



March 4, 2009

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U S Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Prairie Island Nuclear Generating Plant Units 1 and 2  
Dockets 50-282 and 50-306  
License Nos. DPR-42 and DPR-60

Revisions to Environmental Report Regarding Application for Renewed Operating Licenses

By letter dated April 11, 2008, Northern States Power Company, a Minnesota Corporation, (NSPM) submitted an Application for Renewed Operating Licenses (LRA) for the Prairie Island Nuclear Generating Plant (PINGP) Units 1 and 2. This application contained the Applicant's Environmental Report - Operating License Renewal Stage (ER) to assess the environmental impacts of license renewal. This letter provides several changes to the ER.

The ER changes fall into three categories. First, a change is made to reflect the transfer of the operating license from Nuclear Management Company to NSPM. Second, the original Environmental Report's discussion of the archaeological, historical and cultural resources within and around the PINGP property is augmented to provide additional insight into NSPM actions that will further define and protect these resources. Third, updates are provided for PINGP permits and authorizations which have expired or closed since the NRC site visit in August 2008.

Enclosure 1 provides the changes to the ER. Enclosure 2 provides the complete list of Preliminary License Renewal Commitments, updated to reflect the new commitments contained in this letter.

If there are any questions or if additional information is needed, please contact Mr. James Holthaus, Environmental Project Manager.

Summary of Commitments

This letter contains four new Preliminary License Renewal Commitments. These commitments will be implemented prior to entry of the first PINGP Unit into the Period of Extended Operation.

New Preliminary Commitment Number 37 is as follows:

NSPM will revise procedures for excavation and trenching controls and archaeological, cultural and historic resource protection to identify sensitive areas and provide guidance for ground-disturbing activities. The procedures will be revised to include drawings and illustrations to assist users in identifying culturally sensitive areas, and pictures of artifacts that are prevalent in the area of the Plant site. The revised procedures will also require training of the Site Environmental Coordinator and other personnel responsible for proper execution of excavation or other ground-disturbing activities.

New Preliminary Commitment Number 38 is as follows:

NSPM will conduct a Phase I Reconnaissance Field Survey of the disturbed areas within the Plant's boundaries. In addition, NSPM will conduct Phase I field surveys of areas of known archaeological sites to precisely determine their boundaries. NSPM will use the results of these surveys to designate areas for archaeological protection.

New Preliminary Commitment Number 39 is as follows:

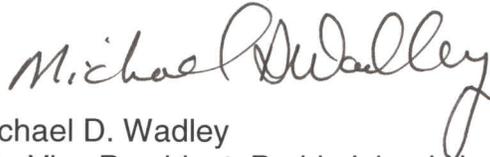
NSPM will prepare, maintain and implement a Cultural Resources Management Plan (CRMP) to protect significant historical, archaeological, and cultural resources that may currently exist on the Plant site. In connection with the preparation of the CRMP, NSPM will conduct botanical surveys to identify culturally and medicinally important species on the Plant site, and incorporate provisions to protect such plants into the CRMP.

New Preliminary Commitment Number 40 is as follows:

NSPM will consult with a qualified archaeologist prior to conducting any ground-disturbing activity in any area designated as undisturbed and in any disturbed area that is described as potentially containing archaeological resources (as determined by the Phase I Reconnaissance Field Survey discussed in New Preliminary Commitment Number 38).

I declare under penalty of perjury that the foregoing is true and correct.

Executed on March 4, 2009.



Michael D. Wadley  
Site Vice President, Prairie Island Nuclear Generating Plant Units 1 and 2  
Northern States Power Company - Minnesota

Enclosures (2)

cc:

Administrator, Region III, USNRC  
License Renewal Environmental Project Manager, Prairie Island, USNRC  
Resident Inspector, Prairie Island, USNRC  
Prairie Island Indian Community ATTN: Phil Mahowald  
Minnesota Department of Commerce

**Enclosure 1**  
**Changes to Applicant's Environmental Report - Operating License Renewal Stage**

**Change 1 - Reflect Transfer of Operating Licenses to NSPM**

In ER Section 1.1, Introduction and Background, on Page 1-1, a new introductory paragraph is hereby added to read as follows:

On September 22, 2008, the operating license for the Prairie Island Nuclear Generating Plant was transferred from Nuclear Management Company, LLC (NMC) to Northern States Power Company – Minnesota (NSPM). All references to NMC in this Environmental Report should be recognized as NSPM.

The remainder of the section is unchanged.

**Change 2 - Augmented Discussion of NSPM Actions to Define and Protect Cultural Resources**

ER Sections 4.16.1 and 4.16.2 (excluding the boxed summaries of NRC guidance) are hereby revised in their entirety to read as follows:

**4.16.1 Historic and Archaeological Resources – Refurbishment**

The NRC has designated the impacts of license renewal (refurbishment) to historic and archaeological resources a Category 2 issue, because determinations of impacts to historic and archaeological resources are site-specific in nature, and the National Historic Preservation Act mandates that impacts must be determined through consultation with the State Historic Preservation Officer (NRC 1996).

As discussed in Section 2.10, the AEC consulted with the State Archaeologist in the course of reviewing the NSP application for a construction permit for PINGP. The AEC did so because previous archaeological surveys in the Mississippi River valley near Red Wing demonstrated that a large number of prehistoric sites were present, and that undisturbed portions of Prairie Island, in particular, contained “many undisturbed burial mounds and a large village habitation by late prehistoric (Mississippian) peoples” (AEC 1973, p. II-28). The State Archaeologist subsequently uncovered parts of this village on the Prairie Island site. This village, later named the Bartron Site, was added to the National Register of Historic Places in 1970 (NPS 2006). In addition to the Bartron Site, surveys in the 1960s and 1980s identified six other archaeological sites at the Prairie Island site.

As a federally licensed facility, PINGP is subject to several federal laws and their enacting regulations designed to identify and protect cultural resources. The most important of these is the National Historic Preservation Act of 1966, as amended. Section 106 of this law requires a cultural resources review of any undertakings sponsored or licensed by the federal government. PINGP follows the 106 review process by reviewing any undertaking that may affect cultural resources, conducting studies as indicated, and consulting with the Minnesota State Historic Preservation Office and other interested parties. The following paragraphs detail PINGP’s efforts to implement the Section 106 process.

## **Enclosure 1**

### **Changes to Applicant's Environmental Report - Operating License Renewal Stage**

NSPM has instituted two corporate procedures to protect cultural resources at NSPM nuclear generating plant sites. The excavation and trenching controls procedure requires a review of any planned excavation (greater than 6 inches deep) to ensure the protection of archaeological and historical resources. The Site Environmental Coordinator or designee is responsible for determining if proposed land-disturbing activity will occur in the vicinity of a culturally-significant site, and if so, for consulting with the qualified archaeologist and SHPO to mitigate potential impacts. The qualified archaeologist is responsible for evaluating any cultural artifacts inadvertently discovered during construction to determine if the material discovered has potential archaeological or historic significance and if so, for reporting it to the SHPO. In any case, the discovery of cultural artifacts at NSPM-owned nuclear plants requires employees to stop work until the Site Environmental Coordinator has evaluated the situation with the qualified archaeologist. Work can resume only after the situation has been addressed, disposition of any material or artifacts has been documented, and it has been determined that identified culturally-significant material is not at risk. These controls ensure that known archaeological/historical sites are avoided and newly-discovered archaeological/historical sites are protected.

The archaeological, cultural and historic resources procedure further defines the responsibilities of the Site Environmental Coordinator and serves as a resource whereby plant employees can access information on the rules and regulations protecting cultural resources and the actions to take in the event of accidental discovery of resources.

To further protect and mitigate any potential impacts to archaeological, cultural, and historic resources, NSPM will revise these procedures to identify sensitive areas and provide guidance for ground-disturbing activities. The procedures will be revised to include drawings and illustrations to assist users in identifying culturally sensitive areas, and pictures of artifacts that are prevalent in the area of the PINGP site. The revised procedures will also require training of the Site Environmental Coordinator and other personnel responsible for proper execution of excavation or other ground-disturbing activities. Training topics will include the review of cultural "exclusion areas" on the plant site (identified during the surveys discussed in Section 4.16.2), artifact identification, situations which would require notification of the State Archaeologist or other technical resource, and the stop-work process.

Based on the Unit 1 SGR project, replacement of Unit 2 steam generators has little potential for disturbing, uncovering, or harming cultural artifacts. Steam generators will be barged up the Mississippi River to the PINGP site and transported to the containment building by a large, all-terrain vehicle (transporter). The transporter will move along an existing aggregate service road that extends from the barge landing, 500 feet east of the Environmental Lab, to the Owner-Controlled Area security fence. The area through which the service road travels was extensively altered during plant construction and is surrounded by buildings, transmission towers, and other infrastructure. Most natural vegetation in the area has been removed and replaced with turf grasses that are mowed during the growing season. Given that the area was cleared and graded for construction of the original units, and that

**Enclosure 1**  
**Changes to Applicant's Environmental Report - Operating License Renewal Stage**

moving the steam generators to the containment building will require no land disturbance, it is anticipated that Unit 2 SGR will likely have no impact on the area's archaeological or historic resources.

Several temporary buildings may be built, including a facility for preparing the steam generators, office space for construction contractors, and a decontamination building. Warehouse(s) are also expected to be built on site and remain after the steam generator replacement outage. Any construction will occur within the existing plant boundaries. There should be no clearing of previously-undisturbed areas. Additional construction personnel and traffic on area roadways associated with the steam generator replacement project are not expected to impact archaeological or historical sites in the area. Therefore, NSPM concludes that refurbishment activities will not impact cultural resources and no mitigation measures will be warranted beyond those prescribed in NSPM's excavation and trenching controls procedure.

The Unit 2 SGR project is currently expected to be contained within the areas shown on Figure 4.16-1, which limits activities to previously disturbed areas. Section 4.16.2 discusses planned surveys to identify areas of archaeological significance at the plant site. If NSPM later identifies any changes in the expected footprint or facilities that would affect either undisturbed areas or areas identified as having archaeological resources potential, NSPM will consult with a qualified archaeologist and perform additional surveys of such areas prior to any ground-disturbing activities. If there are any concerns regarding impacts to cultural resources from refurbishment activities, NSPM may consult with the Minnesota Historical Society, State Historic Preservation Office, Bureau of Indian Affairs, and PIIC.

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**Changes to Applicant's Environmental Report - Operating License Renewal**  
**Stage**



**Enclosure 1**  
**Changes to Applicant's Environmental Report - Operating License Renewal Stage**

**4.16.2 Historic and Archaeological Resources – License Renewal Term**

NRC has designated the impacts of license renewal (continuing operation) to historic and archaeological resources a Category 2 issue, because determinations of impacts to historic and archaeological resources are site-specific in nature, and the National Historic Preservation Act mandates that impacts must be determined through consultation with the State Historic Preservation Officer (NRC 1996).

NSPM is not aware of any historic or archaeological resources that have been affected to date by PINGP operations, including operation and maintenance of transmission lines. NSPM is aware, however, that the site vicinity and the surrounding environs have significant potential for containing cultural resources. Additionally, NSPM is aware of cultural resources that have already been found within the Plant's boundaries. Because NSPM is aware of the potential for the discovery of cultural resources during land-disturbing activities at its facilities and along its transmission line corridors, it has developed corporate procedures that protect cultural resources at NSPM owned nuclear generating plant sites and has instituted those procedures at Prairie Island. As noted in Section 4.16.1, NSPM is revising those procedures to include further protections for cultural resources within the Plant's boundaries. Given that NSPM has no plans to construct new license renewal related facilities at PINGP during the license renewal term, and that the policies and procedures established in the site procedures should protect any resources that have been previously identified or inadvertently discovered, NSPM concludes that operation of generation and transmission facilities over the license renewal term will not impact cultural resources.

NSPM is implementing additional efforts to identify, define, and protect the cultural resources present at the facility. Primarily, NSPM will conduct a Phase I Reconnaissance Field Survey of the disturbed areas within the Plant's boundaries. In addition, NSPM will conduct Phase I field surveys of areas of known archaeological sites to precisely determine their boundaries. NSPM will use the results of these surveys to designate areas for archaeological protection. The Phase I Reconnaissance Field Survey will consist of a 100 percent pedestrian survey of disturbed areas at close transects (maximum of 5 meters). There will be no shovel testing, although areas will be identified as candidates for shovel testing. Soil probes will be used to identify disturbed or undisturbed soil horizons. Surveys will identify areas and the degree and type of disturbance. Findings from the field surveys will be documented using photographs, written descriptions, and sketch maps, as needed. Site layout drawings will be prepared to aid employees in identifying archaeological "exclusion areas" to be aware of during planning for excavation activities and will be integrated into the revised procedures discussed in Section 4.16.1.

The surveys discussed above will be the primary method by which NSPM will define the resources present at the PINGP facility. Once this information is obtained, NSPM will integrate it into a Cultural Resources Management Plan (CRMP), which is already under development. NSPM will prepare, maintain, and implement the CRMP to ensure the protection of significant historical,

**Enclosure 1**  
**Changes to Applicant's Environmental Report - Operating License Renewal Stage**

archaeological, and cultural resources that may currently exist on the Plant site. In connection with the preparation of the CRMP, NSPM will conduct botanical surveys to identify culturally and medicinally important species on the Plant site, and incorporate provisions to protect such plants into the CRMP. NSPM conducted the first botanical survey in the fall of 2008. NSPM intends to complete the additional surveys, amendments to procedures, and consultations on a schedule that will allow finalization of the CRMP by the end of 2010 and implementation prior to entry of the first PINGP Unit into the Period of Extended Operation.

Finally, NSPM has retained a qualified archaeologist for consultation on an as-needed basis. NSPM will consult with the archaeologist prior to conducting any ground-disturbing activity in any area designated as undisturbed and in any disturbed area that is described as potentially containing archaeological resources (as determined by the Phase I Reconnaissance Field Survey previously discussed).

**Enclosure 1**  
**Changes to Applicant's Environmental Report - Operating License Renewal Stage**

**Change 3 - Updated Listing of Permits and Authorizations Which Have Expired or Closed Since the NRC Site Visit in August 2008**

The following information supersedes selected information in ER Table 9.1-1.

Permitting Agency: Minnesota Department of Natural Resources  
Expired Permit Name/Number: Fisheries Management Section Special Permit #14658  
Renewed Permit Name/Number: Fisheries Management Section Special Permit #15552  
New Expiration Date: December 31, 2009

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Permitting Agency: Minnesota Department of Natural Resources  
Expired Permit Name/Number: Fisheries Management Section Special Permit #14657  
Renewed Permit Name/Number: Fisheries Management Section Special Permit #15553  
New Expiration Date: December 31, 2009

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Permitting Agency: Minnesota Department of Transportation  
Expired Permit Name/Number: Hazardous Materials Shipper Certificate of Registration UPR-211635-MN  
Renewed Permit Name/Number: Hazardous Materials Shipper Certificate of Registration UPR-211635-MN  
New Expiration Date: October 27, 2009

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Permitting Agency: South Carolina Department of Health  
Expired Permit Name/Number: Radioactive Waste Transport Permit 0051-22-08X  
Renewed Permit Name/Number: PERMIT NOT RENEWED  
New Expiration Date: Not Applicable

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Permitting Agency: Tennessee Department of Environment and Conservation  
Expired Permit Name/Number: Radioactive Shipment License T-MN003-L08  
Renewed Permit Name/Number: Radioactive Shipment License T-MN003-L09  
New Expiration Date: December 31, 2009

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Permitting Agency: Wisconsin Department of Natural Resources  
Expired Permit Name/Number: Scientific Collector's Permit SCP-WCR-20-C-08  
Renewed Permit Name/Number: Scientific Collector's Permit SCP-WCR-20-C-09  
New Expiration Date: December 31, 2009

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Permitting Agency: US Fish and Wildlife Service  
Expired Permit Name/Number: Federal Fish and Wildlife Permit MB074020-0  
Renewed Permit Name/Number: Federal Fish and Wildlife Permit MB074020-0  
New Expiration Date: March 31, 2012

**Enclosure 2**

**Updated Preliminary License Renewal Commitment List**

16 Pages

## Preliminary License Renewal Commitments

The following table provides the list of preliminary commitments included in the Application for Renewed Operating Licenses (LRA) for Prairie Island Nuclear Generating Plant (PINGP) Units 1 and 2. These commitments reflect the contents of the LRA as submitted, and any updates provided in subsequent correspondence, but are considered preliminary in that the specific wording of some commitments may change, and additional commitments may be made, during the NRC review of the LRA.

The final commitments as submitted by NSPM, and accepted by NRC, are expected to be confirmed in the NRC's Safety Evaluation Report (SER) for the renewed operating licenses. The final commitments, as confirmed in the SER, will become effective upon NRC issuance of the renewed operating licenses. In addition, as stated in the LRA, the final commitments will be incorporated into the Updated Safety Analysis Report (USAR).

Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
1	Each year, following the submittal of the PINGP License Renewal Application and at least three months before the scheduled completion of the NRC review, NMC will submit amendments to the PINGP application pursuant to 10 CFR 54.21(b). These revisions will identify any changes to the Current Licensing Basis that materially affect the contents of the License Renewal Application, including the USAR supplements.	12 months after LRA submittal date and at least 3 months before completion of NRC review	1.4
2	Following the issuance of the renewed operating license, the summary descriptions of aging management programs and TLAAs provided in Appendix A, and the final list of License Renewal commitments, will be incorporated into the PINGP USAR as part of a periodic USAR update in accordance with 10 CFR 50.71(e). Other changes to specific sections of the PINGP USAR necessary to reflect a renewed operating license will also be addressed at that time.	First USAR update in accordance with 10 CFR 50.71(e) following issuance of renewed operating licenses	A1.0
3	An Aboveground Steel Tanks Program will be implemented. Program features will be as described in LRA Section B2.1.2.	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.2
4	Procedures for the conduct of inspections in the External Surfaces Monitoring Program, Structures Monitoring Program,	U1 - 8/9/2013	B2.1.6

### Preliminary License Renewal Commitments

Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
	Buried Piping and Tanks Inspection Program, and the RG 1.127 Inspection of Water-Control Structures Associated with Nuclear Power Plants Program will be enhanced to include guidance for visual inspections of installed bolting.	U2 - 10/29/2014	
5	A Buried Piping and Tanks Inspection Program will be implemented. Program features will be as described in LRA Section B2.1.8.	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.8
6	The Closed-Cycle Cooling Water System Program will be enhanced to include periodic inspection of accessible surfaces of components serviced by closed-cycle cooling water when the systems or components are opened during scheduled maintenance or surveillance activities. Inspections are performed to identify the presence of aging effects and to confirm the effectiveness of the chemistry controls. Visual inspection of component internals will be used to detect loss of material and heat transfer degradation. Enhanced visual or volumetric examination techniques will be used to detect cracking.  [Revised in letter dated 1/20/2009 in response to RAI 3.3.2-13-01]	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.9
7	The Compressed Air Monitoring Program will be enhanced as follows: <ul style="list-style-type: none"> <li>• Station and Instrument Air System air quality will be monitored and maintained in accordance with the instrument air quality guidance provided in ISA S7.0.01-1996. Particulate testing will be revised to use a particle size methodology as specified in ISA S7.0.01.</li> </ul>	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.10

### Preliminary License Renewal Commitments

Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
	<ul style="list-style-type: none"> <li>• The program will incorporate on-line dew point monitoring.</li> </ul> <p>[Revised in letter dated 2/6/2009 in response to Region III License Renewal Inspection]</p>		
8	An Electrical Cable Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Program will be completed. Program features will be as described in LRA Section B2.1.11.	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.11
9	An Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Program will be implemented. Program features will be as described in LRA Section B2.1.12.	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.12
10	An Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Used in Instrumentation Circuits Program will be implemented. Program features will be as described in LRA Section B2.1.13.	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.13
11	<p>The External Surfaces Monitoring Program will be enhanced as follows:</p> <ul style="list-style-type: none"> <li>• The scope of the program will be expanded as necessary to include all metallic and non-metallic components within the scope of License Renewal that require aging management in accordance with this program.</li> <li>• The program will ensure that surfaces that are inaccessible or not readily visible during plant operations will be inspected during refueling outages.</li> <li>• The program will ensure that surfaces that are inaccessible or not readily visible during both plant</li> </ul>	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.14

### Preliminary License Renewal Commitments

Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
	<p>operations and refueling outages will be inspected at intervals that provide reasonable assurance that aging effects are managed such that the applicable components will perform their intended function during the period of extended operation.</p> <ul style="list-style-type: none"> <li>• The program will apply physical manipulation techniques, in addition to visual inspection, to detect aging effects in elastomers and plastics.</li> <li>• The program will include acceptance criteria (e.g., threshold values for identified aging effects) to ensure that the need for corrective actions will be identified before a loss of intended functions.</li> <li>• The program will ensure that program documentation such as walkdown records, inspection results, and other records of monitoring and trending activities are auditable and retrievable.</li> </ul> <p>[Revised in letter dated 2/6/2009 in response to RAI B2.1.14-1 Follow Up question]</p>		
12	<p>The Fire Protection Program will be enhanced to require periodic visual inspection of the fire barrier walls, ceilings, and floors to be performed during walkdowns at least once every refueling cycle.</p> <p>[Revised in letter dated 12/5/2008 in response to RAI B2.1.15-3]</p>	<p>U1 - 8/9/2013 U2 - 10/29/2014</p>	B2.1.15
13	<p>The Fire Water System Program will be enhanced as follows:</p> <ul style="list-style-type: none"> <li>• The program will be expanded to include eight additional yard fire hydrants in the scope of the annual visual</li> </ul>	<p>U1 - 8/9/2013 U2 - 10/29/2014</p>	B2.1.16

### Preliminary License Renewal Commitments

Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
	<p>inspection and flushing activities.</p> <ul style="list-style-type: none"> <li>The program will require that sprinkler heads that have been in place for 50 years will be replaced or a representative sample of sprinkler heads will be tested using the guidance of NFPA 25, "Inspection, Testing and Maintenance of Water-Based Fire Protection Systems" (2002 Edition, Section 5.3.1.1.1). Sample testing, if performed, will continue at a 10-year interval following the initial testing.</li> </ul>		
14	<p>The Flux Thimble Tube Inspection Program will be enhanced as follows:</p> <ul style="list-style-type: none"> <li>The program will require that the interval between inspections be established such that no flux thimble tube is predicted to incur wear that exceeds the established acceptance criteria before the next inspection.</li> <li>The program will require that re-baselining of the examination frequency be justified using plant-specific wear rate data unless prior plant-specific NRC acceptance for the re-baselining was received. If design changes are made to use more wear-resistant thimble tube materials, sufficient inspections will be conducted at an adequate inspection frequency for the new materials.</li> <li>The program will require that flux thimble tubes that cannot be inspected must be removed from service.</li> </ul>	<p>U1 - 8/9/2013 U2 - 10/29/2014</p>	B2.1.18
15	<p>The Fuel Oil Chemistry Program will be enhanced as follows:</p> <ul style="list-style-type: none"> <li>Particulate contamination testing of fuel oil in the eleven fuel oil storage tanks in scope of License Renewal will be</li> </ul>	<p>U1 - 8/9/2013 U2 - 10/29/2014</p>	B2.1.19

### Preliminary License Renewal Commitments

Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
	<p>performed, in accordance with ASTM D 6217, on an annual basis.</p> <ul style="list-style-type: none"> <li>One-time ultrasonic thickness measurements will be performed at selected tank bottom and piping locations prior to the period of extended operation.</li> </ul>		
16	A Fuse Holders Program will be implemented. Program features will be as described in LRA Section B2.1.20.	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.20
17	An Inaccessible Medium Voltage Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Program will be implemented. Program features will be as described in LRA Section B2.1.21	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.21
18	<p>An Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components Program will be implemented. Program features will be as described in LRA section B2.1.22. Inspections for stress corrosion cracking will be performed by visual examination with a magnified resolution as described in 10 CFR 50.55a(b)(2)(xxi)(A) or with ultrasonic methods.</p> <p>[Revised in letter dated 2/6/2009 in response to RAI B2.1.22-1 Follow Up question]</p>	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.22
19	<p>The Inspection of Overhead Heavy Load and Light Load (Related to Refueling) Handling Systems Program will be enhanced as follows:</p> <ul style="list-style-type: none"> <li>Program implementing procedures will be revised to ensure the components and structures subject to inspection are clearly identified.</li> <li>Program inspection procedures will be enhanced to</li> </ul>	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.23

### Preliminary License Renewal Commitments

Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
	include the parameters corrosion and wear where omitted.		
20	A Metal-Enclosed Bus Program will be implemented. Program features will be as described in LRA Section B2.1.26.	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.26
21	For the Nickel-Alloy Nozzles and Penetrations Program, PINGP commits to the following activities for managing the aging of nickel-alloy components susceptible to primary water stress corrosion cracking: <ul style="list-style-type: none"> <li>• Comply with applicable NRC orders, and</li> <li>• Implement applicable NRC Bulletins, Generic Letters, and staff-accepted industry guidelines.</li> </ul>	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.27
22	The Nickel-Alloy Penetration Nozzles Welded to the Upper Reactor Vessel Closure Heads of Pressurized Water Reactors Program will be enhanced as follows: <ul style="list-style-type: none"> <li>• The program will require that any deviations from implementing the appropriate required inspection methods of the NRC First Revised Order EA-03-009, "Issue of Order Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors," dated February 20, 2004 (Order), as amended, will be submitted for NRC review and approval in accordance with the Order, as amended.</li> <li>• The program will require that any deviations from implementing the required inspection frequencies mandated by the Order, as amended, will be submitted</li> </ul>	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.28

### Preliminary License Renewal Commitments

Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
	<p>for NRC review and approval in accordance with the Order, as amended.</p> <ul style="list-style-type: none"> <li>• The program will require that relevant flaw indications detected during the augmented inspections of the upper vessel head penetration nozzles will be evaluated in accordance with the criteria provided in the letter from Mr. Richard Barrett, NRC, Office of Nuclear Reactor Regulation (NRR), Division of Engineering to Alex Marion, Nuclear Energy Institute (NEI), dated April 11, 2003, or in accordance with NRC-approved Code Cases that incorporate the flaw evaluation procedures and criteria of the NRC's April 11, 2003, letter to NEI.</li> <li>• The program will require that, if leakage or evidence of cracking in the vessel head penetration nozzles (including associated J-groove welds) is detected while ranked in the "Low," "Moderate," or "Replaced" susceptibility category, the nozzles are to be immediately reclassified to the "High" susceptibility category and the required augmented inspections for the "High" susceptibility category are to be implemented during the same outage the leakage or cracking is detected.</li> </ul>		
23	A One-Time Inspection Program will be completed. Program features will be as described in LRA Section B2.1.29.	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.29
24	A One-Time Inspection of ASME Code Class 1 Small-Bore Piping Program will be completed. Program features will be as described in LRA Section B2.1.30.	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.30
25	For the PWR Vessel Internals Program, PINGP commits to the following activities for managing the aging of reactor vessel	U1 - 8/9/2011	B2.1.32

### Preliminary License Renewal Commitments

Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
	internals components: <ul style="list-style-type: none"> <li>• Participate in the industry programs for investigating and managing aging effects on reactor internals;</li> <li>• Evaluate and implement the results of the industry programs as applicable to the reactor internals; and</li> <li>• Upon completion of these programs, but not less than 24 months before entering the period of extended operation, submit an inspection plan for reactor internals to the NRC for review and approval.</li> </ul>	U2 - 10/29/2012	
26	The Reactor Head Closure Studs Program will be enhanced to incorporate controls that ensure that any future procurement of reactor head closure studs will be in accordance with the material and inspection guidance provided in NRC Regulatory Guide 1.65.	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.33
27	The Reactor Vessel Surveillance Program will be enhanced as follows: <ul style="list-style-type: none"> <li>• A requirement will be added to ensure that all withdrawn and tested surveillance capsules, not discarded as of August 31, 2000, are placed in storage for possible future reconstitution and use.</li> <li>• A requirement will be added to ensure that in the event spare capsules are withdrawn, the untested capsules are placed in storage and maintained for future insertion.</li> </ul>	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.34

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Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
28	<p>The RG 1.127, Inspection of Water-Control Structures Associated with Nuclear Power Plants Program will be enhanced as follows:</p> <ul style="list-style-type: none"> <li>• The program will include inspections of concrete and steel components that are below the water line at the Screenhouse and Intake Canal. The scope will also require inspections of the Approach Canal, Intake Canal, Emergency Cooling Water Intake, and Screenhouse immediately following extreme environmental conditions or natural phenomena including an earthquake, flood, tornado, severe thunderstorm, or high winds.</li> <li>• The program parameters to be inspected will include an inspection of water-control concrete components that are below the water line for cavitation and erosion degradation.</li> <li>• The program will visually inspect for damage such as cracking, settlement, movement, broken bolted and welded connections, buckling, and other degraded conditions following extreme environmental conditions or natural phenomena.</li> </ul>	<p>U1 - 8/9/2013 U2 - 10/29/2014</p>	B2.1.35
29	<p>A Selective Leaching of Materials Program will be completed. Program features will be as described in LRA B2.1.36.</p>	<p>U1 - 8/9/2013 U2 - 10/29/2014</p>	B2.1.36

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Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
30	<p>The Structures Monitoring Program will be enhanced as follows:</p> <ul style="list-style-type: none"> <li>• The following structures, components, and component supports will be added to the scope of the inspections: <ul style="list-style-type: none"> <li>○ Approach Canal</li> <li>○ Fuel Oil Transfer House</li> <li>○ Old Administration Building and Administration Building Addition</li> <li>○ Component supports for cable tray, conduit, cable, tubing tray, tubing, non-ASME vessels, exchangers, pumps, valves, piping, mirror insulation, non-ASME valves, cabinets, panels, racks, equipment enclosures, junction boxes, bus ducts, breakers, transformers, instruments, diesel equipment, housings for HVAC fans, louvers, and dampers, HVAC ducts, vibration isolation elements for diesel equipment, and miscellaneous electrical and mechanical equipment items</li> <li>○ Miscellaneous electrical equipment and instrumentation enclosures including cable tray, conduit, wireway, tube tray, cabinets, panels, racks, equipment enclosures, junction boxes, breaker housings, transformer housings, lighting fixtures, and metal bus enclosure assemblies</li> <li>○ Miscellaneous mechanical equipment enclosures including housings for HVAC fans, louvers, and dampers</li> <li>○ SBO Yard Structures and components including</li> </ul> </li> </ul>	<p>U1 - 8/9/2013 U2 - 10/29/2014</p>	B2.1.38

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Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
	<p style="text-align: center;">SBO cable vault and bus duct enclosures.</p> <ul style="list-style-type: none"> <li>○ Fire Protection System hydrant houses</li> <li>○ Caulking, sealant and elastomer materials</li> <li>○ Non-safety related masonry walls that support equipment relied upon to perform a function that demonstrates compliance with a regulated event(s).</li> </ul> <ul style="list-style-type: none"> <li>● The program will be enhanced to include additional inspection parameters.</li> <li>● The program will require an inspection frequency of once every five (5) years for structures and structural components within the scope of the program. The frequency of inspections can be adjusted, if necessary, to allow for early detection and timely correction of negative trends.</li> <li>● The program will require periodic sampling of groundwater and river water chemistries to ensure they remain non-aggressive.</li> </ul>		
31	A Thermal Aging Embrittlement of Cast Austenitic Stainless Steel (CASS) Program will be implemented. Program features will be as described in LRA Section B2.1.39.	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.39
32	<p>The Water Chemistry Program will be enhanced as follows:</p> <ul style="list-style-type: none"> <li>● The program will require increased sampling to be performed as needed to confirm the effectiveness of corrective actions taken to address an abnormal chemistry condition.</li> </ul>	U1 - 8/9/2013 U2 - 10/29/2014	B2.1.40

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Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
	<ul style="list-style-type: none"> <li>• The program will require Reactor Coolant System dissolved oxygen Action Level limits to be consistent with the limits established in the EPRI PWR Primary Water Chemistry Guidelines."</li> </ul> <p>[Revised in letter dated 12/5/2008 in response to RAI B2.1.40-3]</p>		
33	<p>The Metal Fatigue of Reactor Coolant Pressure Boundary Program will be enhanced as follows:</p> <ul style="list-style-type: none"> <li>• The program will monitor the six component locations identified in NUREG/CR-6260 for older vintage Westinghouse plants, either by tracking the cumulative number of imposed stress cycles using cycle counting, or by tracking the cumulative fatigue usage, including the effects of coolant environment. The following locations will be monitored:               <ul style="list-style-type: none"> <li>○ Reactor Vessel Inlet and Outlet Nozzles</li> <li>○ Reactor Pressure Vessel Shell to Lower Head</li> <li>○ RCS Hot Leg Surge Line Nozzle</li> <li>○ RCS Cold Leg Charging Nozzle</li> <li>○ RCS Cold Leg Safety Injection Accumulator Nozzle</li> <li>○ RHR-to-Accumulator Piping Tee</li> </ul> </li> <li>• Program acceptance criteria will be clarified to require corrective action to be taken before a cumulative fatigue usage factor exceeds 1.0 or a design basis transient cycle limit is exceeded.</li> </ul> <p>[Revised in letter dated 1/9/2009 in response to RAI 4.3.1.1-1]</p>	<p>U1 - 8/9/2013 U2 - 10/29/2014</p>	B3.2

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<b>Commitment Number</b>	<b>Commitment</b>	<b>Implementation Schedule</b>	<b>Related LRA Section Number</b>
34	Reactor internals baffle bolt fatigue transient limits of 1835 cycles of plant loading at 5% per minute and 1835 cycles of plant unloading at 5% per minute will be incorporated into the Metal Fatigue of Reactor Coolant Pressure Boundary Program and USAR Table 4.1-8.	U1 - 8/9/2013 U2 - 10/29/2014	B3.2
35	NSPM will perform an ASME Section III fatigue evaluation of the lower head of the pressurizer to account for effects of insurge/outsurge transients. The evaluation will determine the cumulative fatigue usage of limiting pressurizer component(s) through the period of extended operation. The analyses will account for periods of both "Water Solid" and "Standard Steam Bubble" operating strategies. Analysis results will be incorporated, as applicable, into the Metal Fatigue of Reactor Coolant Pressure Boundary Program.  [Revised in letter dated 1/9/2009 in response to RAI 4.3.1.1-1]	U1 - 8/9/2013 U2 - 10/29/2014	4.3.1.3
36	NSPM will complete fatigue calculations for the pressurizer surge line hot leg nozzle and the charging nozzle using the methodology of the ASME Code (Subsection NB) and will report the revised CUFs and CUFs adjusted for environmental effects at these locations as an amendment to the PINGP LRA. Conforming changes to LRA Section 4.3.3, "PINGP EAF Results," will also be included in that amendment to reflect analysis results and remove references to stress-based fatigue monitoring.  [Added in letter dated 1/9/2009 in response to RAI 4.3.1.1-1]	April 30, 2009	4.3.3
37	NSPM will revise procedures for excavation and trenching controls and archaeological, cultural and historic resource protection to identify sensitive areas and provide guidance for ground-disturbing activities. The procedures will be revised to	8/9/2013	ER 4.16.1

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Commitment Number	Commitment	Implementation Schedule	Related LRA Section Number
	<p>include drawings and illustrations to assist users in identifying culturally sensitive areas, and pictures of artifacts that are prevalent in the area of the Plant site. The revised procedures will also require training of the Site Environmental Coordinator and other personnel responsible for proper execution of excavation or other ground-disturbing activities.</p> <p>[Added in ER revision submitted in letter dated 3/4/2009]</p>		
38	<p>NSPM will conduct a Phase I Reconnaissance Field Survey of the disturbed areas within the Plant's boundaries. In addition, NSPM will conduct Phase I field surveys of areas of known archaeological sites to precisely determine their boundaries. NSPM will use the results of these surveys to designate areas for archaeological protection.</p> <p>[Added in ER revision submitted in letter dated 3/4/2009]</p>	8/9/2013	ER 4.16.2
39	<p>NSPM will prepare, maintain and implement a Cultural Resources Management Plan (CRMP) to protect significant historical, archaeological, and cultural resources that may currently exist on the Plant site. In connection with the preparation of the CRMP, NSPM will conduct botanical surveys to identify culturally and medicinally important species on the Plant site, and incorporate provisions to protect such plants into the CRMP.</p> <p>[Added in ER revision submitted in letter dated 3/4/2009]</p>	8/9/2013	ER 4.16.2
40	<p>NSPM will consult with a qualified archaeologist prior to conducting any ground-disturbing activity in any area designated as undisturbed and in any disturbed area that is described as potentially containing archaeological resources (as</p>	8/9/2013	ER 4.16.2

### Preliminary License Renewal Commitments

<b>Commitment Number</b>	<b>Commitment</b>	<b>Implementation Schedule</b>	<b>Related LRA Section Number</b>
	determined by the Phase I Reconnaissance Field Survey discussed in Commitment Number 38).  [Added in ER revision submitted in letter dated 3/4/2009]		