



Entergy Nuclear Northeast
Indian Point Energy Center
450 Broadway, GSB
P.O. Box 249
Buchanan, NY 10511-0249
Tel (914) 254-6700

Anthony J Vitale
Site Vice President

NL-17-053

May 18, 2017

U.S. Nuclear Regulatory Commission
Document Control Desk
11545 Rockville Pike, TWFN-2 F1
Rockville, MD 20852-2738

SUBJECT: Reply to Request for Additional Information for the Review of the Indian Point License Renewal Application RAI SET 2017-03 (CAC Nos. MD5407 and MD5408)
Docket Nos. 50-247 and 50-286
License Nos. DPR-26 and DPR-64

REFERENCES: 1) USNRC letter, "Request for Additional Information for the Review of the Indian Point License Renewal Application SET 2017-03 (CAC Nos. MD5407 and MD5408)," dated April 20, 2017

Dear Sir or Madam:

Entergy Nuclear Operations, Inc. (Entergy) is providing in Attachment 1, the additional information requested by the U.S. Nuclear Regulatory Commission (NRC) pertaining to the review of the License Renewal Application (LRA) for Indian Point Energy Center (IPEC) Unit Nos. 2 and 3. (Reference 1)

Changes to the List of Regulatory Commitments are provided in Attachment 2.

If you have any questions, or require additional information, please contact Mr. Robert Walpole at 914-254-6710.

I declare under penalty of perjury that the foregoing is true and correct. Executed on 5/18, 2017.

Sincerely,

AJV/mm

A128
NRK

- Attachments: 1. Reply to NRC Request for Additional Information Regarding the License
Renewal Application
2. License Renewal Application IPEC List of Regulatory Commitments
Revision 32

cc: Mr. Daniel H. Dorman, Regional Administrator, NRC Region I
Mr. Sherwin E. Turk, NRC Office of General Counsel, Special Counsel
Mr. William Burton, NRC Senior Project Manager, Division of License Renewal
Mr. Richard Guzman, NRR Senior Project Manager
Ms. Bridget Frymire, New York State Department of Public Service
Mr. John B. Rhodes, President and CEO NYSERDA
NRC Resident Inspector's Office

ATTACHMENT 1 TO NL-17-053

**RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION
FOR THE REVIEW OF THE INDIAN POINT
LICENSE RENEWAL APPLICATION RAI SET 2017-03
(CAC NOS. MD5407 AND MD5408)**

**ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 & 3
DOCKET NOS. 50-247 AND 50-286**

**RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION
FOR THE REVIEW OF THE INDIAN POINT
LICENSE RENEWAL APPLICATION RAI SET 2017-03
(CAC NOS. MD5407 AND MD5408)**

RAI B.1.2-1

Background

Section 54.21(a)(3) of 10 CFR requires the applicant to demonstrate that the effects of aging for structures and components will be adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis for the period of extended operation. As described in SRP-LR, an applicant may demonstrate compliance with 10 CFR 54.21(a)(3) by referencing the GALL Report and when evaluation of the matter in the GALL Report applies to the plant.

GALL Report AMP XI.M18 states:

Degradation of pressure boundary closure bolting due to crack initiation, loss of preload, or loss of material may result in leakage from the mating surfaces or joint connections of pressure boundary components. Periodic inspection of pressure boundary components for signs of leakage ensures that age-related degradation of closure bolting is detected and corrected before component leakage becomes excessive. Accordingly, pressure retaining bolted connections should be inspected at least once per refueling cycle.

LRA Section B.1.2 states that the Bolting Integrity Program includes "periodic inspection of closure bolting for signs of leakage that may be due to... loss of preload." However, from its review of the program implementing document during the onsite audit, the staff determined that the program did not appear to manage loss of preload. The staff identified this concern in Audit Items 241 and 270. In response to Audit Items 241 and 270, by letter dated December 18, 2007, the applicant stated that the program will manage loss of preload. The applicant revised LRA Table 3.4.1, Item 3.4.1-22, Table 3.3.1, Item 3.3.1-45, and Table 3.2.1, Item 3.2.1-24, to state "the Bolting Integrity Program manages loss of preload for all bolting" in the respective systems. In addition, the applicant revised Commitment #2 to state "[t]he Bolting Integrity Program manages loss of preload and loss of material for all external bolting."

Issue

It is not clear what methods will be used to detect leakage that would indicate loss of preload of closure bolting. If visual inspections will be used, the staff notes that while visual inspections would be capable of detecting leakage of liquid-filled systems, visual inspection may not be sufficient to detect leakage for air- or gas-filled systems.

LRA Table 3.3.2-4-IP2 (and IP3), "Compressed Air System," is an example of a system that cites the Bolting Integrity Program to manage aging effects associated with closure bolting that could be or are air-filled or gas-filled. Based on a review of LRA Section B.1.2 and SER Section 3.0.3.2.2, "Bolting Integrity," it is not clear how aging effects for closure bolting installed in air-filled or gas-filled systems will be effectively managed because in these systems there is typically limited or no visual signs of leakage.

Request

1. List the in-scope systems that have portions that are air-filled and gas-filled for which aging effects associated with closure bolting are being managed by the Bolting Integrity Program.

Response

The systems listed below credit the Bolting Integrity Program and have components that contain a clear gas, such as air or nitrogen.

- Containment Spray
- Containment Isolation
- Safety Injection
- Plant Drains
- Nitrogen
- Service Water
- Compressed Air
- Heating, Ventilation, and Air Conditioning
- Fire Protection - Water
- Emergency Diesel Generator
- Security Generators
- Fire Protection
- Indian Point 2 Station Blackout and Appendix R Diesel Generator
- Fuel Oil
- Indian Point 3 Appendix R Diesel Generator
- Main Steam
- Auxiliary Feedwater
- Containment Penetrations
- Containment Cooling and Filtration
- Control Room HVAC

Many systems are in the scope of license renewal and subject to aging management review only for 10 CFR 54.4(a)(2), that is, for the potential of nonsafety-related components to adversely impact the ability of safety-related equipment to perform its safety functions. Leakage from gas-containing portions of these systems would not be a threat to safety-related systems or components. Those portions of systems would be subject to aging management review because they have a license renewal intended function of structural support.

Request

2. State how the aging effects will be managed.

Response

To manage the effects of aging, the Bolting Integrity Program includes preventive measures, which include material selection (e.g., use of materials with an actual yield strength of less than 150 kilo-pounds per square inch [ksi]), lubricant selection (e.g., restricting the use of molybdenum disulfide), applying the appropriate preload (torque), and checking for uniformity of gasket compression. Application of these preventive measures in accordance with industry standards is expected to preclude loss of preload, loss of material, and cracking. If these preventive measures were ineffective, system leakage would be noted. Corrective actions addressing preventive measures would then apply to bolted closures in general including those serving in systems containing gases.

The review of IPEC operating experience did not identify events where components became unable to perform license renewal intended functions due to loss of pressure boundary bolting preload in clear gas, such as air or nitrogen environments.

In addition to preventive measures to preclude leakage, the Bolting Integrity Program provides for identification of leakage from bolted closures during periodic inspections conducted during system walkdowns. Other plant personnel may also identify leakage during routine maintenance and operational activities. During these inspections and other activities, personnel can identify leakage from bolted closures through visual and audible indications. Visual indications can include residue on nearby components and, in the case of steam systems, a visible plume or condensation in the area of the leak. Audible indications that could indicate a leak are the sounds of leaking gaseous contents escaping from the system. In addition, system engineers review operations logs, deficiency lists, and system parameters such as pressure, flow, and temperature which could indicate a system leak.

Based on these activities and considerations, signs of leakage of clear gaseous fluids are detected from bolted closures included in the Bolting Integrity Program, and ensure that the detection of loss of material and loss of preload occur before there is a loss of intended function.

Request

3. State any enhancements to plant-specific procedures and/or to the Bolting Integrity Program necessary to incorporate how these aging effects are managed.

Response

To provide additional assurance of the adequate management of the effects of aging on bolting, the Bolting Integrity Program will be revised to include visual inspection of a representative sample of closure bolting (bolt heads, nuts, and threads) from components with an internal environment of a clear gas, such as air or nitrogen. A representative sample will be 20 percent of the population up to a maximum of 25 fasteners (for each bolting material and environment combination) during each 10-year period of the period of extended operation. The inspections

will be performed when the bolting is removed to the extent that the bolting threads and bolt heads are accessible for inspections that cannot be performed during visual inspection with the threaded fastener installed.

The LRA is revised as follows. Additions are underlined and deletions are lined through.

A.2.1.2 Bolting Integrity Program

The Bolting Integrity Program is an existing program that relies on recommendations for a comprehensive bolting integrity program, as delineated in NUREG-1339, industry recommendations, and Electric Power Research Institute (EPRI) NP-5769, with the exceptions noted in NUREG-1339 for safety-related bolting. The program relies on industry recommendations for comprehensive bolting maintenance, as delineated in EPRI TR-104213 for pressure retaining bolting and structural bolting.

The program applies to bolting and torquing practices of safety- and nonsafety-related bolting for pressure retaining components, NSSS component supports, and structural joints. The program addresses all bolting regardless of size except reactor head closure studs, which are addressed by the Reactor Head Closure Studs Program. The program includes periodic inspection of closure bolting for signs of leakage that may be due to crack initiation, loss of preload, or loss of material due to corrosion. The program also includes preventive measures to preclude or minimize loss of preload and cracking, which include use of actual yield strength in selecting materials for low susceptibility to SCC and a prohibition on the use of lubricants containing MoS₂ for bolting.

The Bolting Integrity Program will be enhanced to include the following.

- ~~Revise applicable procedures to clarify that actual yield strength is used in selecting materials for low susceptibility to SCC and to clarify the prohibition on use of lubricants containing MoS₂ for bolting.~~

~~Enhancements will be implemented prior to the period of extended operation.~~

- Revise Bolting Integrity Program documents to specify visual inspection of a representative sample of closure bolting (bolt heads, nuts, and threads) from components with an internal environment of a clear gas, such as air or nitrogen. A representative sample will be 20 percent of the population up to a maximum of 25 fasteners (for each bolting material and environment combination) during each 10-year period of the period of extended operation. The inspections will be performed when the bolting is removed to the extent that the bolting threads and bolt heads are accessible for inspections that cannot be performed during visual inspection with the threaded fastener installed.

A.3.1.2 Bolting Integrity Program

The Bolting Integrity Program is an existing program that relies on recommendations for a comprehensive bolting integrity program, as delineated in NUREG-1339, industry recommendations, and Electric Power Research Institute (EPRI) NP-5769, with the exceptions noted in NUREG-1339 for safety-related bolting. The program relies on industry

recommendations for comprehensive bolting maintenance, as delineated in EPRI TR-104213 for pressure retaining bolting and structural bolting.

The program applies to bolting and torquing practices of safety- and non-safety-related bolting for pressure retaining components, NSSS component supports, and structural joints. The program addresses all bolting regardless of size except reactor head closure studs, which are addressed by the Reactor Head Closure Studs Program. The program includes periodic inspection of closure bolting for signs of leakage that may be due to crack initiation, loss of preload, or loss of material due to corrosion. The program also includes preventive measures to preclude or minimize loss of preload and cracking, which include use of actual yield strength in selecting materials for low susceptibility to SCC and a prohibition on the use of lubricants containing MoS₂ for bolting.

The Bolting Integrity Program will be enhanced to include the following.

- ~~Revise applicable procedures to clarify that actual yield strength is used in selecting materials for low susceptibility to SCC and to clarify the prohibition on use of lubricants containing MoS₂ for bolting.~~

~~Enhancements will be implemented prior to the period of extended operation.~~

- Revise Bolting Integrity Program documents to specify visual inspection of a representative sample of closure bolting (bolt heads, nuts, and threads) from components with an internal environment of a clear gas, such as air or nitrogen. A representative sample will be 20 percent of the population up to a maximum of 25 fasteners (for each bolting material and environment combination) during each 10-year period of the period of extended operation. The inspections will be performed when the bolting is removed to the extent that the bolting threads and bolt heads are accessible for inspections that cannot be performed during visual inspection with the threaded fastener installed.

B.1.2 BOLTING INTEGRITY

Enhancements

The following enhancement will be implemented prior to May 31, 2018.

Attributes Affected	Enhancements
<u>4. Detection of Aging Effects</u>	<u>Revise Bolting Integrity Program documents to specify visual inspection of a representative sample of closure bolting (bolt heads, nuts, and threads) from components with an internal environment of a clear gas, such as air or nitrogen. A representative sample will be 20 percent of the population up to a maximum of 25 fasteners (for each bolting material and environment combination) during each 10-year period of the period of extended operation. The inspections will be performed when the bolting is removed to the extent that the bolting threads and bolt heads are accessible for inspections that cannot be performed during visual inspection with the threaded fastener installed.</u>

ATTACHMENT 2 TO NL-17-053

LICENSE RENEWAL APPLICATION

IPEC LIST OF REGULATORY COMMITMENTS

Rev. 32

**ENERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 & 3
DOCKET NOS. 50-247 and 50-286**

List of Regulatory Commitments

Rev. 32

The following table identifies those actions committed to by Entergy in this document. Changes are shown as strikethroughs for deletions and underlines for additions.

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
1	<p>Enhance the Aboveground Steel Tanks Program for IP2 and IP3 to perform thickness measurements of the bottom surfaces of the condensate storage tanks, city water tank, and fire water tanks once during the first ten years of the period of extended operation.</p> <p>Enhance the Aboveground Steel Tanks Program for IP2 and IP3 to require trending of thickness measurements when material loss is detected.</p>	IP2: Complete	<p>NL-07-039</p> <p>NL-13-122</p>	<p>A.2.1.1</p> <p>A.3.1.1</p> <p>B.1.1</p>
	<p>Implement LRA Sections, A.2.1.1, A.3.1.1 and B.1.1, as shown in NL-14-147.</p>	IP2 & IP3: December 31, 2019	NL-14-147	<p>A.2.1.1</p> <p>A.3.1.1</p> <p>B.1.1</p>
	<p>Implement LRA Sections, A.2.1.1 and B.1.1, as shown in NL-15-092</p>	IP2 & IP3: December 31, 2019	NL-15-092	<p>A.2.1.1</p> <p>B.1.1</p>
2	<p>Enhance the Bolting Integrity Program for IP2 and IP3 to clarify that actual yield strength is used in selecting materials for low susceptibility to SCC and clarify the prohibition on use of lubricants containing MoS₂ for bolting.</p> <p>The Bolting Integrity Program manages loss of preload and loss of material for all external bolting.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-07-153</p> <p>NL-13-122</p>	<p>A.2.1.2</p> <p>A.3.1.2</p> <p>B.1.2</p> <p>Audit Items 201, 241, 270</p>

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
3	<p>Implement the Buried Piping and Tanks Inspection Program for IP2 and IP3 as described in LRA Section B.1.6.</p> <p>This new program will be implemented consistent with the corresponding program described in NUREG-1801 Section XI.M34, Buried Piping and Tanks Inspection.</p> <p>Include in the Buried Piping and Tanks Inspection Program described in LRA Section B.1.6 a risk assessment of in-scope buried piping and tanks that includes consideration of the impacts of buried piping or tank leakage and of conditions affecting the risk for corrosion. Classify pipe segments and tanks as having a high, medium or low impact of leakage based on the safety class, the hazard posed by fluid contained in the piping and the impact of leakage on reliable plant operation. Determine corrosion risk through consideration of piping or tank material, soil resistivity, drainage, the presence of cathodic protection and the type of coating. Establish inspection priority and frequency for periodic inspections of the in-scope piping and tanks based on the results of the risk assessment. Perform inspections using inspection techniques with demonstrated effectiveness.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-07-153</p> <p>NL-15-121</p> <p>NL-09-106</p> <p>NL-09-111</p> <p>NL-11-101</p>	<p>A.2.1.5</p> <p>A.3.1.5</p> <p>B.1.6</p> <p>Audit Item 173</p>
4	<p>Enhance the Diesel Fuel Monitoring Program to include cleaning and inspection of the IP2 GT-1 gas turbine fuel oil storage tanks, IP2 and IP3 EDG fuel oil day tanks, IP2 SBO/Appendix R diesel generator fuel oil day tank, and IP3 Appendix R fuel oil storage tank and day tank once every ten years.</p> <p>Enhance the Diesel Fuel Monitoring Program to include quarterly sampling and analysis of the IP2 SBO/Appendix R diesel generator fuel oil day tank, IP2 security diesel fuel oil storage tank, IP2 security diesel fuel oil day tank, and IP3 Appendix R fuel oil storage tank. Particulates, water and sediment checks will be performed on the samples. Filterable solids acceptance criterion will be less than or equal to 10mg/l. Water and sediment acceptance criterion will be less than or equal to 0.05%.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-07-153</p> <p>NL-15-121</p> <p>NL-08-057</p>	<p>A.2.1.8</p> <p>A.3.1.8</p> <p>B.1.9</p> <p>Audit items 128, 129, 132, 491, 492, 510</p>

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
	<p>Enhance the Diesel Fuel Monitoring Program to include thickness measurement of the bottom of the following tanks once every ten years. IP2: EDG fuel oil storage tanks, EDG fuel oil day tanks, SBO/Appendix R diesel generator fuel oil day tank, GT-1 gas turbine fuel oil storage tanks, and diesel fire pump fuel oil storage tank; IP3: EDG fuel oil day tanks, EDG fuel oil storage tanks, Appendix R fuel oil storage tank, and diesel fire pump fuel oil storage tank.</p> <p>Enhance the Diesel Fuel Monitoring Program to change the analysis for water and particulates to a quarterly frequency for the following tanks. IP2: GT-1 gas turbine fuel oil storage tanks and diesel fire pump fuel oil storage tank; IP3: Appendix R fuel oil day tank and diesel fire pump fuel oil storage tank.</p> <p>Enhance the Diesel Fuel Monitoring Program to specify acceptance criteria for thickness measurements of the fuel oil storage tanks within the scope of the program.</p> <p>Enhance the Diesel Fuel Monitoring Program to direct samples be taken and include direction to remove water when detected.</p> <p>Revise applicable procedures to direct sampling of the onsite portable fuel oil contents prior to transferring the contents to the storage tanks.</p> <p>Enhance the Diesel Fuel Monitoring Program to direct the addition of chemicals including biocide when the presence of biological activity is confirmed.</p>			
5	<p>Enhance the External Surfaces Monitoring Program for IP2 and IP3 to include periodic inspections of systems in scope and subject to aging management review for license renewal in accordance with 10 CFR 54.4(a)(1) and (a)(3). Inspections shall include areas surrounding the subject systems to identify hazards to those systems. Inspections of nearby systems that could impact the subject systems will include SSCs that are in scope and subject to aging management review for license renewal in accordance with 10 CFR 54.4(a)(2).</p>	IP2: Complete	<p>NL-07-039</p> <p>NL-13-122</p>	<p>A.2.1.10</p> <p>A.3.1.10</p> <p>B.1.11</p>

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
	Implement LRA Sections A.2.1.10, A.3.1.10 and B.1.11, as shown in NL-14-147.	IP2 & IP3: December 31, 2019	NL-14-147	A.2.1.10 A.3.1.10 B.1.11
6	<p>Enhance the Fatigue Monitoring Program for IP2 to monitor steady state cycles and feedwater cycles or perform an evaluation to determine monitoring is not required. Review the number of allowed events and resolve discrepancies between reference documents and monitoring procedures.</p> <p>Enhance the Fatigue Monitoring Program for IP3 to include all the transients identified. Assure all fatigue analysis transients are included with the lowest limiting numbers. Update the number of design transients accumulated to date.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122 NL-07-153</p> <p>NL-15-121</p>	<p>A.2.1.11 A.3.1.11 B.1.12, Audit Item 164</p>
7	<p>Enhance the Fire Protection Program to inspect external surfaces of the IP3 RCP oil collection systems for loss of material each refueling cycle.</p> <p>Enhance the Fire Protection Program to explicitly state that the IP2 and IP3 diesel fire pump engine sub-systems (including the fuel supply line) shall be observed while the pump is running. Acceptance criteria will be revised to verify that the diesel engine does not exhibit signs of degradation while running; such as fuel oil, lube oil, coolant, or exhaust gas leakage.</p> <p>Enhance the Fire Protection Program to specify that the IP2 and IP3 diesel fire pump engine carbon steel exhaust components are inspected for evidence of corrosion and cracking at least once each operating cycle.</p> <p>Enhance the Fire Protection Program for IP3 to visually inspect the cable spreading room, 480V switchgear room, and EDG room CO₂ fire suppression system for signs of degradation, such as corrosion and mechanical damage at least once every six months.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-15-121</p>	<p>A.2.1.12 A.3.1.12 B.1.13</p>

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
8	<p>Enhance the Fire Water Program to include inspection of IP2 and IP3 hose reels for evidence of corrosion. Acceptance criteria will be revised to verify no unacceptable signs of degradation.</p> <p>Enhance the Fire Water Program to replace all or test a sample of IP2 and IP3 sprinkler heads required for 10 CFR 50.48 using guidance of NFPA 25 (2002 edition), Section 5.3.1.1.1 before the end of the 50-year sprinkler head service life and at 10-year intervals thereafter during the extended period of operation to ensure that signs of degradation, such as corrosion, are detected in a timely manner.</p> <p>Enhance the Fire Water Program to perform wall thickness evaluations of IP2 and IP3 fire protection piping on system components using non-intrusive techniques (e.g., volumetric testing) to identify evidence of loss of material due to corrosion. These inspections will be performed before the end of the current operating term and at intervals thereafter during the period of extended operation. Results of the initial evaluations will be used to determine the appropriate inspection interval to ensure aging effects are identified prior to loss of intended function.</p> <p>Enhance the Fire Water Program to inspect the internal surface of foam based fire suppression tanks. Acceptance criteria will be enhanced to verify no significant corrosion.</p>	IP2: Complete	NL-07-039 NL-13-122 NL-07-153 NL-08-014	A.2.1.13 A.3.1.13 B.1.14 Audit Items 105, 106
	Implement LRA Sections, A.2.1.13, A.3.1.13 and B.1.14, as shown in NL-14-147.	IP2 & IP3: December 31, 2019	NL-14-147	A.2.1.13 A.3.1.13 B.1.14
	Implement LRA Sections A.2.1.13, A.3.1.13 and B.1.14, as shown in NL-15-019	IP2 & IP3: December 31, 2019	NL-15-019	A.2.1.13 A.3.1.13 B.1.14
	Implement LRA Sections A.2.1.13, A.3.1.13 and B.1.14, as shown in NL-15-092	IP2 & IP3: December 31, 2019	NL-15-092	A.2.1.13 A.3.1.13 B.1.14

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
	Implement LRA Sections A.2.1.13, A.3.1.13, and B.1.14, as shown in NL-17-052	IP2 & IP3: December 31, 2017	NL-17-052	A.2.1.13 A.3.1.13 B.1.14
9	<p>Enhance the Flux Thimble Tube Inspection Program for IP2 and IP3 to implement comparisons to wear rates identified in WCAP-12866. Include provisions to compare data to the previous performances and perform evaluations regarding change to test frequency and scope.</p> <p>Enhance the Flux Thimble Tube Inspection Program for IP2 and IP3 to specify the acceptance criteria as outlined in WCAP-12866 or other plant-specific values based on evaluation of previous test results.</p> <p>Enhance the Flux Thimble Tube Inspection Program for IP2 and IP3 to direct evaluation and performance of corrective actions based on tubes that exceed or are projected to exceed the acceptance criteria. Also stipulate that flux thimble tubes that cannot be inspected over the tube length and cannot be shown by analysis to be satisfactory for continued service, must be removed from service to ensure the integrity of the reactor coolant system pressure boundary.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-15-121</p>	<p>A.2.1.15</p> <p>A.3.1.15</p> <p>B.1.16</p>

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
11	Deleted		NL-09-056 NL-11-101	
12	Enhance the Masonry Wall Program for IP2 and IP3 to specify that the IP1 intake structure is included in the program.	IP2: Complete IP3: Complete	NL-07-039 NL-13-122	A.2.1.18 A.3.1.18 B.1.19
13	<p>Enhance the Metal-Enclosed Bus Inspection Program for IP2 and IP3 to visually inspect the external surface of MEB enclosure assemblies for loss of material at least once every 10 years. The first inspection will occur prior to the period of extended operation and the acceptance criterion will be no significant loss of material.</p> <p>Enhance the Metal-Enclosed Bus Inspection Program to add acceptance criteria for MEB internal visual inspections to include the absence of indications of dust accumulation on the bus bar, on the insulators, and in the duct, in addition to the absence of indications of moisture intrusion into the duct.</p> <p>Enhance the Metal-Enclosed Bus Inspection Program for IP2 and IP3 to inspect bolted connections at least once every five years if performed visually or at least once every ten years using quantitative measurements such as thermography or contact resistance measurements. The first inspection will occur prior to the period of extended operation.</p> <p>The plant will process a change to applicable site procedure to remove the reference to "re-torquing" connections for phase bus maintenance and bolted connection maintenance.</p>	IP2: Complete IP3: Complete	NL-07-039 NL-13-122 NL-07-153 NL-15-121 NL-08-057 NL-13-077	A.2.1.19 A.3.1.19 B.1.20 Audit Items 124, 133, 519
14	Implement the Non-EQ Bolted Cable Connections Program for IP2 and IP3 as described in LRA Section B.1.22.	IP2: Complete IP3: Complete	NL-07-039 NL-13-122 NL-15-121	A.2.1.21 A.3.1.21 B.1.22

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
15	<p>Implement the Non-EQ Inaccessible Medium-Voltage Cable Program for IP2 and IP3 as described in LRA Section B.1.23.</p> <p>This new program will be implemented consistent with the corresponding program described in NUREG-1801 Section XI.E3, Inaccessible Medium-Voltage Cables Not Subject To 10 CFR 50.49 Environmental Qualification Requirements.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-07-153</p> <p>NL-15-121</p> <p>NL-11-032</p> <p>NL-11-096</p> <p>NL-11-101</p>	<p>A.2.1.22</p> <p>A.3.1.22</p> <p>B.1.23</p> <p>Audit item 173</p>
16	<p>Implement the Non-EQ Instrumentation Circuits Test Review Program for IP2 and IP3 as described in LRA Section B.1.24.</p> <p>This new program will be implemented consistent with the corresponding program described in NUREG-1801 Section XI.E2, Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Used in Instrumentation Circuits.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-07-153</p> <p>NL-15-121</p>	<p>A.2.1.23</p> <p>A.3.1.23</p> <p>B.1.24</p> <p>Audit item 173</p>
17	<p>Implement the Non-EQ Insulated Cables and Connections Program for IP2 and IP3 as described in LRA Section B.1.25.</p> <p>This new program will be implemented consistent with the corresponding program described in NUREG-1801 Section XI.E1, Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-07-153</p> <p>NL-15-121</p>	<p>A.2.1.24</p> <p>A.3.1.24</p> <p>B.1.25</p> <p>Audit item 173</p>

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
18	<p>Enhance the Oil Analysis Program for IP2 to sample and analyze lubricating oil used in the SBO/Appendix R diesel generator consistent with the oil analysis for other site diesel generators.</p> <p>Enhance the Oil Analysis Program for IP2 and IP3 to sample and analyze generator seal oil and turbine hydraulic control oil.</p> <p>Enhance the Oil Analysis Program for IP2 and IP3 to formalize preliminary oil screening for water and particulates and laboratory analyses including defined acceptance criteria for all components included in the scope of this program. The program will specify corrective actions in the event acceptance criteria are not met.</p> <p>Enhance the Oil Analysis Program for IP2 and IP3 to formalize trending of preliminary oil screening results as well as data provided from independent laboratories.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-11-101</p> <p>NL-15-121</p>	<p>A.2.1.25</p> <p>A.3.1.25</p> <p>B.1.26</p>
19	<p>Implement the One-Time Inspection Program for IP2 and IP3 as described in LRA Section B.1.27.</p> <p>This new program will be implemented consistent with the corresponding program described in NUREG-1801, Section XI.M32, One-Time Inspection.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-07-153</p> <p>NL-15-121</p>	<p>A.2.1.26</p> <p>A.3.1.26</p> <p>B.1.27</p> <p>Audit item 173</p>
20	<p>Implement the One-Time Inspection – Small Bore Piping Program for IP2 and IP3 as described in LRA Section B.1.28.</p> <p>This new program will be implemented consistent with the corresponding program described in NUREG-1801, Section XI.M35, One-Time Inspection of ASME Code Class I Small-Bore Piping.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-07-153</p> <p>NL-15-121</p>	<p>A.2.1.27</p> <p>A.3.1.27</p> <p>B.1.28</p> <p>Audit item 173</p>
21	<p>Enhance the Periodic Surveillance and Preventive Maintenance Program for IP2 and IP3 as necessary to assure that the effects of aging will be managed such that applicable components will continue to perform their intended functions consistent with the current licensing basis through the period of extended operation.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-15-121</p>	<p>A.2.1.28</p> <p>A.3.1.28</p> <p>B.1.29</p>

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
	Implement LRA Sections A.2.1.28, A.3.1.28 and B.1.29, as shown in NL-17-052	IP2 & IP3: December 31, 2017	NL-17-052	A.2.1.28 A.3.1.28 B.1.29
22	<p>Enhance the Reactor Vessel Surveillance Program for IP2 and IP3 revising the specimen capsule withdrawal schedules to draw and test a standby capsule to cover the peak reactor vessel fluence expected through the end of the period of extended operation.</p> <p>Enhance the Reactor Vessel Surveillance Program for IP2 and IP3 to require that tested and untested specimens from all capsules pulled from the reactor vessel are maintained in storage.</p>	IP2: Complete IP3: Complete	NL-07-039 NL-13-122 NL-15-121	A.2.1.31 A.3.1.31 B.1.32
23	<p>Implement the Selective Leaching Program for IP2 and IP3 as described in LRA Section B.1.33.</p> <p>This new program will be implemented consistent with the corresponding program described in NUREG-1801, Section XI.M33 Selective Leaching of Materials.</p>	IP2: Complete IP3: Complete	NL-07-039 NL-13-122 NL-07-153 NL-15-121	A.2.1.32 A.3.1.32 B.1.33 Audit item 173
24	Enhance the Steam Generator Integrity Program for IP2 and IP3 to require that the results of the condition monitoring assessment are compared to the operational assessment performed for the prior operating cycle with differences evaluated.	IP2: Complete IP3: Complete	NL-07-039 NL-13-122	A.2.1.34 A.3.1.34 B.1.35
25	<p>Enhance the Structures Monitoring Program to explicitly specify that the following structures are included in the program.</p> <ul style="list-style-type: none"> • Appendix R diesel generator foundation (IP3) • Appendix R diesel generator fuel oil tank vault (IP3) • Appendix R diesel generator switchgear and enclosure (IP3) • city water storage tank foundation • condensate storage tanks foundation (IP3) • containment access facility and annex (IP3) • discharge canal (IP2/3) • emergency lighting poles and foundations (IP2/3) • fire pumphouse (IP2) • fire protection pumphouse (IP3) • fire water storage tank foundations (IP2/3) • gas turbine 1 fuel storage tank foundation 	IP2: Complete IP3: Complete	NL-07-039 NL-13-122 NL-07-153 NL-15-121 NL-08-057 NL-13-077	A.2.1.35 A.3.1.35 B.1.36 Audit items 86, 87, 88, 417

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
26	<p>Implement the Thermal Aging Embrittlement of Cast Austenitic Stainless Steel (CASS) Program for IP2 and IP3 as described in LRA Section B.1.37.</p> <p>This new program will be implemented consistent with the corresponding program described in NUREG-1801, Section XI.M12, Thermal Aging Embrittlement of Cast Austenitic Stainless Steel (CASS) Program.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-07-153</p> <p>NL-15-121</p>	<p>A.2.1.36</p> <p>A.3.1.36</p> <p>B.1.37</p> <p>Audit item 173</p>
27	<p>Implement the Thermal Aging and Neutron Irradiation Embrittlement of Cast Austenitic Stainless Steel (CASS) Program for IP2 and IP3 as described in LRA Section B.1.38.</p> <p>This new program will be implemented consistent with the corresponding program described in NUREG-1801 Section XI.M13, Thermal Aging and Neutron Embrittlement of Cast Austenitic Stainless Steel (CASS) Program.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-07-153</p>	<p>A.2.1.37</p> <p>A.3.1.37</p> <p>B.1.38</p> <p>Audit item 173</p>
28	<p>Enhance the Water Chemistry Control – Closed Cooling Water Program to maintain water chemistry of the IP2 SBO/Appendix R diesel generator cooling system per EPRI guidelines.</p> <p>Enhance the Water Chemistry Control – Closed Cooling Water Program to maintain the IP2 and IP3 security generator and fire protection diesel cooling water pH and glycol within limits specified by EPRI guidelines.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-08-057</p>	<p>A.2.1.39</p> <p>A.3.1.39</p> <p>B.1.40</p> <p>Audit item 509</p>
29	<p>Enhance the Water Chemistry Control – Primary and Secondary Program for IP2 to test sulfates monthly in the RWST with a limit of <150 ppb.</p>	<p>IP2: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p>	<p>A.2.1.40</p> <p>B.1.41</p>
30	<p>For aging management of the reactor vessel internals, IPEC will (1) participate in the industry programs for investigating and managing aging effects on reactor internals; (2) evaluate and implement the results of the industry programs as applicable to the reactor internals; and (3) 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.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-11-107</p>	<p>A.2.1.41</p> <p>A.3.1.41</p>

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
31	Additional P-T curves will be submitted as required per 10 CFR 50, Appendix G prior to the period of extended operation as part of the Reactor Vessel Surveillance Program.	IP2: Complete IP3: Complete	NL-07-039 NL-13-122 NL-15-121	A.2.2.1.2 A.3.2.1.2 4.2.3
32	As required by 10 CFR 50.61(b)(4), IP3 will submit a plant-specific safety analysis for plate B2803-3 to the NRC three years prior to reaching the RT _{PTS} screening criterion. Alternatively, the site may choose to implement the revised PTS rule when approved.	IP3: Approximately 6 years after entering the PEO	NL-07-039 NL-07-140 NL-08-014 NL-08-127	A.3.2.1.4 4.2.5

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
33	<p>At least 2 years prior to entering the period of extended operation, for the locations identified in LRA Table 4.3-13 (IP2) and LRA Table 4.3-14 (IP3), under the Fatigue Monitoring Program, IP2 and IP3 will implement one or more of the following:</p> <p>(1) Consistent with the Fatigue Monitoring Program, Detection of Aging Effects, update the fatigue usage calculations using refined fatigue analyses to determine valid CUFs less than 1.0 when accounting for the effects of reactor water environment. This includes applying the appropriate Fen factors to valid CUFs determined in accordance with one of the following:</p> <ol style="list-style-type: none"> 1. For locations in LRA Table 4.3-13 (IP2) and LRA Table 4.3-14 (IP3), with existing fatigue analysis valid for the period of extended operation, use the existing CUF. 2. Additional plant-specific locations with a valid CUF may be evaluated. In particular, the pressurizer lower shell will be reviewed to ensure the surge nozzle remains the limiting component. 3. Representative CUF values from other plants, adjusted to or enveloping the IPEC plant specific external loads may be used if demonstrated applicable to IPEC. 4. An analysis using an NRC-approved version of the ASME code or NRC-approved alternative (e.g., NRC-approved code case) may be performed to determine a valid CUF. <p>(2) Consistent with the Fatigue Monitoring Program, Corrective Actions, repair or replace the affected locations before exceeding a CUF of 1.0.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-07-039</p> <p>NL-13-122</p> <p>NL-07-153</p> <p>NL-08-021</p> <p>NL-10-082</p>	<p>A.2.2.2.3</p> <p>A.3.2.2.3</p> <p>4.3.3</p> <p>Audit item 146</p>
34	<p>IP2 SBO / Appendix R diesel generator will be installed and operational by April 30, 2008. This committed change to the facility meets the requirements of 10 CFR 50.59(c)(1) and, therefore, a license amendment pursuant to 10 CFR 50.90 is not required.</p>	<p>Complete</p>	<p>NL-13-122</p> <p>NL-07-078</p> <p>NL-08-074</p> <p>NL-11-101</p>	<p>2.1.1.3.5</p>

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
35	<p>Perform a one-time inspection of representative sample area of IP2 containment liner affected by the 1973 event behind the insulation, prior to entering the period of extended operation, to assure liner degradation is not occurring in this area.</p> <p>Perform a one-time inspection of representative sample area of the IP3 containment steel liner at the juncture with the concrete floor slab, prior to entering the period of extended operation, to assure liner degradation is not occurring in this area.</p> <p>Any degradation will be evaluated for updating of the containment liner analyses as needed.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-08-127</p> <p>NL-13-122</p> <p>NL-11-101</p> <p>NL-15-121</p> <p>NL-09-018</p>	<p>Audit Item 27</p>
36	<p>Perform a one-time inspection and evaluation of a sample of potentially affected IP2 refueling cavity concrete prior to the period of extended operation. The sample will be obtained by core boring the refueling cavity wall in an area that is susceptible to exposure to borated water leakage. The inspection will include an assessment of embedded reinforcing steel.</p> <p>Additional core bore samples will be taken, if the leakage is not stopped, prior to the end of the first ten years of the period of extended operation.</p> <p>A sample of leakage fluid will be analyzed to determine the composition of the fluid. If additional core samples are taken prior to the end of the first ten years of the period of extended operation, a sample of leakage fluid will be analyzed.</p>	<p>IP2: Complete</p>	<p>NL-08-127</p> <p>NL-11-101</p> <p>NL-13-122</p> <p>NL-09-056</p> <p>NL-09-079</p>	<p>Audit Item 359</p>
37	<p>Enhance the Containment Inservice Inspection (CII-IWL) Program to include inspections of the containment using enhanced characterization of degradation (i.e., quantifying the dimensions of noted indications through the use of optical aids) during the period of extended operation. The enhancement includes obtaining critical dimensional data of degradation where possible through direct measurement or the use of scaling technologies for photographs, and the use of consistent vantage points for visual inspections.</p>	<p>IP2: Complete</p> <p>IP3: Complete</p>	<p>NL-08-127</p> <p>NL-13-122</p>	<p>Audit Item 361</p>

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
38	For Reactor Vessel Fluence, should future core loading patterns invalidate the basis for the projected values of RTpts or C _v USE, updated calculations will be provided to the NRC.	IP2: Complete IP3: Complete	NL-08-143 NL-13-122 NL-15-121	4.2.1
39	Deleted		NL-09-079	
40	Evaluate plant specific and appropriate industry operating experience and incorporate lessons learned in establishing appropriate monitoring and inspection frequencies to assess aging effects for the new aging management programs. Documentation of the operating experience evaluated for each new program will be available on site for NRC review prior to the period of extended operation.	IP2: Complete IP3: Complete	NL-09-106 NL-13-122 NL-15-121	B.1.6 B.1.22 B.1.23 B.1.24 B.1.25 B.1.27 B.1.28 B.1.33 B.1.37 B.1.38
41	Deleted		NL-17-005	N/A

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
42	<p>IPEC will develop a plan for each unit to address the potential for cracking of the primary to secondary pressure boundary due to PWSCC of tube-to-tubesheet welds using one of the following two options.</p> <p>Option 1 (Analysis)</p> <p>IPEC will perform an analytical evaluation of the steam generator tube-to-tubesheet welds in order to establish a technical basis for either determining that the tubesheet cladding and welds are not susceptible to PWSCC, or redefining the pressure boundary in which the tube-to-tubesheet weld is no longer included and, therefore, is not required for reactor coolant pressure boundary function. The redefinition of the reactor coolant pressure boundary must be approved by the NRC as a license amendment request.</p> <p>Option 2 (Inspection)</p> <p>IPEC will perform a one-time inspection of a representative number of tube-to-tubesheet welds in each steam generator to determine if PWSCC cracking is present. If weld cracking is identified:</p> <ol style="list-style-type: none"> a. The condition will be resolved through repair or engineering evaluation to justify continued service, as appropriate, and b. An ongoing monitoring program will be established to perform routine tube-to-tubesheet weld inspections for the remaining life of the steam generators. 	<p>IP2: Complete</p> <p>IP3: Complete</p> <p>IP2: Not Applicable</p> <p>IP3: Not Applicable</p>	<p>NL-11-032</p> <p>NL-11-074</p> <p>NL-11-090</p> <p>NL-11-096</p> <p>NL-17-005</p>	<p>N/A</p>

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
43	<p>IPEC will review design basis ASME Code Class 1 fatigue evaluations to determine whether the NUREG/CR-6260 locations that have been evaluated for the effects of the reactor coolant environment on fatigue usage are the limiting locations for the IP2 and IP3 configurations. If more limiting locations are identified, the most limiting location will be evaluated for the effects of the reactor coolant environment on fatigue usage.</p> <p>IPEC will use the NUREG/CR-6909 methodology in the evaluation of the limiting locations consisting of nickel alloy, if any.</p>	<p>IP2: Complete IP3: Complete</p>	<p>NL-11-032 NL-13-122 NL-11-101 NL-15-121</p>	4.3.3
44	<p>IPEC will include written explanation and justification of any user intervention in future evaluations using the WESTEMS "Design CUF" module.</p>	<p>IP2: Complete IP3: Complete</p>	<p>NL-11-032 NL-11-101 NL-13-122 NL-15-121</p>	N/A
45	<p>IPEC will not use the NB-3600 option of the WESTEMS program in future design calculations until the issues identified during the NRC review of the program have been resolved.</p>	<p>IP2: Complete IP3: Complete</p>	<p>NL-11-032 NL-11-101 NL-13-122 NL-15-121</p>	N/A
46	<p>Include in the IP2 ISI Program that IPEC will perform twenty-five volumetric weld metal inspections of socket welds during each 10-year ISI interval scheduled as specified by IWB-2412 of the ASME Section XI Code during the period of extended operation.</p> <p>In lieu of volumetric examinations, destructive examinations may be performed, where one destructive examination may be substituted for two volumetric examinations.</p>	<p>IP2: Complete</p>	<p>NL-11-032 NL-11-074 NL-13-122</p>	N/A
47	Deleted.		NL-14-093	N/A

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
48	Entergy will visually inspect IPEC underground piping within the scope of license renewal and subject to aging management review prior to the period of extended operation and then on a frequency of at least once every two years during the period of extended operation. This inspection frequency will be maintained unless the piping is subsequently coated in accordance with the preventive actions specified in NUREG-1801 Section XI.M41 as modified by LR-ISG-2011-03. Visual inspections will be supplemented with surface or volumetric non-destructive testing if indications of significant loss of material are observed. Consistent with revised NUREG-1801 Section XI.M41, such adverse indications will be entered into the plant corrective action program for evaluation of extent of condition and for determination of appropriate corrective actions (e.g., increased inspection frequency, repair, replacement).	IP2: Complete IP3: Complete	NL-12-174 NL-13-122 NL-15-121	N/A
49	Recalculate each of the limiting CUFs provided in section 4.3 of the LRA for the reactor vessel internals to include the reactor coolant environment effects (F_{en}) as provided in the IPEC Fatigue Monitoring Program using NUREG/CR-5704 or NUREG/CR-6909. In accordance with the corrective actions specified in the Fatigue Monitoring Program, corrective actions include further CUF re-analysis, and/or repair or replacement of the affected components prior to the CUF_{en} reaching 1.0.	IP2: Complete IP3: Complete	NL-13-052 NL-13-122 NL-15-121	A.2.2.2 A.3.2.2
50	Replace the IP2 split pins during the 2016 refueling outage (2R22).	IP2: Complete IP3: N/A	NL-13-122 NL-14-067	A.2.1.41 B.1.42
51	Enhance the Service Water Integrity Program by implementing LRA Sections A.2.1.33, A.3.1.33 and B.1.34, as shown in NL-14-147.	IP2 & IP3: December 31, 2017	NL-14-147	A.2.1.33 A.3.1.33 B.1.34
	Implement LRA Sections A.2.1.33, A.3.1.33 and B.1.34, as shown in NL-17-052	IP2 & IP3: December 31, 2017	NL-17-052	A.2.1.33 A.3.1.33 B.1.34

#	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	RELATED LRA SECTION / AUDIT ITEM
52	Implement the Coating Integrity Program for IP2 and IP3 as described in LRA Section B.1.42, as shown in NL-15-019.	IP2 & IP3: December 31, 2024	NL-15-019	A.2.1.42 A.3.1.42 B.1.43
53	<u>Revise Bolting Integrity Program to include visual inspection of a representative sample of closure bolting (bolt heads, nuts, and threads) from components with an internal environment of a clear gas, such as air or nitrogen. A representative sample will be 20 percent of the population (for each bolting material and environment combination) up to a maximum of 25 fasteners during each 10-year period of the period of extended operation. The inspections will be performed when the bolting is removed to the extent that the bolting threads and bolt heads are accessible for inspections that cannot be performed during visual inspection with the threaded fastener installed.</u>	May 31, 2018	NL-17-053	<u>A.2.1.2</u> <u>A.3.1.2</u> <u>B.1.2</u>