



Constellation Energy

Nine Mile Point Nuclear Station

P.O. Box 63
Lycoming, New York 13093

November 19, 2004
NMP1L 1888

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

SUBJECT: Nine Mile Point Units 1 and 2
Docket Nos. 50-220 and 50-410
Facility Operating License Nos. DPR-63 and NPF-69

License Renewal Application – Submittal of Supplemental Information Resulting
from the NRC Audits and Ongoing Reviews of Aging Management Programs
(TAC Nos. MC0691 and MC0692)

Gentlemen:

By letter dated May 26, 2004, Nine Mile Point Nuclear Station, LLC (NMPNS) submitted an application to renew the operating licenses for Nine Mile Point Units 1 and 2.

As a result of NRC audits and ongoing reviews of the aging management programs, supplemental and/or revised information in support of the License Renewal Application is being submitted as Attachment 1. Attachment 2 provides a list of the regulatory commitments associated with this submittal.

If you have any questions about this submittal, please contact Peter Mazzaferro, NMPNS License Renewal Project Manager, at (315) 349-1019.

Very truly yours,

James A. Spina
Vice President Nine Mile Point

JAS/DEV/jm

A107

ATTACHMENT 1

Nine Mile Point Nuclear Station

Supplemental and/or Revised Information in Support of the License Renewal Application

Resulting from NRC Audits and Ongoing Reviews of Aging Management Programs

**Supplemental and/or Revised Information in Support of the License Renewal Application
Resulting from NRC Audits and Ongoing Reviews of Aging Management Programs**

This supplemental information is formatted as follows. For each identified License Renewal Application (LRA) section, the audit item description or auditor question is provided, followed by the Nine Mile Point Nuclear Station, LLC (NMPNS) response for Nine Mile Point Unit 1 (NMP1) and/or Nine Mile Point Unit 2 (NMP2), as applicable. Revisions to the LRA are described where appropriate. Changes to the LRA are highlighted in *italics* unless otherwise noted.

LRA Appendix B, Section B2.1.8, BWR Vessel Internals Program

Audit Item 156

The BWRVIP Program, as described in the LRA, does not address the required license renewal applicant action items. Please provide NMP's commitment to these items.

Response

The descriptions of the BWR Vessel Internals Program contained in LRA Sections A1.1.12, A2.1.13, and B2.1.8 are revised to incorporate the license renewal action items associated with the Boiling Water Reactor Vessel and Internals Project (BWRVIP) program, as described below.

LRA Revisions

LRA Section A1.1.12 (page A1-5), is revised as follows:

*“The BWR Vessel Internals Program manages aging of materials inside the reactor vessel. Program activities include (1) inspections for the presence and effects of cracking; and (2) monitoring and control of water chemistry. This program is based on guidelines issued by the BWRVIP and approved (or pending approval¹) by the NRC. *The NMP1 BWRVIP program administration is consistent with the guidelines contained in BWRVIP-94, BWR Vessel and Internals Project, Program Implementation Guide. Inspections and evaluations of reactor vessel components are consistent with the guidelines provided in the following BWRVIP reports:**

*BWRVIP-18, BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines
BWRVIP-25, BWR Core Plate Inspection and Flaw Evaluation Guidelines
BWRVIP-26, BWR Top Guide Inspection and Flaw Evaluation Guidelines
BWRVIP-27, BWR Standby Liquid Control System/Core Plate ΔP Inspection and Flaw Evaluation Guidelines
BWRVIP-38, BWR Shroud Support Inspection and Flaw Evaluation Guidelines
BWRVIP-47, BWR Lower Plenum Inspection and Flaw Evaluation Guidelines
BWRVIP-48, Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines*

*BWRVIP-49, Instrument Penetration Inspection and Flaw Evaluation Guidelines
BWRVIP-74, BWR Reactor Pressure Vessel Inspection and Flaw Evaluation Guidelines
BWRVIP-76, BWR Core Shroud Inspection and Flaw Evaluation Guidelines*

NMP1 has completed, or will complete, each of the license renewal applicant action items described in the NRC safety evaluations for these BWRVIP reports. In addition, NMP1 will implement the NRC approved inspection and flaw evaluation guidelines for the steam dryer and inaccessible core spray component welds when issued. The attributes of the BWR Vessel Internals Program related to maintaining reactor coolant water chemistry are included in the Water Chemistry Control Program.”

LRA Section A2.1.13 (page A2-5), is revised as follows:

“The BWR Vessel Internals Program manages aging of materials inside the reactor vessel. Program activities include (1) inspections for the presence and effects of cracking; and (2) monitoring and control of water chemistry. This program is based on guidelines issued by the BWRVIP and approved (or pending approval¹) by the NRC. The NMP2 BWRVIP program administration is consistent with the guidelines contained in BWRVIP-94, BWR Vessel and Internals Project, Program Implementation Guide. Inspections and evaluations of reactor vessel components are consistent with the guidelines provided in the following BWRVIP reports:

*BWRVIP-18, BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines
BWRVIP-25, BWR Core Plate Inspection and Flaw Evaluation Guidelines
BWRVIP-26, BWR Top Guide Inspection and Flaw Evaluation Guidelines
BWRVIP-27, BWR Standby Liquid Control System/Core Plate ΔP Inspection and Flaw Evaluation Guidelines
BWRVIP-38, BWR Shroud Support Inspection and Flaw Evaluation Guidelines
BWRVIP-41, BWR Jet Pump Assembly Inspection and Flaw Evaluation Guidelines
BWRVIP-42, LPCI Coupling Inspection and Flaw Evaluation Guidelines
BWRVIP-47, BWR Lower Plenum Inspection and Flaw Evaluation Guidelines
BWRVIP-48, Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines
BWRVIP-49, Instrument Penetration Inspection and Flaw Evaluation Guidelines
BWRVIP-74, BWR Reactor Pressure Vessel Inspection and Flaw Evaluation Guidelines
BWRVIP-76, BWR Core Shroud Inspection and Flaw Evaluation Guidelines*

NMP2 has completed, or will complete, each of the license renewal applicant action items described in the NRC safety evaluations for these BWRVIP reports. In addition, NMP2 will implement the NRC approved inspection and flaw evaluation guidelines for the steam dryer, access hole cover, and inaccessible core spray, jet pump, and LPCI component welds when issued. The attributes of the BWR Vessel Internals Program related to maintaining reactor coolant water chemistry are included in the Water Chemistry Control Program.”

LRA Section B2.1.8 (page B-21), under the “Program Description” heading, the existing text is replaced, in its entirety, with the following:

“The BWR Vessel Internals Program is an existing program that manages aging of materials inside the reactor vessel. Program activities include (1) inspections for the presence and effects of cracking; and (2) monitoring and control of water chemistry. This program is based on guidelines issued by the BWR Vessel and Internals Project (BWRVIP) and approved (or pending approval¹) by the NRC. The NMPNS BWRVIP program administration is consistent with the guidelines contained in BWRVIP-94, “BWR Vessel and Internals Project, Program Implementation Guide.” The attributes of the BWR Vessel Internals Program related to maintaining reactor coolant water chemistry are included in the Water Chemistry Control Program (Section B2.1.2).

Inspections and evaluations of reactor vessel components are consistent with the guidelines provided in the following BWRVIP reports:

BWRVIP-18, BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines
BWRVIP-25, BWR Core Plate Inspection and Flaw Evaluation Guidelines
BWRVIP-26, BWR Top Guide Inspection and Flaw Evaluation Guidelines
BWRVIP-27, BWR Standby Liquid Control System/Core Plate ΔP Inspection and Flaw Evaluation Guidelines
BWRVIP-38, BWR Shroud Support Inspection and Flaw Evaluation Guidelines
BWRVIP-41, BWR Jet Pump Assembly Inspection and Flaw Evaluation Guidelines (NMP2 only)
BWRVIP-42, LPCI Coupling Inspection and Flaw Evaluation Guidelines (NMP2 only)
BWRVIP-47, BWR Lower Plenum Inspection and Flaw Evaluation Guidelines
BWRVIP-48, Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines
BWRVIP-49, Instrument Penetration Inspection and Flaw Evaluation Guidelines
BWRVIP-74, BWR Reactor Pressure Vessel Inspection and Flaw Evaluation Guidelines
BWRVIP-76, BWR Core Shroud Inspection and Flaw Evaluation Guidelines

The following table addresses the license renewal applicant action items identified in the corresponding NRC safety evaluation (SE) for each of the listed BWRVIP reports. BWRVIP-76 is not included in the table as it has not received NRC review and approval to date. Each of the NRC SEs includes three common applicant action items. The NMPNS response to each common action item is the same and is addressed only once in the following table. For those SEs which contained additional applicant action items, the NMPNS response is provided separately following the responses to the three common items.

BWRVIP License Renewal Applicant Action Items

| Action Item Description | NMPNS Response |
|---|--|
| Common Action Items | |
| <p>BWRVIP-All (1) The license renewal applicant is to verify that its plant is bounded by the report. Further, the renewal applicant is to commit to programs described as necessary in the BWRVIP reports to manage the effects of aging during the period of extended operation. Applicants for license renewal will be responsible for describing any such commitments and identifying how such commitments will be controlled. Any deviations from the aging management programs within these BWRVIP reports described as necessary to manage the effects of aging during the period of extended operation and to maintain the functionality of the components or other information presented in the report, such as materials of construction, will have to be identified by the renewal applicant and evaluated on a plant-specific basis in accordance with 10 CFR 54.21(a)(3) and (c)(1).</p> | <p>NMPNS has reviewed each BWRVIP report and verified that NMP1 and NMP2 are bounded by the reports. Additionally, NMPNS commits to programs described as necessary in the BWRVIP reports to manage the effects of aging during the period of extended operation. These commitments are described by reference to the applicable BWRVIP report in Appendix A of the LRA, FSAR Supplement, and administratively controlled in accordance with the guidelines of BWRVIP-94. Any deviation from a BWRVIP report approved by the NRC will be reported to the NRC within 45 days of the NRC approval.</p> |
| <p>BWRVIP-All (2) 10 CFR 54.21(d) requires that an FSAR supplement for the facility contain a summary description of the programs and activities for managing the effects of aging and the evaluation of TLAA's for the period of extended operation. Those applicants for license renewal referencing the applicable BWRVIP report shall ensure that the programs and activities specified as necessary in the applicable BWRVIP reports are summarily described in the FSAR supplement.</p> | <p>The FSAR Supplements for NMP1 and NMP2 are included as Appendix A of the LRA and include a summary of the programs and activities specified as necessary for the BWRVIP program.</p> |

| Action Item Description | NMPNS Response |
|--|--|
| <p>BWRVIP-All (3) 10 CFR 54.22 requires that each application for license renewal include any technical specification changes (and the justification for the changes) or additions necessary to manage the effects of aging during the period of extended operation as part of the renewal application. The applicable BWRVIP reports may state that there are no generic changes or additions to technical specifications associated with the report as a result of its aging management review and that the applicant will provide the justification for plant-specific changes or additions. Those applicants for license renewal referencing the applicable BWRVIP reports shall ensure that the inspection strategy described in the reports does not conflict with or result in any changes to their technical specifications. If technical specification changes or additions do result, then the applicant must ensure that those changes are included in its application for license renewal.</p> | <p>There have been no technical specification changes identified for NMP1 or NMP2 based upon the BWRVIP reports.</p> |
| Additional Action Items | |
| <p>BWRVIP-18 (4) Applicants referencing the BWRVIP-18 report for license renewal should identify and evaluate any potential TLAA issues which may impact the structural integrity of the subject RPV internal components.</p> | <p>There were no TLAA issues identified for NMP1 for BWRVIP-18.</p> <p>For NMP2, the Core Spray Sparger was identified as a TLAA issue and is included in Section 4.3.5 of the LRA, Reactor Vessel Internals Fatigue Analysis.</p> |

| Action Item Description | NMPNS Response |
|---|---|
| <p>BWRVIP-25 (4) Due to susceptibility of the rim hold-down bolts to stress relaxation, applicants referencing the BWRVIP-25 report for license renewal should identify and evaluate the projected stress relaxation as a potential TLAA issue.</p> | <p>This issue is not applicable to NMP1 as it has core plate wedges installed.</p> <p>For NMP2, the TLAA addressing this issue is described in Section 4.7.3 of the LRA, Stress Relaxation of Core Plate Hold-Down Bolts.</p> |
| <p>BWRVIP-25 (5) Until such time as an expanded technical basis for not inspecting the rim hold-down bolts is approved by the staff, applicants referencing the BWRVIP-25 report for license renewal should continue to perform inspections of the rim hold-down bolts.</p> | <p>This issue is not applicable to NMP1 as it has core plate wedges installed.</p> <p>For NMP2, inspections of the core plate rim hold-down bolts will continue until such time that an NRC-approved technical basis is issued.</p> |
| <p>BWRVIP-26 (4) Due to IASCC susceptibility of the subject safety-related components, applicants referencing the BWRVIP-26 report for license renewal should identify and evaluate the projected accumulated neutron fluence as a potential TLAA issue.</p> | <p>NMPNS has concluded that both NMP1 and NMP2 have exceeded the neutron fluence threshold for IASCC susceptibility for the top guide. As such, the top guide grid beam inspections recommended in GE Service Information Letter (SIL) 554 have been incorporated into the BWRVIP Inspection Plans for both units. NMP1 has completed the first inspections, and NMP2 will perform the first inspections during its next refueling outage. Therefore, evaluating the projected accumulated neutron fluence as a potential TLAA is considered unwarranted.</p> |
| <p>BWRVIP-27 (4) Due to the susceptibility of the subject components to fatigue, applicants referencing the BWRVIP- 27 report for license renewal should identify and evaluate the projected fatigue cumulative usage factors as a potential TLAA issue.</p> | <p>There were no TLAA issues identified for NMP1 for BWRVIP-27.</p> <p>For NMP2, the Standby Liquid Control System/ Core Plate dP line was identified as a TLAA issue and is included in Section 4.3.5 of the LRA, Reactor Vessel Internals Fatigue Analysis.</p> |

| Action Item Description | NMPNS Response |
|--|--|
| <p>BWRVIP-42 (4) Applicants referencing the BWRVIP-42 report for license renewal should identify and evaluate any potential TLAA issues which may impact the structural integrity of the subject RPV internal components.</p> | <p>This issue is not applicable for NMP1 as it is a BWR/2 design and does not have a low pressure coolant injection (LPCI) line.</p> <p>For NMP2, the LPCI line was identified as a TLAA issue and is included in Section 4.3.1 of the LRA, Reactor Vessel Fatigue Analysis.</p> |
| <p>BWRVIP-42 (5) The BWRVIP committed to address development of the technology to inspect inaccessible welds and to have the individual LR applicant notify the NRC of actions planned. Applicants referencing BWRVIP-42 report for license renewal should identify the action as open and to be addressed once the BWRVIP's response to this issue has been reviewed and accepted by the staff.</p> | <p>This issue is not applicable to NMP1 as it is a BWR/2 design and does not have a LPCI line.</p> <p>The inspection of inaccessible welds is a generic open action. NMP2 will address this issue once the BWRVIP's response has been reviewed and accepted by the NRC.</p> |
| <p>BWRVIP-47 (4) Due to fatigue of the subject safety-related components, applicants referencing the BWRVIP-47 report for LR should identify and evaluate the projected CUF as a potential TLAA issue.</p> | <p>There were no TLAA issues identified for NMP1 for BWRVIP-47.</p> <p>For NMP2, TLAA issues for components addressed in BWRVIP-47 are included in LRA Section 4.3.1, Reactor Vessel Fatigue Analysis, and Section 4.3.5, Reactor Vessel Internals Fatigue Analysis.</p> |

| Action Item Description | NMPNS Response |
|--|--|
| <p>BWRVIP-74-A (4) The staff is concerned that leakage around the reactor vessel seal rings could accumulate in the VFLD lines, cause an increase in the concentration of contaminants and cause cracking in the VFLD line. The BWRVIP-74 report does not identify this component as within the scope of the report. However, since the VFLD line is attached to the RPV and provides a pressure boundary function, LR applicants should identify an AMP for the VFLD line.</p> | <p>The NMP1 vessel flange leak detection (VFLD) line is currently not in-scope since the NMP1 licensing basis does not classify this line as having a reactor coolant pressure boundary function. However, NMP1 will re-evaluate this classification and identify an aging management program as appropriate.</p> <p>For NMP2, the VFLD line is in-scope and has cracking identified as an aging effect requiring management. It is managed by the One-Time Inspection and ASME Section XI programs.</p> |
| <p>BWRVIP-74-A (5) LR applicants shall describe how each plant-specific aging management program addresses the following elements: (1) scope of program, (2) preventative actions, (3) parameters monitored and inspected, (4) detection of aging effects, (5) monitoring and trending, (6) acceptance criteria, (7) corrective actions, (8) confirmation process, (9) administrative controls, and (10) operating experience.</p> | <p>The Systems Walkdown Program is the only plant-specific aging management program credited for managing aging of the reactor pressure vessels (credited for the NMP2 VFLD line). The assessment of all 10 aging attributes for this AMP is addressed in LRA Section B2.1.33.</p> |
| <p>BWRVIP-74-A (6) The staff believes inspection by itself is not sufficient to manage cracking. Cracking can be managed by a program that includes inspection and water chemistry. BWRVIP-29 describes a water chemistry program that contains monitoring and control guidelines for BWR water that is acceptable to the staff. BWRVIP-29 is not discussed in the BWRVIP-74 report. Therefore, in addition to the previously discussed BWRVIP reports, LR applicants shall contain water chemistry programs based on monitoring and control guidelines for reactor water chemistry that are contained in BWRVIP-29.</p> | <p>NMPNS maintains a Water Chemistry Control Program for NMP1 and NMP2 as described in LRA Section B2.1.2.</p> |

| Action Item Description | NMPNS Response |
|---|---|
| <p>BWRVIP-74-A (7) LR applicants shall identify their vessel surveillance program, which is either an ISP or plant-specific in-vessel surveillance program, applicable to the LR term.</p> | <p>The Reactor Vessel Surveillance Program for NMP1 and NMP2 will be an Integrated Surveillance Program for the license renewal term, as described in Section B2.1.19 of the LRA.</p> |
| <p>BWRVIP-74-A (8) LR applicants should verify that the number of cycles assumed in the original fatigue design is conservative to assure that the estimated fatigue usage for 60 years of plant operation is not underestimated. The use of alternative actions for cases where the estimated fatigue usage is projected to exceed 1.0 will require case by case staff review and approval. Further, a LR applicant must address environmental fatigue for the components listed in the BWRVIP-74 report for the LR period.</p> | <p>Thermal fatigue (including discussions of cycles, projected cumulative usage factors, environmental fatigue, etc.) is evaluated as a TLAA and described in Section 4.3 of the LRA.</p> |
| <p>BWRVIP-74-A (9) Appendix A to the BWRVIP-74 report indicates that a set of P-T curves should be developed for the heatup and cooldown operating conditions in the plant at a given EFPY in the LR period.</p> | <p>The development of P-T curves for NMP1 and NMP2 for the license renewal period is described as a TLAA in Section 4.2.2 of the LRA.</p> |
| <p>BWRVIP-74-A (10) To demonstrate that the beltline materials meet the Charpy USE criteria specified in Appendix B of the report, the applicant shall demonstrate that the percent reduction in Charpy USE for their beltline materials are less than those specified for the limiting BWR/3-6 plates and the non-Linde 80 submerged arc welds and that the percent reduction in Charpy USE for their surveillance weld and plate are less than or equal to the values projected using the methodology in RG 1.99, Revision 2.</p> | <p>The discussion of Charpy upper shelf energy (USE) for NMP1 and NMP2 for the license renewal period is described as a TLAA in Section 4.2.1 of the LRA. NMP1 has utilized an Equivalent Margin Analysis to confirm acceptability of the USE for the license renewal period, whereas NMP2 has utilized the RG 1.99, Revision 2, methodology.</p> |

| Action Item Description | NMPNS Response |
|--|---|
| <p>BWRVIP-74-A (11) To obtain relief from the inservice inspection of the circumferential welds during the LR period, the BWRVIP report indicates each licensee will have to demonstrate that (1) at the end of the renewal period, the circumferential welds will satisfy the limiting conditional failure frequency for circumferential welds in the Appendix E for the staff's July 28, 1998, FSER, and (2) that they have implemented operator training and established procedures that limit the frequency of cold overpressure events to the amount specified in the staff's FSER.</p> | <p>The discussion of relief from the inservice inspection of the circumferential welds for NMP1 for the license renewal period is described in Section 4.2.3 of the LRA.</p> <p>For NMP2, this relief has not been sought for the current operating term. Therefore, this item is not applicable.</p> |
| <p>BWRVIP-74-A (12) As indicated in the staff's March 7, 2000, letter to Carl Terry, a LR applicant shall monitor axial beltline weld embrittlement. One acceptable method is to determine that the mean RT_{NDT} of the limiting axial beltline weld at the end of the period of extended operation is less than the values specified in Table 1 of this FSER.</p> | <p>The discussion of RPV axial weld failure probability for NMP1 and NMP2 for the license renewal period is described in Section 4.2.4 of the LRA.</p> |
| <p>BWRVIP-74-A (13) The Charpy USE, P-T limit, circumferential weld and axial weld RPV integrity evaluations are all dependent upon the neutron fluence. The applicant may perform neutron fluence calculations using staff approved methodology or may submit the methodology for staff review. If the applicant performs the neutron fluence calculation using a methodology previously approved by the staff, the applicant should identify the NRC letter that approved the methodology.</p> | <p>The neutron fluence calculational methodology for NMP1 and NMP2 is consistent with RG 1.190. The NRC approved this plant-specific methodology in a letter dated October 27, 2003.</p> |

| Action Item Description | NMPNS Response |
|---|---|
| <p>BWRVIP-74-A (14) Components that have indications that have been previously analytically evaluated in accordance with sub-section IWB-3600 of Section XI to the ASME Code until the end of the 40-year service period shall be re-evaluated for the 60-year service period corresponding to the LR term.</p> | <p>NMP1 has performed flaw evaluations for previously identified indications. These are discussed in Section 4.7.4 of the LRA.</p> <p>This is not applicable to NMP2 as no indications have been previously identified.</p> |

LRA Section B2.1.8 (page B-21), under the “Enhancements” heading, “None” is replaced with the following:

“Prior to the period of extended operation, the enhancements listed below will be implemented in the following program element:

Program Elements Affected

Detection of Aging Effects:

BWRVIP-18, BWRVIP-41, and BWRVIP-42 identify open items regarding the inspection of inaccessible welds for core spray, jet pump, and low pressure coolant injection (LPCI) components, respectively. As such, NMPNS will implement the resolution of these open items as documented in the BWRVIP response and reviewed and accepted by the NRC. These three open items are applicable to NMP2. For NMP1, only the open item for core spray components is applicable due to the design of the plant.

The inspection and evaluation guidelines for steam dryers are currently under development by the BWRVIP committee. Once these guidelines are documented, and reviewed and accepted by the NRC, the actions will be implemented at NMP1 and NMP2 in accordance with the BWRVIP program.

The inspection and evaluation guidelines for access hole covers are currently under development by the BWRVIP committee. Once these guidelines are documented, and reviewed and accepted by the NRC, the actions will be implemented at NMP2 in accordance with the BWRVIP program. This issue is not applicable to NMP1 due to the design of the plant.”

The baseline inspections recommended in BWRVIP-47 for the BWR lower plenum components will be incorporated into the appropriate program and implementing documents.

LRA Appendix B, Section B2.1.14, Compressed Air Monitoring Program (NMP1 only)

Audit Item 115

In the LRA, the Compressed Air Monitoring Program is stated to be applicable only to NMP1. What program(s) will be credited to manage the aging effects for those portions of the NMP2 Compressed Air System that are in-scope and subject to AMR? The AMR for the NMP2 Compressed Air System states the Appendix J program is credited. However, the applicant needs to provide justification for crediting this program to manage aging alone.

Response

The portions of the NMP2 Compressed Air System that are in-scope and subject to AMR are the primary containment isolation valves and associated piping. These components are constructed of carbon steel and have an internal environment of air. Currently, the Appendix J program performs leak-rate testing periodically. Leakage from the isolation valves was initially assumed to provide an early indication of potential aging effects present on the internal surfaces of the piping and valves. However, after further review, NMPNS has concluded that crediting the One-Time Inspection Program, in addition to the Appendix J Program, is more appropriate to verify that aging degradation will not impact the ability of the NMP2 Compressed Air System to perform its intended function.

LRA Revisions

In LRA Section 3.3.2.B.5 (page 3.3-46), under the “Aging Management Programs” heading, the list of programs for managing the aging effect for the NMP2 Compressed Air System components is revised by adding the “One-Time Inspection Program.”

In LRA Section B2.1.14, under the “Program Description” heading, the last sentence (at the top of page B-32) is revised as follows:

*“The Compressed Air Monitoring Program is only applicable to NMP1 since the components requiring *aging management* for the NMP2 Compressed Air System are *managed under* the 10 CFR 50 Appendix J Program *and the One-Time Inspection Program.*”*

LRA Appendix B, Section B2.1.15, BWR Reactor Water Cleanup System Program

Audit Items 100, 101, 102, 103 and 104

In the LRA, the applicant refers to their ASME Section XI ISI Program Plan when addressing the BWR Reactor Water Cleanup System Program described in the GALL. The GALL program refers to NUREG-0313 and GL 88-01. Please address these NRC documents specifically. Also, identify which inspection schedule NMP1 and NMP2 follow.

Response

NMP1 and NMP2 meet the requirements of NUREG-0313, Revision 2, and Generic Letter (GL) 88-01 and its Supplement 1 with respect to the Reactor Water Cleanup Systems. The reference to the ISI Program Plan in the LRA was meant to indicate that these requirements are included as augmented inspections in the ISI Program Plan.

With respect to the inspection schedules for the piping welds outboard of the containment isolation valves, both NMP1 and NMP2 fall under Schedule A; no inspections are required. For NMP1, all three screening criteria defined in the Scope of Program attribute in GALL Section XI.M25 are met. Note that even though NMP1 has experienced an intergranular stress corrosion cracking (IGSCC)-related pinhole leak, NMPNS considers the GALL criteria met since (1) the subject weld is considered an isolated case (i.e., further sensitized due to an original construction repair); and (2) inspections of this weld, following repair, and inspections of those welds required by GL 88-01, have shown no indications of IGSCC. For NMP2, screening criterion (a) defined in the Scope of Program attribute in GALL Section XI.M25 is met along with the fact that the subject piping is made of material resistant to IGSCC.

LRA Revisions

LRA Section A1.1.9 (page A1-4) is revised as follows:

*“The BWR Reactor Water Cleanup System Program manages the effects of *stress corrosion cracking or* intergranular stress corrosion cracking on the intended function of austenitic stainless steel piping in the Reactor Water Cleanup System. This program is based on *the NRC criteria related to inspection guidelines for RWCU piping welds outboard of the second isolation valve as delineated in NUREG-0313, Revision 2, and Generic Letter 88-01. An exception is taken to the Acceptance Criteria program element in that NMP1 utilizes the 1989 edition with no addenda of the ASME Section XI code versus the 1995 edition through the 1996 addenda as defined in the GALL.* The attributes of the BWR Reactor Water Cleanup System Program related to maintaining reactor coolant water chemistry are included in the Water Chemistry Control Program.”*

LRA Section A2.1.10 (page A2-4) is revised as follows:

*“The BWR Reactor Water Cleanup System Program manages the effects of *stress corrosion cracking or* intergranular stress corrosion cracking on the intended function of*

austenitic stainless steel piping in the Reactor Water Cleanup System. This program is based on *the NRC criteria related to inspection guidelines for RWCU piping welds outboard of the containment isolation valve as delineated in NUREG-0313, Revision 2, and Generic Letter (GL) 88-01. The design of the NMP2 RWCU system is such that carbon steel piping welds are not required to be examined in accordance with GL 88-01.* The attributes of the BWR Reactor Water Cleanup System Program related to maintaining reactor coolant water chemistry are included in the Water Chemistry Control Program.”

In LRA Section B2.1.15 (page B-33), under the “Program Description” heading, the first paragraph is revised as follows:

“The BWR Reactor Water Cleanup System Program manages the effects of *stress corrosion cracking (SCC) or intergranular stress corrosion cracking (IGSCC)* on the intended function of austenitic stainless steel piping in the Reactor Water Cleanup System. This program is based on *the NRC criteria related to inspection guidelines for RWCU piping welds outboard of the containment isolation valve as delineated in NUREG-0313, Revision 2, and Generic Letter (GL) 88-01. An exception is taken to the Acceptance Criteria program element in that NMP1 utilizes the 1989 edition with no addenda of the ASME Section XI code versus the 1995 edition through the 1996 addenda as defined in the GALL. The design of the NMP2 RWCU system is such that carbon steel piping welds are not required to be examined in accordance with GL 88-01.*”

LRA Section B2.1.15 (page B-34), under the “NUREG-1801 Consistency” heading, is revised as follows:

“The BWR Reactor Water Cleanup System Program *for NMP1* takes exception to one NUREG-1801, Section XI.M25 (BWR Reactor Water Cleanup System) evaluation element (Reference 2).

- (1) The program described in NUREG-1801, Section XI.M25, cites ASME Section XI requirements covered in the 1995 edition through the 1996 addenda *for the Acceptance Criteria element. NMP1 utilizes the 1989 edition with no addenda.* This was found acceptable by the NRC in an SER dated October 5, 2000 (Enclosure to Reference 24).

Program Elements Affected

- **Acceptance Criteria**

Evaluation activities are implemented in accordance with the ASME Section XI program plan submitted to the NRC as identified in the SER listed in (1) above.”

In LRA Section B2.1.15 (page B-34), under the “Operating Experience” heading, the first paragraph is revised as follows:

“NMPNS has reviewed both industry and plant-specific operating experience relating to cracking in the Reactor Water Cleanup System. Review of plant-specific operating experience for NMP1 has not identified any instances of SCC or IGSCC-related indications in those welds inspected under the requirements of GL 88-01. However, a pinhole leak was experienced in a non-safety related weld outboard of the second isolation valve. This weld had undergone a localized repair during its original construction and, consequently, became more sensitized. A weld overlay repair was performed and subsequent inspections did not identify any indications. For NMP2, the Reactor Water Cleanup System outboard of the second isolation valve is designed with IGSCC-resistant material, and inspections have not been required under GL 88-01.”

LRA Section B2.1.15 (page B-35), under the “Conclusion” heading, is revised as follows:

“The BWR Reactor Water Cleanup System Program has been effective in managing RWCU System stress corrosion cracking.

Therefore, there is reasonable assurance that aging effects will be managed by the continued implementation of the BWR Reactor Water Cleanup System Program such that SSCs WSLR will continue to perform their intended functions consistent with the current licensing basis for the period of extended operation.”

ATTACHMENT 2

List of Regulatory Commitments

The following table identifies those actions committed to by Nine Mile Point Nuclear Station, LLC (NMPNS) in this submittal. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

| REGULATORY COMMITMENT | DUE DATE |
|--|--|
| <p>Implement an enhanced BWR Vessel Internals Program that incorporates the following:</p> <ul style="list-style-type: none">• Resolution of BWRVIP-18, BWRVIP-41, and BWRVIP-42 open items regarding the inspection of inaccessible welds for NMP2 core spray, jet pump, and low pressure coolant injection (LPCI) components, respectively.• Resolution of the BWRVIP-18 open item regarding the inspection of inaccessible welds for NMP1 core spray components.• Inspection and evaluation guidelines for steam dryers, following development by the BWRVIP and acceptance by the NRC (NMP1 and NMP2).• Inspection and evaluation guidelines for access hole covers, following development by the BWRVIP and acceptance by the NRC (NMP2 only).• Baseline inspections recommended in BWRVIP-47 for BWR lower plenum components (NMP1 and NMP2) | <p>NMP1: August 22, 2009</p> <p>NMP2: October 31, 2026</p> |
| <p>Re-evaluate the classification of the NMP1 reactor vessel flange leak detection (VFLD) line, and identify an aging management program, as appropriate.</p> | <p>May 31, 2005</p> |