Rulemaking1CEm Resource

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Sent: Tuesday, December 31, 2013 9:14 AM
To: Rulemaking1CEm Resource
Subject: FW: Comments to Docket NRC-2012-0246
Attachments: NRC Waste Confidence GEIS Comments.pdf; NRC Waste Confidence GEIS.doc

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SECY DOCKET DATE: 12/21/13
TITLE: Waste Confidence—Continued Storage of Spent Nuclear Fuel
COMMENT#: 00822

From: healingsystems69@gmail.com [mailto:healingsystems69@gmail.com] **On Behalf Of** Kristen Eide-Tollefson
Sent: Saturday, December 21, 2013 1:05 AM
To: RulemakingComments Resource
Subject: Comments to Docket NRC-2012-0246

Please accept these comments on the NRC Waste Confidence GEIS

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Secretary - Annette Vietti-Cook
U.S.Nuclear Regulatory Commission (NRC)
Washington D.C. 20555-0001
Attn: Rulemakings and Adjudications Staff

RE: Docket ID No. NRC 2012-0246
Waste Confidence Generic Environmental Impact Statement

Comments of Kristen Eide-Tollefson
For the PINGP Study Group
P.O. Box 129 Frontenac, MN 55026
1-651-345-5488
715-317-0228

Dear Secretary Vietti-Cook,

Thank you for the opportunity for public comment on the Draft proposed Nuclear Waste Confidence GEIS. Your public engagement plan, including public meetings across the country, accessible website links to documents and clear directions about comment opportunities and deadlines, was well executed. Facililtation of the public meeting in Minnesota was excellent. I particularly appreciated the teams' openness to discussion after the meeting. This is a critical document, which will be pivotal in the mission of the NRC to “ensure the safe use of radioactive materials for beneficial civilian purposes while protecting people and the environment”.

The Nuclear Waste Confidence Decision was first executed in response to state challenges to the Federal Government, to ensure that waste would not be left indefinitely on site. Minnesota is part of this history. Minnesota's state legislature, citizens, environmental organizations, state agencies, and host communities, including the Prairie Island Indian Community have participated in many proceedings at state and federal level. From all perspectives, Minnesota has produced thousands of pages of testimony, briefs, analysis and decision making documents.

The common concern has always been that the waste will not be removed from our reactor sites, all of which sit on or close to the banks of the Mississippi River. No river maintains a single course over hundreds of years. And any release, leak or failure to isolate wastes for any period of time, will have “disasterous” consequences. Timely federal removal of the waste to a permanent geological repository was, & continues to be, a first condition of support for continued operations in Minnesota.

These comments are submitted for the PINGP Study Group, which is a collaboration of community members and local officials who live within a 25 miles radius of the PINGP plant. Many of us live just outside the 10 mile emergency planning zone. We participated as members of the public in the recent PUC proceedings on the PINGP uprate and expanded dry cask storage, to accommodate relicensing. We strongly support the written and verbal comments of the Prairie Island Indian Community and City of Red Wing. We urge a careful reading of the critique submitted by NAWO and Nukewatch, who have been 'on duty' for the public interest in nuclear safety and health issues, collectively, for over 60 years.

These comments are intended to accompany transcription of my verbal comments made at the recent Minnesota public forum – submitted as Kristen Eide-Tollefson.

These comments address the first of the 3 deficiencies in the Waste Confidence Decision identified by the Court:

1. "Related to the Commission's conclusion that permanent disposal will be available "when necessary", the Court helf that the Commission needed to evaluate the environmental effects of failing to secure permanent disposal, given the uncertainty about whether a repository would be built".

The following bullets summarize my verbal testimony at the Minnesota public meeting:

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- Asserting these Assumptions in order <u>to avoid -- rather than engage – mitigation strategies</u> is wholly incompatible with both the court order and with NEPA: "The purpose of environmental Mitigation must be considered for all impacts, regardless of their significance". The failure to provide mitigation for the required analysis is in direct defiance of NEPA and the CEQ Guidance document on Mitigation adopted in January, 2011: http://energy.gov/sites/prod/files/NEPA-CEQ_Mitigation_and_Monitoring_Guidance_14Jan2011.pdf

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Summary of CEQ Memorandum on Mitigation, from http://www.vnf.com/news-alerts-550.html:
"The memorandum focuses on ensuring the efficacy of mitigation and monitoring proposals that often are included in environmental assessments (EAs) and environmental impact statements (EISs). Thus, in order to provide assurance that mitigation measures relied on by federal agencies in their environmental documents achieve their intended results, the new guidance sets forth recommendations for federal agencies with regard to:

- developing procedures for implementation and monitoring mitigation commitments;
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From: 40 CFR 1508.20 : The CEQ regulations define mitigation as:

Avoiding the impact altogether by not taking a certain action or parts of an action.

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Mitigation: Avoid --> Minimize --> Repair or Restore --> Reduce over time --> Compensate

This ordered approach to mitigation is known as "sequencing" and involves understanding the affected environment and assessing transportation effects throughout project development. Effective mitigation starts at the beginning of the NEPA process, not at the end. Mitigation must be included as an integral part of the alternatives development and analysis process.

Measures necessary to mitigate adverse impacts will be incorporated into the action and are eligible for Federal funding when the Administration determines that:

1. The impacts for which the mitigation is proposed actually result from the Administration action;
2. The proposed mitigation represents a reasonable public expenditure after considering the impacts of the action and the benefits of the proposed mitigation measures. -- 23 CFR 771.105(d)

This comment supports the GEIS-Only Alternative for the following reasons:

- It would not become part of the Waste Confidence rule, but would be used as a guidance document to support site specific license review;
- This may prevent the GEIS from becoming an impediment to rational decision-making and effective planning and implementation of mitigation strategies;
- It does not prevent the filing of contentions;
- The GEIS findings and conclusions would remain open to challenge in site-specific review.
- It would provide a middle ground of efficiency in review.

Given the uncertain future of nuclear waste storage this alternative is a middle ground, that would allow for common features of analysis to be addressed by the GEIS, but would not inappropriately predjudice or bind site specific concerns to the conclusions of the GEIS.

In addition, the GEIS-Only alternative would mean that the document would remain a tool, not a rule. This is appropriate, again, given the uncertainty of the future of nuclear waste storage.

NRC's preferred alternative is based upon the cost concerns of regulation to the agency and the utilities. This is an inappropriate priority.

The cost concerns to be addressed in the GEIS, should be the costs of each of the storage timelines, including indefinite storage. And the costs of ongoing 100 year cask and facility replacement and funding for local, state, and federal collaboration – in enduring institutional controls, including monitoring, maintenance and management.

Mitigation development: The GEIS-only alternative could provide the NRC with a mechanism through which to develop a set of mitigation strategies to address the unknown, and unknowable future of nuclear waste.

For this to happen, NRC would need to reformulate the "Analytic Assumptions" as a set of "Pre-Conditions" for storage which would protect the public health and safety. And proceed to review, adapt and develop tools*, frameworks and strategies, as in the recommendations following.

*Hazardous Substances Pollution Contingency Plan and Community Right to Know provisions.
http://www.gpo.gov/fdsys/pkg/CFR-2001-title40-vol24/pdf/CFR-2001-title40-vol24-chapI-subchapJ.pdf

International Radiation Protection Association – recommendations for Public Stakeholder involvement in radiological education and protection. http://www.ncbi.nlm.nih.gov/pubmed/21979548

Health Physics Society endorsement of Guiding Principles for Radiation Protection Professionals on Stakeholder Engagement developed by the IRPA – Adopted January, 2010.
http://hps.org/documents/stakeholder_engagement_ps024-0.pdf

The GEIS adopted by the Commission must include a planning component to direct utilities and responsible federal stakeholders to engage in strategic planning, funding, and execution of technical and environmental protection requirements to ensure responsible – safe – long term storage. NRC's charge to protect the public health and safety requires *direct action, not evasion,* of the potential impacts of long term and indefinite at reactor site storage. This should include at least the following:

1. Execute:
A. Full phased Environmental Site Evaluation for existing shut down sites, and extended long term (beyond 60 years) storage at any plant site. This should be done before permit decision or license extension for plants or ISFSIs are granted.
a) Engage all relevant federal agency expertise including EPA, Geological Survey and Corps;
b) Provide for local, state and tribal stakeholder education and involvement.
c) Provide funding for a full Health Assessment for long term storage host communities

B. An Adaptive Phased Management Plan for long term/indefinite storage at reactor sites. See attached documentation and recommendations from Federal Council on Environmental Quality - CEQ.

2. Analyze and apply
a) The three engineering studies for the No-Action alternative to the federal EIS for Yucca Mountain – analyzing deterioration effects on casks of precipitation and temperature variations in different zones.
b) Effects of uprated burn up fuels on both initial pool and cask storage for each of the periods.
c) Detailed deterioration factors – and impacts of radiological releases under several scenarios, including the 350 year peak release.
d) A demographic and environmental analysis of long term exposures -different for each plant and including the multiplier of skyshine effects of dry cask storage for each period.

3. Initiate:
a) Guidance documents for institutional controls for indefinite at reactor site storage
b) Health assessments for host communities facing indefinite at reactor site storage

4. Adopt:
a) Minimum standards and criteria for long range at reactor/ISFSI site storage
b) Optimum standards and criteria for long range at reactor/ISFSI site storage
c) Incentives and mechanisms, including funding, to close the gap.

5. Direct:
a. Utilities to do long range planning specifying what technology, funding, cask and facility design options will be needed to ensure complete replacement every 100 years.
b. Uilities to establish escrow accounts for **Long Term Storage Funding Assurance**, in addition to and separate from their decommissioning funds.
c. Establishment of federal funding for utilities to partner with host communities and states on long term institutional controls, including monitoring, education, emergency planning for indefinite storage.

5. Establish:
a) Estimated costs for the above;
b) Mechanisms to ensure funding for long term/indefinite storage.

There is no responsible or safe nuclear waste storage – without adequate planning, funding, and institutional controls. (Reference: PINGP- EIS, MN PUC docket 08-690)

What is Adaptive Phased Management?

Adaptive Phased Management is both a technical method and a management system, with an emphasis on adaptability. Technically, it is centralized containment and isolation of used nuclear fuel in a deep geological repository. The management system involves realistic, manageable phases – each marked by explicit decision points with continuing participation by interested Canadians. It is flexible, allowing for go, no-go decisions at each stage to take advantage of new knowledge or changing societal priorities.

Adaptive Phased Management provides an option for shallow underground storage at the central site if some or all of the used fuel needs to be moved before the deep repository is available. It also provides for continuous monitoring throughout implementation and for retrievability for an extended period.

Canada's Nuclear Waste Management Organization:
http://www.nwmo.ca/faq_adaptive_phased_management#q1

National Academy paper:
http://www.adaptivemanagement.net/sites/default/files/Adaptive%20Management%20References%20in%20National%20Academy%20Press.pdf

NEPA Task Force (2002-04)
Council on Environmental Quality
The NEPA Task Force Report to the Council on Environmental Quality
Modernizing NEPA Implementation

http://ceq.hss.doe.gov/ntf/report/htmltoc.html
http://ceq.hss.doe.gov/ntf/report/totaldoc.html#4.1
http://ceq.hss.doe.gov/nepa/regs/eos/eo13148.html
Executive Order 13148

Minnesota Public Utilities Commission - http://www.gis.state.mn.us/resource.html?Id=24631

In re: Docket to extend dry cask storage at Prairie Island to accommodate relicensing 08-690

9-6-2009

Dear Sir

When Xcel's application was made, and NRC's review was begun - the fate of Yucca Mountain was still uncertain. Secretary Chu's January 15th announcement that "Yucca Mountain is off the table" (Reuters) confirms a long line of administrative moves throughout 2009 -- which have culminated in the elimination of Yucca Mountain as the nation's permanent repository. This is new, significant information -- and a changed circumstance that fundamentally alters the landscape of license renewal for the Prairie Island plant. The NRC DEIS must evaluate and address it.

If there is no repository, host states, local and tribal governments cannot count on completion of decommissioning, and removal of the waste within decommissioning time lines, or even within the time frame of the nuclear waste confidence decision. Without this assurance, land cannot be reused. And deterioration of temporary nuclear waste storage facilities will create safety, health, ecological costs and hazards -- that are neither described nor estimated in the DEIS. The combined strategies of the NRC GEIS and site specific evaluation for reactor refurbishment and relicensing -- and therefore the current DEIS -- are inadequate to address this new development. NRC must consider applying CEQ's NEPA's recommended Adaptive Management strategies to long term, at reactor storage.

Please find attached the PINGP Study Group Advisory Brief to the Minnesota PUC dockets on expanded storage to accommodate the relicensing of the PINGP reactors 1 & 2.

The study group finds that the elimination of Yucca Mountain from consideration as a permanent repository, requires additional considerations from NRC in the EIS. Specifically, the EIS should address:

1. Cumulative effects of skyshine radiation with larger numbers of casks, as discussed in our brief;

2. Additional monitoring as discussed in our brief to support a long term strategic adaptive management plan;

3. Environmental Justice considerations as discussed in our brief;

The development of additional information and analysis to address and mitigate indefinite at reactor site storage is essential:

1. A full Environmental Site Evaluation/Assessment to support strategic long term management;

2. Convening of an Adaptive Management Workgroup (see attachment: Adaptive Management);

5. Detailed documentation and timeline for cask and facility replacement, using the Yucca Mountain No-action engineering studies on factors for cask and facility degradation;

6. Discussion of provision for wet and dry transfer capacity for long term storage as per attached EPRI diagrams on Sequence of Events for Extended Dry Cask Storage. Also for security and safety for extended storage - from the 100 to 500 years discussed in the recent GAO report;

7. Discussion of what an Adaptive Management Plan for long term waste storage at PINGP would look like (see attachment: Adaptive Management);

8. Reevaluation of alternatives, specifically conversion, replacement or repowering of the PINGP with combined cycle gas turbines, in light of irreversibility of committment of resources (see attachment: PINGP Conversion Feasiblity Study Exhibit 57);

PINGP Study Group contacts for additional documentation on the PINGP – Minnesota Public Utilities Commission Proceeding.

FEIS link: http://www.gis.state.mn.us/resource.html?Id=24631

Kristen Eide-Tollefson – healingsystems@earthlink.net

Paula Maccabee – pmaccabee@justchangelaw.com

Secretary - Annette Vietti-Cook
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Attn: Rulemakings and Adjudications Staff

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B. An Adaptive Phased Management Plan for long term/indefinite storage at reactor sites. See attached documentation and recommendations from Federal Council on Environmental Quality - CEQ.

2. Analyze and apply
a) The three engineering studies for the No-Action alternative to the federal EIS for Yucca Mountain – analyzing deterioration effects on casks of precipitation and temperature variations in different zones.
b) Effects of uprated burn up fuels on both initial pool and cask storage for each of the periods.
c) Detailed deterioration factors – and impacts of radiological releases under several scenarios, including the 350 year peak release.
d) A demographic and environmental analysis of long term exposures -different for each plant and including the multiplier of skyshine effects of dry cask storage for each period.

3. Initiate:
a) Guidance documents for institutional controls for indefinite at reactor site storage
b) Health assessments for host communities facing indefinite at reactor site storage

4. Adopt:
a) Minimum standards and criteria for long range at reactor/ISFSI site storage
b) Optimum standards and criteria for long range at reactor/ISFSI site storage
c) Incentives and mechanisms, including funding, to close the gap.

5. Direct:
a. Utilities to do long range planning specifying what technology, funding, cask and facility design options will be needed to ensure complete replacement every 100 years.
b. Uilities to establish escrow accounts for **Long Term Storage Funding Assurance**, in addition to and separate from their decommissioning funds.
c. Establishment of federal funding for utilities to partner with host communities and states on long term institutional controls, including monitoring, education, emergency planning for indefinite storage.

5. Establish:
a) Estimated costs for the above;
b) Mechanisms to ensure funding for long term/indefinite storage.

There is no responsible or safe nuclear waste storage – without adequate planning, funding, and

institutional controls. (Reference: PINGP- EIS, MN PUC docket 08-690)

What is Adaptive Phased Management?

Adaptive Phased Management is both a technical method and a management system, with an emphasis on adaptability. Technically, it is centralized containment and isolation of used nuclear fuel in a deep geological repository. The management system involves realistic, manageable phases – each marked by explicit decision points with continuing participation by interested Canadians. It is flexible, allowing for go, no-go decisions at each stage to take advantage of new knowledge or changing societal priorities.

Adaptive Phased Management provides an option for shallow underground storage at the central site if some or all of the used fuel needs to be moved before the deep repository is available. It also provides for continuous monitoring throughout implementation and for retrievability for an extended period.

Canada's Nuclear Waste Management Organization:
http://www.nwmo.ca/faq_adaptive_phased_management#q1

National Academy paper:
http://www.adaptivemanagement.net/sites/default/files/Adaptive%20Management%20References%20in%20National%20Academy%20Press.pdf

NEPA Task Force (2002-04)
Council on Environmental Quality
The NEPA Task Force Report to the Council on Environmental Quality
Modernizing NEPA Implementation

- 4.1 NEPA Adaptive Management Model
  - 4.1.1 Convening an Adaptive Management Work Group
- 4.2 Using Adaptive Management
  - 4.2.1 Adaptive Management Benefits
  - 4.2.2 Adaptive Management Concerns
  - 4.2.3 Adaptive Management Pilot Study
- 4.3 Planning Adaptive Management
  - 4.3.1 Key Factors and Approaches to Adaptive Management
  - 4.3.2 Oversight and Public Involvement in Adaptive Management
- 4.4 Documenting Adaptive Management
  - 4.4.1 Cumulative Effects of Adaptive Management
- 4.5 Implementing Adaptive Management
- 4.6 Environmental Management Systems
  - 4.6.1 Integrating Adaptive Management and EMS
- 4.7 Issues and Recommendations
- 4.8 Summary of Recommendations

http://ceq.hss.doe.gov/ntf/report/htmltoc.html
http://ceq.hss.doe.gov/ntf/report/totaldoc.html#4.1
http://ceq.hss.doe.gov/nepa/regs/eos/eo13148.html
Executive Order 13148

Minnesota Public Utilities Commission - http://www.gis.state.mn.us/resource.html?Id=24631

In re: Docket to extend dry cask storage at Prairie Island to accommodate relicensing 08-690

9-6-2009

Dear Sir

When Xcel's application was made, and NRC's review was begun - the fate of Yucca Mountain was still uncertain. Secretary Chu's January 15th announcement that "Yucca Mountain is off the table" (Reuters) confirms a long line of administrative moves throughout 2009 -- which have culminated in the elimination of Yucca Mountain as the nation's permanent repository. This is new, significant information -- and a changed circumstance that fundamentally alters the landscape of license renewal for the Prairie Island plant. The NRC DEIS must evaluate and address it.

If there is no repository, host states, local and tribal governments cannot count on completion of decommissioning, and removal of the waste within decommissioning time lines, or even within the time frame of the nuclear waste confidence decision. Without this assurance, land cannot be reused. And deterioration of temporary nuclear waste storage facilities will create safety, health, ecological costs and hazards -- that are neither described nor estimated in the DEIS. The combined strategies of the NRC GEIS and site specific evaluation for reactor refurbishment and relicensing -- and therefore the current DEIS -- are inadequate to address this new development. NRC must consider applying

CEQ's NEPA's recommended Adaptive Management strategies to long term, at reactor storage.

Please find attached the PINGP Study Group Advisory Brief to the Minnesota PUC dockets on expanded storage to accommodate the relicensing of the PINGP reactors 1 & 2.

The study group finds that the elimination of Yucca Mountain from consideration as a permanent repository, requires additional considerations from NRC in the EIS. Specifically, the EIS should address:

1. Cumulative effects of skyshine radiation with larger numbers of casks, as discussed in our brief;

2. Additional monitoring as discussed in our brief to support a long term strategic adaptive management plan;

3. Environmental Justice considerations as discussed in our brief;

The development of additional information and analysis to address and mitigate indefinite at reactor site storage is essential:

1. A full Environmental Site Evaluation/Assessment to support strategic long term management;

2. Convening of an Adaptive Management Workgroup (see attachment: Adaptive Management);

5. Detailed documentation and timeline for cask and facility replacement, using the Yucca Mountain No-action engineering studies on factors for cask and facility degradation;

6. Discussion of provision for wet and dry transfer capacity for long term storage as per attached EPRI diagrams on Sequence of Events for Extended Dry Cask Storage. Also for security and safety for extended storage - from the 100 to 500 years discussed in the recent GAO report;

7. Discussion of what an Adaptive Management Plan for long term waste storage at PINGP would look like (see attachment: Adaptive Management);

8. Reevaluation of alternatives, specifically conversion, replacement or repowering of the PINGP with combined cycle gas turbines, in light of irreversibility of committment of resources (see attachment: PINGP Conversion Feasiblity Study Exhibit 57);

PINGP Study Group contacts for additional documentation on the PINGP – Minnesota Public Utilities Commission Proceeding.

FEIS link: http://www.gis.state.mn.us/resource.html?Id=24631

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