July 30, 2008

Mr. Michael D. Wadley
Site Vice President
Prairie Island Nuclear Generating Plant, Units 1 & 2
Nuclear Management Company, LLC
1717 Wakonade Drive East
Welch, MN 55089

SUBJECT: ENVIRONMENTAL SITE AUDIT REGARDING PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 & 2, LICENSE RENEWAL APPLICATION (TAC NOS. MD8528 AND MD8529)

Dear Mr. Wadley:

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the Environmental Report submitted by Nuclear Management Company, LLC (NMC), in support of its application for license renewal for the Prairie Island Nuclear Generating Plant, Units 1 and 2 (PINGP), and plans to conduct its environmental site audit at PINGP during the week of August 18, 2008. To develop the Supplemental Environmental Impact Statement for the PINGP license renewal, the NRC staff requests that the items described in the enclosed list be made available to the extent possible during the PINGP environmental site audit. If you have any questions, please contact me at 301-415-2703 or at Nathan.Goodman@nrc.gov.

Sincerely,

/RA by JLeous for/

Nathan Goodman, Project Manager
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-282 and 50-306

Enclosure:
As stated

cc w/encl: See next page

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ADAMS Accession No.: **ML082040527**

OFFICE	LA:DLR	PM:DLR:RPB2	OGC	BC:DLR:RPB2
NAME	S. Figueroa	J. Leous for N. Goodman	B. Mizuno	JRowleyfor R.Franovich
DATE	7/24/08	7/29/08	7/29/08	7/30/08

OFFICIAL RECORD COPY

Letter to M. Wadley from N. Goodman, July 30, 2008

DISTRIBUTION:

SUBJECT: ENVIRONMENTAL SITE AUDIT REGARDING PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 & 2, LICENSE RENEWAL APPLICATION (TAC NOS. MD8528 AND MD8529)

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PUBLIC
B. Holian / S. Lee(RidsNrrDlr)
T. Combs, OCA
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R. Shane, OCA
B. Keeling, OCA
R. Franovich (RidsNrrDlrRebb)
J. Rikhoff (RidsNrrDlrReba)
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T. Wengert
R. Skokowski
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D. Roth, OGC
B. Mizuno, OGC
OGC (RidsOGCMailRoom)
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Prairie Island Nuclear Generating Plant, Units 1 and 2
License Renewal Site Audit Needs List

The NRC staff has reviewed Appendix E, Environmental Report (ER), of the Prairie Island Nuclear Generating Plant (PINGP), Units 1 and 2, License Renewal Application and have found that it meets the requirements of 10 CFR 51.45. However, in order to develop the Supplemental Environmental Impact Statement for license renewal, a number of informational needs have been identified and are outlined below. Please have the following documentation available for review, or be prepared to discuss the subject matter addressed in the following document, during the August 18 - August 22, 2008 site audit:

General

- During specific plant area tours, please provide personnel knowledgeable with respect to the pertinent technical area(s) (i.e. aquatic, terrestrial, radiological, cultural resources, etc.) to guide or accompany the tour, and to field questions that may arise during the tour. In addition to resource specific tours, interview time for NRC staff and licensee/contractor counterparts should also be scheduled.

- Please provide hardcopies of all references cited in the ER, excluding those cited in the Severe Accident Mitigation Alternative (SAMA) analysis (Section 4.20 and Appendix E).

Aquatic Review

- Please provide the following references for review:

Adams, S. M., H. A. McLain, D. S. Vaughan, G. F. Cada, K. D. Kumar, and S. G. Hildebrand. 1979. Analysis of Prairie Island Nuclear Generating Station - intake-related studies. Final Report to the Minnesota Pollution Control Agency, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

Bodensteiner, J. 1991. “Letter to T.J. Mader, MPCA, regarding renewal of PINGP’s NPDES permit and proposed changes in permit conditions.” Northern States Power Company, Minneapolis. March 18.

Giese, Brad. 2007. “Re: License Renewal Environmental Review – Peer Review.” E-mail from Brad Giese to RaeLynn Jones-Loss. October 11

HDR (Henningson, Durham, and Richardson, Inc.). 1978. *Section 316(a) Demonstration for the Prairie Island Generating Plant on the Mississippi River near Red Wing, Minnesota.* Prepared for Northern States Power Company, Minneapolis. August.

NSP (Northern States Power Company). 1981a. “Prairie Island Nuclear Generating Plant Chlorination of Circulating Water to Remove Parasitic Amoeba.” Letter to D. Kriens from R. Clough. July 24.

ENCLOSURE

NSP (Northern States Power Company). 1981b. “Prairie Island Nuclear Generating Plant Circulating Water Chlorination-Dechlorination Pathogenic Amoeba Control Program.” Letter to D. Kriens from W. Jensen. October 14.

NSP (Northern States Power Company). 1983. “Prairie Island Nuclear Generating Plant Chlorination of Circulating Water System Fish Loss Report”. Letter to H. Krosch and D. Kriens from W. Jensen. October 14.

Stone & Webster (Stone & Webster Engineering Corp.). 1983. *Final System Description: Modify Circulating Water Intake and Discharge.* Denver. March.

Stone & Webster (Stone & Webster Engineering Corp.). 1983. *Modify Circulating Water Intake and Discharge: System Description and Design Criteria*. Prepared for Northern States Power by Stone & Webster Engineering Corporation. Denver. April 1.

- Please provide all information on refurbishment – Assuming the path taken for delivery of the steam generators is entirely by the Mississippi River, will there be any need for dredging of shallow parts of the river, or bridge modifications to allow the barge to pass?

- Please provide the following information concerning the 316(b) demonstrations for PINGP:

316(b) submittals, as referenced in National Pollutant Discharge Elimination System (NPDES) Permit:

Source water physical data required by 316(b) Phase II
Cooling water intake structure data
Cooling water system data
Proposal for Information Collection

Xcel Energy. 2006a. *Xcel Energy Prairie Island Nuclear Generating Plant Proposal for Information Collection.* Prepared by Xcel Energy Environmental Services. July.

Comprehensive Demonstration Studies (new and old)

Xcel Energy. 2006b. *Xcel Energy Prairie Island Nuclear Generating Plant Comprehensive Demonstration Study.* Xcel Energy Environmental Services. October.

NUS Corporation. 1976. *Section 316(b) Demonstration for the Prairie Island Generating Plant on the Mississippi River near Red Wing, Minnesota.* December.

Results of Impingement and Entrainment Study
Design Construction Technology Plant
Technology Installation and Operation Plan
Verification Monitoring Plan

- The Environmental Report references years 2000-2005. Are there earlier, significant reports? Are these the "Annual Environmental reports" that are required by the NPDES permit? If not, include those, too.

  ESWQD (Environmental Services Water Quality Department). (Multiple years). "Prairie Island Nuclear Generating Plant Environmental Monitoring and Ecological Studies Program." Annual Report.

  Xcel Energy. 2007. *Prairie Island Nuclear Generating Plant Environmental Monitoring and Ecological Studies Program 2006 Annual Report*. Prepared for Northern States Power (d/b/a Excel Energy) by Xcel Energy Environmental Services, Water Quality Department.

- Please provide a breakdown of how much time per year and/or season is spent in the 3 different cooling modes (open, helper, closed), if possible over time. Additionally, what determines which mode is used (helper vs. closed cycle)

- Please provide the actual approach and through-screen water velocities during each cooling mode (and for each type of screen). Also, include velocity through trash racks.

- Please provide any changes in flow rates (intake and discharge) between different cooling modes, as well as information on evaporation and blowdown from the cooling towers.

- Please provide a complete physical description of intake and discharge canals (including depth) and distribution and discharge basins.

Terrestrial Review

Invasive Species

- What species of invasive plants and/or animals have been observed or documented on the PINGP site?

- Are any invasive species populations being managed?

Transmission Line Right-of-Way's (ROWs)

- How wide (in feet) is the Red Rock ROW along with the Red Rock 2 line runs?

- What is the total area of land (in acres) comprised by all in-scope transmission line ROWs?

- The ER states that the Red Rock 2 transmission line "may" cross Cottage Grove Ravine Regional Park in Washington County. Does Red Rock 2 cross this park?

- Please specify where the Blue Lake line crosses the Minnesota Valley National Wildlife Refuge. Which of the eight refuge land units does the line cross?

- The ER states that the Red Rock 1 connection, the Adams connection, the Red Rock 2 line, and the Blue Lake line will remain a permanent part of the transmission system and will be maintained by Xcel Energy, regardless of PINGP continued operation. Will Great River Energy maintain the Spring Creek line regardless of PINGP continued operation?

ROW Maintenance

- What pesticides and/or herbicides are used in transmission line ROWs? What protocol do workers follow when applying chemicals near streams and wetlands for both Xcel Energy and Great River Energy?

- Please provide the transmission line ROW maintenance plans and protocol for both Xcel Energy and Great River Energy.

Management Plans and Procedures

- Please provide any wildlife management plans that are used on site.

- Please provide any best management practices (BMPs) followed for ground-disturbing activities.

Protected Species

- Please provide any management plans for the peregrine falcon nesting site on the PINGP Unit 1 containment building. Are there any future plans to create new suitable nesting areas?

- Did the Fish and Wildlife Service (FWS) or Minnesota Department of Natural Resources (MNDNR) reply to the following letters, which are included in Attachment C of the ER, sent by NMC regarding protected species? If so, please provide copies of the response letters from FWS and/or MNDNR.

    - Mike Wadley (NMC) to Tony Sullins (FWS) dated January 25, 2008

    - Mike Wadley (NMC) to Lisa Joyal (MNDNR) dated January 25, 2008

Wetlands

- Please provide delineation information for the locations/boundaries of the floodplain and wetland areas on the PINGP site.

Bird Collisions with Transmission Lines

- Please provide the following studies referenced in Section 3.1.6.3 of the Environmental Report:

- Goddard, S.V. 1977. "Number and Composition of Birds Killed by Striking Transmission Lines from the Prairie Island Nuclear Generating Plant." *NSP 1976 Annual Report for the Prairie Island Nuclear Generating Station*. Volume 2.

- Goddard, S.V. 1978. "Number and Composition of Birds Killed by Striking Transmission Lines from the Prairie Island Nuclear Generating Plant." *Environmental Monitoring Program, 1977 Annual Report, Special Ecological Studies*. Prairie Island Nuclear Generating Plant.

- Goddard, S.V. 1979. "Number and Composition of Birds Killed by Striking Transmission Lines from the Prairie Island Nuclear Generating Plant." *Environmental Monitoring and Ecological Studies Program, 1978 Annual Report, Volume 2*. Prairie Island Nuclear Generating Plant.

- Please provide the MOU referenced in Section 3.1.6.3 of the Environmental Report:
  - NSPCM & FWS (Northern States Power Company-Minnesota and U.S. Fish and Wildlife Service). 2002. *Memorandum of Understanding*. April 19.

Refurbishment Activities

- Please provide a description of the on site land that will be used for laydown of materials, temporary buildings, and any other land disturbances associated with refurbishment.

- Please provide a description of the path the steam generators will travel via barge up the Mississippi River. Will any modifications to waterways, bridges, or other infrastructure be required?

- Will overland travel be required to transport the new steam generators to the PINGP site? If so, will any road or bridge modifications be required for this?

- Will the old steam generators be housed/stored on site, and will this require the construction of a permanent storage building?

Maps

- Please provide a topographic map of PINGP site and vicinity that includes the following data, as available:
  - The full length of all in-scope portions of transmission lines
  - Any significant natural heritage areas
  - Stream crossings
  - Known locations of threatened, endangered, or special concern species
  - Historical sitings of threatened, endangered, or special concern species
  - Migratory bird rookeries
  - Peregrine falcon nests and nest boxes
  - State or Federal wildlife refuges, wildlife management areas, or parks crossed by transmission lines

- Delineated wetland habitat
- Location of laydown areas, temporary buildings, and any other land disturbances associated with refurbishment

Cultural Resources Review

- Please provide copies of all archaeological reports (published and unpublished) and all related correspondence (official correspondence, field notes, articles, research, studies, salvage operations, survey reports) for sites located on plant property.

- Please provide copies of all correspondence with the Minnesota State Historic Preservation Office (SHPO), State Archaeologist, Bureau of Indian Affairs, Prairie Island Indian Community, and other consulting entities that were not included in the ER (pre-construction, construction, and operations).

- Page II-28 of the Final Environmental Statement mentions the presence of burial mounds and a large village site (the Bartron site) on plant property. At the bottom of the page, a footnote states that the cooling towers and the dikes were relocated. Did the relocation of these structures impact either of these sites? Why were these structures relocated? Are the burial mounds still onsite? If not, were archaeological excavations conducted? Were artifacts recovered? Were human remains encountered upon excavation?

- If human remains and burial goods were recovered from the PINGP site, where are they housed? Are there reports associated with these activities? Have the remains been repatriated? If remains or other associated artifacts were found, was the PIIC or SHPO contacted?

- Please provide a copy of the National Register of Historic Places paperwork and associated correspondence (state archaeologist) for the Bartron site.

- Please provide a copy of the September 2007 cultural resource assessment. Per the environmental report, this assessment attempted to locate sites previously identified on plant property. Did this assessment attempt to identify new sites or areas that may have potential to yield information (areas to avoid) or was this simply a delineation survey?

- Please provide a land disturbance map that identifies areas of heavy, moderate, low, and undisturbed areas of plant property. Did the September 2007 assessment provide this map?

- Please provide copies of any photos (aerial) showing the plant site pre-construction, during construction, and post construction.

- The FES states that this 560 acre site was purchased in 1959. Who owned the land prior to the Northern States Power's acquisition of the site? Why was this site selected as opposed to other possible locations on the Mississippi River? Also, the FES mentions that 5 cottages were on site and were subsequently

removed when site development activities commenced in 1967. Do you have any information regarding these cottages?

- Please provide copies of Platt maps or other historical land use maps. Provide information associated with the historical land use of PINGP (land use of the site prior to the construction of PINGP).

- Please provide a copy of NMC's procedures re: protection of cultural resources at the audit (Excavation and Trenching Controls FP-1H-EXC-01). Please provide examples of NMC compliance with these procedures in connection with ISFSI construction, steam generator replacement project or other plant construction.

- What training does the Environmental Coordinator have in relation to Section 106 guidelines?

- Does NMC or Xcel Energy have a management plan for cultural resources? If so, please provide a copy of the plan.

- Has the MN SHPO reviewed on site procedures re: cultural resources? Would the SHPO be contacted in the case of an inadvertent discovery? Will a cultural resource professional be called in to evaluate inadvertent discoveries? Are there any procedures for notifying the PIIC?

- Are there any archaeological sites or historic structures on or adjacent to transmission line right-of-ways?

- Staff would like to review maintenance procedures for the transmission lines. Do the procedures take into account the protection of cultural resources?

- For the Unit 2 steam generator replacement project, where will the warehouse be constructed?

- Have PIIC observers been present at any of the archaeological investigations that have been conducted on site?

- Please provide data or reports/ surveys concerning the collection of traditional plants and presence of sacred sites within the boundaries of PINGP?

Environmental Justice

- Please provide information about current or past wildlife sampling and testing of game animals such as deer, squirrel, turkey, pheasant, duck, and other game birds and animals that may have been conducted in the vicinity of PINGP by NMC and the previous operators of the plant. Wildlife sampling and testing may have been conducted at PINGP before, during, and after plant construction in the early days of plant operation, but was discontinued after determining that tissue samples were consistently showing no significant or measurable radiological impact on the environment from plant operations.

Socioeconomics

- In addition to the property tax payment information presented in the ER, please describe any other agreed to annual payments, one-time payments, and other forms of compensation provided to local organizations, communities, and jurisdictions (e.g., county, municipality, townships, villages, incorporated places, and school districts). Include any recent information about adjustments to these payments due to re-assessments and other actions (including legal actions) that resulted in notable increases and/or decreases in payments.

Hydrology

- Please provide documentation of any release notifications, notices of violation, or remediation documentation associated with surface water discharges, septic or sewer systems, or groundwater or soil contamination (including spills, leaks, and other releases of tritium, fuels, solvents, or other chemicals).

- Please provide water level records of existing site wells.

- Please provide water use records.

- Please provide any documentation on any groundwater monitoring programs, whether site-wide or targeting a particular facility.

- Are there available well logs of on-site wells?

- Are there other state and local permits relating to water use?

- Please provide a copy of this reference that was identified in the ER:
  Bergland, Britta. 2006 . "Additional Water Data for 2005 for Unpermitted Well." E-mail from Britta Bergland (NMC) to Emily McRee (TtNUS), August 24.

- NRC staff has copies of the following reports below. Are there currently any updates or revisions to the above reports? Are there any more recent studies on surface water and groundwater resources in the immediate area of the plant? If so, please provide copies of the documents.

  Cowdery, Timothy K. 1999. Water Resources of the Prairie Island Indian Reservation, Minnesota, 1994-1997, Water-Resources Investigations Report 99-4069. U.S. Geological Survey in cooperation with the Prairie Island Dakota Community.

  Ruhl, J.F. 2002. Simulation of Ground-Water Flow and Delineation of Areas Contributing Recharge within the Mt. Simon-Hinckley Aquifer to Well Fields in the Prairie Island Indian Community, Minnesota, Water-Resources Investigations Report 02-4155. U.S. Geological Survey in cooperation with the Prairie Island Indian Community.

Winterstein, T.A. 2002. Hydraulic Properties of Mt. Simon Aquifer, Prairie Island Indian Community, Southeastern Minnesota, 2001, Water-Resources Investigations Report 02-4263. U.S. Geological Survey in cooperation with the Prairie Island Indian Community.

Radiological

- Please provide a copy of current Offsite Dose Calculation Manual (ODCM).
- Please provide reports of any abnormal, unusual spills or leaks and reports contained in the 10 CFR 50.75(g) file for decommissioning.
- Please provide any Occupational Exposure Reports.
- Please provide 5 recent years of annual radiological effluent release reports.
- Please provide 5 recent years of annual radiological environmental monitoring reports.
- Please provide program information regarding radiological groundwater monitoring (on-site and off-site).
- NRC staff would like to speak to knowledgeable personnel regarding the plant's radiological effluent monitoring program, radiological environmental monitoring program, and radioactive waste treatment systems and the above documents and reports.

Electromagnetic Fields

- NRC staff would like to speak with knowledgeable personnel regarding transmission line acute effects.

Non-Radiological Waste/Pollution Prevention

- Please provide a description of non-radioactive waste systems and applicable procedures.
- Please provide copies of waste permits.

Alternatives to License Renewal

- NRC staff would like to speak with the alternatives expert/contractor on the project.

Air Quality and Meteorology

- Please provide a description of the meteorological system/tower.

- Please provide a description of the onsite air sampling program.
- Please provide copies of air permits and compliance history for air quality (the past 5 years at minimum).
- Please provide a description of the regional climatology (annual and seasonal mean temperatures, historically high rain and snow events, and tornado/hurricane activity).
- Please provide a description of the local meteorology at the plant site (annual and seasonal predominant wind speed and direction).
- Please provide information on the use of any on-site incinerators or fossil fueled boilers.
- Please provide a list of all emission sources and material emitted.
- NRC staff would like to have plant personnel who are knowledgeable with respect to the plant's air quality monitoring program present at some point during the week of August 18, 2008.

Prairie Island Nuclear Generating Plant,
Units 1 and 2

cc:

Peter M. Glass
Assistant General Counsel
Xcel Energy Services, Inc.
414 Nicollet Mall (MP4)
Minneapolis, MN 55401

Manager, Regulatory Affairs
Prairie Island Nuclear Generating Plant
Nuclear Management Company, LLC
1717 Wakonade Drive East
Welch, MN 55089

Manager - Environmental Protection Division
Minnesota Attorney General's Office
445 Minnesota St., Suite 900
St. Paul, MN 55101-2127

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
1719 Wakonade Drive East
Welch, MN 55089-9642

Administrator
Goodhue County Courthouse
Box 408
Red Wing, MN 55066-0408

Philip R. Mahowald
General Counsel
Prairie Island Indian Community
5636 Sturgeon Lake Road
Welch, MN 55089

Heather Westra
Prairie Island Indian Community
5636 Sturgeon Lake Road
Welch, MN 55089

Gene Eckholt
Nuclear Management Company, LLC
1717 Wakonade Drive East
Welch, MN 55089

Jim Holthaus
Nuclear Management Company, LLC
1717 Wakonade Drive East
Welch, MN 55089

Katie Himanga, Mayor
City of Lake City
205 West Center St.
Lake City, MN 55041

Commissioner
Minnesota Department of Commerce
85 7th Place East, Suite 500
St. Paul, MN 55101-2198

Tribal Council
Prairie Island Indian Community
ATTN: Environmental Department
5636 Sturgeon Lake Road
Welch, MN 55089

Nuclear Asset Manager
Xcel Energy, Inc.
414 Nicollet Mall (MP4)
Minneapolis, MN 55401

Dennis L. Koehl
Chief Nuclear Officer
Nuclear Management Company, LLC
414 Nicollet Mall (MP4)
Minneapolis, MN 55401

Joel P. Sorenson
Director, Site Operations
Prairie Island Nuclear Generating Plant
Nuclear Management Company, LLC
1717 Wakonade Drive East
Welch, MN 55089

Prairie Island Nuclear Generating Plant,
Units 1 and 2

Joan Marshman
30129 County 2 Blvd.
P.O. Box 62
Frontenac, MN 55026

Kristen Eide-Tollefson
Florence Township Commission
P.O. Box 130
Frontenac, MN 55026