often a question whether sensitive individuals are adequately protected.” *Id.* at 134-35. Elsewhere in the FEIS, the DNR recognized that emissions from coal-fired power plants, even those that do not result in any violation of state or federal standards, carry environmental and social costs, implicitly recognizing that these emissions have no intrinsic benefit. (Ex. 41, Vol. 3, pp. 20-21). The FEIS did not attempt to quantify those health impacts in human or dollar terms for either the project as proposed or for any alternative forms of the project. The FEIS noted, that “[p]ast DNR analyses ... have found that, from an inhalation perspective, the risks resulting from well controlled facilities with tall stacks are low,” so that a “facility that meets applicable Wisconsin DNR requirements would not be likely to cause a significant inhalation risk.” *Id.* at 20.

F. Weighing Costs and Benefits

The EPA has recently adopted an air dispersion model known as CALPUFF as the “preferred technique for assessing long range transport of pollutants and their impacts on Federal Class I areas.” 68 Fed. Reg. 18,440 (April 15, 2003). Some experts in the field believe the CALPUFF model and similar models may be employed to provide a reasonably reliable calculation of the human health costs and impacts of air emissions from a specific source. (Ex. 44, Tab 2, p. 4019-20). Indeed, in the process of developing the FEIS, the Petitioners had submitted a study prepared by a Harvard University professor and associates that relied at least in part on the CALPUFF model. This study undertook to quantify the human health impacts that would result from the PM_{2.5} emissions from the ERGS as proposed and under alternative configurations, including a scenario of powering the ERGS wholly by natural gas. (Ex. 44, Tab 1, pp. 4013-14).

Despite the apparent emergence of analytical techniques that attempt to quantify the adverse health impacts from a particular source with some reasonable degree of

reliability, the Petitioners have not identified any air permit authorities in any jurisdiction that have required such quantification as a component of an alternatives analysis. Presumably, there are none. No precedent from any state or federal authority suggests that such a study should be conducted as a part of an alternatives analysis under the federal Clean Air Act or its state analogs. Absent any such precedent, the burden of demonstrating that the DNR acted unreasonably in not conducting this type of study is quite high. The Petitioners have not met this burden.

Owing in large part to its “inherently subjective” nature (*Campo Landfill* at 521), there is ample room within an alternatives analysis for reasonable persons to disagree on whether the benefits of a proposed project significantly outweigh its environmental and social costs. This is certainly true with respect to the ERGS project. Though reasonable persons may disagree, it falls to the DNR to see that an alternatives analysis is done and to make a determination upon it. The Petitioners have not demonstrated that the matters that the DNR either considered or did not consider in this endeavor were unreasonable or that the alternatives analysis failed to meet minimum legal requirements.

IV. Compliance of Other Wisconsin Electric Facilities

Because the ERGS is located in a nonattainment area for ozone, the DNR was required to determine that all of Wisconsin Electric’s other major sources in Wisconsin “are in compliance, or on a schedule to come in compliance with all applicable emissions limitations and standards under the federal clean air act.” Wis. Stat. § 285.63(2)(c); see also Wis. Admin. Code § NR 408.08(1); 42 U.S.C. § 7503(a)(3).

In its permit application, Wisconsin Electric stated that all its major sources in Wisconsin were in compliance with applicable emissions limitations. (Ex. 40, Attachment 4-D, response to comment 9). The DNR permit engineer responsible for processing the application consulted the DNR’s air compliance engineers involved in inspecting and monitoring Wisconsin Electric’s major sources. These compliance engineers had monitoring and compliance records available to them, and they confirmed that all of Wisconsin Electric’s major sources in the state were in compliance with all applicable emission limits. (*Id.*; Tr. 413-14, 419, 434-35).

Wisconsin Electric’s permit application was completed on October 1, 2003. Some five months earlier, on April 29, 2003, the United States had filed a complaint against Wisconsin Electric in federal district court alleging that since 1982 Wisconsin Electric had modified and thereafter operated coal-fired electricity generating units in Wisconsin and Michigan without first obtaining required permits. (Ex. 46). The same day that the complaint was filed, a proposed “Amended Consent Decree” was also filed with the federal district court, that if approved by the district court would resolve the dispute. The proposed Amended Consent Decree recited that Wisconsin Electric denied having violated the air pollution control laws as alleged in the complaint. (Ex. 48). The federal district court has not yet approved or disapproved the proposed consent decree. (Ex. 47).

The DNR was aware of the federal lawsuit and proposed amended consent decree at the time that it determined Wisconsin Electric to be in compliance with all applicable emissions limitations. The DNR was not obliged by virtue of the federal complaint to make an independent determination on the validity of the allegations in the federal complaint. It was entitled to reasonably rely on periodic compliance reports and records respecting Wisconsin Electric's other major sources in the state in determining that Wisconsin Electric was in compliance with all applicable emissions limits. No evidence beyond the bare allegations of the federal complaint were offered in the contested case hearing that would show that Wisconsin Electric was not in compliance with all applicable emissions limitations when the DNR issued the Permit. The DNR did not err in allowing the matter alleged in the federal lawsuit to take its course and in reasonably relying on the information in its possession regarding Wisconsin Electric's compliance with emission standards. The DNR reasonably concluded that other major sources owned or operated by Wisconsin Electric in the state were in compliance with all applicable emission limits.

V. Other Issues Raised in Petitioners' Issues List

The Division's Order dated August 3, 2004 limited the scope of the Petitioners' enumerated issues 1, 2, 3, 4, 14 and 15. In their post hearing briefs, the Petitioners have not presented evidence or made any assertions within the remaining scope of issues 1, 2, 3, 4, 14 and 15, so there is nothing further to determine respecting those issues beyond the matters determined by the Order of August 3, 2004.

In their enumerated issue 5, the Petitioners claimed that the "air dispersion modeling upon which the Air Permit is based is flawed" for several stated reasons. The Petitioners have presented no evidence and made no argument respecting issue 5 and have thus not met their burdens of proof and persuasion on this issue. Wis. Stat. § 285.81(1)(b); Wis. Admin. Code § NR 2.13(3)(b). The Petitioners have likewise not met their burdens of proof or persuasion regarding issue 13, which challenges application of hazardous air pollutant regulations.

CONCLUSIONS OF LAW

1. The Division of Hearings and Appeals has authority to hear contested cases relating to air pollution permits. Wis. Stat. §§ 227.43 and 285.81(a). "Following the hearing the [DNR's] action may be affirmed, modified or withdrawn." Wis. Stat. § 285.81(1)(b).

2. The BACT and LAER analyses and the air quality review for the ERGS project complied with all applicable requirements of Wis. Admin. Code §§ NR 405.08 and NR 408.04.

3. An applicant for an air pollution control construction permit is not required to redefine the design of the proposed source in selecting control technologies or production processes for inclusion in the BACT or LAER analysis. Wis. Stat. § 283.63.

4. Selection of IGCC process technology in a BACT/LAER analysis for a SCPC unit would result in redefining the design of the proposed source. The DNR was not required to include IGCC process technology in the top down BACT/LAER analysis for either or both SCPC units for the proposed ERGS. The DNR acted within its discretion in not requiring Wisconsin Electric to include the IGCC process technology in the BACT/LAER analysis for the ERGS SCPC units. Wis. Stat. § 283.63.

5. The DNR reasonably established the ERGS IGCC mercury emissions limitation based upon a verified rate of 95% mercury removal that had been demonstrated by control technology in use in another IGCC plant. Wis. Stat. § 283.63.

6. The DNR considered alternative sites, sizes, production processes and environmental control techniques to the ERGS project. Wis. Stat. §285.63(2)(d); Wis. Admin. Code § NR 405.08(2).

7. The DNR considered environmental and social costs of the ERGS and alternatives to the ERGS. Wis. Stat. §285.63(2)(d); Wis. Admin. Code § NR 405.08(2).

8. The DNR weighed environmental and social costs of the ERGS against its benefits. Wis. Stat. §285.63(2)(d); Wis. Admin. Code § NR 405.08(2).

9. The DNR reasonably determined that the benefits of the ERGS project would significantly outweigh the environmental and social costs that it would impose. Wis. Stat. §285.63(2)(d); Wis. Admin. Code § NR 405.08(2).

10. The DNR reasonably determined that all of Wisconsin Electric's facilities in Wisconsin were in compliance or on a schedule for compliance as of the date of permit issuance. Wis. Stat. § 285.63(2)(b); Wis. Admin. Code § NR 408.08(1).

ORDER

WHEREFORE, IT IS ORDERED that the Department's issuance of Air Pollution Control Construction Permit No. 03-RV-166 on January 14, 2004 is affirmed.

Dated at Milwaukee, Wisconsin on February 3, 2005.

STATE OF WISCONSIN
DIVISION OF HEARINGS AND APPEALS
819 North 6th Street, Room 92
Milwaukee, Wisconsin 53203-1685

By: _____
William S. Coleman, Jr.
Administrative Law Judge

NOTICE

Set out below is a list of alternative methods available to persons who may desire to obtain review of the attached decision of the Administrative Law Judge. This notice is provided to insure compliance with Wis. Stat. § 227.48 and sets out the rights of any party to this proceeding to petition for rehearing and administrative or judicial review of an adverse decision.

1. Any party to this proceeding adversely affected by the decision attached hereto has the right within twenty (20) days after entry of the decision, to petition the secretary of the Department of Natural Resources for review of the decision as provided by Wisconsin Administrative Code § NR 2.20. A petition for review under this section is not a prerequisite for judicial review under Wis. Stat. §§ 227.52 and 227.53.

2. Any person aggrieved by the attached order may within twenty (20) days after service of such order or decision file with the Department of Natural Resources a written petition for rehearing pursuant to Wis. Stat. § 227.49. Rehearing may only be granted for those reasons set out in Wis. Stat. § 227.49(3). A petition under this section is not a prerequisite for judicial review under Wis. Stat. §§ 227.52 and 227.53.

3. Any person aggrieved by the attached decision which adversely affects the substantial interests of such person by action or inaction, affirmative or negative in form is entitled to judicial review by filing a petition therefor in accordance with the provisions of Wis. Stat. §§ 227.52 and 227.53. Said petition must be filed within thirty (30) days after service of the agency decision sought to be reviewed. If a rehearing is requested as noted in paragraph (2) above, any party seeking judicial review shall serve and file a petition for review within thirty (30) days after service of the order disposing of the rehearing application or within thirty (30) days after final disposition by operation of law. Since the decision of the Administrative Law Judge in the attached order is by law a decision of the Department of Natural Resources, any petition for judicial review shall name the Department of Natural Resources as the respondent. Persons desiring to file for judicial review are advised to closely examine all provisions of Wis. Stat. §§ 227.52 and 227.53, to insure strict compliance with all its requirements.