

## LimerickNPEM Resource

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**From:** Christopher.Wilson2@exeloncorp.com  
**Sent:** Friday, March 30, 2012 9:16 AM  
**To:** Kuntz, Robert  
**Subject:** FW: 3.30.12 - LIM - Response to RAI dated 3.22.12 & info. addressing minor errors or omissions re. LGS LRA.pdf - Adobe Acrobat Professional  
**Attachments:** 3.30.12 - LIM - Response to RAI dated 3.22.12 & info. addressing minor errors or omissions re. LGS LRA.pdf

Rob...this letter was transmitted to DCC today. Call if you have any questions

Chris

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**Created By:** Christopher.Wilson2@exeloncorp.com

**Recipients:**  
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10 CFR 50  
10 CFR 51  
10 CFR 54

**March 30, 2012**

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

**Limerick Generating Station, Units 1 and 2  
Facility Operating License Nos. NPF-39 and NPF-85  
NRC Docket Nos. 50-352 and 50-353**

**Subject:** Response to NRC Request for Additional Information, dated March 22, 2012; and information addressing minor errors or omissions related to the Limerick Generating Station License Renewal Application

**Reference:** 1. Exelon Generation Company, LLC letter from Michael P. Gallagher to NRC Document Control Desk, "Application for Renewed Operating Licenses", dated June 22, 2011  
2. Letter from Robert F. Kuntz (NRC) to Michael P. Gallagher (Exelon), "Requests for Additional Information for the review of the Limerick Generating Station, Units 1 and 2, License Renewal Application (TAC Nos. ME6555, ME6556)", dated March 22, 2012

In the Reference 1 letter, Exelon Generation Company, LLC (Exelon) submitted the License Renewal Application (LRA) for the Limerick Generating Station, Units 1 and 2 (LGS). In the Reference 2 letter, the NRC requested additional information to support the staffs' review of the LRA.

Enclosed are the responses to these requests for additional information (Enclosure A), updates to affected LGS LRA sections (Enclosure B), and an update to one of the LGS license renewal commitments (Enclosure C).

Enclosure D contains information that addresses four minor errors or omissions identified subsequent to the submittal of the LRA.

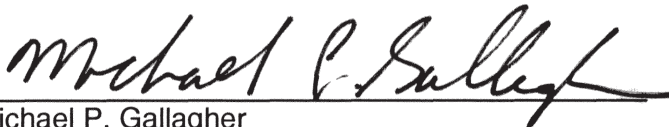
This letter and its enclosures contain no other new or revised regulatory commitments.

If you have any questions, please contact Mr. Al Fulvio, Manager, Exelon License Renewal, at 610-765-5936.

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

Executed on 3-30-2012

Respectfully,

  
Michael P. Gallagher  
Vice President - License Renewal Projects  
Exelon Generation Company, LLC

Enclosures: A: Responses to Requests for Additional Information  
B: Updates to affected LGS LRA sections  
C: LGS License Renewal Commitment List Changes  
D: Minor Errors or Omissions Related to the LRA

cc: Regional Administrator – NRC Region I  
NRC Project Manager (Safety Review), NRR-DLR  
NRC Project Manager (Environmental Review), NRR-DLR  
NRC Project Manager, NRR-DORL Limerick Generating Station  
NRC Senior Resident Inspector, Limerick Generating Station  
R. R. Janati, Commonwealth of Pennsylvania

**Enclosure A**

**Responses to Requests for Additional Information related to various sections of the LGS  
License Renewal Application (LRA)**

RAI B.2.1.17-3.1

RAI B.2.1.29-2.1

### **RAI B.2.1.17-3.1**

#### **Background**

The "detection of aging effects" program element of GALL Report AMP XI.M26 states that visual inspections are performed by fire protection qualified personnel of fire barrier penetration seals, walls, ceilings, floors, doors, and other fire barrier materials. LRA Section B.2.1.17 states that the personnel performing inspections are qualified and trained to perform the inspection activities. However, the staff noted that the personnel responsible for performing fire barrier inspections are maintenance qualified personnel; not fire protection qualified personnel. By letter dated January 17, 2012, the staff issued RAI B.2.17-3 requesting that the training and qualifications of the personnel responsible for performing fire barrier inspections be described.

The response to RAI B.2.17-3, provided by letter dated February 15, 2012, stated that inspections are typically performed by personnel who are qualified by training and demonstration of installation and repair of fire barriers, the purpose of fire barriers, fire barrier types, and materials of construction, and that these typically qualified personnel inspect both new and repaired fire barriers.

Regulatory Guide 1.189, "Fire Protection for Nuclear Power Plants," states that personnel responsible for maintaining and testing fire protection systems should be qualified by training and experience for such work. The LRA does not discuss whether the personnel responsible for performing the inspections have been trained to identify fire barrier deficiencies.

#### **Issue**

It is not clear to the staff how the program will ensure only personnel who are trained and qualified to identify fire barrier deficiencies are assigned to perform fire barrier inspections given that the personnel are only typically qualified and that the typical qualifications do not include training in the identification of fire barrier deficiencies.

#### **Request**

1. Explain the minimum qualifications required for the personnel performing fire barrier inspections, not the typical qualifications.
2. Explain how the program will ensure that only personnel trained and qualified to identify fire barrier deficiencies are assigned to perform fire barrier inspections.

#### **Exelon Response**

1. Maintenance personnel performing LGS fire barrier inspections have a minimum of three years experience and are trained in accordance with Regulatory Guide 1.8 (Rev. 1) and ANSI/ANS 3.1 (1978) as described in UFSAR Section 13.1.3, "Qualification of Nuclear Plant Personnel." Training requirements are met via an INPO National Academy for Nuclear Training accredited training program that meets industry standards described in ACAD 92-008, "Guidelines for Training and Qualification of Maintenance Personnel." Training in this program includes familiarization with fire protection systems and plant fire barriers, use of the Corrective Action Program, and use of plant procedures.

Doors that have dual functions of fire barrier and security barrier are inspected by plant security personnel. The security personnel receive training prior to performing the inspections. This training includes observation of inspections performed by a trained security officer, performance of an inspection while being observed by a trained security officer, and demonstration and completion of inspection procedure requirements.

Fire protection barrier inspection parameters and acceptance criteria are identified in plant procedures that implement Fire Protection program requirements. As discussed above, inspections are performed by trained site personnel in accordance with these procedures. Inspection results that do not meet established procedure acceptance criteria are entered into the Corrective Action Program for evaluation.

2. LGS personnel verify their training is current and that they are qualified prior to performing fire barrier inspections. Additionally, the supervisor also verifies that the individual assigned to perform the inspection is qualified. This process precludes unqualified personnel from performing fire barrier inspections.

#### **RAI B.2.1.29-2.1**

##### **Background**

During its audit, the staff noted that the Buried and Underground Piping and Tanks program states that adverse conditions detected during inspections will be evaluated and the potential inspection expansion will be determined in accordance with the corrective action program. The staff issued RAI B.2.1.29-2 requesting that the applicant state the basis for how the corrective action program inspection expansion size will be consistent with GALL Report AMP XI.M41, or state why the corrective action inspection expansion size will be sufficient to detect degradation prior to it causing an in-scope component to not be capable of meeting its current licensing basis function(s).

The response to RAI B.2.1.29-2 stated that:

The LGS Buried and Underground Piping and Tanks aging management program enhancement is revised to include criteria such that if adverse indications are detected during inspection of inscope buried piping, inspection sample sizes within the affected piping categories are doubled. If adverse indications are found in the expanded sample, the inspection sample size is again doubled. This doubling of the inspection sample size continues as dictated by the corrective action program. This criterion is in accordance with GALL Report AMP XI.M41 , "Buried and Underground Piping and Tanks."

### Issue

The response states, in part that, "[t]his doubling of the inspection sample size continues as dictated by the corrective action program. It is not clear to the staff what is intended by the wording associated with the corrective action program. GALL Report AMP XI.M41, section 4.f.iv states that, [i]f adverse indications are detected, inspection sample sizes within the affected piping categories are doubled. If adverse indications are found in the expanded sample, the inspection sample size is again doubled. This doubling of the inspection sample size continues as necessary." It is not clear if the corrective action program would require doubling of the inspection sample size until a subsequent set of inspections detected no adverse conditions.

### Request

State whether the corrective action program would require doubling of the inspection sample size until a subsequent set of inspections detected no adverse conditions, and if not, state the basis for consistency with GALL Report AMP XI.M41, or state the basis for why the expanded scope of inspections have identified the extent of condition and extent of cause of the adverse condition.

### **Exelon Response**

To be consistent with GALL Report AMP XI.M41 the enhancement is changed to read as follows:

"If adverse indications are detected, inspection sample sizes within the affected piping categories are doubled. If adverse indications are found in the expanded sample, the inspection sample size is again doubled. This doubling of the inspection sample size continues as necessary."

LRA Appendix A.2.1.29 and Appendix B.2.1.29 are revised as shown in Enclosure B. LRA Table A.5 item 29 is revised as shown in Enclosure C.



**Enclosure B**  
**LGS License Renewal Application Updates**

Notes:

- Updated LRA Sections and Tables are provided in the same order as the RAI responses contained in Enclosure A.
- To facilitate understanding, portions of the original LRA have been repeated in this Enclosure, with revisions indicated.
- Existing LRA text is shown in normal font. Changes are highlighted with ***bold italics*** for inserted text and strikethroughs for deleted text.

As a result of the response to RAI B.2.1.29-2.1 provided in Enclosure A of this letter, the Buried and Underground Piping and Tanks aging management program for Section A.2.1.29 of Appendix A, enhancement 1 on LRA page A-21 is revised as shown below:

#### **A.2.1.29 Buried and Underground Piping and Tanks**

The Buried and Underground Piping and Tanks aging management program will be enhanced to:

If adverse indications are detected during inspection of in-scope buried piping, inspection sample sizes within the affected piping categories are doubled. If adverse indications are found in the expanded sample, the inspection sample size is again doubled. This doubling of the inspection sample size continues as **necessary**. ~~dictated by the corrective action program.~~

As a result of the response to RAI B.2.1.29-2.1 provided in Enclosure A of this letter, the Buried and Underground Piping and Tanks aging management program for Section B.2.1.29 of Appendix B, enhancement 1 on LRA page B-117 is revised as shown below:

#### **B.2.1.29 Buried and Underground Piping and Tanks**

##### **Enhancements**

Prior to the period of extended operation, the following enhancements will be implemented in the following program elements:

1. If adverse indications are detected during inspection of in-scope buried piping, inspection sample sizes within the affected piping categories are doubled. If adverse indications are found in the expanded sample, the inspection sample size is again doubled. This doubling of the inspection sample size continues as **necessary**. ~~dictated by the corrective action program.~~

**Program Element Affected: Detection of Aging Effects (Element 4)**

## Enclosure C

### LGS

#### License Renewal Commitment List Changes

This Enclosure identifies commitments made in this document and is an update to the LGS LRA Appendix A, Table A.5 License Renewal Commitment List. Any other actions discussed in the submittal represent intended or planned actions and are described to the NRC for the NRC's information and are not regulatory commitments. Changes to the LGS LRA Appendix A, Table A.5 License Renewal Commitment List are as a result of the Exelon response to the following RAI:

RAI 2.1.29-2.1

#### Notes:

- To facilitate understanding, portions of the original LRA have been repeated in this Enclosure, with revisions indicated.
- Existing LRA text is shown in normal font. Changes are highlighted with ***bold italics*** for inserted text and strikethroughs for deleted text.

As a result of the response to RAI B.2.1.29-2.1 provided in Enclosure A of this letter for the Buried and Underground Piping and Tanks aging management program, LRA Table A.5 Commitment List, commitment 29, item 1 on LRA page A-55 is revised as shown below:

**A.5 License Renewal Commitment List**

| <b>NO.</b> | <b>PROGRAM OR TOPIC</b>                 | <b>COMMITMENT</b>  | <b>IMPLEMENTATION SCHEDULE</b>  | <b>SOURCE</b>   |
|------------|---|--|---|---|
| 29         | Buried and Underground Piping and Tanks | <p>Buried and Underground Piping and Tanks is an existing program that will be enhanced to:</p> <p>1. If adverse indications are detected during inspection of in-scope buried piping, inspection sample sizes within the affected piping categories are doubled. If adverse indications are found in the expanded sample, the inspection sample size is again doubled. This doubling of the inspection sample size continues as <b>necessary</b>. <del>dictated by the corrective action program.</del></p> | <p>Program to be enhanced prior to the period of extended operation.</p> <p>Inspection schedule identified in commitment.</p> | <p>Section A.2.1.29</p> <p>LGS Letter dated 2/15/12</p> <p>RAI B.2.1.29-2</p> <p>RAI B.2.1.29-3</p> <p><b>LGS Letter dated 3/30/12</b></p> <p><b>RAI B.2.1.29-2.1</b></p> |

## **Enclosure D**

### **Minor Errors or Omissions Related to the LRA**

#### **Introduction**

This enclosure contains four changes that correct minor errors or omissions identified subsequent to the submittal of the License Renewal Application (LRA). For each revision the affected section, page and paragraph of the LRA is provided, and the change is described. For clarity, entire sentences or paragraphs from the LRA are provided with deleted text highlighted by strikethroughs and inserted text highlighted by bolded italics. Revisions to tables are shown by providing excerpts from the affected tables.

### **Change #1: Compressed Air System**

**Affected LRA Sections: 3.3.2.1.3, Table 3.3.2-3**

**LRA Page Numbers: 3.3-5, 3.3-96, 3.3-98**

**Description of Change:** An additional material/environment combination has been identified for the Compressed Air system. The inflatable seal filter housings are aluminum and are added to LRA Section 3.3.2.1 and LRA Table 3.3.2-3 under the “Piping, piping components, and piping elements” component type. These filter housings are exposed to an external environment of Air-Indoor, Uncontrolled and an internal environment of Air/Gas-Wetted and are managed by the Compressed Air Monitoring program.

As discussed in response to RAI 3.3.2.1.14-1 provided to the NRC in Exelon’s letter dated February 16, 2012, preventive maintenance inspections are conducted on aluminum alloy piping, piping components, and piping elements exposed to air/gas – wetted (internal) as part of the Compressed Air Monitoring program. GALL Report AMP XI.M24, Compressed Air Monitoring, recommends performing periodic and opportunistic visual inspections of internal surfaces of components for signs of corrosion and abnormal corrosion products that might indicate a loss of material within the system. The inflatable seal filters are subject to a periodic preventive maintenance activity which provides access to the internal surfaces of the filter housing for inspection and maintenance.

LRA Section 3.3.2.1.3, page 3.3-5, is revised as follows:

#### **3.3.2.1.3 Compressed Air System**

##### **Materials**

The materials of construction for the Compressed Air System components are:

- ***Aluminum***
- Carbon Steel
- Carbon and Low Alloy Steel Bolting
- Copper
- Copper Alloy with less than 15% Zinc
- Elastomer
- Stainless Steel

LRA Table 3.3.2-3, page 3.3-96, is revised as follows:

**Table 3.3.2-3**  
**Compressed Air System**  
**Summary of Aging Management Evaluation**

| <b>Component Type</b>                          | <b>Intended Function</b> | <b>Material</b> | <b>Environment</b>                           | <b>Aging Effect Requiring Management</b> | <b>Aging Management Programs</b>                                 | <b>NUREG-1801 Item</b> | <b>Table 1 Item</b> | <b>Notes</b> |
|--|--------------------------|-----------------|--|--|--|------------------------|---------------------|--------------|
| Piping, piping components, and piping elements | Structural Support       | Aluminum        | <i>Air - Indoor, Uncontrolled (External)</i> | <i>None</i>                              | <i>None</i>  | <i>VII.J.AP-135</i>    | <b>3.3.1-113</b>    | <i>A</i>     |
|  |                          |                 | <i>Air/Gas - Wetted (Internal)</i>           | <i>Loss of Material</i>                  | <i>Compressed Air Monitoring (B.2.1.15)</i>                      | <i>VII.F1.AP-142</i>   | <b>3.3.1-92</b>     | <i>E, 1</i>  |
|  |                          | Carbon Steel    | Air - Indoor, Uncontrolled (External)        | Loss of Material                         | External Surfaces Monitoring of Mechanical Components (B.2.1.25) | VII.D.A-80             | 3.3.1-78            | A            |
|  |                          |                 | Air/Gas - Wetted (Internal)                  | Loss of Material                         | Compressed Air Monitoring (B.2.1.15)                             | VII.D.A-26             | 3.3.1-55            | A            |
|  |                          | Copper          | Air - Indoor, Uncontrolled (External)        | None                                     | None   | V.F.EP-10              | 3.2.1-57            | A            |

LRA Table 3.3.2-3, page 3.3-98, is revised as follows:

**Plant Specific Notes:**

None.

- The Compressed Air Monitoring (B.2.1.15) program is substituted to manage the aging effect(s) applicable to this component type, material, and environment combination.*

**Change #2: Primary Containment Ventilation System**

**Affected LRA Section: Table 3.3.2-16**

**LRA Page Numbers: 3.3-189 and 3.3-193**

**Description of Change:** An additional material/environment combination has been identified for the Primary Containment Ventilation system. A portion of the carbon steel chilled water supply piping to the reactor enclosure supply air cooling coils is internal to the ventilation fan cabinet, and is therefore exposed to an external environment of Air/Gas-Wetted. This environment is added to LRA Table 3.3.2-16 under the "Piping, piping components, and piping elements" component type.



LRA Table 3.3.2-16, page 3.3-189, is revised as follows:

**Table 3.3.2-16 Primary Containment Ventilation System**

| Component Type                                 | Intended Function | Material     | Environment                           | Aging Effect Requiring Management | Aging Management Programs  | NUREG-1801 Item    | Table 1 Item    | Notes       |
|--|-------------------|--------------|---------------------------------------|-----------------------------------|--|--------------------|-----------------|-------------|
| Piping, piping components, and piping elements | Leakage Boundary  | Carbon Steel | Air - Indoor, Uncontrolled (External) | Loss of Material                  | External Surfaces Monitoring of Mechanical Components (B.2.1.25)                                 | VII.D.A-80         | 3.3.1-78        | A           |
|  |                   |              | <i>Air/Gas - Wetted (External)</i>    | <i>Loss of Material</i>           | <i>Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26)</i> | <i>VII.F3.A-08</i> | <i>3.3.1-90</i> | <i>C, 2</i> |
|  |                   |              | Air/Gas - Wetted (Internal)           | Loss of Material                  | Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26)        | VII.G.A-23         | 3.3.1-89        | A           |

LRA Table 3.3.2-16, page 3.3-193, is revised as follows:

**Plant Specific Notes:**

1. The stainless steel drip pan is located internal to the ventilation ductwork, and therefore the Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) program is used to manage the applicable aging effects.
2. *The Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) program is used to manage the applicable aging effects for carbon steel piping located internal to the ventilation ductwork.*

**Change #3: Primary Containment Instrument Gas System**

**Affected LRA Section: Table 3.3.2-14**

**Exelon letter dated 3/13/12, "Response to NRC Requests for Additional Information, dated February 14, 2012 and February 16, 2012, related to the Limerick Generating Station License Renewal Application", Enclosure B, page 20 of 28**

The response to RAI 3.2.2.1.1-3 was provided to the NRC in Exelon's letter dated March 13, 2012. LRA Table 3.3.2-14 was revised as part of the response to add Selective Leaching as an aging management program for Gray Cast Iron in an Air/Gas-Wetted environment. However, the program was incorrectly added to the Ductile Cast Iron line in the table. The corrected page from Table 3.3.2-14 revision is attached below. The response to RAI 3.2.2.1.1-3 is otherwise unchanged.

Exelon letter dated 3/13/12, "Response to NRC Requests for Additional Information, dated February 14, 2012 and February 16, 2012, related to the Limerick Generating Station License Renewal Application," Enclosure B, page 20 of 28, is revised as follows:

**Table 3.3.2-14 Primary Containment Instrument Gas System (Continued)**

| Component Type                                 | Intended Function | Material          | Environment                           | Aging Effect Requiring Management | Aging Management Programs   | NUREG-1801 Item | Table 1 Item | Notes |
|--|-------------------|-------------------|---------------------------------------|-----------------------------------|---|-----------------|--------------|-------|
| Piping, piping components, and piping elements | Leakage Boundary  | Ductile Cast Iron | Air - Indoor, Uncontrolled (External) | Loss of Material                  | External Surfaces Monitoring of Mechanical Components (B.2.1.25)                          | VII.D.A-80      | 3.3.1-78     | A     |
|  |                   |                   | Air/Gas - Wetted (Internal)           | Loss of Material                  | Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) | VII.G.A-23      | 3.3.1-89     | A     |
|  |                   |                   |                                       |                                   | <del>Selective Leaching (B.2.1.23)</del>  |                 |              | H, 3  |
|  |                   | Gray Cast Iron    | Air - Indoor, Uncontrolled (External) | Loss of Material                  | External Surfaces Monitoring of Mechanical Components (B.2.1.25)                          | VII.D.A-80      | 3.3.1-78     | A     |
|  |                   |                   | Air/Gas - Wetted (Internal)           | Loss of Material                  | Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) | VII.G.A-23      | 3.3.1-89     | A     |
|  |                   |                   |                                       |                                   | <del>Selective Leaching (B.2.1.23)</del>  |                 |              | H, 3  |
|  | Pressure Boundary | Nickel Alloy      | Air - Indoor, Uncontrolled (External) | None                              | None  | VII.J.AP-16     | 3.3.1-118    | A     |
|  |                   |                   | Air/Gas - Wetted (Internal)           | Loss of Material                  | Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) | VII.E5.AP-274   | 3.3.1-95     | A     |
|  |                   | Stainless Steel   | Air - Indoor, Uncontrolled (External) | None                              | None  | VII.J.AP-17     | 3.3.1-120    | A     |
|  |                   |                   | Air/Gas - Wetted (Internal)           | Loss of Material                  | Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) | VII.F1.AP-99    | 3.3.1-94     | C     |
|  |                   | Aluminum          | Air - Indoor, Uncontrolled (External) | None                              | None  | VII.J.AP-135    | 3.3.1-113    | A     |
|  |                   |                   | Air/Gas - Dry (Internal)              | None                              | None  | VII.J.AP-37     | 3.3.1-113    | A     |
|  |                   |                   | Air - Indoor, Uncontrolled (External) | None                              | None  | VII.J.AP-14     | 3.3.1-117    | A     |
|  | Stainless Steel   |                   | Air/Gas - Dry (Internal)              | None                              | None  | VII.J.AP-98     | 3.3.1-117    | A     |
|  |                   |                   | Air - Indoor, Uncontrolled (External) | None                              | None  | VII.J.AP-17     | 3.3.1-120    | A     |

**Change #4: Emergency Diesel Generator System**

**Affected LRA Sections: Section 2.3.3.8 and Table 3.3.2-8**

**LRA Page Numbers: 2.3-85, 3.3-129 and 3.3-133**

**Description of Changes:**

1. An additional intended function has been identified for a material/environment combination within the Emergency Diesel Generator system. LRA Table 3.3.2-8, Emergency Diesel Generator System, page 3.3-133 is revised as shown to show the aging management evaluation for carbon steel piping, piping components and piping elements in an air-outdoor environment and fuel oil internal environment with structural support intended function. These components are shown on LR Drawings LR-M-20 Sheets 3 and 9 at location D-2, upstream of valves 020-1(2)041, including basket strainers BS-1(2)20 to just upstream of valves 020-1(2)039. A structural support is located between BS-1(2)20 and valve 020-1(2)039. LRA Section 2.3.3.8, Intended Functions list, is revised as shown to be consistent with this change. LR Drawings LR-M-20 Sheets 3 and 9 will be revised to show these piping components red.
2. All carbon steel piping, piping components and piping elements in an air-outdoor environment and fuel oil internal environment with leakage boundary intended function are underground in vaults. The external surfaces of the piping in underground vaults are managed by the Buried and Underground Piping and Tanks program; therefore, the External Surfaces Monitoring of Mechanical Components is not used. LRA Table 3.3.2-8, page 3.3-129 is revised as shown to delete this aging management review line item.

LRA Table 3.3.2-8, page 3.3-129, is revised as follows:

**Table 3.3.2-8 Emergency Diesel Generator System**

(Continued)

| Component Type                                 | Intended Function | Material     | Environment                           | Aging Effect Requiring Management | Aging Management Programs   | NUREG-1801 Item        | Table 1 Item        | Notes |
|--|-------------------|--------------|---------------------------------------|-----------------------------------|---|------------------------|---------------------|-------|
| Hoses  | Pressure Boundary | Elastomer    | Air - Indoor, Uncontrolled (External) | Hardening and Loss of Strength    | External Surfaces Monitoring of Mechanical Components (B.2.1.25)                          | VII.F4.AP-102          | 3.3.1-76            | A     |
|  |                   |              | Air/Gas - Wetted (Internal)           | Hardening and Loss of Strength    | Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) |                        |                     | G, 2  |
|  |                   |              | Closed Cycle Cooling Water (Internal) | Hardening and Loss of Strength    | Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) | VII.C2.AP-259          | 3.3.1-85            | A     |
|  |                   |              | Lubricating Oil (Internal)            | Hardening and Loss of Strength    | Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) |                        |                     | G, 2  |
| Piping, piping components, and piping elements | Leakage Boundary  | Carbon Steel | Air - Indoor, Uncontrolled (External) | Loss of Material                  | External Surfaces Monitoring of Mechanical Components (B.2.1.25)                          | VII.I.A-77             | 3.3.1-78            | A     |
|  |                   |              | Air - Outdoor (External)              | Loss of Material                  | Buried and Underground Piping and Tanks (B.2.1.29)  | VII.H1.A-24            | 3.3.1-80            | E, 1  |
|  |                   |              |                                       |                                   | External Surfaces Monitoring of Mechanical Components (B.2.1.25)                          | <del>VII.H1.A-24</del> | <del>3.3.1-80</del> | A     |
|  |                   |              | Air/Gas - Wetted (Internal)           | Loss of Material                  | Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) | VII.H2.A-23            | 3.3.1-89            | A     |
|  |                   |              | Fuel Oil (Internal)                   | Loss of Material                  | Fuel Oil Chemistry (B.2.1.20)   | VII.H1.AP-105          | 3.3.1-70            | A     |
|  |                   |              |                                       |                                   | Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) | VII.H1.AP-105          | 3.3.1-70            | E, 3  |

LRA Table 3.3.2-8, page 3.3-133, is revised as follows:

**Table 3.3.2-8 Emergency Diesel Generator System**

**(Continued)**

| Component Type                                 | Intended Function  | Material        | Environment                           | Aging Effect Requiring Management | Aging Management Programs   | NUREG-1801 Item | Table 1 Item | Notes |
|--|--------------------|-----------------|---------------------------------------|-----------------------------------|---|-----------------|--------------|-------|
| Piping, piping components, and piping elements | Pressure Boundary  | Stainless Steel | Diesel Exhaust (Internal)             | Loss of Material                  | Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) | VII.H2.AP-104   | 3.3.1-88     | A     |
|  | Structural Support | Carbon Steel    | Air - Outdoor (External)              | Loss of Material                  | External Surfaces Monitoring of Mechanical Components (B.2.1.25)                          | VII.H1.A-24     | 3.3.1-80     | A     |
|  |                    |                 | Fuel Oil (Internal)                   | Loss of Material                  | Fuel Oil Chemistry (B.2.1.20)   | VII.H1.AP-105   | 3.3.1-70     | A     |
|  |                    |                 | Air - Indoor, Uncontrolled (External) | None                              | One-Time Inspection (B.2.1.22)  | VII.H1.AP-105   | 3.3.1-70     | A     |
| Pump Casing (Coolant)                          | Pressure Boundary  | Gray Cast Iron  | Air/Gas - Wetted (Internal)           | Loss of Material                  | Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.26) | VII.E5.AP-273   | 3.3.1-95     | A     |
|  |                    |                 | Air - Indoor, Uncontrolled (External) | Loss of Material                  | External Surfaces Monitoring of Mechanical Components (B.2.1.25)                          | VII.I.A-77      | 3.3.1-78     | A     |
|  |                    |                 | Closed Cycle Cooling Water (Internal) | Loss of Material                  | Closed Treated Water Systems (B.2.1.13)   | VII.H2.AP-202   | 3.3.1-45     | A     |
|  |                    |                 | Air - Indoor, Uncontrolled (External) | Loss of Material                  | Selective Leaching (B.2.1.23)   | VII.C2.A-50     | 3.3.1-72     | A     |
| Pump Casing (Fuel Oil)                         | Pressure Boundary  | Carbon Steel    | Air - Indoor, Uncontrolled (External) | Loss of Material                  | External Surfaces Monitoring of Mechanical Components (B.2.1.25)                          | VII.I.A-77      | 3.3.1-78     | A     |
|  |                    |                 | Air - Outdoor (External)              | Loss of Material                  | Buried and Underground Piping and Tanks (B.2.1.29)  | VII.H1.A-24     | 3.3.1-80     | E, 1  |
|  |                    |                 | Fuel Oil (Internal)                   | Loss of Material                  | Fuel Oil Chemistry (B.2.1.20)   | VII.H1.AP-105   | 3.3.1-70     | A     |
|  |                    | Gray Cast Iron  | Air - Indoor, Uncontrolled (External) | Loss of Material                  | One-Time Inspection (B.2.1.22)  | VII.H1.AP-105   | 3.3.1-70     | A     |
|  |                    |                 | Air - Indoor, Uncontrolled (External) | Loss of Material                  | External Surfaces Monitoring of Mechanical Components (B.2.1.25)                          | VII.I.A-77      | 3.3.1-78     | A     |
|  |                    |                 | Fuel Oil (Internal)                   | Loss of Material                  | Fuel Oil Chemistry (B.2.1.20)   | VII.H1.AP-105   | 3.3.1-70     | A     |
|  |                    |                 | Fuel Oil (Internal)                   | Loss of Material                  | One-Time Inspection (B.2.1.22)  | VII.H1.AP-105   | 3.3.1-70     | A     |

LRA Section 2.3.3.8, Emergency Diesel Generator system, page 2.3-85 is revised as follows:

Intended Functions

1. Provide motive power to safety-related components. The Emergency Diesel Generator System is required to power safety-related equipment in the event normal offsite power sources are not available. 10 CFR 54.4(a)(1)
2. Resist nonsafety-related SSC failure that could prevent satisfactory accomplishment of a safety-related function. The Emergency Diesel Generator System includes nonsafety-related water and oil filled lines in the Emergency Diesel Generator Enclosures and the Diesel Oil Tank Structures that have the potential for spatial interactions (spray or leakage) with safety-related SSCs. The air starting **and fuel oil** systems includes nonsafety-related piping that is in scope to provide a seismic anchor credited for structural support of safety-related piping. 10 CFR 54.4(a)(2)
3. Relied upon in safety analyses or plant evaluations to perform a function that demonstrates compliance with the commission's regulations for Station Blackout (10 CFR 50.63). The Emergency Diesel Generator System provides an alternate power source required to be available within one hour from the initiation of a station blackout event to support safe shutdown and decay heat removal for the blacked out unit for the required coping duration. 10 CFR 54.4(a)(3)
4. Relied upon in safety analyses or plant evaluations to perform a function that demonstrates compliance with the commission's regulations for Fire Protection (10 CFR 50.48). The Emergency Diesel Generator System provides power to safe shutdown equipment in the event of a loss of offsite power coincident with the postulated fire for several analyzed Fire Safe Shutdown methods. The Emergency Diesel Generator System also provides an alternate supply of compressed air to support operation of the main steam relief valves in the event that the Primary Containment Instrument Gas System is unavailable due to fire damage. 10 CFR 54.4(a)(3)