

## **ENVIRONMENTAL IMPACT STATEMENT SCOPING WORKSHEET Addendum**

This addendum is part of the record of the Advisory Task Force (ATF) for the Xcel Energy Prairie Island Nuclear Generating Plant (PINGP) Extend Power Uprate (EPU) and Request for Additional Dry Cask Storage Projects. The ATF met October 8, 15, and 22, 2008, in Red Wing. Members:

### **Local Units of Government**

Dr. Ronald Allen, Goodhue County Commissioner  
Stephen Castner, Red Wing City Council Member  
Carol Duff, Red Wing City Council President  
Joan Marshman, Florence Township Supervisor  
David Tincher, Hay Creek Township, Deputy Clerk

### **Non-Governmental Organizations**

Sigurd Anderson, Communities United for Responsible Energy (CURE)  
Lea Foushee, North American Water Office (NAWO)  
Michelle Rosier, Sierra Club North Star Chapter

### **Prairie Island Indian Community**

Wayne Wells, Prairie Island Indian Community  
Philip Mahowald, Prairie Island Indian Community

### **Individuals**

John Howe  
Bruce McBeath  
Andru Peters  
Katie Himanga

This addendum contains a myriad of comments that are related and in many significant ways, effectively ‘scope’ potential cumulative effects of the three connected actions.

**Statement:** We recognize the Mississippi River, Lake Pepin, and their tributaries as interacting components of the world’s third largest river system. The impacts of the Prairie Island Nuclear Generating Plant clearly extend beyond the boundaries of the plant site. It benefits all parties when the State of Minnesota and Xcel Energy recognize and acknowledge the profound impact of the facility on the peoples and environments adjacent to, downstream of, and downwind of the site.

What follows are these, which are included as a means to accommodate the breadth of public comment, and do not constrain the final scope unnecessarily:

1. Cumulative Impacts
2. Alternatives
3. EIS Scoping Exclusions
4. Adequate Inclusion of the Nuclear Regulatory Commission’s Environmental Impact Statement and the Interplay Between the Two Documents.

**Connected Actions.** The three proceedings, plus the relicensing proceeding with NRC, are connected actions. The reasonable and well thought out design of the environmental review created by the Office of Energy Security (OES), in effect, validates this claim. We believe that it is appropriate to address these applications as connected actions. We urge the OES to consider that there are OTHER connected actions, including funding actions on part of federal government bodies – that have major effects on the issues scoped in the Advisory Task Force documents. We ask that all be included in the ‘scope’ for this EIS.

**Note:** These items are in addition to those listed on Worksheets 1 and 2. These need to be incorporated into the scope.

**Process recommendations:** We hope you will find our exploration useful, and our process recommendations conceivable. We have made them in the spirit of both local and larger public interest in the health of our river communities and resources. And with an eye to opportunities that could be created for more coordinated evaluation in permitting and planning. We also feel that approaches we have suggested create efficiencies in the EIS process, by coordinating agency evaluation and recommendation and packaging them in a less compartmentalized way that is suggestive of innovation and improvements to implementation of related planning and mitigations measures – as is encouraged under statute.

**Other Task Force Member and Public Comment:** The ATF asks that all comments received by the OES related to the scope of the EIS be retained, and made part of the record of the ATF.

## ENVIRONMENTAL IMPACT STATEMENT SCOPING WORKSHEET

<b>Cumulative Impacts</b> <i>[NB: Can use chart to cluster/add/organize comments]</i>		
Impact Category	Connected actions (CA) and/or Cumulative effects (CE) Identify other CA/CE items here	Data/Analysis/Expertise needed Mitigation Options  NB: For all items, assume at least, connected actions of EPU, Expanded dry cask storage, and Relicensing.
<p>1a. Water appropriation</p> <p>1b. Water Thermal impacts</p> <p>1c. Combined effects on resources, including Ms aquatic ecology.</p> <p>1d. Identify and analyze socio-economic effects, per (116D.03)</p>	<p><b>Cumulative effect factors:</b></p> <ul style="list-style-type: none"> <li>• Drawdowns (Corps);</li> <li>• Increased uptake requirements (PI and other plants on the Ms);</li> <li>• Thermal discharge increases;</li> <li>• Climate change;</li> <li>• Increased demands on water (including agricultural); and</li> <li>• Reduced aquifer supplies in SE MN</li> <li>• Navigational requirements;</li> <li>• Low water scenarios</li> </ul> <p><b>Connected Actions DNR &amp; MPCA Permits for PINGP:</b></p> <ul style="list-style-type: none"> <li>• Plant cooling demands tend to increase with stressors, including temperature. Negative feedback (see DNR comments).</li> <li>• Lack of coordination in permitting may increase/multiply effects; increased coordination and cooperation may mitigate and/or</li> </ul>	<p><b>Data &amp; Analysis (add to column from comments):</b></p> <ul style="list-style-type: none"> <li>• Impact of thermal load on sedimentation; discuss relationship to water quality, if any.</li> <li>• Analyze and get <u>independent</u> verification on calculations for increased thermal load with uprate; calculate for period of relicensing;</li> <li>• Get information on thermal issues/impact from other uprates/plant operations; compare w/PI.</li> <li>• Calculate (ask DNR) appropriations for generating plants on the Ms. From Sherco down to Alma/Winona (at least through pool 4).</li> <li>• Describe current fish monitoring programs and find out from DNR if other measures or monitoring might be needed.</li> <li>• Provide historic data for BASELINES. Discuss socio-economics of fish resources for affected river communities, at least through Lake Pepin, including potential for recreational resource impacts.</li> <li>• What current or pending water and water resource planning (including fish/river ecology) initiatives address the identified effects/ issues.</li> <li>• In “affected environment” section, describe priorities and values associated with management of this section of Ms watershed, per: DNR comments.</li> <li>• Explanation of history and use of cooling towers; info. on effects of towers on thermal and fish/aquatic ecology issues. Other?</li> <li>• Describe &amp; evaluate resource competition using several scenarios and timelines (see DNR comments) for global climate change, population, cooling, and agricultural demand progressions (for SE). Discuss socio-economics</li> <li>• Describe what happens during low water scenarios now; describe cycle, including rising of Prarie du Chien aquifer during low water, to supply Ms. Include analysis of reduced ‘carrying capacity’ of water for wastes; greater</li> </ul>

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	<p style="text-align: center;">identify mitigation and best practices.</p> <p><b>REQUEST FOR AGENCY ACTION: (&amp; in accordance w/ <u>116D.03</u>)</b></p> <p><b>DNR and MPCA <u>in consultation</u> with <u>CORPS of Engineers, UMN, MDH and appropriate WI agency and resource managers, to form a team to review PINGP Permits for connected actions of 20 additional years of operations &amp; proposed EPU</u></b></p> <p>To look at, identify and analyze, cumulative effects including climate change conditions, resource competition and resource quality over the next 20 years; consider joint permit requirements; make recommendations on mitigation options, BMP, CoN permit conditions, &amp; alternatives, including no-action alternative</p> <p>(NB: statute requires protection of groundwater and evaluation of effects of continued operations in review of cask storage extension; please evaluate these effects, evaluate</p>	<p style="text-align: center;">vulnerability of ecosystem to stress, toxins.</p> <ul style="list-style-type: none"> <li>• Compare summer and winter flow issues; include navigation..</li> <li>• Discuss values and effects of ice cover on river ecology. Discuss socio-economic effects on communities of reduced and changing patterns</li> <li>• How does the plant adjust appropriations, temperature and flows for conditions; how is this verified, and recorded? Who's responsible?</li> <li>• Request socio-economic impacts from PIIC.</li> <li>• See and incorporate other comments.</li> </ul> <p><b>Mitigation Options:</b></p> <ul style="list-style-type: none"> <li>• No-Build (Uprate);</li> <li>• No-Build (additional cask storage)</li> <li>• Discuss programmatic cooperation options with Corps/DNR/Xcel on Drawdowns; discuss options for mitigating sedimentation, carrying capacity, and effects on river flora -- of thermal increases with MPCA &amp; interested parties.</li> <li>• Add dry cooling tower as recommended by DNR; additional use of cooling towers?;</li> <li>• Reduce plant thermal inefficiencies and mitigate uprate thermal increase by providing for district heating using waste heat for PIIC and other nearby communities. Factor this economically into improvements needed for uprate and relicensing</li> <li>• Convene interested stakeholders, government officials, and experts for a technical conference to address mitigation options. Include sportsmen's clubs in area.</li> <li>• Refine or add to testing and monitoring programs as advised, with mitigation planning.</li> <li>• Request mitigation ideas from PIIC.</li> </ul> <p><b>Research/Expertise needed:</b> See left hand column. This item needs interagency team review and recommendations.</p>

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	groundwater issues, especially those raised by PIIC and for Tritium)	
2. Groundwater	<p><b>Cumulative Effects:</b></p> <p>See recommendation for team evaluation above, <b>include MDH, with MPCA &amp; DNR.</b></p> <p><b>Investigate and analyze:</b> combined effects of categories 1a-d through 4, for affected environments.</p>	<p><b>Data and Analysis (expertise needed MPCA; MN Dept of Health; DNR and others)</b></p> <ul style="list-style-type: none"> <li>• Establish BASELINE for requirements of statute for groundwater. <u>Independent</u> testing and analysis required to fulfill statute requirement.</li> <li>• Provide independent analysis of historical data for TRITIUM releases.</li> <li>• Provide adequate description of effects of tritium in and on living systems and cycles.</li> <li>• Describe (re: affected environment) groundwater tables and flows for PI area; use attached US Geological Reports.</li> <li>• Include description and analysis of relationship between surface and groundwater flows for all flow conditions/seasons. Analyze impacts and potential impacts including but not limited to: combined and cumulative effects of discharges, thermal effects, socio-economic and natural system stressors, etc. Example: Prairie du Chien aquifer rises to adjust for low Ms flows. What groundwater quality vulnerabilities does this create; how might they be exacerbated or impacted by appropriations etc (per above).</li> <li>• Describe possible scenarios for next 20 years that could affect flows, demands, resource competition</li> <li>• Describe mitigation of previous well tritium contamination, in terms of placement of discharge pipe and other mitigations.</li> <li>• Review all PI studies, and US Geological studies pertaining to conditions for groundwater flows on PIIC, and in the Ms. Valley/terrace to S. end of Lake Pepin, at least.</li> <li>• Do search on tritium issues for other plants,</li> </ul>

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		<p>NB: For all items, assume at least, connected actions of EPU, Expanded dry cask storage, and Relicensing.</p> <p>including issues raised in uprates, closed plant site leaks, and relicensing dockets.</p> <ul style="list-style-type: none"> <li>• How is PIIC particularly affected? Ask them.</li> <li>• Add other relevant/related comments here.</li> </ul>
	<p><b>Please note:</b> We appreciate that these recommendations would mean a lot of work for already busy agencies. We see this as an important opportunity to explore efficiencies and improvements in coordination and evaluation for permitting &amp; management -- as discussed in a number of current and recent planning documents.</p>	<p><b>Mitigation options:</b> No-build</p> <p>Other options recommended by experts/interagency team and the Prairie Island Indian Community (PIIC).</p> <p>The importance of this segment of the Ms. River as a watershed and natural and recreational resources, is undisputed and elaborated in a number of agency and other public/planning/resource management documents.</p>
		<p><b>Research/Expertise needed:</b> To be determined by responsible agencies. Utilize PIIC formal and informal expertise. Involve NRC/federal expertise as appropriate.</p>
4. EAW	<p><b>NOTE: EAW claims that impacts are confined to project boundaries is wholly erroneous and <u>must</u> be abandoned as a principle of development of the EIS.</b></p> <ul style="list-style-type: none"> <li>• Proceedings have not included WI residents, local governments, agencies, or boundary water authorities;</li> <li>• Community claims that they are affected should be a defining factor in</li> </ul>	<p><b>Data and Analysis</b></p> <ul style="list-style-type: none"> <li>• <b>There is a combined effect of the limitation of participation in these dockets by the following circumstances:</b> <ol style="list-style-type: none"> <li>a) PIIC is dealing with prohibitions from 2003 negotiations and agreements; their effective participation is also hampered by lack of clarity about boundaries of these prohibitions;</li> <li>b) There are many simultaneous major infrastructure proposals before the Commission and demanding agency resources;</li> <li>c) There is not funding that would allow professional public interest groups/NGOs to intervene to represent issues of concern to the broader public interest and environment.</li> <li>d) Several key NGO's are also bound by previous negotiating agreements with NSP, from participating fully in PI/nuclear proceedings.</li> <li>e) Citizen's groups and local governments are not</li> </ol> </li> </ul>

**Cumulative Impacts**

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	<p>describing the affected environment under part 4</p> <ul style="list-style-type: none"> <li>• Community claims about effects should be used as a foundation for evaluating EIS analysis and priorities, NOT 'scoped out' because of artificial constraints imposed by EAW assumptions.</li> </ul> <p><b>Limitations in EAW for cumulative effects analysis, are also inadequate:</b></p> <p>The MS river valley, its aquatic, air, social, human and natural resource systems are part of one living system. It is the whole purpose of environmental review to minimize impacts to systems, to evaluate the potential for combined and cumulative effects and to recommend and compare alternatives and mitigations.</p> <p>The EAW scoping document in a number of</p>	<p>funded or resourced for this kind of intervention</p> <p>f) Wisconsin is not involved even though there are WI counties listed in the affected area, there are established interests and communities in WI may be closer than some who are involved.</p> <p>g) Ms River and Boundary waters specialists, planning professionals have not been consulted and the affected environment is artificially constrained in the proposed EAW treatment.</p> <ul style="list-style-type: none"> <li>• <b>Potential effects include:</b> <ul style="list-style-type: none"> <li>a) Incomplete scope;</li> <li>b) Incomplete development of the record;</li> <li>c) Inappropriate burdens being placed upon a few under resourced/ inexperienced parties, overworked agencies;</li> <li>d) Commission depends on parties for an adequate record for decision-making</li> </ul> </li> </ul> <p><b>Mitigation &amp; Opportunities:</b></p> <ul style="list-style-type: none"> <li>• <b>Hire consultants</b> and request help from/create</li> <li>• <b>Interagency teams</b> to maximize efficiencies and reduce burdens and costs, and to improve outcomes. Agencies to work together with consultants and other advisors and resource people to ensure full development of EIS and record in accordance with MEPA and 116D.03</li> <li>• <b>Consider cooperation with NRC</b>, where appropriate.</li> <li>• <b>Maintain state authorities.</b> It is imperative that the state not abandon its authorities or responsibilities for oversight and environmental assessment to NRC. There is no federal plan for waste from relicensed reactors. And no long term funding scheme for waste stranded at sites.</li> <li>• <b>See Utility responsibilities under Title 1</b></li> <li>• <b>Consider in EAW scope, approach, and in evaluation of NRC/state authorities:</b> <ul style="list-style-type: none"> <li>a) NRC has not done a full (as opposed to GEIS,</li> </ul> </li> </ul>

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	<p>its particulars and assumptions, neither reflects nor fulfills MEPA goals and mandates. See comments of parties.</p> <p><b>POSITIVE EFFECTS on impact mitigation:</b> Because of: a) special proximity of PIIC; and b) the community's work over many generations to care for the land and its resources --- <u>addressing impacts to PIIC, will address and protect downstream communities and ecosystems.</u></p> <p><u>Conversely, failure to protect and address PIIC's concerns will mean failure to address, protect and mitigate resource impacts downstream.</u></p>	<p>NB: For all items, assume at least, connected actions of EPU, Expanded dry cask storage, and Relicensing.</p> <p>supplemented) site specific environmental review of on site storage since the first studies in @ 1978 (see: NUREG 1092). This study assumed reprocessing and continuous removal of waste from reactor sites.</p> <p>b) D/EIS for Yucca Mountain does not analyze waste stranded indefinitely at reactor sites in the no-action alternative; instead, regional sites are studied.</p> <p>c) State regulatory and legislative actions help to define authorities. If state makes requests based on economic considerations in context of PUC proceedings, this constitutes exercise of authority. E.g. Requirement for transport casks and order of waste transfer in PI CoN/ bill.</p> <p>d) EAW must not be limited by assumptions that there are no authorities.</p> <p style="text-align: center;">• <b>Special considerations for PIIC:</b></p> <p>e) PIIC is the closest community, and may be the only community (?) to have a reactor AND an ISSI within the boundary area of a reservation.</p> <p>f) There are broad trust responsibilities to PIIC, for the reason that they are limited, in a number of ways, to boundaries of the reservation.</p>
<p>5. Effects of Continued Operations</p> <p>Uprate + Cask storage + Relicensing (+ Decommissioning)</p>	<p><b>Connected actions &amp; Cumulative Effects:</b></p> <ul style="list-style-type: none"> <li>• <u>Main effect of continued operations is stranded waste at reactor site, indefinitely;</u></li> <li>• Cumulative social, economic and psychological stressors of unknown risks and</li> </ul>	<p><b>Data and Analysis (expertise needed):</b></p> <ul style="list-style-type: none"> <li>• See 116D.03; provide for this interdisciplinary analysis.</li> <li>• <b>ADDRESS INCOMPLETE AND MISSING INFORMATION</b>, regarding disposition of nuclear waste and various scenarios (as below)</li> <li>• Analyze scenarios for funding, monitoring, and maintenance of indefinite at reactor site storage and storage facilities, pool, dry cask storage, extrapolated along timeline from YM DEIS; include at least those scenarios mentioned in</li> </ul>

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<p>To: PIIC Local Gov't Citizens Economic Development Natural Resources</p>	<p>outcomes, including long term (low level) human and and environmental exposures;</p> <ul style="list-style-type: none"> <li>• Funding (un)availability for waste management at reactor sites; for permanent repository</li> <li>• Government oversight shortfalls; back up falls to local governments.</li> <li>• Ongoing and cumulative Socio-economic burdens to local communities of vigilance, unknown scenarios, emergency and safety support;</li> <li>• Long term social, psychological and economic liabilities to communities of identification with nuclear waste;</li> <li>• Incompatibility with Hiawatha Valley land use planning and Ms. River water and natural resource management and plans</li> </ul>	<p>YM DEIS (see attachments): i. DOE take title, leaving waste on site; ii. DOE take title, establishment of regional sites; Utility retains title, plant is decommissioned after initial license expires; Utility retains title, plant is decommissioned after second license period expires.</p> <ul style="list-style-type: none"> <li>• Discuss Xcel reports on worker transition, decommissioning, and generation replacement.</li> <li>• Review, update and discuss statutory (1994) requirement to use</li> <li>• Review and update the original conditions on limited certificate of need for dry cask storage at PI (commission decision); discuss how each condition has been addressed over time. This is important to knowing how the utility fulfills its obligations over time;</li> <li>• Review and provide historic and current information on tax base payments, agreements, and other compensation that communities have received – Red Wing, Goodhue, and PIIC. Provide annual totals in a chart for each tax or compensation package;</li> <li>• Provide a copy of the Xcel suit settlement with DOE, with the list of items for which they requested compensation, and for which they received compensation under the settlement; Discuss when that money will be paid, from what federal source, and where it will go.</li> <li>• Discuss and find <u>independent</u> evaluation capacity for seismic meter/monitoring at PI.</li> <li>• Establish a timeline and funding plan for facility and cask maintenance and repairs, along timeline suggested in YM DEIS and by EPRI dry cask reports.</li> <li>• Review 2004 EPRI report on bolted cask storage</li> <li>• Add items from other comments here.</li> </ul>
		<p><b>Mitigation Options:</b></p> <ul style="list-style-type: none"> <li>• Should include contingency planning for key</li> </ul>

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		<p>factors, including but not limited to economic, accident, excessive release and other environmental issues/ incidents (like low water)</p> <ul style="list-style-type: none"> <li>• Should feature a plan to involve local governments, cooperatively in ongoing evaluation, decision-making, monitoring programs, and review of data from monitoring.</li> <li>• Should consider upgrade of Seismic detection equipment and other equipment and safeguards identified in information on disc submitted in attachments.</li> <li>• Review comments for additional measures.</li> </ul>
		<p><b>Research/Expertise needed:</b></p> <ul style="list-style-type: none"> <li>• Find consultants as needed; Dr. Thompson, expert witness from Monticello proceedings could act as advisor for development of data, analysis and mitigations. See his record. UMN Geology Department has provided expertise in past proceedings regarding nuclear waste siting.</li> </ul>
6. Providing for Efficiencies	<p><b>Cumulative effects and Connected Actions</b></p> <p><b>See all items above</b></p>	<p><b>FINAL RECOMMENDED ACTION:</b></p> <ul style="list-style-type: none"> <li>• <b><u>Scope an SIA, Social Impacts Analysis for PIIC</u> ). Put together an advisory and consulting team to do an SIA, including an evaluation of the relationship between physical and social/psychological/spiritual values and effects; include, as appropriate, NRC, EJ point person from Xcel and elsewhere. (See links and information in attachments)</b></li> <li>• Review PIIC and other comments for items for development &amp; analysis. Put PIIC on the team.</li> <li>• Review EJ requirements (state and federal) under pertinent rules; connected actions include relicensing. Coordinate with NRC on EJ matters and discuss possible joint SIA.</li> </ul>

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		<p>NB: For all items, assume at least, connected actions of EPU, Expanded dry cask storage, and Relicensing.</p> <ul style="list-style-type: none"> <li>• Discuss socio-economics for river communities of inability to return site to Greenfield after decommissioning (waste remains);</li> <li>• Discuss basic psycho-social dynamics of effects of unknown risks, and invisible hazards in the literature (see attachments)</li> </ul>
		<p><b>Mitigations: TDB</b></p> <p>See PIIC comments</p>
		<p><b>Expertise needed: Additional scoping required.</b> <u>Please recommend for final scope that this happen.</u></p> <ul style="list-style-type: none"> <li>• See comments, esp. PIIC</li> <li>• Consult with PIIC; Xcel EJ advisor; NRC</li> <li>• <b>See attachments</b> for resources/guidelines</li> <li>• Scope University of MN resources; consult with task force member Lea Foushee on this.</li> <li>• Consult with Red Wing officials/professionals, particularly task force member Bruce McBeath.</li> </ul>
	<b>ATTACHMENTS By section of chart</b>	<b>With COMMENTS</b>
1a		
1b		
2.		
	SIA attachments	
5.	EPRI Report (See Marshman comments)	
	YM DEIS materials/chart	
6.	Shively Thesis & others	<p><a href="http://etd.lib.fsu.edu/theses/available/etd-04132004-113623/unrestricted/01_cas_fulltext.pdf">http://etd.lib.fsu.edu/theses/available/etd-04132004-113623/unrestricted/01_cas_fulltext.pdf</a> Risk Perception, Uncertainty and Facility Siting - Carissa Shively, Humphrey Institute Chapter 3: Uncertainty and Its Role in the Policy Process <a href="http://www.pnas.org/content/91/23/10786.full.pdf?ck=nck">http://www.pnas.org/content/91/23/10786.full.pdf?ck=nck</a></p>

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	<p>Social/Psychological Impact Analysis</p> <p>See also E-attachment</p>	<p><a href="http://www.state.nv.us/nucwaste/yucca/socio02.htm">http://www.state.nv.us/nucwaste/yucca/socio02.htm</a> Social and Economic Effects of Nuclear Waste Disposal Considerations for Institutional Management</p> <p><a href="http://books.nap.edu/openbook.php?record_id=316&amp;page=16">http://books.nap.edu/openbook.php?record_id=316&amp;page=16</a></p> <p><b>Guidelines for implementing SIA:</b> <a href="http://www.nmfs.noaa.gov/sfa/social_impact_guide.htm">http://www.nmfs.noaa.gov/sfa/social_impact_guide.htm</a> <a href="http://www.iaia.org/modx/assets/files/SP2.pdf">http://www.iaia.org/modx/assets/files/SP2.pdf</a></p> <p><b>SOCIAL IMPACT ASSESSMENT International Principles, May, 2003 (excerpts)</b> Burdge, Rabel J. 2004. <i>A Community Guide to Social Impact Assessment: 3rd Edition</i>. Middleton, WI <a href="http://www.dog-eared.com/socialcologypress/">www.dog-eared.com/socialcologypress/</a></p> <p><b>Expertise:</b> <a href="http://green.uprm.edu/pdfs/bio_DPijawka.pdf">http://green.uprm.edu/pdfs/bio_DPijawka.pdf</a> <a href="http://aaa.main.usu.edu/Assessment/Fac_Vitas/SSWA/KrannichRick.pdf">http://aaa.main.usu.edu/Assessment/Fac_Vitas/SSWA/KrannichRick.pdf</a> <a href="http://www.socialimpactassessment.net/">http://www.socialimpactassessment.net/</a></p>

**ENVIRONMENTAL IMPACT STATEMENT SCOPING WORKSHEET**

<b>ALTERNATIVES ANALYSIS</b>		
	Single Source Alternatives	Combined Resource Alternatives
	<p><b>Single source alternatives</b> The EIS analysis must not be limited to single source alternatives, as required in NRC process (see CURE comments)</p>	<p><b>Combined resource alternatives</b> are potentially more flexible, environmentally friendly, feasible, and economical. Therefore they should be scoped for inclusion in the EIS. Xcel listed this category with its benefits, but did not fill out this alternatives category in their ER. Combined resource alternatives should include:</p> <p>Wind and Gas, using existing and refurbished gas facilities;</p> <ul style="list-style-type: none"> <li>a. <b>EIS should include consideration of 164MW of gas from increased capacity at the Black Dog plant with its conversion to natural gas.</b> Xcel Energy plans to convert a coal-fired power plant to combined cycle natural gas and increase its capacity. The draft EIS scope should include achieving some and all of the proposed 164MW from the Black Dog plant.</li> <li>b. <b>EIS should include consideration of 164MW from smaller distributed generation.</b></li> <li>c. <b>EIS should include consideration of an optimized alternatives proposal (combination of sources) for up to 164MW.</b> ATF finds the limited alternatives in the EAW to be insufficient both in terms of the limited scope of fuel types considered and also that the analysis required that all 164MW came from a new, single facility. In the Draft EIS, an analysis should look at optimizing alternative sources under the new demand forecast with consideration for the State’s commitment to clean, safe, affordable energy which includes considering first conservation and DSM and renewable energy.</li> </ul>

		2. Energy Campus conversion concept per: CURE comments
		3. Incorporate excess thermal discharge into district heating component for PIIC and Red Wing (other?)
		4. PINGP Gas conversion report from IRP supplement (2000?), combined with wind, as in 2002 IRP.
		5. Calculate conservation requirements for 20 years. <b>EIS should include consideration of 164MW of energy efficiency and DSM which will be met through a .5% increase in these programs from initial resource plan.</b> Xcel Energy is on record as pursuing an additional .2% from the initial resource plan's 1.1% energy efficiency and DSM used in the CON and EAW after the Office of Energy Security found it would be cost-effective. The state goal of 1.5% of annual energy sales should be considered as an alternative to the 164MW.
		6. Analyze this figure alongside projected declines in demand for economic recession; review MISO reports on decline in demand. <b>EIS should provide an analysis of whether or not 164MW are needed given Xcel Energy's new demand forecast which is 600MW less than proposed in the CON application and draft EAW.</b> In the CON and draft EAW, Xcel Energy's demand forecast is 2800MW; however, in their September Resource Plan reply comments they provide an updated forecast of 2200MW.
	Discuss: Xcel's characterization of the changing construction of needs, from baseload towards support for more flexible configurations of peaking, and intermediate.	7. Describe Xcel's commitment to CBED as discussed in the current IRP and Renewable Energy Plan. Ask Xcel to analyze a combined CBED and conservation alternative.
		8. Analyze Xcel battery research initiative and its effect on ability of wind to fulfill projected needs for each of the proposed projects. Ask Xcel to discuss impacts on potential for wind to serve need.

## **ENVIRONMENTAL IMPACT STATEMENT SCOPING WORKSHEET EIS SCOPING EXCLUSIONS**

The seven topics that the State of Minnesota, Minnesota Department of Commerce Office of Energy Security has given staff the authority to exclude from the Environmental Impact Statement: 1) plant radiation and safety; 2) storage technology, accidents, terrorism; 3) nuclear fuel chain; 4) off-site alternatives; 5) Economic feasibility of alternatives; 6) transportation of spent fuel from Prairie Island to Yucca Mountain; 7) NRC Standards and mitigation measures, does not enable the public to be educated and understand the environmental and socioeconomic impacts of the proposal before the state level contested case hearing is completed, as the projected final date of the Federal EIS is not anticipated before 10/28/09. These exclusions are inappropriate.

The Utility Applicant addresses each of these items within the Application and the Environmental Assessment Worksheet and we, as members of the public, are barred from commenting on the statements made. While the Federal Government has established Standards for the enabling of nuclear operations, this does not preclude the discussion of those radioactive emission levels and concentrations and dispersion plumes of those identified radioactive isotopes that are admitted to be routine gaseous and liquid effluent and solid releases. It is essential to be able to discuss the processes by which these toxic radioactive materials impact the people and the environment of Minnesota and elsewhere. These seven prohibited topics are of historical significance as they are primary public exposure pathways for radioactive contamination and have been protested and opposed by the public for decades. Consider these comments as a formal complaint for failure to address these areas of great public concern.

### 1) Plant radiation and safety

There is no safe dose of radiation. Every exposure to nuclear radiation is a potential for mutation or alteration in living cells. The Utility Applicant admits this risk to living beings. (Appendix E-14).

The documents provided to the Advisory Task Force Group do not adequately identify the amounts of radiation produced by the facility. This information is needed in a summary. Multiple charts that do not provide a cumulative number of Curies are not informative for a member of the public.

The public needs to know where these radioactive materials are deposited in the environment. Current monitoring activities do not identify the dispersion plumes of these isotopes. Current monitoring is not designed to capture the dispersion pattern of these emissions. But without understanding this pattern, which enables people to know where the radiation actually goes after it is released, the radiation monitoring program appears to be a public relations stunt attempting to impose a feeling of false security onto an the public.

Charts in the Application identify approximately 1,000 Curies (Ci) in gaseous (8-19), liquid (8-25) and solid (8-24) radioactive wastes as the rolling five-year average. An EIS must identify where these potential cancer-causing agents go. Any environmental assessment or analysis that does not include this information is inadequate and misinforms those exposed to the contamination.

2) Storage technology, accidents and terrorism

New casks TN-40HT

The technology has not been tested to failure. Statements made that there is no credible scenario in which the contents of the casks can be released to the environment are without the substantiation. The primary security strategy is the belief that the robustness of the facility will deter attack. This is a strategy founded on a bodyguard of lies. No one thought commercial jets were a weapon before either...we are being asked to take it on faith.

3) Nuclear Fuel Chain and Stationary Air Source Emissions

The Utility Applicant claims “green” CO<sub>2</sub> credits (10-3) for nuclear operations without identifying the amount of coal and oil required to mine uranium ore, boil earth to extract that uranium and other enrichment processes, as well as all transportation emissions throughout the nuclear chain. After the uranium ore is boiled over a coal fire to separate the U<sup>235</sup> from the U<sup>238</sup>, CFCs are often used to cool the resulting fuel and depleted Uranium. Significant amounts of which are often released to the atmosphere. What is the contribution of this coal burning and CFC usage to global climate change? This exclusion enables the Applicant to green wash the project and claims a carbon reduction credit for this proposal, when the carbon release is in other jurisdictions but is released to the environment as a result of the project nonetheless.

4) Off-site Alternatives

The further expansion and relicensing of the facility violates the principles of Environmental Justice by foisting Minnesota’s worst pollution problem onto an Indigenous Community.

When an off-site alternative was mandated in 1994 for the initial Prairie Island dry cask storage proposal, the alternative Goodhue County non-native community was able to defeat the proposal because of the overwhelming health and safety issues to the surrounding community and the Mississippi River environment.

5) Economic Feasibility of Alternatives

The Utility Applicant refuses to examine the community based dispersed renewable generation option that would create countless Minnesota jobs and

provide more equitable economic development than their profiteering from the externalized social costs of nuclear contamination for geological time.

Co-generation of Prairie Island waste heat from nuclear operations could mitigate the thermal loading to the environment and supply steam heat to towns and communities. Demand-side efficiencies alone could more than off-set the purported need for this proposal, and those efficiencies would be readily achievable if the utility financial health were not tied directly to the wasteful consumption of its product. See, for example, the Pioneer Press newspaper story of October 24, 2008 whereby Xcel is complaining that profits are down due to lower consumption in the residential sector.

#### 6) Transportation of Spent Fuel

There is no credible documentation that substantiates the claim by the Utility that Yucca Mountain will actually accept its nuclear waste by 2020. NSP projected that their Prairie Island radioactive waste would be shipped to the Mescalero Apache during the 1994 Legislative Session in their efforts to convince the State Lawmakers that the ISFSI was only temporary. That proposal was abandoned, another Indigenous Nation (Skull Valley Goshute) substituted and the waste still has not moved.

The Federal EIS was initially designed for 10,000 years on site containment; litigation remanded the USEPA process back to calculate for 1,000,000 years because of the heinously long lasting radioactive isotopes that are in spent nuclear fuel. The State of Nevada is actively fighting the process of becoming a radioactive dump for the nation, and the whole licensing process has been fraught with fraud and corruption.

The following is a partial listing of those opposed to the Yucca Mountain proposal just in Nevada:

- Nevada Legislature
- Nevada State Medical Association
- Nevada Resort Association
- Nevada State Firemen's Association
- Nevada Parent Teachers Association Board of Directors
- Clark County
- Cities of Las Vegas, Henderson, Boulder City, Lovelock, Reno, and Sparks
- Nevada League of Cities
- Nevada Commission on Tourism
- Nevada Parent Teachers Association Convention of Delegates
- Nevada Commission on Nuclear Projects
- Nevada Nuclear Waste Task Force
- Western Shoshone Council
- Shundahai Network

Even assuming the Yucca Mountain facility opens in 2020, DOE waste would be accepted first then commercial reactor waste in order of waste from the oldest facility next. This prioritization would not include the initial 29 dry casks of Prairie Island waste as first to be shipped in the queue. The requested 35 additional casks from the 20 year relicense extension are not included in the queue even if Yucca Mountain opens, and neither would the 34 projected decommissioning casks. Whether Yucca Mountain opens in 2020 is purely a political question, and will change depending on the election results.

#### 7) NRC Standards

National Academies of Science Biological Effects of Ionizing Radiation BEIR VII Report released in 2005 reaffirmed that there is no safe dose of ionizing radiation. The National Academies of Science BEIR VII Report documents, that 1 in 100 members of the public would get cancer if exposed to 100 millirads per year for a 70-year lifetime.

This is the USNRC allowable radiation dose for members of the public.

The standards set by the government are not protective, rather they are based on what commercial nuclear technologies can achieve. These standards allow for certain members of the public to be adversely and disproportionately impacted.

**ENVIRONMENTAL IMPACT STATEMENT SCOPING WORKSHEET  
INCLUSION OF THE NUCLEAR REGULATORY COMMISSION'S  
ENVIRONMENTAL IMPACT STATEMENT AND THE INTERPLAY  
BETWEEN THE TWO DOCUMENTS**

The ATF requests a discussion of how the Draft EIS will incorporate the findings of the Nuclear Regulatory Commission's SEIS with less than 5 business days between the anticipated release of the SEIS (3/11/09) and the Draft EIS (3/17/09.<sup>1</sup>) The charge allows for summaries of the SEIS findings. The Sierra Club appreciates OES's commitment to summarize issues considered "matters not within the scope of the EIS" which we understand to mean providing a summary of the NRC's SEIS in the draft EIS on these "matters." It is extremely complicated for citizens and non-profits with limited resources to keep pace with the expedited process established in this docket, and we are relying on the OES to provide adequate summary of the SEIS issues related to the uprate and additional cask storage in the draft EIS. Will the draft EIS be delayed if the SEIS is delayed?

In addition, how will these two documents reflect the independence of these decisions? Clearly, the uprate is a moot point if the relicensing is denied. However, it is unclear to us if the relicensing relies on the equipment updates which will be provided through the approval of the uprate. It is our understanding that Reactor 1 at PINGP has had groundwater leaks and PWR containment sump issues<sup>2</sup>. Have these issues been addressed or will they be addressed if the uprate is not approved?

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<sup>1</sup> This is the timeline provided by Xcel Energy; however, the Draft Scoping Document suggests the Draft EIS will be completed by 3/31/2009.

<sup>2</sup> Union of Concerned Scientists, Nuclear Power Information Tracker, accessed on 10/22/08:  
[http://ucsusa.wsm.ga3.org/clean\\_energy/nuclear\\_safety/reactor-map/reactors/prairie-island-unit-1.html](http://ucsusa.wsm.ga3.org/clean_energy/nuclear_safety/reactor-map/reactors/prairie-island-unit-1.html)

To: Bill Storm, Project Manager  
Office of Energy Security  
Re: Scoping Task Force Comments for PI proceedings

10-22-08

Dear Mr. Storm,

Because we found the proposed treatment of issues in the EAW inadequate to our understanding of the issues, we used adaptations of your scoping charts to explore an approach that creates 'catch basins' for a myriad of comments that are related and in many significant ways, effectively 'scope' potential cumulative effects of these 3 connected actions.

We hope that this tool – an extension of your own – might contribute to the ability to rapidly cluster comments and recommendations, **then** prioritize and condense the scope. We found it to be very useful in trying to lay out the complex and interrelated elements of the EIS scope. Perhaps similar to the charting process you went through to combine the EIS processes that you have successfully consolidated and communicated to the public.

**Re: Connected Actions.** We thought initially that it might be difficult to argue that the 3 proceedings, plus the relicensing proceeding with NRC, are connected actions. But the reasonable and well thought out design of the environmental review that you have created, in effect, validates this claim. Our close reading of CEQ definitions and brief consultation with environmental professionals, including EQB and DNR staff, also confirms our sense that it is appropriate to address these applications as connected actions. We urge you to consider that there are OTHER connected actions, including funding actions on part of federal government bodies – that have major effects on the issues scoped in our documents. We leave it to other party comments and to you to 'scope' those.

**Process recommendations:** We hope you will find our exploration useful, and our process recommendations conceivable. We have made them in the spirit of both local and larger public interest in the health of our river communities and resources. And with an eye to opportunities that could be created for more coordinated evaluation in permitting and planning. We also feel that approaches we have suggested create efficiencies in the EIS process, by coordinating agency evaluation and recommendation and packaging them in a less compartmentalized way, that is suggestive of innovation and improvements to implementation of related planning and mitigations measures – as is encouraged under statute.

Thank you for your excellent and timely work. Our only concern is that the good pre-work you did accommodate the breadth of public comment, and does not constrain the final scope unnecessarily. Please consider us allies in this important work.

Yours,

Sig Anderson, Chair  
Representing: R-CURE (River) Communities United for Responsible Energy  
P.O. Box 130 Frontenac, MN 55026 651-345-4515

## ENVIRONMENTAL IMPACT STATEMENT SCOPING WORKSHEET

<b>Cumulative Impacts</b> <i>[NB: Can use chart to cluster/add/organize comments]</i>		
Impact Category	Connected actions (CA) and/or Cumulative effects (CE) Identify other CA/CE items here	Data/Analysis/Expertise needed Mitigation Options  NB: For all items, assume at least, connected actions of EPU, Expanded dry cask storage, and Relicensing.
<p>1a. Water appropriation</p> <p>1b. Water Thermal impacts</p> <p>1c. Combined effects on resources, including Ms aquatic ecology.</p> <p>1d. Identify and analyze socio-economic effects, per (116D.03)</p>	<p><b>Cumulative effect factors:</b></p> <ul style="list-style-type: none"> <li>• Draw downs (Corps);</li> <li>• Increased uptake requirements (PI and other plants on the Ms);</li> <li>• Thermal discharge increases;</li> <li>• Climate change;</li> <li>• Increased demands on water (including agricultural); and</li> <li>• Reduced aquifer supplies in SE MN</li> <li>• Navigational requirements;</li> <li>• Low water scenarios</li> </ul> <p><b>Connected Actions DNR &amp; MPCA Permits for PINGP:</b></p> <ul style="list-style-type: none"> <li>• Plant cooling demands tend to increase with stressors, including temperature. Negative feedback (see DNR comments).</li> <li>• Lack of coordination in permitting may increase/multiply effects; increased coordination and cooperation may mitigate and/or identify mitigation</li> </ul>	<p><b>Data &amp; Analysis (add to column from comments):</b></p> <ul style="list-style-type: none"> <li>• Impact of thermal load on sedimentation; discuss relationship to water quality, if any.</li> <li>• Analyze and get <u>independent</u> verification on calculations for increased thermal load with uprate; calculate for period of relicensing;</li> <li>• Get information on thermal issues/impact from other uprates/plant operations; compare w/PI.</li> <li>• Calculate (ask DNR) appropriations for generating plants on the Ms. From Sherco down to Alma/Winona (at least through pool 4).</li> <li>• Describe current fish and other river biomes monitoring programs and solicit from DNR other measures or monitoring that might be needed.</li> <li>• Provide historic data for BASELINES. Discuss socio-economics of fish resources for affected river communities, at least through Lake Pepin, including potential for recreational resource impacts.</li> <li>• What current or pending water and water resource planning (including fish/river ecology) initiatives address the identified effects/ issues.</li> <li>• In “affected environment” section, describe priorities and values associated with management of this section of Ms watershed, per: DNR comments.</li> <li>• Explanation of history and use of cooling towers; info. on effects of towers on thermal and fish/aquatic ecology issues (thermal shock, etc.) Other?</li> <li>• Describe &amp; evaluate resource competition using several scenarios and timelines (see DNR comments) for global climate change, population, cooling, and agricultural demand progressions (for SE). Discuss socio-economics</li> <li>• Describe what happens during low water scenarios now; describe cycle, including rising of Prairie du Chien aquifer during low water, to</li> </ul>

and best practices.

**REQUEST FOR  
AGENCY ACTION:  
(& in accordance w/ 116D.03)**

**DNR and MPCA in  
consultation with CORPS  
of Engineers, UMN,  
MDH and appropriate  
WI agency and resource  
managers, to form a team  
to review PINGP  
Permits for connected  
actions of 20 additional  
years of operations &  
proposed EPU**

To look at, identify and analyze, cumulative effects including climate change conditions, resource competition and resource quality over the next 20 years; consider joint permit requirements; make recommendations on mitigation options, BMP, CoN permit conditions, & alternatives, including no-action alternative

(NB: statute requires protection of groundwater and evaluation of effects of continued operations in review of cask storage extension; please evaluate these effects, evaluate groundwater issues, especially those raised by PIIC and for Tritium)

supply Ms. Include analysis of reduced 'carrying capacity' of water for wastes; greater vulnerability of ecosystem to stress, toxins.

- Compare summer and winter flow issues; include navigation.
- Discuss values and effects of ice cover on river ecology. Discuss socio-economic effects on communities of reduced and changing patterns
- How does the plant adjust appropriations, temperature and flows for conditions; how is this verified, and recorded? Who's responsible?
- Request socio-economic impacts from PIIC.
- See and incorporate other comments.

**Mitigation Options:**

- No-Build (Uprate);
- No-Build (additional cask storage)
- Discuss programmatic cooperation options with Corps of Engineers/MNDNR/WIDNR/XCEL on drawdowns; discuss options for mitigating sedimentation carrying capacity, and effects on river flora -- of thermal increases with MPCA & interested parties.
- Add dry cooling tower as recommended by MNDNR; additional use of cooling towers?
- Reduce plant thermal inefficiencies and mitigate uprate thermal increase by providing for district heating using waste heat for PIIC and other nearby communities. Factor this economically into improvements needed for uprate and relicensing
- Convene interested stakeholders, government officials, and experts for a technical conference to address mitigation options. Include sportsmen's clubs in area.
- Refine or add to testing and monitoring programs as advised, with mitigation planning.
- Request mitigation ideas from PIIC.

**Research/Expertise needed:** See left hand column. This item needs interagency team review and recommendations.

<p>2. Groundwater</p>	<p><b>Cumulative Effects:</b> See recommendation for team evaluation above, <b>include MDH, with MPCA &amp; DNR.</b></p>	<p><b>Data and Analysis (expertise needed MPCA; MN Dept of Health; DNR and others)</b></p> <ul style="list-style-type: none"> <li>• Establish BASELINE for requirements of statute for groundwater. <u>Independent</u> testing and analysis required to fulfill statute requirement.</li> </ul>
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**Investigate and analyze:** combined effects of categories 1a-d through 4, for affected environments.

- Provide independent analysis of historical data for TRITIUM releases.
- Provide adequate description of effects of tritium in and on living systems and cycles.
- Describe (re: affected environment) groundwater tables and flows for PI area; use attached US Geological Reports.
- Include description and analysis of relationship between surface and groundwater flows for all flow conditions/seasons. Analyze impacts and potential impacts including but not limited to: combined and cumulative effects of discharges, thermal effects, socio-economic and natural system stressors, etc. Example: Prairie du Chien aquifer rises to adjust for low Ms flows. What groundwater quality vulnerabilities does this create; how might they be exacerbated or impacted by appropriations etc (per above).
- Describe possible scenarios for next 20 years that could affect flows, demands, resource competition
- Describe mitigation of previous groundwater well tritium contamination, in terms of placement of discharge pipe and other mitigations.
- Review all PI studies, and US Geological studies pertaining to conditions for groundwater flows on PIIC, and in the Ms. Valley/terrace to So. end of Lake Pepin, at least.
- Do search on tritium issues for other plants, including issues raised in uprates, closed plant site leaks, and relicensing dockets.
- How is PIIC particularly affected? Ask them.
- Add other relevant/related comments here.

**Please note:** We appreciate that these recommendations would mean a lot of work for already busy agencies. We see this as an important opportunity to explore efficiencies and improvements in coordination and evaluation for permitting & management -- as discussed in a number of

**Mitigation options:**

No-build

Other options recommended by experts/interagency team and the Prairie Island Indian Community (PIIC).

The importance of this segment of the Ms. River as a watershed and natural and recreational resources is undisputed and elaborated in a number of agency and other public/planning/resource management documents.

	current and recent planning documents.	
		<b>Research/Expertise needed:</b> To be determined by responsible agencies. Utilize PIIC formal and informal expertise. Involve NRC/federal expertise as appropriate.
4. EAW	<p><b>NOTE: EAW claims that impacts are confined to project boundaries is wholly erroneous and <u>must</u> be abandoned as a principle of development of the EIS.</b></p> <ul style="list-style-type: none"> <li>• Proceedings have not included WI residents, local governments, agencies, or boundary water authorities;</li> <li>• Community claims that they are affected should be a defining factor in describing the affected environment under part 4</li> <li>• Community claims about effects should be used as a foundation for evaluating EIS analysis and priorities, NOT 'scoped out' because of artificial constraints imposed by EAW assumptions.</li> </ul> <p><b>Limitations in EAW for cumulative effects analysis, are also inadequate:</b></p>	<p><b>Data and Analysis</b></p> <ul style="list-style-type: none"> <li>• <b>There is a combined effect of the limitation of participation in these dockets by the following circumstances:</b> <ol style="list-style-type: none"> <li>a) PIIC is dealing with prohibitions from 2003 negotiations and agreements; their effective participation is also hampered by lack of clarity about boundaries of these prohibitions;</li> <li>b) There are many simultaneous major infrastructure proposals before the Commission and demanding agency resources;</li> <li>c) There is not funding that would allow professional public interest groups/NGOs to intervene to represent issues of concern to the broader public interest and environment.</li> <li>d) Several key NGO's are also bound by previous negotiating agreements with NSP, from participating fully in PI/nuclear proceedings.</li> <li>e) Citizen's groups and local governments are not funded or resourced for this kind of intervention</li> <li>f) Wisconsin is not involved even though there are WI counties listed in the affected area, there are established interests and communities in WI may be closer than some who are involved.</li> <li>g) Ms River and Boundary waters specialists, planning professionals have not been consulted and the affected environment is artificially constrained in the proposed EAW treatment.</li> </ol> </li> <li>• <b>Potential effects include:</b> <ol style="list-style-type: none"> <li>a) Incomplete scope;</li> <li>b) Incomplete development of the record;</li> <li>c) Inappropriate burdens being placed upon a few under resourced/ inexperienced parties, overworked agencies;</li> <li>d) Commission depends on parties for an adequate record for decision making</li> </ol> </li> </ul> <p><b>Mitigation &amp; Opportunities:</b></p> <ul style="list-style-type: none"> <li>• <b>Hire consultants</b> and request help from/create</li> <li>• <b>Interagency teams</b> to maximize efficiencies and reduce burdens and costs, and to improve</li> </ul>

	<p>The MS river valley, its aquatic, air, social, human and natural resource systems are part of one living system. It is the whole purpose of environmental review to minimize impacts to systems, to evaluate the potential for combined and cumulative effects and to recommend and compare alternatives and mitigations.</p> <p>The EAW scoping document in a number of its particulars and assumptions, neither reflects nor fulfills MEPA goals and mandates. See comments of parties.</p> <p><b>POSITIVE EFFECTS on impact mitigation:</b>  Because of: a) special proximity of PIIC; and b) the community's work over many generations to care for the land and its resources --- <u>addressing impacts to PIIC, will address and protect downstream communities and ecosystems.</u></p> <p><u>Conversely, failure to protect and address PIIC's concerns will mean failure to address, protect and mitigate resource impacts downstream.</u></p>	<p>outcomes. Agencies to work together with consultants and other advisors and resource people to ensure full development of EIS and record in accordance with MEPA and 116D.03</p> <ul style="list-style-type: none"> <li>• <b>Consider cooperation with NRC</b>, where appropriate.</li> <li>• <b>Maintain state authorities.</b> It is imperative that the State not abandon its authorities or responsibilities for oversight and environmental assessment to NRC. There is no federal plan for waste from relicensed reactors. And no long term funding scheme for waste stranded at sites.</li> <li>• <b>See Utility responsibilities under Title 1</b></li> <li>• <b>Consider in EAW scope, approach, and in evaluation of NRC/state authorities:</b> <ol style="list-style-type: none"> <li>a) NRC has not done a full (as opposed to GEIS, supplemented) site-specific environmental review of on site storage since the first studies in @ 1978 (see: NUREG 1092). This study assumed reprocessing and continuous removal of waste from reactor sites.</li> <li>b) D/EIS for Yucca Mountain does not analyze waste stranded indefinitely at reactor sites in the no-action alternative; instead, regional sites are studied.</li> <li>c) State regulatory and legislative actions help to define authorities. If state makes requests based on economic considerations in context of PUC proceedings, this constitutes exercise of authority. E.g. Requirement for transport casks and order of waste transfer in PI CoN/ bill.</li> <li>d) EAW must not be limited by assumptions that there are no authorities. <ul style="list-style-type: none"> <li>• <b>Special considerations for PIIC:</b></li> </ul> </li> <li>e) PIIC is the closest community, and may be the only community (?) to have a reactor AND an ISSI within the boundary area of a reservation.</li> <li>f) There are broad trust responsibilities to PIIC, for the reason that they are limited, in a number of ways, to boundaries of the reservation.</li> </ol> </li> </ul>
	<p><b>Connected actions &amp; Cumulative Effects:</b></p> <ul style="list-style-type: none"> <li>• <u>Main effect of</u></li> </ul>	<p><b>Data and Analysis (expertise needed):</b></p> <ul style="list-style-type: none"> <li>• See 116D.03; provide for this interdisciplinary analysis.</li> </ul>

<p>5. Effects of Continued Operations</p> <p>Uprate + Cask storage + Relicensing (+ Decommissioning)</p> <p>To: PIIC Local Gov't Citizens Economic Development Natural Resources</p>	<p><u>continued operations is stranded waste at reactor site, indefinitely;</u></p> <ul style="list-style-type: none"> <li>• Cumulative social, economic and psychological stressors of unknown risks and outcomes, including long term (low level) human and environmental exposures;</li> <li>• Funding (un)availability for waste management at reactor sites; for permanent repository</li> <li>• Government oversight shortfalls; back up falls to local governments.</li> <li>• Ongoing and cumulative Socio-economic burdens to local communities of vigilance, unknown scenarios, emergency and safety support;</li> <li>• Long term social, psychological and economic liabilities to communities of identification with nuclear waste;</li> <li>• Incompatibility with Hiawatha Valley land use planning and Ms. River water and natural resource management and plans</li> </ul>	<ul style="list-style-type: none"> <li>• <b>ADDRESS INCOMPLETE AND MISSING INFORMATION</b>, regarding disposition of nuclear waste and various scenarios (as below)</li> <li>• Analyze scenarios for funding, monitoring, and maintenance of indefinite at reactor site storage and storage facilities, pool, dry cask storage, extrapolated along timeline from YM DEIS; include at least those scenarios mentioned in YM DEIS (see attachments): i. DOE take title, leaving waste on site; ii. DOE take title, establishment of regional sites; Utility retains title, plant is decommissioned after initial license expires; Utility retains title, plant is decommissioned after second license period expires.</li> <li>• Discuss XCEL reports on worker transition, decommissioning, and generation replacement.</li> <li>• Review, update and discuss statutory (1994) requirement to use</li> <li>• Review and update the original conditions on limited certificate of need for dry cask storage at PI (commission decision); discuss how each condition has been addressed over time. This is important to knowing how the utility fulfills its obligations over time;</li> <li>• Review and provide historic and current information on tax base payments, agreements, and other compensation that communities have received – Red Wing, Goodhue, and PIIC. Provide annual totals in a chart for each tax or compensation package;</li> <li>• Provide a copy of the XCEL suit settlement with DOE, with the list of items for which they requested compensation, and for which they received compensation under the settlement; Discuss when that money will be paid, from what federal source, and where it will go.</li> <li>• Discuss and find <u>independent</u> evaluation capacity for seismic meter/monitoring at PI.</li> <li>• Establish a timeline and funding plan for facility and cask maintenance and repairs, along timeline suggested in YM DEIS and by EPRI dry cask reports.</li> <li>• Review 2004 EPRI report on bolted cask storage</li> <li>• Add items from other comments here.</li> </ul>
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		<p><b>Mitigation Options:</b></p> <ul style="list-style-type: none"> <li>• Should include contingency planning for key factors, including but not limited to economic, accident, excessive release and other environmental issues/ incidents (like low water)</li> <li>• Should feature a plan to involve local governments, cooperatively in ongoing evaluation, decision-making, monitoring programs, and review of data from monitoring.</li> <li>• Should consider upgrade of Seismic detection equipment and other equipment and safeguards identified in information on disc submitted in attachments.</li> <li>• Review comments for additional measures.</li> </ul>
		<p><b>Research/Expertise needed:</b></p> <ul style="list-style-type: none"> <li>• Find consultants as needed; Dr. Thompson, expert witness from Monticello proceedings could act as advisor for development of data, analysis and mitigations. See his record. UMN Geology Department has provided expertise in past proceedings regarding nuclear waste siting.</li> </ul>
<p>6. Providing for Efficiencies</p>	<p><b>Cumulative effects and Connected Actions</b></p> <p><b>See all items above</b></p>	<p><b>FINAL RECOMMENDED ACTION:</b></p> <ul style="list-style-type: none"> <li>• <b><u>Scope an SIA, Social Impacts Analysis for PIIC).</u> Put together an advisory and consulting team to do an SIA, including an evaluation of the relationship between physical and social/psychological/spiritual values and effects; include, as appropriate, NRC, EJ point person from XCEL and elsewhere. (See links and information in attachments)</b></li> <li>• Review PIIC and other comments for items for development &amp; analysis. Put PIIC on the team.</li> <li>• Review EJ requirements (state and federal) under pertinent rules; connected actions include relicensing. Coordinate with NRC on EJ matters and discuss possible joint SIA.</li> <li>• Discuss socio-economics for river communities of inability to return site to Greenfield after decommissioning (waste remains);</li> <li>• Discuss basic psycho-social dynamics of effects of unknown risks, and invisible hazards in the</li> </ul>

		literature (see attachments)
		<b>Mitigations: TDB</b>  See PIIC comments
		<b>Expertise needed: Additional scoping required.</b> <u>Please recommend for final scope that this happen.</u> <ul style="list-style-type: none"> <li>• See comments, esp. PIIC</li> <li>• Consult with PIIC; XCEL EJ advisor; NRC</li> <li>• <b>See attachments</b> for resources/guidelines</li> <li>• Scope University of MN resources; consult with task force member Lea Foushee on this.</li> <li>• Consult with Red Wing officials/professionals, particularly task force member Bruce McBeath.</li> </ul>
	<b>ATTACHMENTS By section of chart</b>	<b>With COMMENTS</b>
1a		
1b		
2.		
	SIA attachments	
5.	EPRI Report (See Marshman comments)	
	YM DEIS materials/chart	
6.	Shively Thesis & others  Social/Psychological Impact Analysis  See also E-attachment	<a href="http://etd.lib.fsu.edu/theses/available/etd-04132004-113623/unrestricted/01_cas_fulltext.pdf">http://etd.lib.fsu.edu/theses/available/etd-04132004-113623/unrestricted/01_cas_fulltext.pdf</a> Risk Perception, Uncertainty and Facility Siting - Carissa Shively, Humphrey Institute Chapter 3: Uncertainty and Its Role in the Policy Process <a href="http://www.pnas.org/content/91/23/10786.full.pdf?ck=nck">http://www.pnas.org/content/91/23/10786.full.pdf?ck=nck</a> <a href="http://www.state.nv.us/nucwaste/yucca/socio02.htm">http://www.state.nv.us/nucwaste/yucca/socio02.htm</a> Social and Economic Effects of Nuclear Waste Disposal Considerations for Institutional Management <a href="http://books.nap.edu/openbook.php?record_id=316&amp;page=16">http://books.nap.edu/openbook.php?record_id=316&amp;page=16</a> <b>Guidelines for implementing SIA:</b> <a href="http://www.nmfs.noaa.gov/sfa/social_impact_guide.htm">http://www.nmfs.noaa.gov/sfa/social_impact_guide.htm</a> <a href="http://www.iaia.org/modx/assets/files/SP2.pdf">http://www.iaia.org/modx/assets/files/SP2.pdf</a> <b>SOCIAL IMPACT ASSESSMENT</b> <b><u>International Principles, May, 2003 (excerpts)</u></b> Burdge, Rabel J. 2004. <i>A Community Guide to Social Impact Assessment: 3rd Edition</i> . Middleton, WI

[www.dog-eared.com/social ecologypress/](http://www.dog-eared.com/social ecologypress/)

**Expertise:**

[http://green.uprm.edu/pdfs/bio\\_DPIjawka.pdf](http://green.uprm.edu/pdfs/bio_DPIjawka.pdf)

[http://aaa.main.usu.edu/Assessment/Fac\\_Vitas/SSWA/  
KrannichRick.pdf](http://aaa.main.usu.edu/Assessment/Fac_Vitas/SSWA/KrannichRick.pdf)

<http://www.socialimpactassessment.net/>

**ENVIRONMENTAL IMPACT STATEMENT SCOPING WORKSHEET**

**ALTERNATIVES ANALYSIS – CURE**

	<p><b>Single source alternatives</b> The EIS analysis must not be limited to single source alternatives, as required in NRC process (see CURE comments)</p>	<p><b>Combined resource alternatives</b> are potentially more flexible, environmentally friendly, feasible, and economical. Therefore they should be scoped for inclusion in the EIS. XCEL listed this category with its benefits, but did not fill out this alternatives category in their ER. Combined resource alternatives should include:</p>
		1. Wind and Gas, using existing and refurbished gas facilities;
		2. Energy Campus conversion concept per: CURE comments
		3. Incorporate excess thermal discharge into district heating component for PIIC and Red Wing (other?)
		4. PINGP Gas conversion report from IRP supplement (2000?), combined with wind, as in 2002 IRP.
		5. Calculate conservation requirements for 20 years
		6 Analyze this figure alongside projected declines in demand for economic recession; review MISO reports on decline in demand.
	Discuss: Excel’s characterization of the changing construction of needs, from base load towards support for more flexible configurations of peaking, and intermediate.	7. Describe XCEL’s commitment to CBED as discussed in the current IRP and Renewable Energy Plan. Ask XCEL to analyze a combined CBED and conservation alternative. Investigate wind turbine “cluster” developments as deployed in Northern Europe.
		8. Analyze XCEL battery research initiative and its effect on ability of wind to fulfill projected needs for each of the proposed projects. Ask XCEL to discuss impacts on potential for wind to serve need.


C:\Documents and Settings\test\Local Settings\Temp\EIS WORKSHEET-CumulativeImpacts.doc



## NORTH AMERICAN WATER OFFICE

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October 22, 2008

William Cole Storm  
State of Minnesota  
Minnesota Department of Commerce  
Office of Energy Security  
85 7<sup>th</sup> Place East  
Suite 500  
St. Paul, MN 55101

RE: E002/CN-08-509 E002/CN-08-510 E002/GS-08-690  
Environmental Assessment Worksheet and EIS Scoping Exclusions

Dear Mr. Storm:

The seven topics that the State of Minnesota, Minnesota Department of Commerce Office of Energy Security has given staff the authority to exclude from the Environmental Impact Statement: 1) plant radiation and safety; 2) storage technology, accidents, terrorism; 3) nuclear fuel chain; 4) off-site alternatives; 5) Economic feasibility of alternatives; 6) transportation of spent fuel from Prairie Island to Yucca Mountain; 7) NRC Standards and mitigation measures, does not enable the public to be educated and understand the environmental and socioeconomic impacts of the proposal before the state level contested case hearing is completed, as the projected final date of the Federal EIS is not anticipated before 10/28/09.

The Utility Applicant addresses each of these items within the Application and the Environmental Assessment Worksheet and we, as members of the public, are barred from commenting on the statements made. While the Federal Government has established Standards for the enabling of nuclear operations, this does not preclude the discussion of those radioactive emission levels and concentrations and dispersion plumes of those identified radioactive isotopes that are admitted to be routine gaseous, liquid and solid effluent releases. It is essential to be able to discuss the processes by which these toxic radioactive materials impact the people and the environment of Minnesota and elsewhere.



[www.nawo.org](http://www.nawo.org) email: [gwilllo@nawo.org](mailto:gwilllo@nawo.org)

Board of Directors: Laurence LaFond, chair; Ralph Hilgendorf, vice chair; Diane Rother, secretary/treasurer;  
Louis Alemayehu; Sara Axtell; Bruce Drew; Rosalie Wahl  
George Crooker, Executive Director

These seven prohibited topics are of historical significance as they are primary public exposure pathways for radioactive contamination and have been protested and opposed by the public for decades. Consider these comments as a formal complaint for failure to address these areas of great public concern.

1) Plant radiation and safety

There is no safe dose of radiation. Every exposure to nuclear radiation is a potential for mutation or alteration in living cells. The Utility Applicant admits this risk to living beings. (Appendix E-14).

The documents provided to the Advisory Task Force Group do not adequately identify the amounts of radiation produced by the facility. This information is needed in a summary. Multiple charts that do not provide a cumulative number of Curies are not informative for a member of the public.

The public needs to know where these radioactive materials are deposited in the environment. Current monitoring activities do not identify the dispersion plumes of these isotopes. Current monitoring is not designed to capture these emissions.

Charts in the Application identify approximately 1,000 Curies (Ci) in gaseous, liquid and solid radioactive wastes as the rolling five-year average. An EIS must identify where these potential cancer-causing agents go. Any environmental assessment or analysis that does not include this information is inadequate and designed to misinform those it will expose to the contamination.

2) Storage technology, accidents and terrorism

New casks TN-40HT

The technology has not been tested to failure. Statements made that there is no credible scenario in which the contents of the casks are released to the environment appears without the substantiation. No one thought commercial jets were a weapon before either...we are being asked to take it on faith.

3) Nuclear Fuel Chain and Stationary Air Source Emissions

The Utility Applicant claims “green” CO2 credits for nuclear operations without identifying the amount of coal and oil required to mine uranium ore, boil earth to extract that uranium and other enrichment processes, as well as all transportation emissions throughout the nuclear chain. This exclusion enables the Applicant

to green wash the project and claims a carbon reduction credit for this proposal, when the carbon release is in other jurisdictions but is released to the environment as a result of the project nonetheless.

#### 4) Off-site Alternatives

The further expansion and relicensing of the facility violates the principles of Environmental Justice by foisting Minnesota's worst pollution problem onto an Indigenous Community.

When an off-site alternative was mandated in 1994 for the initial Prairie Island dry cask storage proposal, the alternative Goodhue County non-native community was able to defeat the proposal because of the overwhelming health and safety issues to the surrounding community and the Mississippi River environment.

#### 5) Economic Feasibility of Alternatives

The Utility Applicant refuses to examine the community based disbursed renewable generation option that would create countless Minnesota jobs and provide more equitable economic development than their profiteering from the externalized social costs of nuclear contamination for geological time.

Co-generation of Prairie Island waste heat from nuclear operations could mitigate the thermal loading to the environment and supply steam heat to towns and communities.

#### 6) Transportation of Spent Fuel

There is no credible documentation that substantiates the claim by the Utility that Yucca Mountain will actually accept its nuclear waste by 2020. NSP projected that their Prairie Island radioactive waste would be shipped to the Mescalero Apache during the 1994 Legislative Session in their efforts to convince the State Lawmakers that the ISFSI was only temporary. That proposal was abandoned, another Indigenous Nation (Skull Valley Goshute) substituted and the waste still has not moved.

The Federal EIS was initially designed for 10,000 years on site containment; litigation remanded the USEPA process back to calculate for 1,000,000,000 years because of the heinously long lasting radioactive isotopes that are in spent nuclear fuel. The State of Nevada is actively fighting the process of becoming a radioactive dump for the nation.

The following is a partial listing of those opposed to the Yucca Mountain proposal:

Nevada Legislature  
Nevada State Medical Association  
Nevada Resort Association  
Nevada State Firemen's Association  
Nevada Parent Teachers Association Board of Directors  
Clark County  
Cities of Las Vegas, Henderson, Boulder City, Lovelock, Reno, and Sparks  
Nevada League of Cities  
Nevada Commission on Tourism  
Nevada Parent Teachers Association Convention of Delegates  
Nevada Commission on Nuclear Projects  
Nevada Nuclear Waste Task Force  
Western Shoshone Council  
Shundahai Network

Even assuming the Yucca Mountain facility opens in 2020, DOE waste would be accepted first then commercial reactor waste in order of waste from the oldest facility next. This prioritization would not include the Prairie Island waste as first to be shipped in the queue. Whether Yucca Mountain opens in 2020 is purely a political question, and will change depending on the election results.

7) NRC Standards

National Academies of Science Biological Effects of Ionizing Radiation BEIRVII Report released in 2005 reaffirmed that there is no safe dose of ionizing radiation. The National Academies of Science BEIR VII Report documents, that 1 in 100 members of the public would get cancer if exposed to 100 millirads per year for a 70-year lifetime.

This is the USNRC allowable radiation dose for members of the public.

The standards set by the government are not protective, rather they allow for certain members of the public to be adversely and disproportionately impacted as a consequence for the so-called greater benefit of electricity.

Sincerely,



Lea Foushee  
North American Water Office  
Prairie Island Advisory Task Force Member