8.0 COMPARISON OF ENVIRONMENTAL IMPACTS OF LICENSE RENEWAL WITH THE ALTERNATIVES

NRC

"To the extent practicable, the environmental impacts of the proposal and the alternatives should be presented in comparative form..." 10 CFR 51.45(b)(3) as adopted by 51.53(c)(2)

Nuclear Management Company, LLC (NMC) presents its evaluations of the environmental impacts associated with Prairie Island Nuclear Generating Plant (PINGP) operating license renewal (the proposed action) and those associated with selected alternatives in Chapter 4 and Chapter 7 of this ER, respectively. In this chapter, NMC provides a comparative summary of these impacts. The environmental impacts comparison addresses Category 2 issues associated with the proposed action and additional issues the U.S Nuclear Regulatory Commission (NRC) identifies in the Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS) (NRC 1996, Section 8.1) as major considerations in an alternatives analysis. Inclusion of these additional issues therefore established a basis for comparison of relevant impacts among alternatives. NMC provides a comparative summary of its conclusions regarding these issues in Table 8-1, and a more detailed comparison in Table 8-2.

As indicated in Tables 8-1 and 8-2, environmental impacts of the proposed action (PINGP license renewal) are expected to be SMALL for all impact categories. In contrast, NMC expects that socioeconomic impacts would be LARGE for the no-action alternative (NRC decision not to renew the PINGP operating license), considered with or without development of replacement generation facilities. Expected adverse environmental impacts include the potential loss of substantial tax revenues by the City of Red Wing, and Goodhue County from termination of PINGP operations 20 years sooner than if its license is renewed. Notable adverse impacts in the areas of land use, air quality, ecological resources, waste management, socioeconomics, and aesthetics may result from replacement of PINGP generating capacity with an alternative generating source, depending on the alternative selected.

In summary, NMC's analysis indicates that renewal of the PINGP operating licenses is preferred from an environmental standpoint. With respect to NRC's decision-making standard at 10 CFR 51.95(c)(4), the analysis supports a conclusion that the option of renewing PINGP operating license should be preserved.

TABLE 8-1
IMPACTS COMPARISON SUMMARY

Impact	Proposed Action (License Renewal)	Base (Decommissioning)	No Action Alternatives		
			With Coal-Fired Generation	With Gas-Fired Generation	With Purchased Power
Land Use	SMALL	SMALL	MODERATE	SMALL to MODERATE	SMALL to MODERATE
Water Quality	SMALL	SMALL	SMALL	SMALL	SMALL
Air Quality	SMALL	SMALL	MODERATE	MODERATE	MODERATE
Ecological Resources	SMALL	SMALL	SMALL to MODERATE	SMALL to MODERATE	SMALL to MODERATE
Threatened or Endangered Species	SMALL	SMALL	SMALL	SMALL	SMALL
Human Health	SMALL	SMALL	SMALL	SMALL	SMALL
Socioeconomics	SMALL	LARGE	MODERATE to LARGE	MODERATE to LARGE	MODERATE to LARGE
Waste Management	SMALL	SMALL	MODERATE	SMALL	SMALL to MODERATE
Aesthetics	SMALL	SMALL	SMALL to MODERATE	SMALL to MODERATE	SMALL to MODERATE
Cultural Resources	SMALL	SMALL	SMALL	SMALL	SMALL

SMALL - Environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource.
MODERATE - Environmental effects are sufficient to alter noticeably, but not to destabilize, any important attribute of the resource.
LARGE - Environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.
10 CFR 51, Subpart A, Appendix B, Table B-1, Footnote 3.

TABLE 8-2
IMPACTS COMPARISON DETAIL

		No-Action Alternatives		
Proposed Action (License Renewal)	**Base (Decommissioning)**	**With Coal-Fired Generation**	**With Gas-Fired Generation**	**With Purchased Power**
Alternative Descriptions				
PINGP license renewal for 20 years beyond the current expiration dates of 2013 and 2014 for Units 1 and 2, respectively.	Terminate operations and decommission PINGP following license expiration in 2013 and 2014 for Units 1 and 2, respectively. Adopting by reference NRC impacts of associated activities provided in the GEIS Chapter 7.	New construction at a greenfield site.	New construction at a greenfield site.	Would involve construction of new generation capacity in Minnesota or other states.
		New rail spur (60 acres)	Construction of a new gas pipeline and transmission line disturbing as much as 110 acres. May require upgrades to existing pipelines.	
		New switchyard and transmission lines	New switchyard and transmission lines	Construct approximately 100 miles of transmission lines.
		Two 520 MW (net) tangentially-fired, dry bottom unit; capacity factor 0.85	Two 520 MW (net) (Combined-cycle turbines to be used); capacity factor 0.85	
		New cooling water intake/ discharge system	New cooling water intake/ discharge system	
		Pulverized bituminous coal, 8,914 Btu/pound; 10,200 Btu/kWh; 6.47% ash; 0.44% sulfur; 7.2 lb/ton nitrogen oxides; 4.7 million tons coal/yr	Natural gas, 1,008 Btu/ft^3; 6,040 Btu/kWh; 0.0034 lb sulfur/MMBtu; 0.0128 lb NO_x/MMBtu; 48.3 million ft^3 gas/yr	

TABLE 8-2 (CONTINUED)
IMPACTS COMPARISON DETAIL

		No Action Alternative		
Proposed Action (License Renewal)	**Base (Decommissioning)**	**With Coal-Fired Generation**	**With Gas-Fired Generation**	**With Purchased Power**
		Low NO_x burners, overfire air and selective catalytic reduction (95% NO_x reduction efficiency) Wet scrubber – lime/limestone desulfurization system (95% SO_x removal efficiency); 64,675 tons lime/yr Fabric filters (99.9% particulate removal efficiency)	Selective catalytic reduction with steam/water injection	
582 permanent and 103 long-term contract workers		1,700 construction workers and 120 permanent workers (Section 7.2.2.3)	629 construction workers and 35 permanent workers(Section 7.2.2.2)	
		Land Use Impacts		
SMALL – Adopting by reference Category 1 issue findings (Appendix A, Table A-1, Issues 52, 53). Offsite land use impacts as a result of license renewal and refurbishment would be minimal as a result of established land use patterns (Section 4.14, Issues 68 and 69).	SMALL – Not an impact evaluated by GEIS (NRC 1996)	MODERATE – 350 acres required for the powerblock and waste disposal. 150 acres required for transmission line and rail spur (Section 7.3.3.1).	SMALL to MODERATE – 41 acres for facility; 110 acres for pipeline and transmission line (Section 7.3.2.1). New gas pipeline would be built to connect with existing gas pipeline corridor.	SMALL to MODERATE – transmission facilities could be constructed to avoid highly incompatible land uses (Section 7.3.1).

TABLE 8-2 (CONTINUED)
IMPACTS COMPARISON DETAIL

Proposed Action (License Renewal)	Base (Decommissioning)	No Action Alternative		
		With Coal-Fired Generation	With Gas-Fired Generation	With Purchased Power
Water Quality Impacts				
SMALL – Adopting by reference Category 1 Issue findings (Appendix A, Table A-1, Issues 1-3, 6-12, 14-16, and 31). Two Category 2 groundwater issues not applicable (Section 4.2, Issues 35 and 39). Under normal conditions PINGP withdrawals do not affect surface water and groundwater quality or conflict with water use (Section 4.2, Issues 13, 33, and 34)	SMALL – Adopting by reference Category 1 issue finding (Appendix A, Table A-1, Issue 89).	SMALL – Construction impacts minimized by use of best management practices. (Section 7.3.3.7)	SMALL – Reduced cooling water demands, inherent in combined-cycle design (Section 7.3.2.7)	SMALL– Impacts would be similar to the impacts of baseload alternatives (Sections 7.3.2 and 7.3.3)
Air Quality Impacts				
SMALL – Adopting by reference Category 1 issue finding (Appendix A, Table A-1, Issue 51**).** Air quality impacts as a result of refurbishment would be temporary and localized (Section 4.8, Issue 50).	SMALL – Adopting by reference Category 1 issue findings (Appendix A, Table A-1, Issue 88)	MODERATE – 1,815 tons SO_x/yr 848 tons NO_x/yr 1,178 tons CO/yr 152 tons TSP/yr 35 tons PM_{10}/yr 0.2 tons Hg/yr (Section 7.3.3.2)	MODERATE – 83 tons SO_x/yr 312 tons NO_x/yr 409 tons CO/yr 122 tons PM_{10}/yr[a] (Section 7.3.2.2)	MODERATE – Impacts would be similar to the impacts of baseload alternatives (Sections 7.3.2 and 7.3.3)

TABLE 8-2 (CONTINUED)
IMPACTS COMPARISON DETAIL

Proposed Action (License Renewal)	Base (Decommissioning)	No Action Alternative		
		With Coal-Fired Generation	With Gas-Fired Generation	With Purchased Power
Ecological Resource Impacts				
SMALL – Adopting by reference Category 1 issue findings (Appendix A, Table A-1, Issues 15-24, 28-30, 43, 45-48). Entrainment, impingement, and heat shock impacts are SMALL (Section 4.3, Issue 25; Section 4.4, Issue 26; Section 4.5, Issue 27); Refurbishment activities would occur in locations devoid of ecological resources (Section 4.6, Issue 40).	SMALL – Adopting by reference Category 1 issue finding (Appendix A, Table - 1, Issue 90)	SMALL to MODERATE – 500 acres could be required for plant facilities and ash/sludge disposal over 20-year license renewal term. (Section 7.3.3.4).	SMALL to MODERATE – Construction of new facilities could alter 41 acres and new pipeline and transmission line ROW could impact 110 acres (Section 7.3.2.4).	SMALL to MODERATE – Impacts would be similar to the impacts of baseload alternatives (Sections 7.2.2 and 7.2.3)

TABLE 8-2 (CONTINUED)
IMPACTS COMPARISON DETAIL

Proposed Action (License Renewal)	Base (Decommissioning)	No Action Alternative		
		With Coal-Fired Generation	With Gas-Fired Generation	With Purchased Power
Threatened or Endangered Species Impacts				
SMALL – Three state- or federally-listed threatened or endangered species are known to occur in the vicinity of the PINGP site or along the transmission corridors. A pair of Peregrine falcons has nested in a nest box on the Unit 1 containment dome since 1997. Higgins' eye pearlymussels have been cultured and recently re-introduced into lower Pool 4 and upper Pool 3. Biologists conducting fish population studies in Sturgeon Lake over the last several decades have occasionally collected individual paddlefish (Section 4.7, Issue 49).	MODERATE – Removal of the containment buildings would eliminate one of only 25 successful nesting sites that currently exist in the state. Adverse impacts would be SMALL with mitigation (Section 7.1.1).	SMALL – Federal and state laws prohibit destroying or adversely affecting protected species and their habitats.	SMALL – Federal and state laws prohibit destroying or adversely affecting protected species and their habitats.	SMALL – Federal and state laws prohibit destroying or adversely affecting protected species and their habitats.

TABLE 8-2 (CONTINUED)
IMPACTS COMPARISON DETAIL

Proposed Action (License Renewal)	Base (Decommissioning)	No Action Alternative		
		With Coal-Fired Generation	With Gas-Fired Generation	With Purchased Power
Human Health Impacts				
SMALL – Adopting by reference Category 1 issues (Appendix A, Table A-1, Issues 54-56, 58, 61, 62). Risk due to microbiological organisms minimal because the system undergoes periodic treatments to control (Section 4.9, Issue 57) Risk due to transmission-line induced currents minimal due to conformance with consensus code (Section 4.10, Issue 59).	SMALL – Adopting by reference Category 1 issue finding (Appendix A, Table A-1, Issue 86)	SMALL – Adopting by reference GEIS conclusion that risks such as cancer and emphysema from emissions are likely (NRC 1996)	SMALL – Adopting by reference GEIS conclusion that some risk of cancer and emphysema exists from emissions (NRC 1996)	SMALL– Impacts would be similar to the impacts of baseload alternatives (Sections 7.3.2 and 7.3.3)

TABLE 8-2 (CONTINUED)
IMPACTS COMPARISON DETAIL

Proposed Action (License Renewal)	Base (Decommissioning)	No Action Alternative		
		With Coal-Fired Generation	With Gas-Fired Generation	With Purchased Power
Socioeconomic Impacts				
SMALL – Adopting by reference Category 1 issue findings (Appendix A, Table A-1, Issues 64, 67, 91). Existing temporary and permanent housing available minimizes potential for housing impacts. (Section 4.11, Issue 63). Capacity of public water supply and transportation infrastructure minimizes potential for related impacts (Section 4.12, Issue 65 and Section 4.15, Issue 70). The refurbishment workforce would not relocate families due to the short duration of the refurbishment (Section 4.13, Issue 66). License renewal and refurbishment not expected to influence area land-use pattern, but would continue beneficial impact on county (Section 4.14, Issues 68, 69).	LARGE – Large impacts from the loss of tax revenue for the City of Red Wing (Section 7.1.1).	MODERATE to LARGE– Proximity to large population centers would result in SMALL impacts at the location of the representative plant. LARGE impacts from the reduction in tax revenue for the City of Red Wing (Section 7.3.3.5).	MODERATE to LARGE– Proximity to large population centers would result in SMALL impacts at the location of the representative plant. LARGE impacts from the reduction in tax revenue for the City of Red Wing (Section 7.3.2.5).	MODERATE to LARGE – Impacts would be similar to the impacts of baseload alternatives (Sections 7.3.2 and 7.3.3)

TABLE 8-2 (CONTINUED)
IMPACTS COMPARISON DETAIL

Proposed Action (License Renewal)	Base (Decommissioning)	No Action Alternative		
		With Coal-Fired Generation	With Gas-Fired Generation	With Purchased Power
Waste Management Impacts				
SMALL – Adopting by reference Category 1 issue findings (Appendix A, Table A-1, Issues 77-85)	SMALL – Adopting by reference Category 1 issue finding (Appendix A, Table A-1, Issue 87)	MODERATE – 210,000 tons of coal ash per year and 77,000 tons of scrubber sludge per year would require 90 acres over 20-year license renewal term. Industrial waste generated annually (Section 7.3.3.3).	SMALL – Almost no waste generation (Section 7.3.2.3)	SMALL to MODERATE – Impacts would be similar to the impacts of baseload alternatives (Sections 7.3.2 and 7.3.3)
Aesthetic Impacts				
SMALL – Adopting by reference Category 1 issue findings (Table A-1, Issues 72-74)	SMALL – Not an impact evaluated by GEIS (NRC 1996)	SMALL to MODERATE – The coal-fired power blocks and the exhaust stacks would be visible from a moderate offsite distance (Section 7.3.3.6).	SMALL to MODERATE – Steam turbines and stacks would create visual impacts (Section 7.3.2.6).	SMALL to MODERATE – Impacts would be similar to the impacts of baseload alternatives (Sections 7.3.2 and 7.3.3)
Cultural Resource Impacts				
SMALL – No known impacts to archeological or cultural resources on PINGP site or transmission line corridors (Section 4.16, Issue 71).	SMALL – Not an impact evaluated by GEIS (NRC 1996)	SMALL – Impacts to cultural resources would be avoided (Section 7.3.2.7).	SMALL – Impacts to cultural resources would be avoided (Section 7.3.3.7).	SMALL – Impacts would be similar to the impacts of baseload alternatives (Sections 7.3.2 and 7.3.3)

SMALL - Environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource.

MODERATE Environmental effects are sufficient to alter noticeably, but not to destabilize, any important attribute of the resource. 10 CFR 51, Subpart A, Appendix B, Table B-1, Footnote 3.

LARGE - Environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

Btu = British thermal unit
ft^3 = cubic foot
gal = gallon
GEIS = Generic Environmental Impact Statement (NRC 1996)
kW-h = kilowatt-hour
lb = pound
MM = million
MW = megawatt
NO_x = nitrogen oxide
PM_{10} = particulates having diameter less than 10 microns
SHPO = State Historic Preservation Officer
SO_x = oxides of sulfur
TSP = total suspended particulates
yr = year

a. All TSP for gas-fired alternative is PM_{10}.

8.1 REFERENCES

NRC (U.S. Nuclear Regulatory Commission). 1996. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants* (GEIS), Volumes 1 and 2, NUREG-1437. Washington, D.C. May.

9.0 STATUS OF COMPLIANCE

9.1 PROPOSED ACTION

NRC

"The environmental report shall list all federal permits, licenses, approvals and other entitlements which must be obtained in connection with the proposed action and shall describe the status of compliance with these requirements. The environmental report shall also include a discussion of the status of compliance with applicable environmental quality standards and requirements including, but not limited to, applicable zoning and land-use regulations, and thermal and other water pollution limitations or requirements which have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection." 10 CFR 51.45(d), as adopted by 10 CFR 51.53(c)(2)

9.1.1 GENERAL

Table 9.1-1 lists environmental authorizations that Northern States Power (NSP) has obtained for current Prairie Island Nuclear Generating Plant (PINGP) operations. In this context Nuclear Management Company, LLC (NMC) defines "authorizations" to include any permits, licenses, approvals, or other entitlements. NMC expects NSP to continue renewing these authorizations during the current license period and through the U.S. Nuclear Regulatory Commission (NRC) license renewal period, and complying with the Red Wing Zoning Ordinance for General Industrial Use. Because the NRC regulatory focus is prospective, Table 9.1-1 does not include authorizations that NMC obtained for past activities that did not include continuing obligations such as building and construction permits.

Before preparing the application for license renewal, NMC conducted an assessment to identify any new and significant environmental information (Chapter 5). The assessment included interviews with NMC, NSP, and Xcel Energy experts, review of PINGP environmental documentation, and communication with state and federal environmental protection agencies. Based on this assessment, NMC concludes that PINGP is in compliance with applicable environmental standards and requirements.

Table 9.1-2 lists additional environmental authorizations and consultations related to NRC renewal of the PINGP license to operate. As indicated, NMC anticipates needing relatively few such authorizations and consultations. Sections 9.1.2 through 9.1.5 discuss some of these items in more detail.

9.1.2 THREATENED OR ENDANGERED SPECIES

Section 7 of the Endangered Species Act (16 USC 1531 et seq.) requires federal agencies to ensure that agency action is not likely to jeopardize any species that is listed, or proposed for listing as endangered, or threatened. Depending on the action involved, the Act requires consultation with the U.S. Fish and Wildlife Service (FWS) regarding effects on non-marine species, the National Marine Fisheries Service (NMFS)

for marine species, or both. The FWS and NMFS have issued joint procedural regulations at 50 CFR 402, Subpart B, that address consultation, and FWS maintains the joint list of threatened and endangered species at 50 CFR 17.

As discussed in Section 4.7 of this Environmental Report (ER), NMC does not expect the continued operation of PINGP to affect the population of any state or federally listed threatened or endangered species or natural communities in the vicinity of the PINGP site. Although not required of an applicant by federal law or NRC regulation, NMC has chosen to invite comment from federal and state agencies regarding potential effects that PINGP license renewal might have on threatened or endangered species. Attachment C includes copies of NMC correspondence with FWS and the Minnesota Department of Natural Resources, Ecological Resources Division, Natural Heritage and Nongame Research Program.

9.1.3 HISTORIC PRESERVATION

Section 106 of the National Historic Preservation Act (16 USC 470 et seq.) requires federal agencies having the authority to license any undertaking to, prior to issuing the license, take into account the effect of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation an opportunity to comment on the undertaking. Council regulations provide for the State Historic Preservation Officer (SHPO) to have a consulting role (35 CFR 800.2). Although not required of an applicant by federal law or NRC regulation, NMC has chosen to invite comment by the Minnesota SHPO. Attachment D contains a copy of NMC's letter to the Minnesota SHPO.

9.1.4 WATER QUALITY (401) CERTIFICATION

Federal Clean Water Act Section 401 requires an applicant for a federal license to conduct an activity that might result in a discharge into navigable waters to provide the licensing agency a certification from the state that the discharge will comply with applicable Clean Water Act requirements (33 USC 1341). NRC has indicated in its Generic Environmental Impact Statement for License Renewal (NRC 1996, Section 4.2.1.1) that issuance of a National Pollutant Discharge Elimination System (NPDES) permit implies certification by the state. NMC is applying to NRC for license renewal to continue PINGP operations. Consistent with the GEIS, NMC is providing PINGP's NPDES permit as evidence of state water quality (401) certification (Attachment B).

9.1.5 STATE OF MINNESOTA ENVIRONMENTAL REVIEW PROGRAM

The Minnesota Public Utility Commission (MPUC) requires a Certificate of Need (CON) application to allow additional dry cask storage at the Independent Spent Fuel Storage Installation (ISFSI) on the PINGP site. Minnesota Statute Chapter 216B.243 Subdivision 3b(b) requires that the CON address the impacts of continued operation during the period covered by the renewed license. Minnesota Statute Chapter 116C.83 Subdivision 6(b) requires that an environmental impact statement (EIS) be prepared by the Minnesota Environmental Quality Board (MEQB) pursuant to the requirements of Chapter 116D for the construction and operation of an ISFSI. This EIS will be prepared

by the MEQB and submitted to the MPUC for consideration in the MPUC's CON determination.

9.2 ALTERNATIVES

NRC

"The discussion of alternatives in the report shall include a discussion of whether the alternatives will comply with such applicable environmental quality standards and requirements." 10 CFR 51.45(d), as required by 10 CFR 51.53(c)(2)

The coal, gas, and purchased power alternatives discussed in Section 7.2.2 could be constructed and operated to comply with applicable environmental quality standards and requirements. NMC notes that increasingly stringent air quality protection requirements could make the construction of a large fossil-fueled power plant infeasible in many locations. NMC also notes that the U.S. Environmental Protection Agency has revised requirements for design and operation of cooling water intake structures at new and existing facilities (40 CFR 125 Subparts I and J). These requirements could necessitate construction of cooling towers for the coal- and gas-fired alternatives if surface water were used for once-through condenser cooling.

TABLE 9.1-1
ENVIRONMENTAL AUTHORIZATIONS FOR CURRENT PINGP OPERATIONS

Agency	Authority	Requirement	Number	Expiration Date	Activity Covered
Federal and State Requirements					
Minnesota Department of Health	Minnesota Rules 4740.2010 through 4741.2120	Certification	027-049-218	12/23/2009	Certification of the Environmental Laboratory
Minnesota Department of Natural Resources	10 U.S.C. 2668	Amended Permit (amended as needed)	80-5082	NA	Construction of intake canal system.
Minnesota Department of Natural Resources	10 U.S.C. 2668	Amended Permit (amended as needed)	80-5081	NA	Construction of discharge canal system.
Minnesota Department of Natural Resources	MN Rules Chapters 97A & 6212.1400	Division of Fish and Wildlife Special Permit	14658	12/31/2008	Collect fish and ichthyo - plankton for biological evaluation.
Minnesota Department of Natural Resources	MN Rules 6216.1400 and 6212.1500	Division of Fish and Wildlife Special Permit	14567	12/31/2008	Collect native fish for aquaria
Minnesota Department of Natural Resources	MN Rules 6216.0100 to 6216.0600 to	Permit	159	12/31/2009	Collect and possess zebra mussels from Lakes Zumbro and Pepin for control studies at plant

TABLE 9.1-1
ENVIRONMENTAL AUTHORIZATIONS FOR CURRENT PINGP OPERATIONS (CONTINUED)

Agency	Authority	Requirement	Number	Expiration Date	Activity Covered
Federal and State Requirements					
Minnesota Department of Natural Resources	MN Rules 103 G.271	Surface Water Appropriation Permit	690172	N/A	Appropriation of river water from Mississippi River for cooling at 630,000 gpm or 235 MGY
Minnesota Department of Natural Resources	MN Rules 103 G.271	Groundwater Appropriation Permit	690171	N/A	Wells 256120 (Installation #121) & 256121 (Installation #122), Appropriate groundwater for Plant operations
Minnesota Department of Natural Resources	MN Rules 103 G.271	Groundwater Appropriation Permit	785153	N/A	Well 611076, Appropriate groundwater for motor cooling and lubrication of pump seals for cooling towers
Minnesota Department of Natural Resources	MN Rules 103G.271	Groundwater Appropriation Permit	865114	N/A	Well 402599, Appropriate groundwater for pump bearing lubrication at PINGP
Minnesota Department of Natural Resources	MN Rules 103 G.271	Groundwater Appropriation Permit	965042	N/A	Well 256074, Appropriate groundwater for Training Center domestic use and lawn irrigation
MN Department of Transportation	Minnesota Statutes, section 221.0355	Registration	UPR-211635-MN	10/27/2008	Hazardous materials shipments

TABLE 9.1-1
ENVIRONMENTAL AUTHORIZATIONS FOR CURRENT PINGP OPERATIONS (CONTINUED)

Agency	Authority	Requirement	Number	Expiration Date	Activity Covered
Federal and State Requirements					
Minnesota Pollution Control Agency, Industrial Division	Clean Water Act (33 USC 1251 et seq.), MN Statutes Chapts. 115, 116, and Rules Chapts. 7001, 7050, and 7060, National Pollutant Discharge Elimination System	Permit	MN0004006	08/31/2010	Industrial wastewater discharges to Mississippi River
Minnesota Pollution Control Agency	Clean Air Act (42 USC 7401 et seq), MN Statutes Chapts. 115 and 116, MN Rules Chapt. 7007	Permit	00000001-003	12/17/2004 (renewal application submitted)	Operation of air emission system for an electric utility power generation system
Minnesota Pollution Control Agency	Clean Air Act (42 USC 7401 et seq), MN Regulations Chapters 7007.1150 to 7007.1500	Permit	04900030-003	01/3/2012	Operation of oil-fired boiler and diesel-fired engines for emergency power, pump cooling water, fire fighting system
Minnesota Pollution Control Agency	Clean Water Act (33 USC 1251 et seq.), MN Rules 7100.0030.	Permit	MPCA 51557	No expiration	Above ground storage tank registration
Minnesota Pollution Control Agency	MN Rules Chapter 7045, Statute 116.07	License	MND049537780	06/30/2008	Hazardous Waste Generator License, Small Quantity

TABLE 9.1-1
ENVIRONMENTAL AUTHORIZATIONS FOR CURRENT PINGP OPERATIONS (CONTINUED)

Agency	Authority	Requirement	Number	Expiration Date	Activity Covered
Federal and State Requirements					
South Carolina Department of Health and Environmental Control – Division of Waste Management	South Carolina Radioactive Waste Transportation and Disposal Act (Act No. 429)	Permit	0051-22-08-X	12/31/2008	Transportation of radioactive waste into the State of South Carolina
State of Tennessee Department of Environment and Conservation Division of Radiological Health	Tennessee Department of Environment and Conservation Rule 1200-2-10.32	Permit	T-MN003-L08	12/31/2008	Transportation of radioactive waste into the State of Tennessee
State of Utah Department of Environmental Quality Division or Radiation Control	Utah Radiation Control Rules R313-26	Permit	0402 002 748	02/23/2008 (renewal application submitted)	Transportation of radioactive into the State of Utah
Wisconsin Department of Natural Resources	WI State Statutes 29.614, 169.25, 19.31, 169.34, and 169.35	Scientific Collectors Permit	SCP-WCR-20-C-08	12/31/2008	Collect fish and ichthyoplankton for radiological and biological monitoring.
U.S. Army Corps of Engineers	Section 10 of River and harbor Act of 1899 (33 U.S.C. 403)	General Permit	GP/LOP-98-MN	02/18/2008	Maintenance dredging and erosion control discharge canal
U.S. Army Corps of Engineers	10 U.S.C. 2668	License	DACW37-3-06-0071	9/30/2011	Air quality monitoring station at Lock and Dam Number 3.

TABLE 9.1-1
ENVIRONMENTAL AUTHORIZATIONS FOR CURRENT PINGP OPERATIONS (CONTINUED)

Agency	Authority	Requirement	Number	Expiration Date	Activity Covered
Federal and State Requirements					
U.S. Army Corps of Engineers	Section 10 of River and harbor Act of 1899 (33 U.S.C. 403)	Dredging Permit	GP-01-MN	05/15/.2006	Maintenance dredging in front of the River Intake Structure
U.S. Department of Transportation	49 USC 5108, 49CFR Part 107, Subpart G	Registration	062706 552 0090	6/30/2008	Hazardous materials shipments
U.S. Fish and Wildlife Service	16 USC 703-712, Regulation 50 CFR Part 13, 50 CFR 21.27	Special Purpose Federal Fish and Wildlife Permit	MB074020-0	3/31/2009	Retrieve, transport, and temporarily possess carcasses of migratory birds. Collect, stabilize, and transport sick/ injured migratory birds.
U.S. Nuclear Regulatory Commission	Atomic Energy Act (42 USC 2011, et seq.), 10 CFR 50.10	License to operate nuclear plant	DPR-42 DPR-60	08/09/2013 10/29/2014	Operation of PINGP Unit 1 Operation of PINGP Unit 2

TABLE 9.1-2
ENVIRONMENTAL AUTHORIZATIONS FOR PINGP LICENSE RENEWAL[a]

Requirement	Agency	Authority	Remarks
License renewal	U.S. Nuclear Regulatory Commission	Atomic Energy Act (42 USC 2011 et seq.)	Environmental Report submitted in support of license renewal application
Consultation	U.S. Fish and Wildlife Service (FWS)	Endangered Species Act Section 7 (16 USC 1536)	Requires federal agency issuing a license to consult with the FWS (Attachment C)
Certification	Minnesota Pollution Control Agency, Industrial Division	Clean Water Act Section 401 (33 USC 1341)	State issuance of NPDES permit (Attachment B) constitutes 401 certification (Section 9.1.4)
Consultation	Minnesota Historical Society	National Historic Preservation Act Section 106 (16 USC 470f)	Requires federal agency issuing a license to consider cultural impacts and consult with SHPO. (Attachment D)

[a] No renewal-related requirements identified for local or other agencies.

9.3 REFERENCES

NRC (U.S. Nuclear Regulatory Commission). 1996. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants. Volume 1.* NUREG-1437. Washington, DC. May.