

## **APPENDIX E – EIS Scoping Work Sheets with OES Treatment**

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**ENVIRONMENTAL IMPACT STATEMENT SCOPING WORKSHEET**

**Chapter 1 -Comment Sheet**

Comment Number	Category	Comment	Treatment
1	Project Description	Historic information on power uprates at Pressure Water Reactors. New information gained from, or lessons learned from, similar uprates from other plants worldwide.	A review of EPU's at PWRs will be conducted and significant findings will be discussed relative to the PINGP EPU and planned upgrades and component monitoring.
2	Description of Power Generating Equipment	Narrative that discusses system component replacement, age, monitoring/inspections (pool, etc.)	A narrative (aging analysis) describing the inspection/maintenance and replacement of system components will be included.
3	Description of Power Generating Equipment	Address concerns reported for Reactor 1 groundwater leaks and PWR containment sump and the pressure water sump. (source: Union of Concerned Scientists, Nuclear Power Information Tracker, accessed on 10/22/08: <a href="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</a> )	A description of the incident reporting requirements (policy/procedures) to the NRC will be included and a public source or "clearing-house" for this data will be given. Specific discussion of the Union of Concerned Scientists information tracker report on the groundwater leaks reported for the PWR containment sump will be included.
4	Project Description - Wastewater	Discuss use of water treatment chemicals and levels of discharge. Document status of CR6.	The EIS will contain a list of water treatment chemicals (as well as list of hazardous materials) used on the plant site. The EIS will contain a list of parameters and their concentrations found in discharge waters from the plant.
5	Project Description - Fuel Supply	Summary of nuclear cycle and pollution and health impacts. Include carbon footprint of entire chain.	The EIS will describe the nuclear cycle in generic terms. Potential impacts resulting from the mining, processing and transportation of the fuel will be discussed in generic terms in the EIS. Detailed analyses of these processes undergo regulatory & environmental review in other jurisdictions.
6	Regulatory Framework	Description of the status of Yucca Mountain and alternate plans for disposition and long term storage of nuclear waste. Specifically describe timeline of the ISFSI relative to the status of Yucca Mountain.	The EIS will contain general information on Yucca Mountain, its permit status and capacity and National Nuclear Waste Policy.
7	Regulatory Framework - Other Permits	Narrative on how the various permitting agencies (MDNR, WDNR, US COE, MPCA) coordinate the issuing of permits for water appropriation and water (quality) discharge so as to assure that with multiple permittees and multiple permits the river is protected.	The EIS will describe the current regulatory permits held by PINGP, the terms and status of said permits and discuss the potential need for any amendments. This will also include a narrative on specific permitting agencies' rationale, current monitoring requirements, methods, reporting, analysis, and how the various agencies (MDNR, MPCA, US COE) coordinate their permitting authority.
8	Alternatives to the EPU	Describe smaller scale options, distributed generation (DG) alternatives	The EIS will describe the applicability of DG as a solution to the stated need.
9	Alternatives to the EPU	Describe other biomass and energy efficiency options considered. Biomass proposal in CON application was a single plant using only wood.	The EIS will describe, in generic terms, the applicability of base-load biomass generating facilities to meet the stated need.
10	Alternatives to the EPU	Describe transmission alternatives versus generation alternatives (i.e. CAPX 2020)	The EIS will describe generic "transmission" alternatives to the stated need and their impacts. The EIS will evaluate whether any specific transmission proposal meets the stated need.
11	Alternatives to the EPU	Discuss options of energy efficiency and demand side management. Consider if energy efficiency and DSM could replace PINGP with a .5% annual sales increase in these programs from initial resource plan. 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.	The EIS will describe the applicability of DSM as a solution to the stated need. No evaluation of Xcel Energy's resource plan in regards to DSM will be made beyond that conducted by OES Energy Regulation & Planning Unit. The details of OES Energy Regulation & Planning Unit's analysis will be incorporated by reference.
12	Alternatives to the EPU	Discuss future demand forecast with updated information. 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. In the CON and draft EAW, Xcel Energy's demand forecast is 2800MW; however, in their September Resource Plan reply comments they	The OES will solicit from Xcel Energy updated demand forecast information to be included in the EIS for the narrative on the stated need. The environmental review conducted during the CON process does not evaluate the "stated need"; analysis of the stated need is outside the scope. The details of OES Energy Regulation & Planning Unit's analysis will be incorporated by reference.

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		provide an updated forecast of 2200MW.	
13	Alternatives to the EPU	Evaluate options for heat recovery from wastewater versus discharge of heat to atmosphere or Mississippi River (possible mitigation measure).	The OES will solicit from Xcel Energy information on utilization of waste heat from the PINGP in reducing the 164 MW stated need and/or the practicality of using this waste heat in some other manner.
14	Alternatives to the EPU	Analyze alternative of 164MW of gas from increased capacity at Black Dog Power Plant with its conversion to natural gas. 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 Black Dog.	The EIS will describe the up-grading of existing facilities to meet the stated need. Information on the Black Dog facility will be sought for that discussion.
15	Alternatives to the EPU	Analysis of optimized alternative sources (possibly a combination of 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.	Alternatives to the proposed EPU will be evaluated in the EIS; this evaluation will include DSM and renewable energy, as well as a discussion of combinations of these alternatives to meet or minimize the 164 MW stated need.
16	Environmental Setting	Include, by reference, the Minnesota Department of Natural Resources letter to the Minnesota Department of Commerce dated October 7, 2008, and the Wisconsin Department of Natural Resources letters to the US Nuclear Regulatory Commission dated September 8, 2008, and to Minnesota Pollution Control Agency dated April 3, 2000,	Public and Agency comment letters received during the comment period for the dockets will be given due consideration in developing the scope of the EIS.
17	Environmental Setting	Establish the current extent of thermal and radioactive discharges into the environment. This is the baseline for ongoing study and analysis of impacts. Specifically include maps of plume extensions in surface water, in groundwater and in the air.	Emissions from the PINGP, current and future, and the various permit conditions will be discussed in EIS. This will include thermal discharges to the river and radioactive discharges to the air.
18	Environmental Setting	Include baseline information related to air, water, and other natural resources. Include interactions of the various resources.	Data on emissions/discharges (under current and future permit conditions) and their potential impacts from the PINGP will be discussed in the EIS.
19	Environmental Setting	Document endangered and protected species.	The EIS will describe the environmental setting in which the PINGP is situated; this will include topography, geology, hydrology/flood plain, meteorological, local flora and fauna (including threatened and endangered species), as well as the built environment.
20	Environmental Setting	Identify and document plants, animals, and other materials used for consumption (i.e. medicine and food) by Prairie Island Indian Community (PIIC) members and others.	The OES will seek information on the plant, animals and other consumables that the PIIC (and others) harvest from the area/vicinity of the PINGP.
21	Environmental Setting	Include, by reference, National Weather Service information about wind patterns.	See treatment under comment # 19.
22	Environmental Setting	Include, by reference, US Army Corps of Engineers/USGS historic and ongoing data on Lake Pepin ice cover.	The OES will seek information on the historic data and/or current monitoring information concerning ice cover on Lake Pepin and information on the extent of the thermal plume.
23	Environmental Setting	Include, by reference, National Weather Service, US Army Corps of Engineers, USGS historic and ongoing data on flooding and drought on the Upper Mississippi River watershed.	See treatment under comment # 19.
24	Human and Environmental Impacts	Describe pollution and health impacts along the entire nuclear chain.	See treatment under comment # 5.
25	Human and Environmental Impacts	Describe monitoring: How about testing of human breast milk and baby teeth.	The EIS will include information on the historic, current and possible future radiological monitoring programs at the PINGP. This information will include data, methods, regulatory requirements and standards. Depending on the extent of the information/data, much of it maybe provided through reference.
26	Human and	Describe past and current radiological monitoring for the facility including air,	See treatment under comment # 25.

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	Environmental Impacts	water, milk and other monitoring associated with the site. Provide data and information about standard methods being used and under what permit the monitoring is being done. Incorporate information, by reference, about the best available technology for modeling and monitoring, both protocols and instrumentation. Provide a summary of the referenced information.	
27	Human and Environmental Impacts	Evaluate the potential change in electromagnetic field (EMF) relative to the 164 EPU uprate.	Potential EMF impacts attributable to the 164 MW increases, if any, will be discussed in the EIS.
28	Human and Environmental Impacts	Include data about the incidence of adverse health effects, including Downs Syndrome, Hodgkin's Disease, thyroid disease, breast cancer, prostate cancer, leukemia and other types of cancer, and include Department of Health data by reference. Specifically include infant and childhood cancers.	The OES will seek information on the occurrence of disease and illness for the PINGP area, as well as, other peer reviewed studies concerning the issues of nuclear generating plants, local populations and potential association with disease or illness.
29	Human and Environmental Impacts	Describe the clean fill gravel removed from site and where it will go.	The testing and disposal of class V/soils removed from the ISFSI to allow for expansion of the concrete pad will be covered in the EIS.
30	Human and Environmental Impacts	Cross reference long term storage issues discussed in Chapter 2.	The PINGP EIS will include an analysis, consistent with the Monticello ISFSI EIS, which assessed the potential impacts of on-site storage at the plant for 30 years beyond the licensed life of operation and up to 200 years.
31	Human and Environmental Impacts	Describe where radiated solid waste goes. Describe liquid emissions and their sources, including tritium, and where it goes. Specifically identify the fraction of discharge listed on 8.25 of CON that is not tritium. Describe gaseous emissions, how vented, and where it goes. Provide data and information about standard methods being used and what monitoring is being done. Incorporate information, by reference, about the best available technology for modeling and monitoring, both protocols and instrumentation. Provide a summary of the referenced information.	The sources, testing and disposal of solid (radiated) waste generated at the PINGP will be covered in the EIS. The sources, testing and disposal of liquid (radiated) waste generated at the PINGP will be covered in the EIS. The testing equipment and methodology used in monitoring these materials will be described or provided through reference. Data on the non-tritium component of the liquid (radiated) waste releases will be provided if available.
32	Water Surface Water	Analysis of entire thermal plume and its affect on the ecology of the river, both upriver and downriver, and Sturgeon Lake and Lake Pepin. Describe current and past monitoring. Reference existing data. Describe how the MPCA, DNR, US Army Corps of Engineers and other regulatory agencies coordinate their various duties to make decisions about issuing permits.	Discharges into the river from the PINGP will be discussed in the EIS. This will include data on the thermal discharges, required monitoring, current permit limits, terms and conditions. The discussion will include, to the extent available, information on the impacts to the biota.  The EIS will describe the current regulatory permits held by PINGP, the terms and status of said permits and discuss the potential need for any amendments. This section will also include a narrative on how the various agencies (MDNR, MPCA, US COE) coordinate their permitting authority.
33	Water Surface Water	Vertebrates and invertebrates. Affect on distribution of aquatic organism or indirect impacts such as increased exposure to predators.	See treatment under comment # 32.
34	Water Surface Water	Ice cover. Affect on the characteristics of ice, evaporation rates, and the length of ice cover season on Lake Pepin. Cultural (recreation), safety, and impact on local microclimate (ex: affect on agricultural or horticultural crops such as apples and grapes).	See treatment under comment # 22.  The OES will seek information on potential impacts to the area's "microclimate" and report if available.
35	Water Resources	Impacts under conditions of stream flow reversal on PINGP	The OES will seek information on the consideration of stream flow reversal on NPDES discharge permits issued to PINGP and potential for significant impacts, if any. The data/information will be discussed in the EIS to extent that it is available.
36	Water	Distribution of sediment. Affect on the hydrodynamics of river which then	The OES will seek information on the effect of PINGP discharges into the river on sediment distribution.

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	Surface Water	affect sediment in the immediate channel and downstream.	The data/information will be discussed in the EIS, to extent that it is available.
37	Water Surface Water	Dissolved oxygen. Affect on dissolved oxygen levels.	See treatment under comment # 32.
38	Water Surface Water	Endocrine disruptors. Interaction with a municipal wastewater discharge plume means organisms congregate in the water may be subject to prolonged exposure to chemicals.	The OES will seek information on thermal discharges, the possible interaction with municipal wastewater discharges and endocrine disruption. Discussion will be limited to summarizing available peer reviewed data.
39	Water Surface Water	Phytoplankton and Zooplankton. Affect on production of organisms that ultimately lead to a decrease in light and oxygen in the river and Lake Pepin.	See treatment under comment # 32.
40	Water Surface Water	Parasites. Thermal effluent can influence the prevalence and abundance of parasites of fish.	See treatment under comment # 32.
41	Water Surface Water	Discuss alternatives to thermal discharge such as heat recovery from water.	See treatment under comment # 13.
42	Water Surface Water	Need for analysis regarding these issues using the best available technology for water dispersion monitoring and modeling (ex: secure services of the U of MN research center at St. Anthony Falls)	See treatment under comment # 32.
43	Water Surface Water	Use best available technology for monitoring natural resource impacts (ex: water temperature, flow, depth, turbidity, river topography, meteorological conditions, chemistry, organisms, recreation)	See treatment under comment # 32.
44	Water Surface Water	Describe water consumption (seasonally, annually, life of plant)	Water consumption at the PINGP will be described in the EIS.
45	Water Surface Water	Describe and analyze effect of increase in water temperature and quantity.	See treatment under comment # 32.
46	Water Surface Water	Discuss relationship with Lake Pepin Total Maximum Daily Load (TMDL)	The OES will seek information on the potential impact of discharges at the PINGP on Lake Pepin, including consideration of TMDL.
47	Water Surface Water	Identify impacts under conditions of stream flow reversal on PINGP	See treatment under comment # 35.
48	Water Surface Water	Address all impacts on the Mississippi River both upstream and downstream (including Sturgeon Lake and the main river channel)	See treatment under comment # 32.
49	Water Surface Water	Affect of water treatment chemicals used in PINGP and levels of discharge.	See treatment under comment # 32.
50	Water Surface Water	Confirm accuracy of the methods and measurements providing PINGP's compliance with all operating permits using best available technology.	See treatment under comment # 7.
51	Water Surface Water	Impact of additional water withdrawal/discharge on the river navigation and channel maintenance.	See treatment under comment # 7.
52	Water Surface Water	Describe how the need for cooling water for operation of the plant will be managed during times of drought or river level drawdown (i.e. does Xcel's mandate to produce electricity preempt competing demands for water from the river?).	See treatment under comment # 7.
53	Biological Resources	Discuss historic, current, and future required monitoring programs (biological, physical & chemistry)	See treatment under comment # 7.
54	Biological Resources	Incorporate and address Wisconsin DNR concerns including 2001 recommendations regarding monitoring locations of thermal plume	The OES will seek information from the Wisconsin DNR on current concerns and recommendations that the agency has regarding environmental monitoring at the PINGP.

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		(specifically note the requested changes for locations of monitoring stations), and impacts on Lake Pepin downstream such as habitability and temperature reaching upper limit of fish tolerance.	
55	Biological Resources	Incorporate and address US Army Corps of Engineers/USGS/Minnesota DNR draw reports of temperature and ice condition downstream of plant and in Lake Pepin.	See treatment under comment # 7 and 22.
56	Biological Resources -Rare and Unique Natural Resources	Describe impacts on the Higgins eye pearly mussel.	The OES will seek information on the Higgins Eye pearly Mussel in the vicinity of PINGP, potential impacts of PINGP discharges on said mussel, if any. The data/information will be discussed in the EIS extent that it is available.
57	Culture, Archeological, and Historic Resources	Describe cultural and archeological resources that were on the site at the time of the Original Land Survey. Identify those that have been impacted or obliterated since, and list those that remain. Describe the impact on local residents. Include oral tradition. Describe mitigation measures that could reduce lingering impacts on local residents.	The OES will seek information on cultural, archaeological, and historic resources at the PINGP site. To the extent the information is available, the EIS will discuss the incremental impact to these resources from the proposed EPU and ISFSI expansion.
58	Culture, Archeological, and Historic Resources	Discuss the social, cultural, and spiritual impacts of the plant as it relates to protection of natural resources as described in other sections in this worksheet.	See treatment of natural resources under comment # 32. See treatment of cultural impacts under # 57.
59	Culture, Archeological, and Historic Resources	Comment on the social and psychological impact analysis for Prairie Island Indian Community. This item needs further scoping with the Prairie Island Indian Community and may involve NRC and environmental justice considerations.	The OES will seek information from published peer reviewed studies on the effect on population (psychological) due to living in close proximity to a nuclear generating facility.  The OES will review the federal supplement ('91 EIS) sections on environmental justice.
60	Culture, Archeological, and Historic Resources	Describe impacts on the Higgins eye pearly mussel. The Higgins eye pearly mussel is a quite essential part of the Prairie Island Indian Community's culture. The pearl of this mussel is held in high esteem and adorned with honor.	See treatment under comment # 56.
61	Culture, Archeological, and Historic Resources	Discuss the impact of the physical presence of the PINGP in the local landscape. Consider the perspective of nearby residents reflected in this observation, "From personal experience, I have had to wait for the sun to rise above the Nuclear Plant's generating towers before I could offer my morning prayer to Tunkasida."	The potential aesthetic/visual impacts of the proposed projects will be included in the EIS.
62	Health & Safety	Radiation impacts on nearby residents.	See treatment under comment # 25 and 28.
63	Health & Safety	Describe plant security and ability of the plant and the community to respond. Describe the NRC requirements for the plant and say if they are current.	The EIS will describe the generic plant security and safety measures, the PINGP, NRC Red Wing, and surrounding communities' emergency preparedness plans.
64	Health & Safety	Discuss availability of monitoring data (air, water) relative to the radiation monitoring program.	See treatment under comment # 25.
65	Health & Safety	Reference program models for involvement of a spectrum of local residents in monitoring baseline and ongoing physical, mental and spiritual health. This includes, but is not limited to, capturing and analyzing data, and addressing any found shortcomings. Example: Have monitor subjects be actual local human beings including a Prairie Island Indian Community child with a baseline genetic marker, adult, and elder, and then monitor their health effects.	The EIS will not conduct its own research/studies; it will rely on literary reviews or consultations with other State and Federal agencies.  See treatment under comment # 28.
66	Health & Safety	Investigate ways that Xcel Energy can mitigate some of the mental, physical, emotional, and spiritual health concerns of the Prairie Island Indian	The EIS will not conduct its own research/studies; it will rely on literary reviews or consultations with other State and Federal agencies.

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Comment Number	Category	Comment	Treatment
		Community through the use of mediation and healing initiatives. We believe this to be a positive opportunity for all parties. Mitigation strategies should include a conclusive study on disruption of the Prairie Island Indian Community's natural cyclical life cycle.	See treatment under comment # 28. See treatment under comment # 25.
67	Health & Safety	Describe the impact of PINGP on neighbors living in a constant state of fear (i.e. radiation, nuclear incident, terroristic attack).	See treatment under comment # 59.
68	Health & Safety	Describe monitoring of plants, animals and other materials used in traditional medicines by Prairie Island Indian Community members that are not typically monitored by the State of Minnesota or Xcel.	See treatment under comment # 20.
69	Land Use Recreational Areas	Discuss the impact of the physical presence of the PINGP in the local landscape. Consider the perspective of recreational users, both residents and visitors, as reflected in this observation, "From personal experience, I have had to wait for the sun to rise above the Nuclear Plant's generating towers before I could offer my morning prayer to Tunkasida."	The potential aesthetic/visual impacts of the proposed projects will be included in the EIS.
70	Summary of mitigating measures and unavoidable impacts	Summarize, and include by reference, current German studies on conclusive reports of higher incidents of childhood cancer within 3.2 mile radius of nuclear power plants.	See treatment under comment # 28.
71	Unavoidable impacts	Discuss unavoidable impacts that are in the future and include studies by whatever entity studies the impacts of radiation exposure to dry cask storage. How these future conclusive comprehensive studies will expose the harmful side effects of radiation exposure to human beings, especially those at a marginalized population i.e. Native Americans federally recognized by the United States government the Prairie Island Indian Community.	The EIS will include a discussion/analysis of potential incidents and incident response plans.
72	Displacement Unavoidable impacts Socioeconomics	Discuss potential impacts on the Prairie Island Indian Community which is located in close proximity of Northern States Power Company (Xcel Energy). Any unavoidable nuclear accident could put the Prairie Island Indian Community into a dead zone. This could possibly shut down the Community's Treasure Island Casino and have vast socioeconomic factors: ruin to the tribe's financial stability.	See treatment under comment # 71.
73	Culture, Archeological, and Historic Resources Socioeconomic Biological Resources	Include all conclusive studies and guarantees related to safety for the Prairie Island Indian Community. Loss of time spent on focusing on how this 20 year license will affect our Prairie Island Indian Community's children. The Prairie Island Indian Community has a rare and rich culture to focus on and practice every day. The issue in dealing with Xcel's uprate interrupts the natural, cultural way of life, as this issue of the Nuclear power plant has for the whole time it has its footprint next to the Prairie Island Indian Community. This burden of what are the current effects of the radiation exposure and the uncertainty of a major accident is constantly a great factor of stress and worry on every Prairie Island Indian Community member's mind. We, the people, understand that the Nuclear power plan is one major accident away from creating a dead zone for the community's livelihood, culture, and distinct identity.	See treatment under comment # 59. See treatment under comment # 71.

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Comment Number	Category	Comment	Treatment
74	Health & Safety	Include all baseline studies on psychological effects on the Prairie Island Indian Community and incorporate into mitigation plans.	See treatment under comment # 59.

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**Chapter 2 -Comment Sheet**

Comment Number	Category	Comment	Treatment
1	Minnesota Regulatory Process & Permits & Approvals	The Advisory Task Force (ATF) requests an extension of the Scoping period. Combining the three (3) Xcel requests puts this Scoping and EIS process beyond the capability of ATF members to adequately address in the limited time allotted.	Out of scope; this comment goes to the procedures laid out in statute and rule and is outside the scope of the environmental review document.
2	Regulatory Framework	Incorporate US Army Corps of Engineers perspective into EIS	The EIS will describe the current regulatory permits held by PINGP, the terms and status of these permits and discuss the potential need for any amendments. The EIS will also include a narrative on specific permitting agencies' rationale, current monitoring requirements, methods, reporting, analysis, and how the various agencies (MDNR, MPCA, US COE) coordinate their permitting authority.
3	Regulatory Framework	Expand discussion related to location in the floodplain (same as 1991). Discuss 0.2% annual chance (500-year) along with 1% annual chance (100-year) flood.	The EIS will describe the flood plain in which the PINGP is situated. The potential impact of the flood plain and flooding on the operation of the PINGP and the ISFSI will be covered in the EIS.
4	Regulatory Framework	Provide a rationale for the decision to not include transportation of spent fuels in the scope of the EIS despite impacts on the state and Prairie Island tribe and a precedent of the state legislature and Prairie Island tribe weighing in on issues related to the "temporary" storage of this waste within the state and Prairie Island community.	<p>The EIS will not include a discussion of the transportation of high level radioactive waste; The Department of Transportation (DOT) and Nuclear Regulatory Commission (NRC) share primary responsibility for establishing standards for the safe transport of radioactive materials within the United States.</p> <p>In the process for identifying rail routes, DOE has considered routes in the Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain.</p> <p>The discussion on Regulatory Framework in the EIS will include details on the State of Minnesota's responsibilities in regards to transportation of spent nuclear fuel.</p>
5	Minnesota Regulatory Process	Incorporate the 1991 Prairie Island Environmental Impact Statement (EIS) by reference.	The OES staff will review the 1991 Prairie Island Environmental Impact Statement (EIS) and incorporate information as appropriate.
6	Project Description	Describe cask types; maintenance/inspection requirements, life expectancy	The construction and safety specifications, as well as maintenance and inspection/monitoring protocols concerning the dry casks will be described in the EIS.
7	Spent Fuel Inventory	Describe maintenance of casks	See treatment under comment # 6.
8	Spent Fuel Inventory	Describe cumulative impacts of current and proposed casks	The potential radiological impacts from the ISFSI will be included in the EIS.
9	Spent Fuel Inventory	Describe the cumulative effect of increasing the number of casks to 98 which is the full capacity of the ISFSI pad.	The PINGP EIS will include an analysis, consistent with the Monticello ISFSI EIS, which assessed the potential impacts of on-site storage at the plant for 30 years beyond the licensed life of operation and up to 200 years, in 50-year increments. Since this timeline would extend beyond the relicensing period for the PINGP (2034), the assessment will include the incremental potential impacts of the 98 dry casks representative of the fuel generated during operations through 2034.
10	ISFSI	Describe the design standards for the anticipated lifetime of any storage container at the PINGP plant. Describe how they would need to be engineered and built for long term storage. What is the expected life span of the TN-40 casks used at PINGP?	See treatment under comment # 6.

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Comment Number	Category	Comment	Treatment
11	Plant Closure & Final Decommissioning	Describe funds available for decommissioning and comment on their adequacy. Describe federal or other sources of funds available. Include the total cost for PINGP decommissioning with closure in 2034. Include fund balance in the existing local PINGP decommission fund.	A narrative on the procedures required for closure and final decommissioning of the PINGP will be contained in the EIS. This discussion will include the funding mechanisms.
12	Plant Closure & Final Decommissioning	Describe how 98 casks could be permanently stored at PINGP if the DOE Yucca Mountain project does not move forward as anticipated in 20-30 years.	See treatment under comment # 9. The ISFSI will be treated as temporary storage as defined in Statute (Minnesota Statute 116C.77 and 116C.71) and will not be evaluated in the EIS as a permanent facility.  See treatment under comment # 37 (Yucca Mountain).
13	Plant Closure & Final Decommissioning	Describe the process of decommissioning with a total of 98 casks on site (i.e. 64 more than are there now).	See treatment under comment # 11. The EIS will include a description of the ISFSI and its ability to accommodate temporary storage of the 98 dry casks needed for PINGP decommissioning (i.e., emptying the spent fuel pool), as well as other means of temporary storage.
14	Analysis of Proposed Project	Describe current and proposed security of the ISFSI	A narrative on the general security procedures and emergency response system in-place at the PINGP will be contained in the EIS. A similar narrative on the ISFSI will also be included in the EIS.
15	Traffic	Describe plans for handling traffic in the event that an incident closes roads.	The EIS will describe the generic plant security and safety measures, the PINGP, NRC Red Wing, and surrounding communities' emergency preparedness plans.
16	Cumulative Impacts	Evaluate cumulative impacts of the <u>total number of casks</u> , not just the 35 additional casks. What will the impacts be for the 64 casks, 98 casks, decommission casks, and any future relicense casks.  Permanent storage has a much different set of issues and impacts associated with it then does a 20-40 year storage term.  Refer to the EIS for Prairie Island 4/12/91: 4.14 "Army Corps of Engineers predict a 500 year flood elevation of approx. 690 feet. The ISFSI is proposed to be built at an elevation of 693 feet or greater...". At a maximum flood scenario the lower half of the casks would be standing in water. 706.7 feet peak. See "Probable Maximum Flood Study, Mississippi River at Prairie Island Minnesota. Appendix F in Updated Safety Analyses Report December 1985. Every single year there is a 20% chance of a flood occurring based on historical data. Historical and current data needed regarding the flood probabilities for the PINGP ISFSI.	See treatment under comment # 9.  The ISFSI will be treated as temporary storage, and will not be evaluated in the EIS as a permanent facility.  See treatment under comments # 3 & # 5. The EIS will describe the potential impact of the flood plain/flooding on the ISFSI.
17	Cumulative Impacts	Describe future plans for plant renewal or expansion. Comment specifically on the possibility of future expansion past 2033-2034 and provide details of all possible impacts.	The utility has not stated any plans to operate PINGP beyond the 2034 relicensing; it would not be practicable for the environmental review document to speculate on the conditions or needs of the state that far into the future. Should the utility desire to extend the operating license beyond 2034, that decision would trigger additional environmental review at the federal level.
18	Radiation Environmental Impacts	Provide data and analysis related to background radiation and cumulative impacts.	The EIS will include information on the historic, current and possible future radiological monitoring programs at the PINGP. This information will include data, methods, regulatory requirements and standards. Depending on the extent of the information/data, much of it maybe provided through reference.
19	Radiation Environmental	Describe impact on children and expectant mothers.	The OES will seek information on the potential radiological health effects to populations in the



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		Provide information about the length of time between complete burial of a cask and cask seal failure (reportedly 60 hours). Describe what procedures are in place to address this possible scenario.	See treatment under comment # 20.
30	Existing Radiation & Radioactivity Monitoring near the Plant	Describe past and current internal and external monitoring. Provide data and information about standard methods being used and under what permit the monitoring is being done. Incorporate information, by reference, about the best available technology for monitoring, both protocols and instrumentation. Provide a summary of the referenced information.	See treatment under comment # 18.
31	Existing radiation & Radioactivity Monitoring	Describe how independent monitoring is used at other plants.	See treatment under comment # 18. The EIS will discuss the rationale behind the design of monitoring programs.
32	Additional Monitoring Recommendations for Storage Installation	Summarize, and include by reference, test results for testing cask to failure, seal leaks, damaged casks, damaged assemblies, failure of monitoring systems, and all the scenarios mentioned in 5.4 above. Confirm the validity of the statement that there are no credible events that could result in the release of radioactivity from the TN-40 or TN-40HT cask cavity, nor in unacceptable increases in direct radiation due to loss of cask shielding. Describe what radiation & airborne radioactivity monitors are required at the ISFSI.	See treatment under comment # 6.
33	Analysis of ISFSI Alternatives	Describe and analyze alternatives for storage of spent fuel, both on and off-site. (ex: Skull Valley)	Alternatives to storage at PINGP ISFSI will be covered in the EIS. No in-state, non-PINGP options will be included (Minn. Statute 116C.83, subd. 6).
34	Analysis of ISFSI Alternatives	Address the issue of permanency of storage.	See treatment under comment # 12.
35	Analysis of ISFSI Alternatives	Describe alternatives to dry cask storage including, but not limited to, re-racking.	See treatment under comment # 33.
36	Private Fuel Storage Initiative	Describe any PFS locations being looked into at this time. Consideration: In September 2006 The Dept. of Interior disapproved the PFS Goshute project lease & the use of public lands for transport. Due to the uncertainty surrounding this project, PFS <u>is not</u> an alternative to additional spent fuel storage at PINGP.	See treatment under comment # 33.
37	Yucca Mountain	<p>Include an analysis of the potential for the ISFSI facility to become a de facto permanent storage site.</p> <p>Despite over twenty (20) years of work on the Yucca Mountain project, uncertainty still plagues the science and engineering of the proposed project.</p> <p>The NRC has not done an EIS for <u>long-term</u> storage at the reactor site. The Yucca Mountain facility will be filled to capacity by 2040. The PINGP high-level nuclear waste will leave the state of Minnesota no earlier than 2041 at best. Acceptance of the PINGP waste to the Yucca Mountain facility maybe questionable. Are there any Xcel plans for long-</p>	<p>See treatment under comment # 12.</p> <p>The PINGP EIS will include an analysis, consistent with the Monticello ISFSI EIS, which assessed the potential impacts of on-site storage at the plant for 30 years beyond the licensed life of operation and up to 200 years, in 50-year increments.</p>

Chapter 2 -Comment Sheet

Comment Number	Category	Comment	Treatment
		<p>term storage if the acceptance to Yucca Mountain is delayed indefinitely?  If no plans are in place, this issue should be made mandatory.</p> <p>Yucca Mountain calculates in 10,000 to 100,000 years spans...PINGP calculates in 50 to 100 year spans. It is unknown when, if ever, the DOE may remove PINGP's spent fuel. The method of dry cask storage has not been evaluated as a permanent method. Are there any figures of testing the dry casks to failure?</p> <p>Storage canisters and their performance over a long period of time are in question. What is the cask life-span versus duration of storage?</p> <p>It is so unlikely that the DOE will ever open the Yucca Mountain repository that the PINGP ISFSI may become a permanent facility. The PINGP ISFSI can be expanded incrementally as needed. The interim storage proposed at PINGP in reality will become permanent by default. In a worst case scenario, if there is a cask failure, what are the cask unload plans?</p> <p>Yucca Mountain cask acceptance is for the first 29 casks only. There are no plans for acceptance of any additional casks or spent fuel at the PINGP plant. What are PINGP's plans for long-term storage of <u>all</u> the casks over the original 29 casks?</p> <p>It is imperative for the EIS to address whether ISFSI design or operation is adequate for long term, permanent storage.</p>	<p>See treatment under comment # 6.</p>
38	Yucca Mountain	<p>Describe how siting considerations for temporary storage are different than siting considerations for a permanent facility. In 1993, the Minnesota Court of Appeals re. dry cask storage on PINGP said..."...the proposed facility is probably classified as one in which waste is permanently stored..."</p>	<p>See treatment under comment # 12.</p>
39	Yucca Mountain and Transportation	<p>Discuss issues related to transportation of spent nuclear fuel from Minnesota to the Yucca Mountain Repository. A difficult, but real reality for nuclear generation is the lack of long-term, permanent storage for the radioactive waste. While this is in part a federal issue, the ATF finds impacts on the state and Prairie Island tribe and a precedent of the state legislature and Prairie Island Indian Community weighing in on issues related to the "temporary" storage of this waste within the state and Prairie Island Indian Community.</p>	<p>See treatment under comment # 4.</p>
40	Analysis of Alternative to the PINGP	<p>Consider renewable alternatives, such as wind, &amp; biomass.</p>	<p>The EIS will evaluate alternatives to the EPU that include renewable generation alternatives.</p>