IPRenewal NPEmails

From: STROUD, MICHAEL D [MSTROUD@entergy.com]
Sent: Tuesday, June 30, 2009 2:18 PM
To: Green, Kimberly
Cc: YOUNG, GARRY G; COX, ALAN B; IVY, TED S
Attachments: NL-09-088.pdf

Kim,

See attached IPEC letter that revises the May 15, 2009, NL-09-060, letter. This letter is a revision to the May 15, 2009 letter and is marked with rev bars in the right column. This will resolve the problems with the IP2 and IP3 plant drains tables and the IP2 CO2 changes. Let me know if you have any questions.

Thanks
Mike

Hearing Identifier: IndianPointUnits2and3NonPublic_EX
Email Number: 1477

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Fred Dacimo
Vice President
License Renewal

NL-09-088

June 30, 2009

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

SUBJECT: Amendment 8, Revision 1 to License Renewal Application (LRA)
Indian Point Nuclear Generating Unit Nos. 2 & 3
Docket Nos. 50-247 and 50-286
License Nos. DPR-26 and DPR-64

REFERENCES:

1. Entergy Letter dated April 23, 2007, F. R. Dacimo to Document Control Desk, "License Renewal Application" (NL-07-039)
2. Entergy Letter dated April 23, 2007, F. R. Dacimo to Document Control Desk, "License Renewal Application Boundary Drawings (NL-07-040)
3. Entergy Letter dated April 23, 2007, F. R. Dacimo to Document Control Desk, "License Renewal Application Environmental Report References (NL-07-041)
4. Entergy Letter dated October 11, 2007, F. R. Dacimo to Document Control Desk, "License Renewal Application (LRA)" (NL-07-124)
5. Entergy Letter dated November 14, 2007, F. R. Dacimo to Document Control Desk, "Supplement to License Renewal Application (LRA) Environmental Report References" (NL-07-133)
6. Entergy Letter dated May 15, 2009, F. R. Dacimo to Document Control Desk, "Amendment 8 to License Renewal Application (LRA)" (NL-09-060)

Dear Sir or Madam:

In the referenced letters, Entergy Nuclear Operations, Inc. applied for renewal of the Indian Point Energy Center operating license. The amendment revision provided in Attachment 1 supersedes the previous version submitted to the NRC by Reference 6. The amendment revision is needed to provide updated and corrected information associated with Amendment 8 to the LRA.

If you have any questions, or require additional information, please contact Mr. Robert Walpole at 914-734-6710.

I declare under penalty of perjury that the foregoing is true and correct. Executed on 6/30/09.

Sincerely,

FRD/dmt

Attachment: 1. Amendment 8, Revision 1 to License Renewal Application, Annual Update Amendment

cc: Mr. Samuel J. Collins, Regional Administrator, NRC Region I
Mr. Sherwin E. Turk, NRC Office of General Counsel, Special Counsel
Mr. John Boska, NRR Senior Project Manager
Ms. Kimberly Green, NRC Safety Project Manager
NRC Resident Inspector's Office
Mr. Paul Eddy, New York State Department of Public Service
Mr. Francis J. Murray, President and CEO, NYSERDA

ATTACHMENT 1 TO NL-09-088

Amendment 8, Revision 1 to License Renewal Application,
Annual Update Amendment

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 & 3
DOCKET NOS. 50-247 AND 50-286
LICENSE NOS. DPR-26 and DPR-64

INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3
LICENSE RENEWAL APPLICATION
ANNUAL UPDATE AMENDMENT

*(**NOTE**: Changes made under revision 1 of this document are identified by revision bars in right margin)*

In accordance with 10 CFR 54.21(b), each year following submittal of the license renewal application and at least 3 months before scheduled completion of the NRC review, an amendment to the renewal application must be submitted that identifies any change to the CLB of the facility that materially affects the contents of the license renewal application (LRA), including the FSAR supplement. This attachment is that required amendment for the Indian Point Energy Center (IPEC).

The review included documents affecting the CLB during the period of May 1, 2008 through March 1, 2009. The last annual update of the LRA included a review of documents thru April 30, 2008.

This review concluded that certain sections of the LRA are affected by changes to the CLB over the period of review. The table below summarizes the changes listing the affected system (if applicable), an explanation of the change (including effect on the LRA), and the affected LRA section.

IPEC LRA Sections Affected

System	CLB Change	LRA Section Affected
CS	Engineering change modified the buffer chemical in the IP3 containment spray system from sodium hydroxide (liquid injection) to baskets containing sodium tetraborate. The sodium hydroxide injection components are retired in place (disconnected and drained). (The baskets themselves have no license renewal intended function and as such are not subject to aging management review, but the buffer descriptions in the LRA are changed.) [Deleted line items associated with sodium hydroxide components from LRA tables and tank inspection activities from the LRA Appendix B aging management program]	2.3.2.2 (IP3) Table 2.3.2-2-IP3 Table 3.2.2-2-IP3 (including notes) App. B, B.1.29
--	Engineering change – added drain piping and float valve to protect RHR pump motors from internal flooding	3.3.2.1.18 Table 2.3.3-18-A (located in section

System	CLB Change	LRA Section Affected
	[Additional component type/ material/environment added to plant drains LRA tables – See identical material/environment line items in LRA tables 3.3.2-19-28-IP2 and 3.3.2-11-IP3 with the exception of plastic/soil which is a new material/environment combination]	2.3.3.18) Table 3.3.2-18-IP2 Table 3.3.2-18-IP3
SPG	Engineering change replaced IP3 Security Generator [Change in materials for section 3.3 tables - See identical material/environment line items in table 3.3.2-16-IP2 for the stainless steel/exhaust gas line item and NUREG 1801, Rev. 1 line item VII.A4-5 for the aluminum/treated water line item. Modified heat exchanger (bonnet) line item for a new fiberglass/treated water combination. This fiberglass/treated water material/environment combination has been previously reviewed as documented in the final Vermont Yankee Safety Evaluation Report (dated February 2008), in section 3.3.2.3.72 which includes the staff finding that the fiberglass/treated water combination has no aging effects. Therefore, no program is required for management of this combination]	3.3.2.1.15 Table 3.3.2-15-IP3
--	Engineering change – IP2 Fuel Storage Building Crane [Change to text only to identify new gantry crane in building description. No impact to table line items]	2.4.3

In addition to the identified CLB changes, corrections to the LRA were also identified and are described below.

There is buried piping in the containment isolation support system (CISS) that had not been previously identified. This piping is part of the air pressure supply that feeds Rack 15 for steam and feedwater penetrations on drawing LRA-9321-2726-0 at grid B-6. Correction of this omission requires the addition of stainless steel/soil as a material/ environment to section 3.2.2.1.3 and table 3.2.2-3-IP2 and adds the CISS reference to

the Appendix B program, B.1.6. An identical material/environment line item is already included in tables 3.2.2-2-IP3 and 3.2.2-4-IP3.

The IP2 fire protection CO_2 system described in the LRA does not exist. This CO_2 system was to be installed as part of the new station blackout diesel, but the design was changed to eliminate the CO_2 system. This affects LRA section 2.3.3.12(IP2).

IPEC LRA changes are shown below.

(Changes are shown as strikethroughs for ~~deletions~~ and underlines for additions)

LRA Section 2.3.2.2, Containment Spray System, System Description, Unit 3, second and third paragraphs, is revised as follows.

~~The containment spray system includes a spray additive tank containing sodium hydroxide and eductors that draw from the tank when the containment spray pumps are in operation following a LOCA for pH control of the water in containment.~~ Long-term post-accident retention of iodine is assured by sodium tetraborate baskets located in the containment that will be flooded under accident conditions, allowing the sodium tetraborate to dissolve into the fluid for pH control. The containment spray system also includes a dousing system for the carbon filter bank of each fan cooler unit of the containment air recirculation cooling and filtration system. Each dousing system can be started manually if high temperature conditions occur.

The containment spray system has the following intended functions for 10 CFR 54.4(a)(1).

- Provide means for rapid reduction of containment pressure and temperature by providing borated water from the RWST following a design basis loss-of-coolant accident (LOCA) or a steam-line-break accident inside containment.
- Distribute flow from the containment recirculation pumps or RHR pumps to the containment atmosphere during the recirculation phase of an accident.
- Provide ~~a means to inject~~ chemical ~~spray~~ additives (~~sodium hydroxide~~ sodium tetraborate) ~~into the containment spray stream~~ to increase the pH of post-accident fluids in the recirculation and containment sumps.
- Provide containment isolation capability for lines penetrating containment.

LRA Table 2.3.2-2-IP3 is revised as follows.

Table 2.3.2-2-IP3
Containment Spray System
Components Subject to Aging Management Review

Component Type	Intended Function(s)
Bolting	Pressure boundary
Eductor	Pressure boundary Flow control
Flow element	Pressure boundary
Nozzle	Pressure boundary Flow control
Piping	Pressure boundary
Pump casing	Pressure boundary
~~Tank~~	~~Pressure boundary~~
Tubing	Pressure boundary
Valve body	Pressure boundary

LRA Table 3.2.2-2-IP3 is revised as follows.

Table 3.2.2-2-IP3: Containment Spray System

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Flow element	Pressure boundary	Stainless steel	Air – indoor (int)	None	None	--	--	G
~~Flow element~~	~~Pressure boundary~~	~~Stainless steel~~	~~Treated water (int)~~	~~Loss of material~~	~~Periodic Surveillance and Preventive Maintenance~~	~~--~~	~~--~~	~~G, 202~~
~~Flow element~~	~~Pressure boundary~~	~~Stainless steel~~	~~Treated water (int)~~	~~Cracking~~	~~Periodic Surveillance and Preventive Maintenance~~	~~--~~	~~--~~	~~G, 202~~
Nozzle	Pressure boundary Flow control	Stainless steel	Air – indoor (ext)	None	None	V.F-13 (EP-19)	3.2.1-57	A
Nozzle	Pressure boundary Flow control	Stainless steel	Air – indoor (int)	None	None	--	--	G
Piping	Pressure boundary	Stainless steel	Air – indoor (ext)	None	None	V.F-13 (EP-19)	3.2.1-57	A
Piping	Pressure boundary	Stainless steel	Air – indoor (int)	None	None	--	--	G

Table 3.2.2-2-IP3: Containment Spray System

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Piping	Pressure boundary	Stainless steel	Air – outdoor (ext)	Loss of material	External Surfaces Monitoring	--	--	G
Piping	Pressure boundary	Stainless steel	Soil (ext)	Loss of material	Buried Piping and Tanks Inspection	V.D1-26 (EP-31)	3.2.1-4	E
Piping	Pressure boundary	Stainless steel	Treated borated water (int)	Loss of material	Water Chemistry Control – Primary and Secondary	V.A-27 (EP-41)	3.2.1-49	A
~~Piping~~	~~Pressure boundary~~	~~Stainless steel~~	~~Treated water (int)~~	~~Cracking~~	~~Periodic Surveillance and Preventive Maintenance~~	~~--~~	~~--~~	~~G, 202~~
~~Piping~~	~~Pressure boundary~~	~~Stainless steel~~	~~Treated water (int)~~	~~Loss of material~~	~~Periodic Surveillance and Preventive Maintenance~~	~~--~~	~~--~~	~~G, 202~~
Pump casing	Pressure boundary	Stainless steel	Air – indoor (ext)	None	None	V.F-13 (EP-19)	3.2.1-57	A
Pump casing	Pressure boundary	Stainless steel	Treated borated water (int)	Loss of material	Water Chemistry Control – Primary and Secondary	V.A-27 (EP-41)	3.2.1-49	A
~~Tank~~	~~Pressure boundary~~	~~Carbon steel with stainless cladding~~	~~Air – indoor (ext)~~	~~Loss of material~~	~~External Surfaces Monitoring~~	~~V.E-7 (E-44)~~	~~3.2.1-31~~	~~A~~

Table 3.2.2-2-IP3: Containment Spray System

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
~~Tank~~	~~Pressure boundary~~	~~Carbon steel with stainless cladding~~	~~Air – indoor (ext)~~	~~Loss of material~~	~~Boric Acid Corrosion Prevention~~	~~V.D1-1 (E-28)~~	~~3.2.1-45~~	~~C~~
~~Tank~~	~~Pressure boundary~~	~~Carbon steel with stainless cladding~~	~~Treated water (int)~~	~~Cracking~~	~~Periodic Surveillance and Preventive Maintenance~~	~~--~~	~~--~~	~~G, 202~~
~~Tank~~	~~Pressure boundary~~	~~Carbon steel with stainless cladding~~	~~Treated water (int)~~	~~Loss of material~~	~~Periodic Surveillance and Preventive Maintenance~~	~~--~~	~~--~~	~~G, 202~~
~~Tank~~	~~Pressure boundary~~	~~Carbon steel with stainless cladding~~	~~Treated water (int)~~	~~Loss of material~~	~~Periodic Surveillance and Preventive Maintenance~~	~~--~~	~~--~~	~~G, 202~~
Tubing	Pressure boundary	Stainless steel	Air – indoor (ext)	None	None	V.F-13 (EP-19)	3.2.1-57	A
Tubing	Pressure boundary	Stainless steel	Air – indoor (int)	None	None	--	--	G
Tubing	Pressure boundary	Stainless steel	Treated borated water (int)	Loss of material	Water Chemistry Control – Primary and Secondary	V.A-27 (EP-41)	3.2.1-49	A

Table 3.2.2-2-IP3: Containment Spray System

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
~~Tubing~~	~~Pressure boundary~~	~~Stainless steel~~	~~Treated water (int)~~	~~Loss of material~~	~~Periodic Surveillance and Preventive Maintenance~~	--	--	~~G, 202~~
~~Tubing~~	~~Pressure boundary~~	~~Stainless steel~~	~~Treated water (int)~~	~~Cracking~~	~~Periodic Surveillance and Preventive Maintenance~~	--	--	~~G, 202~~
Valve body	Pressure boundary	Stainless steel	Air – indoor (ext)	None	None	V.F-13 (EP-19)	3.2.1-57	A
Valve body	Pressure boundary	Stainless steel	Air – outdoor (ext)	Loss of material	External Surfaces Monitoring	--	--	G
Valve body	Pressure boundary	Stainless steel	Treated borated water (int)	Loss of material	Water Chemistry Control – Primary and Secondary	V.A-27 (EP-41)	3.2.1-49	A
~~Valve body~~	~~Pressure boundary~~	~~Stainless steel~~	~~Treated water (int)~~	~~Loss of material~~	~~Periodic Surveillance and Preventive Maintenance~~	--	--	~~G, 202~~
~~Valve body~~	~~Pressure boundary~~	~~Stainless steel~~	~~Treated water (int)~~	~~Cracking~~	~~Periodic Surveillance and Preventive Maintenance~~	--	--	~~G, 202~~

LRA Notes for Tables 3.2.2-1-IP2 through 3.2.2-5-IP3 are revised as follows.

Notes for Tables 3.2.2-1-IP2 through 3.2.2-5-IP3

Plant-Specific Notes

201. The air – treated environment is the equivalent of the NUREG-1801 defined dried air.

202. ~~This treated water environment is water with sodium hydroxide.~~ Not used.

203. This treated water environment is the equivalent of the NUREG-1801 defined closed cycle cooling water.

204. The containment sump suction line on IP3 utilizes a "mini-containment" consisting of guard piping and encapsulation of the containment outboard isolation valve. The air pressure internal to the "mini-containment" is maintained above the pressure internal to the RHR components by instrument air.

205. Not used.

LRA Appendix B, Section B.1.29, Periodic Surveillance and Preventive Maintenance, is revised as follows.

B.1.29 PERIODIC SURVEILLANCE AND PREVENTIVE MAINTENANCE

Program Description

The Periodic Surveillance and Preventive Maintenance Program is an existing program that includes periodic inspections and tests that manage aging effects not managed by other aging management programs. In addition to specific activities in the plant's preventive maintenance program and surveillance program, the Periodic Surveillance and Preventive Maintenance Program includes enhancements to add new activities. The preventive maintenance and surveillance testing activities are generally implemented through repetitive tasks or routine monitoring of plant operations. Credit for program activities has been taken in the aging management review of the following systems and structures. All activities are new unless otherwise noted.

Reactor building	Use visual or other NDE techniques to inspect the surface condition of carbon steel components of the reactor building cranes (polar and manipulator), crane rails, and girders, and

	refueling platform to manage loss of material. [existing]
~~Containment spray system~~	~~IP3: Perform wall thickness measurements of the NaOH tank to manage loss of material. [existing]~~ ~~IP3: Perform visual or other NDE inspections on the inside surfaces of a representative sample of stainless steel components exposed to sodium hydroxide to manage loss of material and cracking.~~

LRA Appendix B, Periodic Surveillance and Preventive Maintenance, Section B.1.29, Attribute 10, is revised as follows.

10. Operating Experience

Typical inspection results of this program include:

- IP2 reactor building polar crane (May 2006): no indication of corrosion, cracking, or wear in the crane structural members.
- IP3 reactor building polar crane (February 2001 and March 2005): no indication of corrosion, cracking, or wear in the crane structural members.
- ~~IP3 sodium hydroxide (NaOH) storage tank (August 2004): no deficiencies. Ultrasonic measurement of wall thickness was satisfactory.~~
- IP2 and IP3 recirculation pumps and related system components (2005 and 2006): no deficiencies.
- IP2 Diesel Generator Building floor drain backwater valves (October 2006): no loss of material.
- IP2 and IP3 EDG's (2005 and 2006): no unacceptable loss of material.

The use of proven monitoring techniques and acceptance criteria provides assurance that this program will remain effective for managing aging effects for passive components.

The inspections of the ~~IP3 sodium hydroxide (NaOH) storage tank,~~ IP2 and IP3 recirculation pumps, IP2 and IP3 emergency diesel generators, the security generator, and the IP3 Appendix R fire protection diesel found no evidence of loss of material

LRA Section 3.2.2.1.3 Containment Isolation Support System is revised as follows.

Environment

Containment isolation support system components are exposed to the following environments.

- air – indoor
- air – treated
- gas
- treated water
- soil

Aging Effects Requiring Management

The following aging effects associated with the containment isolation support system require management.

- loss of material

Aging Management Programs

The following aging management programs manage the aging effects for containment isolation support system components.

- Bolting Integrity
- External Surfaces Monitoring
- Water Chemistry Control – Primary and Secondary
- Buried Piping and Tanks Inspection

LRA table 3.2.2-3-IP2, Containment Isolation Support Systems Summary of Aging Management Review (IP2), is revised as follows.

Table 3.2.2-3-IP2: Containment Isolation Support Systems

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Piping	Pressure boundary	Carbon steel	Air – treated (int)	None	None	VII.J-22 (AP-4)	3.3.1-98	C, 201
Piping	Pressure boundary	Stainless steel	Soil (ext)	Loss of material	Buried Piping and Tanks Inspection	VII.C1-18 (A-01)	3.3.1-19	C
Piping	Pressure boundary	Stainless steel	Air – treated (int)	None	None	VII.J-18 (AP-20)	3.3.1-98	C, 201
Piping	Pressure boundary	Stainless steel	Air – indoor (ext)	None	None	V.F-12 (EP-18)	3.2.1-53	A
Piping	Pressure boundary	Stainless steel	Treated water (int)	Loss of material	Water Chemistry Control – Primary and Secondary	V.C-4 (E-33)	3.2.1-3	C, 206
Tank	Pressure boundary	Carbon steel	Air – indoor (ext)	Loss of material	External Surfaces Monitoring	V.E-7 (E-44)	3.2.1-31	A
Tank	Pressure boundary	Carbon steel	Air – treated (int)	None	None	VII.J-22 (AP-4)	3.3.1-98	C, 201

LRA Appendix B, BURIED PIPING AND TANKS INSPECTION, Section B.1.6, is revised as follows.

B.1.6 BURIED PIPING AND TANKS INSPECTION

Program Description

The Buried Piping and Tanks Inspection Program is a new program that includes (a) preventive measures to mitigate corrosion and (b) inspections to manage the effects of corrosion on the pressure-retaining capability of buried carbon steel, gray cast iron, and stainless steel components. Preventive measures are in accordance with standard industry practice for maintaining external coatings and wrappings. Buried components are inspected when excavated during maintenance. If trending within the corrective action program identifies susceptible locations, the areas with a history of corrosion problems are evaluated for the need for additional inspection, alternate coating, or replacement. The program applies to buried components in the following systems.

- Safety injection
- Service water
- Fire protection
- Fuel oil
- Security generator
- City water
- Plant drains
- Auxiliary feedwater
- Containment isolation support

LRA Section 3.3.2.1.18, Plant Drains is revised as follows.

Materials

Plant drains components are constructed of the following materials.

- carbon steel
- stainless steel
- gray cast iron
- plastic

LRA Table 2.3.3-18-A, Floor Drains Routing is revised as follows:

Table 2.3.3-18-A
Floor Drains Routing (Continued)

Route Number	Description
1	IP2: Fire Area A, Zone 32A, Electrical Tunnel in the Primary and Control Building, contains automatic closed head, preaction water spray systems. Water from the actuated sprinklers in the electrical tunnel flow down the sloped floor toward the cable spreading room. At the end of the tunnel, a properly sized drain routes water to the yard where drainage terminates.
2	IP2: Fire Area G, Zone 10, Diesel Generator Building, contains an automatic (closed head) spray system with backflow prevention devices. Five drainage sumps are provided in the building and connect to the site drainage system routing water from elevation 64' to elevation 18' and terminates at manhole 17.
3	IP2: Primary Auxiliary Building (PAB) drains protect safety-related equipment from flooding at various elevations throughout the building. Drain water is routed through a series of 4" drains to a deep sump located at the 15' elevation. ~~The door leading to the main transformer yard is designed to provide for drainage to the yard~~ A float operated valve with PVC pipe that penetrates the exterior PAB wall is routed below grade to a nearby storm drain manhole in the transformer yard to prevent RHR pump failure in the unlikely event the pipe failure is undetected. Operator actions are also credited to prevent flooding of the RHR pumps.
6	IP3: The Primary Auxiliary Building (PAB) is designed so flooding from any elevation will result in water settling at the lowest elevation (15'). Each room utilizes drains to protect safety-related equipment from flooding at various elevations throughout the building. Drain water is routed through a series of 4" drains to a deep sump located at the 15' elevation. ~~Sufficient drainage area is provided in addition to a flap installed in the door leading to the main transformer yard.~~ A float operated valve with PVC pipe that penetrates the exterior PAB wall is routed below grade to a nearby storm drain manhole in the transformer yard in the unlikely event the pipe failure is undetected to prevent RHR pump failure. Operator actions are also credited to prevent flooding of the RHR pumps.

LRA Table 3.3.2-18-IP2, Plant Drains Summary of Aging Management Review (IP2) and LRA table 3.3.2-18-IP3, Plant Drains Summary of Aging Management Review (IP3), is revised as follows.

Table 3.3.2-18-IP2: Plant Drains

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Piping	Pressure boundary	Plastic	Air – indoor (int)	None	None	--	--	F
Piping	Pressure boundary	Plastic	Air – indoor (ext)	None	None	--	--	F
Piping	Pressure boundary	Plastic	Soil (ext)	None	None	--	--	F
Strainer	Filtration	Carbon steel	Air – indoor (ext)	Loss of material	External Surfaces Monitoring	VII.I-8 (A-77)	3.3.1-58	A
Strainer	Filtration	Stainless steel	Air – indoor (ext)	None	None	VII.J-15 (AP-17)	3.3.1-94	A
Tubing	Pressure boundary	Stainless steel	Air – indoor (ext)	None	None	VII.J-15 (AP-17)	3.3.1-94	A
Tubing	Pressure boundary	Stainless steel	Raw water (int)	Loss of material	One-Time Inspection	VII.C1-15 (A-54)	3.3.1-79	E

Table 3.3.2-18-IP2: Plant Drains

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Valve body	Pressure boundary	Carbon steel	Air – indoor (ext)	Loss of material	External Surfaces Monitoring	VII.I-8 (A-77)	3.3.1-58	A
Valve body	Pressure boundary	Carbon steel	Raw water (int)	Loss of material	Periodic Surveillance and Preventive Maintenance	VII.C1-19 (A-38)	3.3.1-76	E
Valve body	Pressure boundary	Stainless steel	Air – indoor (ext)	None	None	VII.J-15 (AP-17)	3.3.1-94	A
Valve body	Pressure boundary	Stainless steel	Gas (int)	None	None	VII.J-19 (AP-22)	3.3.1-97	A
Valve body	Pressure boundary	Stainless steel	Raw water (int)	Loss of material	One-Time Inspection	VII.C1-15 (A-54)	3.3.1-79	E
Valve body	Pressure boundary	Stainless steel	Treated borated water (int)	Loss of material	Water Chemistry Control – Primary and Secondary	VII.E1-17 (AP-79)	3.3.1-91	C
Valve body	Pressure boundary	Gray cast iron	Air – indoor (ext)	Loss of material	External Surfaces Monitoring	VII.I-8 (A-77)	3.3.1-58	A
Valve body	Pressure boundary	Gray cast iron	Air – indoor (int)	Loss of material	External Surfaces Monitoring	V.A-19 (E-29)	3.2.1-32	E

Table 3.3.2-18-IP3
Plant Drains
Summary of Aging Management Review

Table 3.3.2-18-IP3: Plant Drains

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Piping	Pressure boundary	Plastic	Air – indoor (int)	None	None	--	--	F
Piping	Pressure boundary	Plastic	Air – indoor (ext)	None	None	--	--	F
Piping	Pressure boundary	Plastic	Soil (ext)	None	None	--	--	F
Strainer	Filtration	Carbon steel	Air – indoor (ext)	Loss of material	External Surfaces Monitoring	VII.I-8 (A-77)	3.3.1-58	A
Strainer	Filtration	Stainless steel	Air – indoor (ext)	None	None	VII.J-15 (AP-17)	3.3.1-94	A
Tubing	Pressure boundary	Stainless steel	Air – indoor (ext)	None	None	VII.J-15 (AP-17)	3.3.1-94	A

Table 3.3.2-18-IP3: Plant Drains

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Tubing	Pressure boundary	Stainless steel	Raw water (int)	Loss of material	One-Time Inspection	VII.C1-15 (A-54)	3.3.1-79	E
Valve body	Pressure boundary	Stainless steel	Air – indoor (ext)	None	None	VII.J-15 (AP-17)	3.3.1-94	A
Valve body	Pressure boundary	Stainless steel	Gas (int)	None	None	VII.J-19 (AP-22)	3.3.1-97	A
Valve body	Pressure boundary	Stainless steel	Raw water (int)	Loss of material	One-Time Inspection	VII.C1-15 (A-54)	3.3.1-79	E
Valve body	Pressure boundary	Stainless steel	Treated borated water (int)	Loss of material	Water Chemistry Control – Primary and Secondary	VII.E1-17 (AP-79)	3.3.1-91	C
Valve body	Pressure boundary	Gray cast iron	Air – indoor (ext)	Loss of material	External Surfaces Monitoring	VII.I-8 (A-77)	3.3.1-58	A
Valve body	Pressure boundary	Gray cast iron	Air – indoor (int)	Loss of material	External Surfaces Monitoring	V.A-19 (E-29)	3.2.1-32	E

LRA Section 3.3.2.1.15, Security Generator is revised as follows.

Materials

Security generator system components are constructed of the following materials.

- aluminum
- carbon steel
- ~~copper alloy > 15% zinc~~
- stainless steel
- fiberglass

Aging Management Programs

The following aging management programs manage the aging effects for security generator system components.

- Bolting Integrity
- Buried Piping and Tanks Inspection
- External Surfaces Monitoring
- Periodic Surveillance and Preventive Maintenance
- ~~Selective Leaching~~
- Water Chemistry Control – Closed Cooling Water

LRA Table 3.3.2-15-IP3, Security Generator Summary of Aging Management Review, is revised as follows.

Table 3.3.2-15-IP3: Security Generator

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Bolting	Pressure boundary	Carbon steel	Air – indoor (ext)	Loss of material	Bolting Integrity	VII.I-4 (AP-27)	3.3.1-43	A
Bolting	Pressure boundary	Stainless steel	Air – indoor (ext)	None	None	VII.J-15 (AP-17)	3.3.1-94	C
Filter housing	Pressure boundary	Carbon steel	Air – indoor (ext)	Loss of material	External Surfaces Monitoring	VII.I-8 (A-77)	3.3.1-58	A
Filter housing	Pressure boundary	Carbon steel	Air – indoor (int)	Loss of material	External Surfaces Monitoring	V.A-19 (E-29)	3.2.1-32	E
Flexible bellows	Pressure boundary	~~Carbon steel~~ Stainless Steel	Air – indoor (ext)	~~Loss of material~~ None	~~External Surfaces Monitoring~~ None	~~VII.I-8 (A-77)~~ VII.J-15 (AP-17)	~~3.3.1-58~~ 3.3.1-94	C
Flexible bellows	Pressure boundary	~~Carbon steel~~ Stainless Steel	Exhaust gas (int)	Cracking – fatigue	Periodic Surveillance and Preventive Maintenance	--	--	H
Flexible bellows	Pressure boundary	~~Carbon steel~~ Stainless Steel	Exhaust gas (int)	Loss of material	Periodic Surveillance and Preventive Maintenance	VII.H2-2 (A-27)	3.3.1-18	E

Table 3.3.2-15-IP3: Security Generator

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Flexible connection	Pressure boundary	Stainless steel	Air – indoor (ext)	None	None	VII.J-15 (AP-17)	3.3.1-94	A
Flexible connection	Pressure boundary	Stainless steel	Gas (int)	None	None	VII.J-19 (AP-22)	3.3.1-97	A
Heat exchanger (bonnet)	Pressure boundary	~~Copper alloy > 15% Zn~~ Fiberglass	Air – indoor (ext)	None	None	~~V.F-3 (EP-10)~~ --	~~3.2.1-53~~ --	~~C~~ F
Heat exchanger (bonnet)	Pressure boundary	~~Copper alloy > 15% Zn~~ Fiberglass	Treated water (int)	~~Loss of material~~ None	~~Water Chemistry Control – Closed Cooling Water~~ None	~~VII.E1-2 (AP-34)~~ --	~~3.3.1-51~~ --	~~D~~ F
Heat exchanger (fins)	~~Heat transfer~~	Aluminum	Air – indoor (ext)	Fouling	Periodic Surveillance and Preventive Maintenance	--	--	H
Heat exchanger (tubes)	Heat transfer	~~Copper alloy > 15% Zn~~ Aluminum	Air – indoor (ext)	Fouling	Periodic Surveillance and Preventive Maintenance	--	--	~~G~~ F
Heat exchanger (tubes)	Heat transfer	~~Copper alloy > 15% Zn~~ Aluminum	Treated water (int)	Fouling	Water Chemistry Control – Closed Cooling Water	~~VII.C2-2 (AP-80)~~ --	~~3.3.1-52~~ --	~~D~~ F

LRA Section 2.3.3.12(IP2), Fire Protection – CO2, Halon, and RCP Oil Collection Systems, System Description, Unit 2, third paragraph, is revised as follows.

The fire protection – CO2, halon, and RCP oil collection system consists of fixed fire suppression systems utilizing ~~carbon dioxide (CO2) and~~ bromotrifluoromethane (Halon 1301) as well as oil leakage collection for the reactor coolant pumps (RCPs). The ~~CO2 and~~ halon system~~s~~ consist<u>s</u> of gas storage tanks and the necessary piping, valves, and instrumentation. The RCP oil collection system consists of drain pans, collection tanks and the necessary piping, valves, and instrumentation to collect any leakage of the RCP lube oil system.

~~The Unit 2 fire protection – CO_2 system is not required to meet the requirements of 10 CFR 50.48 and is therefore not within the scope of license renewal.~~

LRA Section 2.4.3, Turbine Buildings, Auxiliary Buildings and Other Structures, Description, fourteenth section (Fuel Storage Buildings (IP2/3) is revised as follows.

Fuel Storage Buildings (IP2/3)

For Units 2 and 3, the fuel storage building is designed to handle and store both spent and new fuel and provides support for the spent fuel crane and other fuel handling equipment. <u>In addition, the floor of IP2 provides support of a gantry crane.</u> Each structure is located adjacent to, but separate from, its respective containment building.