

Dr. Burl Haar – Executive Secretary
Minnesota Public Utilities Commission
121 7th Place E., Suite 350
Saint Paul, MN 55101-2147

8-21-09

In re: Final Environmental Impact Statement Xcel Energy's Prairie Island Nuclear Generating Plant
Extended Power Uprate and Additional Dry Cask Storage Projects.

Dockets: E002/CN-08-509; E002/CN-08-510; and E002/GS-08-690.

Dear Dr. Haar,

I am submitting this comment today on the Final Environmental Statement for the above dockets, as directed by notice dated July 31, 2009, to OES project manager Bill Storm, of the Facilities Permitting Division of the Public Utilities Commission.

Most respectfully yours,

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Comment to FINAL EIS for Expansion of Dry Cask Storage at the Prairie Island ISFSI 8-21-09

Summary: The central issue for nuclear waste impacts upon human health, riverine ecosystems, social well-being and economic security is 'term of storage'. The central inadequacy of the FEIS is that -- while it acknowledges the multiple, interactive uncertainties about the stranding of waste at reactor sites -- it does not accurately describe the reality of the federal storage scenario. Instead, the FEIS creates a new term of storage to 'bound' its investigation: "temporary long term". It justifies this maneuver with a quasi logical and legal argument that simply assumes that the federal government will fulfill its obligation, and do so by actually removing the waste.

The FEIS thereby denies decision makers a realistic basis for its decision. It fails to consider or evaluate long term storage or cask technologies. It fails to adequately represent or address the socio-economic concerns or evaluate the environmental justice implications -- raised in numerous comments by the PUC task force and affected communities. Finally, by the same logic, it fails to provide adequate analysis and provision for mitigation, which is a key function of environmental review. It ignores numerous requests and recommendations -- provided in public and PUC task force comments -- for mitigation measures.

Once the waste has been created, it cannot be dis-created. Despite promotion of nuclear expansion, the new administration has announced that Yucca Mountain will not go forward, that there is need for a new plan for the disposition of the waste, and that there never was a plan for waste from relicensed reactors. Yet the analysis of the FEIS rests entirely upon an invalid assumption that the waste will be removed. This undermines the analysis and the ability of state regulators and decision makers to grapple with the economic, social and environmental implications of the application. The assumption "the federal obligation", undermines the execution of the state's responsibility to hold the utility accountable to its federal obligation to provide for the care of the stranded waste, as long as it takes*

The FEIS lets the utility off the hook to the peril of state and local government interests and statutory responsibilities for the health and well-being of Minnesota's social, economic and natural systems. This is an irreversible commitment of resources.

Discussion: The FEIS is much improved by the fact that it begins to grapple with the effects of the multiple *uncertainties* surrounding the proposed dry cask storage expansion. It takes up and competently explores (in 5.4 cumulative impacts) the implications of relying upon the assumption that there will be regular and adequate monitoring and maintenance of dry cask storage through time. It defines and describes the critical issue of "institutional control", and challenges to ensuring funding sources to sustain all 3 of these key functions, over time and under circumstances that cannot be foreseen, even within the projected 200 year scope of the EIS. It utilizes the extensive analysis done for the Yucca Mountain EIS -- to identify some of the engineering factors for deterioration.

However, having ventured into these deep waters, the analysis suddenly leaps to the lifeboat of a set of unfounded assumptions (p 40), which defer all responsibility to the federal obligation to provide for a federal repository. Critically, the FEIS fails to ask how the utility plans to act upon its obligation to provide for the safe maintenance of the waste until such time that the federal government "takes" it.*

* NWPA, Subtitle A, Section 111 (5) "the generators and owners of high-level radioactive waste and spent nuclear fuel have the primary responsibility to provide for, and the responsibility to pay the costs of, the interim storage of such waste and spent fuel until such waste and spent fuel is accepted by the Secretary of Energy in accordance with the provisions of this Act [42 U.S.C. 10101 et seq.]; [see Attachment]

This strategic caveat reveals the fundamental flaw in the framework of assumptions upon which the FEIS hangs its analysis – regarding costs, and responsibility for maintenance of the waste:

ISFSI operation costs are included in the nuclear decommissioning trust fund established for the PINGP and Prairie Island ISFSI. Additionally, eventual storage of spent fuel in a federal repository is a federal obligation. Federal courts have held that the Department of Energy is liable for damages attributable to delays in accepting spent nuclear fuel for placement. Thus the Department of Energy will pay costs attributable to the on-going operation of the Prairie Island ISFSI (page 40).

This summary dismissal of the need to further examine provisions for the long term costs and planning for indefinite storage at PI, is a serious shortcoming of both the FEIS and OES analysis.

The FEIS fails to provide any detail about the decommissioning fund: about the purported allotment for the ISFSI; or how funds would be designated and released from decommissioning funds when, technically speaking, according to NRC – they are not to be used to cover provisions for storage. How will NRC regard these funds? By what mechanism would the state ensure their availability for long term storage; on what budget, timeline, and conditions? OES analysis has the same flaws.

The leap from “federal liability” to the assumption that DOE will “pay costs attributable to the on-going operation of the Prairie Island ISFSI ” is a highly problematic representation of the situation. These monies were reimbursements, which required significant investments of time, legal action, and capital to recapture. Nothing can be 'funded' through reimbursements. Money must be available to be spent for monitoring, and maintenance – before it can be reimbursed. This is the rub.

Long term costs of institutional control: From here (p. 40) the FEIS goes on to an excellent analysis of an additional cost factor that “is not reflected in these discussions of cost and payment”. That is “those costs of institutional control that are indirectly tied to ongoing operations of the Prairie Island ISFSI”. This is an excellent and insightful discussion. At page 42, the analysis summarizes the connection between risks – radiological, security, environmental – and the maintenance of institutional control. It correctly asserts (page 40-41) that to avoid the “predictable and severe” consequences of failure of the ISFSI over time periods “much longer than typical socio-political demands”, multiple layers of “institutional control” are necessary, including the ISFSI operators, the city of Red Wing, Goodhue County, the State of Minnesota and the United States of America.

However, it is just at this point that the FEIS's “fatal flaw” invalidates the cumulative impacts analysis. The section is entitled: “Possible Scenarios – Yucca Mountain Unavailable”. Rather than unfold the implications of the scenario, this critical analysis begins with a “proof” that (despite all evidence to the contrary) there “*is no possible scenario in which Yucca Mountain would not be available*”. It does this by opening the section, with the following argument:

The cumulative impacts scenario analyzed in this section – the *temporary long-term storage* of spent nuclear fuel at the Prairie Island ISFSI until the dry storage casks can be transported to a federal repository – is the only scenario in accordance with current Minnesota and federal law (page 42).

The FEIS justifies this conclusion with the following “legal” caveat:

“Minnesota law requires that dry cask storage be temporary and managed such that spent

nuclear fuel can be shipped to a repository as soon as feasible. The Nuclear Waste Policy Act (NWPA) as amended, makes the placement of commercial spent fuel in a federal repository a federal obligation. Additionally, it identifies Yucca Mountain as the only site for development of an initial repository” (page42-43).

This deeply flawed logical argument is restated in response to the comments of the City of Red Wing, at 25-2 in section 3, where the city challenges the use of the term “temporary long term”, and asks for an explanation. The FEIS replies:

The term 'temporary long term storage', as used in the EIS to describe the storage of spent nuclear fuel at the ISFSI is not an attempt to characterize such storage with respect to Xcel Energy's application for a Certificate of Need or Minnesota Statutes. Rather, it is an attempt to describe for the general reader the situation which exists at the Prairie Island ISFSI. There is a federal obligation for removal of spent nuclear fuel at the ISFSI to a federal repository. Thus storage at the ISFSI is temporary. For a number of reasons, there has been considerable delay in constructing and operating a federal repository...Thus storage at the ISFSI is, or has the potential to become, long term. In sum, it is temporary, long-term storage” (Part 3, 25-2).

But, despite the claim that this is not an attempt to characterize Xcel's application or MN Statute, the FEIS does precisely that, and uses this argument as the framework upon which its analysis is hung.

The premise of the inevitability of federal action, the assumption that such action will indeed remove the waste, and therefore assure “temporary” storage is a wholly inadequate response to the multiple uncertainties in this irreversible commitment of these resources. Not least of all because the legal decision which brought the last PUC proceeding on Dry Cask Storage at Prairie Island to the legislature, determined that – without somewhere to go and a time line certain -- the waste can't be considered temporary. And therefore the final decision must be made by the legislature.

So to the end of its invalid premise, the FEIS does not analyze any scenario at all – in which YM is not the ultimate destination of the waste – despite the title of the section: “Possible Scenarios – Yucca Mountain Unavailable”. As a result, the FEIS recommends no mitigation or planning mechanism to address this scenarios or any other contingencies. The use of the term of storage concept, “temporary long term storage”, and the quasi logical-legal argument used to justify it – wholly undermines the adequacy of the environmental review.

Storage technologies and equipment: By defining term of storage as “temporary long term”, and positing certain removal of the waste, the FEIS avoids a discussion of anything other than established “temporary” cask technologies and assumes that the ISFSI -- which is not designed or licensed for long term storage – will be adequate. Thus the rationale for the FEIS evaluation of canister and non-canister options at section 6.3, p. 52 is fundamentally flawed. Despite a competent examination of some of the factors of cask failure and release of radionuclides into the biotic environment, and the predictably 'severe' risks and consequences – the FEIS provides no discussion or criteria for technologies that might be more or less appropriate for long term, rather than temporary storage. The FEIS clearly assumes the superiority of a system that can be readily 'transported' to Yucca Mountain.

Mitigation: For the same reasons, the FEIS apparently assumes that mitigation will not be necessary. In any event, the FEIS is inadequate in providing for mitigation discussion, strategies, or in responding to the mitigation requests and recommendations of the affected communities and parties.

Recommendations - To be adequate, the FEIS requires supplemental analysis:

1. **Use of the term “temporary long term storage”** must be fully evaluated by the office of the attorney general for its implications for state's legislative and regulatory authorities and environmental protection obligations. Or it must be dropped, in favor of a description of the *actual situation*. The FEIS must adopt a more objective and realistic framework. Hanging the framework of the FEIS upon this shaky foundation does all interests a disservice. And it avoids the obligation to provide for planning for mitigations that might alleviate or provide safeguards against the impacts of these historic, multiple uncertainties (4410.2300 I).
2. **Dry Cask Storage options:** Must be reevaluated in light of the lack of certainty that waste will be removed within the viable life of the 'temporary' dry cask storage systems proposed. An investigation of long term storage technologies; other technologies such as a hot box that will be needed for cask maintenance over the long term; and what kind of plan & security measures could provide for the transfer of information, cultural continuity and institutional control.
3. **Cumulative Impacts Analysis:** To adequately address cumulative impacts, there must be at least one scenario (with multiple aspects) that actually grapples with a “no Yucca Mountain” future. Simply stating a series of uncertainties, of gaps in information, is insufficient. The specter of indefinite, even ad hoc permanent storage at Prairie Island is real. To be most useful, this analysis would be iterative in 50 year intervals. The analysis would directly apply data from the FEIS on the cumulative effects of skyshine, increased population, and other factors identified in the FEIS section 5.4 and by other commenting parties.
4. **Analysis of No-Facility Expansion & Alternatives:** The No-ISFSI Expansion is discussed at p. 54-55, 7.0. This statement incorrectly assumes that the “No-ISFIS Expansion” would lead to a “loss of 1,100 megawatts of generating capacity at Prairie Island”. This would not be the case if the supplemental alternative discussed at page 58, and pages 62 and 63 – a full or partial conversion to modular combined cycle natural gas – were developed. This alternative requires further development and integration into the FEIS analysis. This alternative would utilize existing and new equipment, but would heat steam with natural gas rather than by nuclear fission. It could be combined, as noted, with wind and transmission access to fulfill the need.

It is not clear why CoN rules 7849.0340 for the development and comparison of the No-Facility Alternative are not applied.

5. **Mitigations** (4410.2300 I). Finally, the premise that the waste will certainly leave before it causes any problems, also undermines the adequate development of mitigations, required by statute and rule. The environmental justice analysis is wholly inadequate, as has been persistently noted in comments. For starters, the project description needs to include the closest neighbors to the plant, the Prairie Island Indian Community and City of Red Wing.
6. **Socio-Economic factors.** 441Rule 0.2200 calls for an interdisciplinary approach to ensure the integrated use of natural, environmental and social sciences. The FEIS does not provide an adequate description of the socio-economic concerns and costs of local “institutional controls” to the communities. This creates a serious gap in the analysis and ability of OES to consider, and the Commission to balance costs and benefits of the proposed projects in accordance with its statutory criteria.

Certainly a description of the waste storage situation at Prairie Island is needed. The assumption that makes the FEIS inadequate is that the federal government will fulfill its responsibility by removing the waste from Prairie Island. This assumption is not supported by history, law, logic, or experience. The convoluted rationale does justice to no affected interest. It will not be easy to grapple -- as company, governments and citizens -- with our common social and moral responsibility for the nuclear waste generated by the PINGP steam plant. But if not now, when? Later will be too late. Judging adequacy of this far reaching proposal and its potential environmental effects will require a great deal more than a rulebook. It will require moral courage, and clear foresight.

As Red Wing has repeatedly asserted in public forums, we need to begin to communicate as partners along the long road of “institutional control”, where we share responsibility for the most toxic hazardous waste that man has created. This is true, regardless of the outcomes of this proceeding. The FEIS needs to provide a framework for our mutual accountability and the utility's responsibility.

Request for supplementation of the FEIS: Under rules 4410.3000 Subpart 5A: “The scope of a supplement to an EIS must be limited to impacts, alternatives, and mitigation measures not addressed or inadequately addressed in the final EIS. The RGU shall adopt a scope for the supplement as part of the preparation notice. The RGU may consult with any person in order to obtain information relevant to the scoping of a supplement, and may hold public meetings to obtain the information. Reasonable notice must be given of any meetings. All meetings must be open to the public.”

Under Subpart 4: “Any person may request preparation of a supplement to an EIS by submitting a written request to the RGU containing material evidence that a supplement is required under subpart 3. A copy of the request must be sent to the EQB. The RGU shall make a decision on the need for a supplement within 30 days of receipt of the request, and shall notify the requesting person and the EQB staff of its decision within five days. If the RGU denies the request, the notice must explain the basis for its decision and respond to the issues raised by the requesting person. If the RGU orders a supplement, its basis for the decision must be incorporated into the supplement preparation notice.”

Please consider this filing both a comment on the final EIS, and a request for preparation of a supplement, to be scoped in consultation with the commenting parties and additional public meetings (if PUC deems necessary) under the supervision of PUC staff.

An alternative option for supplementing the FEIS could be to simply add an analysis of “Possible Scenarios – Yucca Mountain Unavailable”, that actually addresses this scenario – without assuming either that Yucca Mountain will become available or that the waste will be removed*. Playing out this analysis would involve analyzing a series of scenarios and comparing interactive cumulative factors – related to indefinite storage, continued operations and the use of hotter fuel. The effects of hotter fuel on pool, long term cask storage, and materials release in operations, must be fully evaluated.

Thank you for the opportunity to comment,
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*The federal government has been considering alternatives to Yucca Mountain for some time. The FEIS summarizes these by citing the YM EIS. In fact, the YM EIS embeds one of its favorites in the analysis of the no-action alternative. The no-action alternative never did actually analyze the effects of leaving waste at 72+ reactor sites. The no-action alternative analysis was conducted assuming an unspecified 'regional storage' alternative. This very alternative could be activated, at any time -- using existing sites, under several scenarios – including the provision in the NWPA for the contract option for the federal government to 'take title' to the waste at the reactor sites. Thus creating a federal site, in our own back yards.

***SUBTITLE A—REPOSITORIES FOR DISPOSAL OF HIGH-LEVEL**

RADIOACTIVE WASTE AND SPENT NUCLEAR FUEL

http://ocrwm.doe.gov/documents/nwpa/css/nwpa_2004.pdf

FINDINGS AND PURPOSES

Sec. 111. (a) Findings. The Congress finds that—3

- (1) radioactive waste creates potential risks and requires safe and environmentally acceptable methods of disposal;
- (2) a national problem has been created by the accumulation of (A) spent nuclear fuel from nuclear reactors; and (B) radioactive waste from (i) reprocessing of spent nuclear fuel; (ii) activities related to medical research, diagnosis, and treatment; and (iii) other sources;
- (3) Federal efforts during the past 30 years to devise a permanent solution to the problems of civilian radioactive waste disposal have not been adequate;
- (4) while the Federal Government has the responsibility to provide for the permanent disposal of high-level radioactive waste and such spent nuclear fuel as may be disposed of in order to protect the public health and safety and the environment, the costs of such disposal should be the responsibility of the generators and owners of such waste and spent fuel;
- (5) the generators and owners of high-level radioactive waste and spent nuclear fuel have the primary responsibility to provide for, and the responsibility to pay the costs of, the interim storage of such waste and spent fuel until such waste and spent fuel is accepted by the Secretary of Energy in accordance with the provisions of this Act [42 U.S.C. 10101 et seq.];
- (6) State and public participation in the planning and development of repositories is essential in order to promote public confidence in the safety of disposal of such waste and spent fuel; and
- (7) high-level radioactive waste and spent nuclear fuel have become major subjects of public concern, and appropriate precautions must be taken to ensure that such waste and spent fuel do not adversely affect the public health and safety and the environment for this or future generations.