

October 23, 2006

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )  
 )  
SYSTEM ENERGY RESOURCES, INC. ) Docket No. 52-009-ESP  
 )  
(Early Site Permit for Grand Gulf ESP Site) )

NRC STAFF BRIEF CONCERNING ENVIRONMENTAL ISSUES

INTRODUCTION

On October 3, 2006, the Atomic Safety and Licensing Board (Board) in this proceeding issued an Order<sup>1</sup> requesting, *inter alia*, briefing on the three environmental issues that the Board must resolve in this early site permit (ESP) proceeding. Those three issues are:

- (1) Determine whether the requirements of Section 102(2) (A), (C), and (E) of [the National Environmental Policy Act (NEPA)] and Subpart A of 10 C.F.R. Part 51 have been complied with in the proceeding;
- (2) independently consider the final balance among the conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; and
- (3) determine, after considering reasonable alternatives, whether the ESP should be issued, denied, or appropriately conditioned to protect environmental values.

Order at 2. The Board directed the NRC Staff (Staff) and System Energy Resources, Inc. (SERI or Applicant) to focus their briefs on the four topics related to the resolution of the three NEPA issues. The Board directed that the parties: (1) "expressly indicat[e] how the record of this proceeding demonstrates that the requirements of Section 102(2)(A), (C), and (E) of NEPA and Subpart A of 10 C.F.R. Part 51 have been satisfied"(Order at 2); (2) "identify and describe

---

<sup>1</sup> "Order (Issuing Questions Relating to the Grand Gulf ESP Environmental Impact Statement, Requesting Briefing on Environmental Issues, and Addressing Scheduling Issues)," dated October 3, 2006.

the conflicting environmental factors contained in the record of this proceeding, and analyze the balance among those conflicting environmental factors, with a view toward assisting the Board to determine the appropriate action to be taken regarding whether the ESP should be issued, denied, or appropriately conditioned to protect environmental values” (Order at 2-3); (3) “specifically define their interpretation of the Federal action at issue in this proceeding”; “address whether this ESP is one that can significantly effect the environment”; and “[g]iven this, discuss whether NEPA is triggered in this proceeding” (Order at 3);<sup>2</sup> and (4) “describe whether, and if so how, the Board (on the record before us) can conduct the independent assessment and weighing of environmental factors, and the consideration of reasonable alternatives.” Order at 3. The first three of these topics are discussed in turn while the final topic is discussed as part of the discussion of the second and third topics.

### DISCUSSION

A. Board Question 1: How Does the Record of this Proceeding Demonstrate That the Requirements of Section 102(2)(A), (C), and (E) of NEPA and Subpart A of 10 C.F.R. Part 51 Have Been Satisfied?

Part 51 of the Commission’s regulations implements Section 102(2) of NEPA. 10 C.F.R. § 51.1. Where a specific section of Part 51 is relevant to the following discussion, it is so noted; however, to avoid unnecessary repetition, the discussion is organized around the applicable portions of Section 102(2) of NEPA rather than the pertinent portions of both NEPA and Part 51. The Staff’s analysis begins with NEPA § 102(2)(A).

1. Has NEPA § 102(2)(A) Been Satisfied?

Section 102(2)(A) of NEPA requires that Federal agencies “utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences

---

<sup>2</sup> With respect to this topic, the Board also requested that the parties address the consequences of assuming that NEPA is or is not triggered. Order at 3.

and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment." 42 U.S.C. § 4332(2)(A). In preparing the Final Environmental Impact Statement (FEIS), NUREG-1817, "Environmental Impact Statement for an Early Site Permit (ESP) at the Grand Gulf ESP Site," Final Report, the Staff followed the systematic approach set forth in 10 C.F.R. Part 51 and the guidance in RS-002. The Staff utilized an interdisciplinary approach integrating its use of the natural and social sciences in its decision-making regarding environmental impacts as required under NEPA. See NRC Staff's Proposed Findings of Fact and Conclusions of Law in the Mandatory Hearing (Aug. 11, 2006) ¶ 639 [hereinafter *Staff Proposed Findings*]. Specifically, the Staff considered numerous subjects and impacts, including: the purpose and need for the proposed action, the alternatives to the proposed action, compliance with applicable regulations, meteorology and air quality, geology, the radiological environment, water resources and water use, local ecology, socioeconomics, aesthetics, cultural resources, environmental justice, threatened and endangered species, transportation, noise, land use, public and worker health, accidents, waste management and fuel cycle impacts, decommissioning, cumulative impacts, and resource commitments. See *id.* The Staff utilized the expertise of professional scientists, engineers, and social scientists in conducting its review. See *id.* at Appendices A and B. Accordingly, the Staff satisfied the requirements of Section 102(2)(A) of NEPA by using a systematic, interdisciplinary approach that integrated the natural and social sciences into its decision-making in preparing the FEIS.

2. Has NEPA § 102(2)(C) Been Satisfied?

NEPA § 102(2)(C) requires that "major Federal actions significantly affecting the quality of the human environment" include "a detailed statement by the responsible official" addressing:

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

42 U.S.C. § 4332(2)(C)(i)-(v). Section 102(2)(C) further requires that before preparing this "detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved." 42 U.S.C. § 4332(2)(C). The Staff has complied with these requirements, *see Staff Proposed Findings* ¶ 639, as demonstrated in the following discussion.

a. Environmental Impact of the Proposed ESP

The FEIS includes a detailed statement of the environmental impacts of the proposed action. The FEIS notes that the ESP, if granted, will not authorize any activities by SERI that would have an environmental impact because SERI did not choose to include a site redress plan (as provided by 10 C.F.R. § 52.17(c) and 10 C.F.R. § 52.25) and thus would not be authorized to perform any limited work activities (10 C.F.R. § 50.10(e)(1)). FEIS at 10-4.

However, an ESP provides a foundation for the subsequent issuance of a combined license (COL), which would authorize construction and operation of a new nuclear facility.<sup>3</sup> The Staff addressed the impacts of facility construction and operation in Chapters 4 and 5 of its ESP FEIS.<sup>4</sup> In Chapter 4 of the FEIS, the Staff analyzed the potential impacts of construction on land use, air quality, water, ecosystems, socioeconomics, historic and cultural resources, and environmental justice, as well as nonradiological and radiological health effects. *See Staff Proposed Findings* ¶¶ 390-424. In Chapter 5 of the FEIS, the Staff analyzed the potential

---

<sup>3</sup> Construction and operation of a power reactor may be authorized pursuant to a construction permit (CP) and operating license (OL), or a COL. For simplicity, the Staff will refer only to a COL herein.

<sup>4</sup> The reasons for discussing these impacts in an ESP EIS are set forth in Section C, *infra*.

impacts of operation on each of these topics plus the impacts of postulated accidents. *See id.* ¶¶ 425-471. In Chapter 6 of the FEIS, the Staff evaluated the environmental impacts from the uranium fuel cycle and solid waste management, transportation of radioactive material, and decommissioning for the proposed Grand Gulf ESP site. *See id.* ¶¶ 472-503. In Chapter 7 of the FEIS, the Staff evaluated the potential cumulative impacts of constructing and operating one or more nuclear power units at the proposed Grand Gulf ESP site. *See id.* ¶¶ 504-518. In Chapter 7 of the FEIS, the Staff also analyzed the potential cumulative impacts associated with fuel cycle, transportation, and decommissioning. *See id.* ¶¶ 519-522. In accordance with 10 C.F.R. § 52.39 and 40 C.F.R. § 1508.28(b), the Staff will use NEPA tiering principles and incorporation by reference at the COL stage to provide issue preclusion for issues that were resolved, but will consider whether there is any significant new information regarding such issues. The final assessment of adverse environmental impacts from construction and operation at the Grand Gulf ESP site would be performed at the COL stage for issues that were not resolved in the ESP review. Therefore, the Staff has met its obligations under NEPA with respect to environmental impacts.

b. Environmental Effects Which Cannot be Avoided

The FEIS included a detailed statement on any adverse environmental effects which cannot be avoided should the proposal be implemented. *See Staff Proposed Findings* ¶ 628. With respect to unavoidable adverse environmental impacts, the Staff noted that the ESP, if granted, will not authorize any activities by SERI that would have an environmental impact. FEIS at 10-4. The Staff noted that because SERI did not choose to include a site redress plan (as provided by 10 C.F.R. § 52.17(c) and 10 C.F.R. § 52.25), it would not be authorized to perform any limited work activities (as defined in 10 C.F.R. § 50.10(e)(1)), meaning that there are no unavoidable adverse environmental impacts at this stage. FEIS at 10-4. However, as previously discussed, issuance of an ESP may lead to construction and operation of a new

nuclear facility under a COL. The Staff summarized these impacts in Chapters 4 and 5 of its ESP FEIS analysis. *See Staff Proposed Findings* ¶¶ 390-471. The Staff will use NEPA tiering principles and incorporation by reference at the COL stage for issues that were resolved, but will consider whether there is any significant new information regarding resolved issues. The final assessment of adverse environmental impacts from construction and operation at the Grand Gulf ESP site would be performed at the COL stage for issues that were not resolved in the ESP review. Therefore, the Staff has met its obligation under NEPA with respect to unavoidable environmental impacts.

c. Alternatives to the Proposed Action

The FEIS included a detailed discussion of alternatives to the proposed action. *See id.* ¶¶ 527-626, 642-643. In performing its evaluation, the Staff considered energy alternatives, plant design alternatives, the Applicant's alternative site selection process, and the Applicant's three alternative sites. The Staff considered whether the ESP Applicant (1) used a reasonable process to identify alternative sites, (2) evaluated the likely environmental impacts of construction and operation at these sites, and (3) used a logical means of comparing sites that led to the Applicant's selection of the proposed site. FEIS at 9-2 to 9-7. While the Staff identified some differences in the environmental impacts of both construction and operation at the proposed and alternative ESP sites, the Staff concluded that none of these differences is sufficient to determine that any of the alternative sites is environmentally preferable to the Grand Gulf ESP site. FEIS at 9-6, 9-7. The Staff concluded that none of the alternative sites identified is environmentally preferable or obviously superior to the proposed Grand Gulf ESP site. FEIS at 9-7. Accordingly, the Staff has met its obligations under NEPA with respect to consideration of alternatives.

d. Relationship Between Local Short-Term Uses and Long-Term Productivity

The FEIS included a detailed statement on the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity. *See Staff Proposed Findings ¶ 632.* With respect to the relationship between short-term uses and long-term productivity of the human environment, the Staff found that there will be no short-term use of the environment, again because the ESP does not authorize SERI to perform any site preparation activities. FEIS at 10-8. Furthermore, because a long-term productivity assessment with respect to the impacts of construction and operation would be performed at the COL stage, the Staff considered this issue unresolved. FEIS at 10-8. Accordingly, the Staff has met its obligation under NEPA with regard to the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity.

e. Irreversible and Irretrievable Commitments of Resources

The FEIS included a detailed statement of irreversible and irretrievable commitments of resources that would be involved in the proposed action. *See Staff Proposed Findings ¶ 631.* With respect to irreversible and irretrievable commitments of resources, the Staff again found there would be none because the ESP will not authorize any activities by SERI that would have an environmental impact. FEIS at 10-6. Because the proposed action does not involve commitment of resources, and a complete assessment of irreversible and irretrievable commitments of resources with respect to the impacts of construction and operation would be performed at the COL stage, the Staff noted that the issue remains unresolved. FEIS at 10-6. The Staff noted, however, that irretrievable commitments of resources during construction generally would be similar to that of any major construction project and would depend on the specific design. FEIS at 10-6, 10-7, Tbl. 10-2. The Staff also determined that the construction materials and uranium required would be of small consequence with respect to the availability of such resources. FEIS at 10-8.

f. Consultation Requirements

The Staff complied with NEPA consultation requirements by consulting with and obtaining comments from the Federal agencies that have jurisdiction or special expertise with respect to any environmental impact involved. *See Staff Proposed Findings* ¶ 641. Additionally, copies of such statements and the comments and views of the appropriate Federal, State, and local agencies are available for both the Board and the Commission to review. Appendix B lists the agencies and persons consulted during the Staff's review. *See* FEIS at Appendix B. Appendix F of the FEIS includes key consultation correspondence received by the Staff, and Appendices D and E contain public comments received by the Staff at its scoping meeting and in response to its DEIS. *See id.* at Apps. D, E, & F. In view of the foregoing, the Staff has met its obligation under NEPA to consult with and obtain the comments of Federal agencies that have jurisdiction or special expertise with respect to any environmental impact involved.

3. Has NEPA § 102(2)(E) Been Satisfied?

NEPA § 102(2)(E) requires that Federal agencies "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E). The FEIS documented that the NRC studied, developed, and described appropriate alternatives to the ESP. *See supra* Section A.2.c. Therefore, the Staff has met its obligations under NEPA with respect to studying, developing, and describing alternatives to the recommended course of action.

B. Board Question 2: How May the Board Analyze the Balance among the Conflicting Environmental Factors Contained in the Record of this Proceeding to Determine the Appropriate Action to Be Taken?

1. Identification and Description of Conflicting Environmental Factors

The Board directed the parties to "identify and describe the conflicting environmental factors contained in the record of this proceeding." Order at 2-3. Environmental factors would conflict with the issuance of this ESP if the ESP interfered with or was incompatible with any particular environmental values or resources. Conflicting environmental factors could include (1) any unavoidable adverse environmental impacts; (2) any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented; (3) any conflicts involving the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and (4) whether an obviously superior alternative site has been identified.

With respect to unavoidable adverse environmental impacts, the Staff noted that the ESP, if granted, will not authorize any activities by SERI that would have an environmental impact. FEIS at 10-4. The Staff noted that because SERI did not choose to include a site redress plan (as provided by 10 C.F.R. § 52.17(c) and 10 C.F.R. § 52.25), it would not be authorized to perform any limited work activities (10 C.F.R. § 50.10(e)(1)), meaning that there are no unavoidable adverse environmental impacts at this stage. FEIS at 10-4.

However, the issuance of an ESP is related to construction and operation of a new nuclear facility under a COL. The Staff summarized these impacts in Chapters 4 and 5 of its ESP FEIS analysis. The Staff will use NEPA tiering principles and incorporation by reference at the COL stage for issues that were resolved, but will consider whether there is any significant new information regarding resolved issues. The final assessment of adverse environmental impacts from construction and operation at the Grand Gulf ESP site would be performed at the COL stage for issues that were not resolved in the ESP review. With respect to construction

activities, such unavoidable impacts were primarily related to land use (involving ground disturbance and loss of some forest and field acreage), but also included some potential socioeconomic impacts on traffic and housing. FEIS at 10-4 to 10-6.

The Staff found that construction of a new nuclear facility may result in unavoidable impacts, but that these impacts could be reduced through mitigation, such as reducing dust emissions with control plans and conducting surveys for protected species prior to construction. FEIS at 10-4 to 10-6. Likewise, with respect to operations, the Staff concluded that unavoidable impacts would generally be small, and it summarized mitigation activities, such as road improvements to offset traffic increases and best management practices to reduce impingement and entrainment of aquatic species. FEIS at 10-6, 10-7. With respect to cumulative impacts, the Staff repeated its conclusions from FEIS Chapter 7 that most cumulative impacts were determined to be small. FEIS at 10-8. The Staff also reiterated that several impact issues, including ones with the potential for MODERATE or LARGE adverse impacts, were not resolved due to lack of necessary information. FEIS at 10-8. As these issues were not resolved, they would have to be addressed in any future COL application that references an ESP for the Grand Gulf site. FEIS at 10-8.

With respect to irreversible and irretrievable commitments of resources, the Staff again found there would be none because the ESP will not authorize any activities by SERI that would have an environmental impact. FEIS at 10-6. Because the proposed action does not involve a commitment of resources, and because a complete assessment of irreversible and irretrievable commitments of resources would be performed for the impacts of construction and operation at the COL stage, the Staff noted that the issue remains unresolved. FEIS at 10-6. The Staff noted, however, that irretrievable commitments of resources during construction generally would be similar to that of any major construction project and would depend on the specific design. FEIS at 10-6, 10-7, Tbl. 10-2. The Staff also determined that the construction

materials and uranium required would be of small consequence with respect to the availability of such resources. FEIS at 10-8.

With respect to the relationship between short-term uses and long-term productivity of the human environment, the Staff found that there will be no short-term use of the environment, again because the ESP does not authorize SERI to perform any site preparation activities. FEIS at 10-8. Furthermore, because the long-term productivity assessment would be performed at the COL stage, the Staff considered the issue unresolved. FEIS at 10-8.

The Staff's FEIS includes all factors relevant to the assessment of whether an obviously superior alternative site has been identified. First, with respect to construction impacts, while the Staff concluded that impacts were generally small for all four analyzed sites, the Staff identified several differences between the environmental impacts of construction at the proposed and alternative ESP sites. FEIS at 9-6. However, while the Grand Gulf site had some higher adverse impacts with respect to demographics, terrestrial ecosystems and infrastructure and community services (as well as one area, social and economic benefits from tax revenues, of significantly higher beneficial impacts), the Staff found that each alternative site had higher adverse impacts for the same issues or in other respects. FEIS at 9-6. Accordingly, the Staff concluded that none of the alternative sites was obviously superior to the Grand Gulf ESP site. FEIS at 9-7.

Second, with respect to operational impacts, the Staff again noted that impacts were generally small for all four analyzed sites, and identified several differences between the environmental impacts at the proposed and alternative ESP sites. FEIS at 9-7. However, while the Grand Gulf site again had some higher adverse impacts with respect to demographics and infrastructure and community services (and also had significantly higher potential social and economic benefits), the Staff found that the alternative sites had, on the whole, either closely comparable impacts or slightly less beneficial impacts than the Grand Gulf site. FEIS at 9-7.

Accordingly, the Staff again concluded that none of the alternative sites was obviously superior to the Grand Gulf ESP site. FEIS at 9-7.

2. Balancing of the Conflicting Environmental Factors

The Board directed the parties to “analyze the balance among those conflicting environmental factors, with a view toward assisting the Board to determine the appropriate action to be taken regarding whether the ESP should be issued, denied, or appropriately conditioned to protect environmental values.” Order at 2-3. In balancing the conflicting environmental factors discussed above, the Board should consider that there are no unavoidable adverse environmental impacts associated with the issuance of this ESP. Similarly, there are no irreversible and irretrievable commitments of resources and there are no short-term uses of the environment because the ESP will not authorize any activities by SERI that would have an environmental impact. However, the Board should also consider that issuance of an ESP may lead to construction and operation of a new nuclear facility under a COL that references this ESP. Although the construction and operation of a new nuclear facility may result in unavoidable impacts, most of these impacts could be mitigated, (e.g., by reducing dust emissions with control plans, conducting surveys for protected species prior to construction, road improvements to offset traffic increases, and best management practices to reduce impingement and entrainment of aquatic species).

The Board should find that the fact that there are no environmental impacts associated with the issuance of this ESP, no irreversible and irretrievable commitments of resources, and no short-term use of the environment authorized by issuance of this ESP, weighs in favor of issuance of the ESP. Potential unavoidable adverse environmental impacts resulting from construction and operation of a new nuclear facility under a COL that references a Grand Gulf ESP should not weigh heavily against issuance of this ESP because many of these impacts can be mitigated. To the extent that the Staff has not resolved whether there are unavoidable

adverse environmental impacts, irreversible and irretrievable commitments of resources, or issues related to short-term use and long-term productivity of the environment that would result from construction and operation of a new nuclear facility under a COL that referenced this ESP, the Board should likewise not heavily weigh this lack of information against issuance of this ESP because NEPA requires that the Staff consider these issues at the COL stage. Finally, with respect to environmentally superior sites, the Board should weigh the fact that none of the analyzed alternative sites is environmentally superior in favor of the issuance of the ESP. In view of the foregoing, there is sufficient information to allow the Board to conduct a relative balancing of the conflicting environmental factors in the record, and given this balance, the Board should find that the conflicting environmental factors do not weigh against issuance of the ESP.

C. Board Question 3: What Is the "Federal Action" at Issue in this Proceeding, and Does it Trigger NEPA?

The Board requested that the parties "specifically define their interpretation of the 'Federal action' at issue in this proceeding" and "address whether this ESP is one that can significantly effect the environment (42 U.S.C. § 4332(2)(C))." Order at 3. The "Federal action" at issue in this proceeding is the NRC decision on whether an ESP for the Grand Gulf site should be issued, denied, or appropriately conditioned. This action requires that the NRC resolve whether SERI's application meets the relevant site safety requirements of 10 C.F.R. Part 100. The resolution of these issues has the potential to affect the environment because it is related to action the NRC may subsequently take on a potential COL application referencing the Grand Gulf ESP.

If considered in isolation, a decision relating to this ESP cannot significantly affect the environment because it would not authorize the performance of any limited work activities (10 C.F.R. 50.10(e)(1)). However, in determining the "significance" of a Federal action, Council

on Environmental Quality (CEQ) regulations state that an agency should consider “[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.” 40 C.F.R. § 1508.27(b)(7). The fact that the NRC’s decision on the Grand Gulf ESP, if considered in isolation, may not significantly affect the quality of the environment does not excuse the NRC from preparing an EIS. The NRC must consider the relatedness of its ESP site safety decision to a potential COL decision. When the cumulative impact of these actions is considered, it is clear that NEPA requires the preparation of an EIS before a decision on an ESP is reached. It is for this reason that NRC regulations state that “the Commission shall prepare an environmental impact statement during review of the [ESP] application.” 10 C.F.R. § 52.18.

In asking whether NEPA is triggered in this proceeding, the Board cited cases upholding an agency’s decision to not produce an EIS because the agency action did not change the “status quo.” Order at 3 (citing *Sierra Club v. FERC*, 754 F.2d 1506, 1509-10 (9th Cir. 1985); *Burbank Anti-Noise Group v. Goldschmidt*, 623 F.2d 115, 116 (9th Cir. 1980)). These cases are distinguishable from ESP proceedings. In *Sierra Club*, the agency decision at issue related to a hydroelectric permit that merely allowed an applicant to maintain its priority as to when its application would be reviewed by the agency. *Sierra Club*, 754 F.2d at 1509 (citing 16 U.S.C. § 798). That agency decision did not make a substantive determination on issues potentially impacting the environment. The NRC’s ESP decision, however, resolves the site safety requirements of 10 C.F.R. Part 100 and thus changes the “status quo” because these issues, as well as environmental issues, will be considered resolved at the COL stage. Thus, unlike in *Sierra Club*, determinations made in connection with an ESP finally resolve substantive issues central to authorizing subsequent construction and operation of a reactor facility. Without an

ESP, at the COL stage, the NRC would need to address safety issues related to site suitability and environmental issues relating to alternative sites.

Similarly, in *Goldschmidt*, the U.S. Court of Appeals for the Ninth Circuit held that an EIS was unnecessary when the agency decision related to the financing of a purchase of an airport that was already built and operating. *Goldschmidt*, 623 F.2d at 116. The financing decision had no potential for different environmental impacts because it did not involve and was unrelated to any changes in the operation of the airport. *Id.* While the granting of this ESP also would not permit an immediate effect on the environment at the Grand Gulf site, the ESP is related to actions that would (e.g., a subsequent NRC action relating to a COL application referencing the Grand Gulf ESP). Accordingly, the “Federal action” at issue in this ESP proceeding is one that can significantly affect the environment, triggering NEPA.

Although NEPA is clearly triggered in this proceeding, the Board asks the parties to explain, “[i]f one assumes that NEPA is not triggered, how this affects the Board’s obligations under 10 C.F.R. § 2.104(b)(3) in [its] review of this partial construction permit . . . .” Order at 3. First, NRC regulations require that the Staff prepare an EIS as part of its review of an ESP application. 10 C.F.R. § 52.18. Second, in this proceeding, the notice of hearing and a Commission order, as well as Commission regulations, set forth the Board’s obligations in regard to evaluating the Staff’s environmental review. See 69 Fed. Reg. 2636; *Exelon Generation Company, LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5 (2005); 10 C.F.R. § 52.21. The jurisdiction of a licensing board is established by the Commission and, likewise, can only be contracted by the Commission. *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790 (1985). Therefore, it would be improper for the Board to ignore the Commission’s regulations, order, and notice of hearing and find that it was not obligated to address the three NEPA issues, even if it were to find that NEPA was not triggered in this proceeding.

Next, the Board requested a discussion, assuming NEPA is triggered, on “whether, given the number of Staff assumptions and unresolved matters that are documented in the EIS, the Board has been presented with sufficient information to properly balance the harms and benefits of the proposed action so that it may carefully consider the potential significant environmental effects, or to give this project the required ‘hard look’ envisioned by NEPA.”

Order at 3. First, the Board cannot “balance the harms and benefits of the proposed action.”

Order at 3. As the Commission explained in CLI-05-17:

Licensing Boards in our three currently pending ESP cases cannot perform cost-benefit “weighing” – because an ESP is only a “partial” construction permit and 10 C.F.R. § 52.21 explicitly exempts both the NRC Staff and the applicant from assessing the ESP’s benefits. Because the environmental report will lack such an assessment, neither the NRC staff nor the Licensing Boards can conduct the “weighing” in its EIS ordinarily required under NEPA. This does not equate to evading the NEPA cost-benefit analysis, but merely postpones the analysis until the next (combined operating license) phase of licensing. At that time, the NRC staff and ESP applicants will have much more cost-benefit information to provide reviewing licensing boards. Postponing the NEPA cost-benefit balancing simply reflects the limited scope of an ESP proceeding, as compared with that of a full construction permit case (addressing both site and plant design) . . . .

*Clinton ESP Site*, CLI-05-17, 62 NRC at 47.

However, the Board does have the obligation to “consider the final balance among conflicting factors contained in the record.” 69 Fed. Reg. 2636 (Jan. 16, 2004). The Staff’s identification and description of the conflicting environmental factors contained in the record of this proceeding, and the Staff’s suggestion for analyzing the balance among those conflicting environmental factors is contained in Sections B.1 and B.2. *supra*. The Board has been presented with sufficient information to properly balance these conflicting environmental factors and to conclude that the Staff conducted the “hard look” required by NEPA despite the existence of assumptions and unresolved matters that are documented in the EIS.

The Commission has instructed that the Board “should not second guess underlying technical or factual findings by the NRC staff.” *Clinton ESP Site*, CLI-05-17, 62 NRC at 45.

This deference extends to the assumptions that the Staff made in the FEIS. In independently considering the final balance among conflicting factors contained in the record, the Board should rely on the Staff's determinations regarding assumptions as long as the assumptions are within the bounds of "reasoned decision-making" and as long as the Staff "considered the relevant factors and articulated a rational connection between the facts found and the choice made." *Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 104-05 (1983). If the FEIS identifies and explains an assumption, as long as the assumption is within the range of reasonable choices, the Board should rely on that assumption in assessing and weighing environmental factors and reasonable alternatives. The FEIS does identify the assumptions upon which the evaluation rests, and does explain the rationale behind those assumptions. Therefore, the fact that the Staff documents a number of assumptions in the FEIS does not detract from the Board's ability to consider the final balance among conflicting factors in the record and to determine whether the ESP should be issued, denied, or appropriately conditioned to protect environmental values.

Similarly, the fact that the FEIS does not resolve some issues does not impact upon the Board's ability to consider the final balance among conflicting factors in the record and to reach a decision regarding the issuance of the ESP. The Staff did have much detailed information pertaining to the impacts of the proposed Grand Gulf application. Full disclosure of anticipated environmental impacts was precluded in only certain areas in which information was lacking. For those issues, although the Staff did not resolve the magnitude of the environmental impact, information sufficient to evaluate alternative sites was available. The FEIS adequately handles these unresolved issues by (1) clearly identifying any incomplete or unavailable information and the relevance of such information; (2) summarizing existing information that is relevant to evaluating reasonably foreseeable environmental impacts; and (3) evaluating such impacts based upon theoretical approaches or research methods generally accepted in the scientific

community. See 40 C.F.R. § 1502.22. Using this approach, the Staff, in the FEIS, stated the likely range of potential environmental impacts for those areas where there was insufficient information.

At the ESP stage, the principal focus of the NRC's NEPA review is limited to evaluations regarding the appropriateness of the site. See *Clinton ESP Site*, CLI-05-17, 62 NRC at 48. A key purpose of the FEIS is to allow for "an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed." 10 C.F.R. §§ 52.17(a)(2), 52.18. The fact that the Staff did not resolve the magnitude of an environmental impact would be problematic if a comparison of the Grand Gulf ESP site to alternative sites were precluded. The Staff's review of environmental impacts, however, allows for this comparison by giving likely impact ranges for unresolved issues. Accordingly, giving the likely impact ranges allowed the Staff to satisfy its requirements under NEPA to provide a detailed statement on potential adverse environmental impacts and to make a meaningful comparison of alternatives. Furthermore, this approach allowed the Staff to reach a conclusion on whether there were any obviously superior alternatives to the site proposed.

The Staff's documentation in the FEIS of its approach on unresolved issues provides sufficient information to allow the Board to perform an independent assessment and weighing of environmental factors and of reasonable alternatives. The approach in the FEIS to dealing with missing information is consistent with the purposes of NEPA. As the U.S. Court of Appeals for D.C. Circuit explained:

NEPA cannot be "read as a requirement that complete information concerning the environmental impact of a project must be obtained before action may be taken. If we were to impose a requirement that an impact statement can never be prepared until all relevant environmental effects were known, it is doubtful that any project could ever be initiated."

*State of Alaska v. Andrus*, 580 F.2d 465, 473 (D.C. Cir. 1978), *vacated in part sub nom.*,

*Western Oil and Gas Ass' v. Alaska*, 439 U.S. 922 (1978) (quoting *Jicarilla Apache Tribe of*

*Indians v. Morton*, 47 F.2d 1275, 1280 (9th Cir. 1973)). See also *Public Service Co. of Oklahoma* (Black Fox Station, Units 1 & 2), LBP-78-26, 8 NRC 102, 141 (1978). The fact that the Staff has not resolved the potential environmental impacts for every issue, but instead identifies a range of possibilities, does not create a deficiency in the FEIS because the Board may consider these ranges in reaching its decision. By allowing for a process for dealing with missing information, NEPA acknowledges that uncertainty can be accommodated in the decisionmaking process. In this regard, the U.S. Court of Appeals for the D.C. Circuit stated:

One of the costs that must be weighed by decisionmakers is the cost of uncertainty *i.e.*, the costs of proceeding without more and better information. Where that cost has been considered, and where the responsible decisionmaker has decided that it is outweighed by the benefits of proceeding with the project without further delay, the courts may not substitute their judgment for that of the decisionmaker and insist that the project be delayed while more information is sought.

*Andrus*, 580 F.2d at 473-74.

In making its recommendation on the issuance of the ESP, the Staff weighed the range of uncertain impacts and concluded that the potential for mitigation reduced many adverse impacts. As previously discussed, the Board has been presented with sufficient information to decide that the Staff's environmental review of the Grand Gulf ESP provides the "hard look" required by NEPA. The Staff's documentation of assumptions and unresolved matters does not prevent the Board from executing its responsibility to determine whether the Staff's environmental review, as documented in the FEIS, contains analysis sufficient to ensure consistency with NEPA's goals of public disclosure, identification of potential adverse environmental impacts, and consideration of reasonable alternatives.

CONCLUSION

As discussed above, the FEIS prepared by the Staff in this proceeding satisfies the requirements of Section 102(2)(A), (C), and (E) of NEPA and Subpart A of 10 C.F.R. Part 51 by documenting the Staff's systematic, interdisciplinary approach in reviewing environmental issues relevant to this ESP application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jonathan M. Rund". The signature is fluid and cursive, with a large initial "J" and "R".

Jonathan M. Rund  
Counsel for the NRC Staff

Dated at Rockville, Maryland  
this 23<sup>rd</sup> day of October, 2006