

NRR-PMDAPEm Resource

From: Lisa.Simpson@exeloncorp.com
Sent: Wednesday, June 05, 2013 2:25 PM
To: DiFrancesco, Nicholas
Cc: David.Gullott@exeloncorp.com
Subject: EGC Response Regarding LaSalle UFSAR Chapter 15 GE Methods
Attachments: IR 1497553.pdf

Nick,

In May 2013 you asked Exelon informal questions related to the general practice for UFSAR controls and updates for LaSalle UFSAR Chapter 15, Accident Analysis, associated with fuel reloads:

- 1) Should language related to *fuel* and *reload analysis* in UFSAR Chapter 15 be removed following a fuel cycle or once the fuel is no longer in the core?
- 2) If our practice is to retain this information, what is the reason for the retention?

Included in the email below dated 5/9/13 are examples you provided from LaSalle UFSAR Chapter 15.

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### EGC Response:

The below table illustrates the numerous transitions between fuels vendors LaSalle has experienced over the past 10 years. During the past 10 years, there has only been one 12-month period (approximately February 2011 to approximately February 2012) in which there was no GE fuel in either core at LaSalle. During this period, work had already begun to reintroduce GE fuel (GNF2) into LaSalle Unit 1 in early 2012.

| LaSalle Unit & Cycle | Year | Fuel in Core*                                          |
|----------------------|------|--------------------------------------------------------|
| L1C11                | 2004 | 1/3 GE14 (new), 2/3 AREVA (legacy)                     |
| L2C11                | 2005 | 1/3 GE14 (new), 2/3 AREVA (legacy)                     |
| L1C12                | 2006 | 1/3 AREVA (new), 1/3 GE14 (legacy), 1/3 AREVA (legacy) |
| L2C12                | 2007 | 1/3 AREVA (new), 1/3 GE14 (legacy), 1/3 AREVA (legacy) |
| L1C13                | 2008 | 1/3 AREVA (new), 1/3 AREVA (legacy), 1/3 GE14 (legacy) |
| L2C13                | 2009 | 1/3 AREVA (new), 1/3 AREVA (legacy), 1/3 GE14 (legacy) |
| L1C14                | 2010 | AREVA                                                  |
| L2C14                | 2011 | AREVA                                                  |
| L1C15                | 2012 | 1/3 GNF (new), 2/3 AREVA (legacy)                      |
| L2C15                | 2013 | 1/3 GNF (new), 2/3 AREVA (legacy)                      |

\*Amounts are approximate and are included for illustrative purposes only.

For a site such as LaSalle where fuel transitions are a common occurrence, it is Exelon's practice not to remove all reference to a fuel vendor's methodology immediately after the fuel is removed from the core. This is done primarily for two reasons. The first reason is that even though the fuel is removed from the core, the fuel remains in the fuel pool with the remote chance that the fuel could be reintroduced into the core. Second, with the planned transition back to GE fuel in 2012, it was Exelon's practice not to remove all GE references related to fuel and reload analyses only to be reintroduced in the following year. Rather, it is Exelon's practice to ensure that all appropriate references for both AREVA and GE methods are included in the UFSAR. The UFSAR is reviewed for each reload as required by Exelon procedure NF-AB-120, "Reload Licensing (BWR)," and updates are made as required. Therefore, Exelon does not consider this information to be obsolete information as defined in NEI 98-03.

Issues identified with regard to UFSAR updates are documented in issue reports (IRs) and their resolutions are tracked through Exelon corrective action program (LS-AA-125, "Corrective Action Program (CAP) Procedure"). As such, during a

recent review of the LaSalle UFSAR for L2C15, there was a missed opportunity to update the UFSAR with the new LOCA information. This missed opportunity was discovered during the UFSAR review required per Exelon process (NF-AA-102, "10 CFR 50.46 Reporting") in association with submittal of the annual 10 CFR 50.46 letter to the NRC and was documented in IR # 01497553 (attached). The appropriate information will be included in the UFSAR within the required 6 month timeframe as tracked by our action tracking system (ATI # 01497553-02).

In summary –

\* The LaSalle UFSAR appropriately reflects the core reload in accordance with NF-AB-120, "Reload Licensing (BWR)."

\* The examples identified in the email below dated 5/9/13 are accurate as currently written. These statements should not be identified as historical information because they reflect the current methodology as there is currently GE fuel in both LaSalle cores. As previously stated, there was an approximate 12-month period where there was no GE fuel in either LaSalle core. During this time, there could have been a question as to whether or not the statements reflected historical information. However, as explained, Exelon did not remove this methodology during this time because the GE fuel was still on site and new GE fuel was to be loaded in the core in the upcoming cycle.

\* No additional UFSAR revisions are required (beyond those described in IR 1497553) with respect to GE reload methodology and the sections of the UFSAR that are applicable to Safety Analysis.

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**From:** DiFrancesco, Nicholas [mailto:Nicholas.DiFrancesco@nrc.gov]  
**Sent:** Thursday, May 09, 2013 11:58 AM  
**To:** Simpson, Lisa A.:(GenCo-Nuc)  
**Subject:** Background Information Re: LaSalle UFSAR Chapter 15 GE methods

Lisa,

Below is a quick review of Chapter 15.

In review of the 2012 LaSalle UFSAR update, in consideration of historical information, it contains reference to GESTAR and GE methods when no GE fuel was utilized for operation.

GESTAR was maintained as a reference in Chapter 15 sections 15.1.5,15.2.10,15.3.5,15.4.?,15.6.7,15.7.6, and 15.A.6:

[Various]. General Electric Report NEDE-24011-P-A, "General Electric Standard Application for Reactor fuel (GESTAR II)," (latest approved version).

The UFSAR chapter has retained wording of GE reload analysis methods in several locations with statements similar to:

15.1.1 Loss of Feedwater Heater

[...] "Methodology in Reference 2 is used for GE reload analyses."

15.1.1.3 Core and System Performance

[...] For reload analyses, the model described in Reference 2 is used for GE fuel and a cycle specific model for FANP fuel.

15.1.2A.3 Core and System Performance

[...] For reload analyses, the model described in Reference 2 [Reference to GESTAR] or 9 is used.

15.2.2A.3 Core and System Performance

[...] The model used for reload analyses is given in Reference 3 [Reference to GESTAR].

[There may be a few additional examples]

10 CFR 50.71(e) requirements are discussed in [NEI 98-03 Rev 1](#). The guidance discusses removal of (Section 3.4 Appendix 5) "Obsolete Information," and control of (Appendix 4.3) "Reference other documents in FSAR," if applicable, may apply.

Let me know if additional background would be helpful.

Sincerely,  
Nick

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**Hearing Identifier:** NRR\_PMDA  
**Email Number:** 1010

**Mail Envelope Properties** (B89765C774C10B4992D8F5806597A58A014D5297)

**Subject:** EGC Response Regarding LaSalle UFSAR Chapter 15 GE Methods  
**Sent Date:** 6/5/2013 2:25:05 PM  
**Received Date:** 6/5/2013 2:25:11 PM  
**From:** Lisa.Simpson@exeloncorp.com

**Created By:** Lisa.Simpson@exeloncorp.com

**Recipients:**

"David.Gullott@exeloncorp.com" <David.Gullott@exeloncorp.com>  
Tracking Status: None  
"DiFrancesco, Nicholas" <Nicholas.DiFrancesco@nrc.gov>  
Tracking Status: None

**Post Office:** cccmsxch13.energy.power.corp

| Files          | Size  | Date & Time         |
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| MESSAGE        | 6873  | 6/5/2013 2:25:11 PM |
| IR 1497553.pdf | 24291 |                     |

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**Reply Requested:** No  
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|                        |         |                 |          |                    |            |
|------------------------|---------|-----------------|----------|--------------------|------------|
| <b>Aff Fac:</b>        | Cantera | <b>AR Type:</b> | CR       | <b>Status:</b>     | APPROVED   |
| <b>Aff Unit:</b>       | NA      | <b>Owed To:</b> | A8064CAP | <b>Due Date:</b>   | 02/20/2014 |
| <b>Aff System:</b>     | --      |                 |          | <b>Event Date:</b> | 03/08/2013 |
| <b>CR Level/Class:</b> | 4/D     |                 |          | <b>Disc Date:</b>  | 04/03/2013 |
| <b>How Discovered:</b> | H02     |                 |          | <b>Orig Date:</b>  | 04/04/2013 |

**Action Request Details****Subject:** LASALLE UFSAR UPDATES FOR THE GEH ATRIUM-10 LOCA ANALYSIS**Description:**

Originator: KRISTIN C MCCOSKEY Supv Contacted: Hossein Youssefnia

**Condition Description:**

As part of the transition to GNF2 fuel at LaSalle Units 1 & 2, GEH performed a Loss of Coolant (LOCA) analysis for the ATRIUM-10 fuel at LaSalle Units 1 & 2. The analysis is documented as LaSalle calculation L-003737, "GEH 0000-0142-8555-R0, LaSalle County Station ECCS-LOCA Evaluation for ATRIUM-10 Fuel." The analysis was not completed until after the introduction of GNF2 fuel at LaSalle Unit 1 during the L1R14 outage. Therefore, the analysis was not implemented for L1C15. Because implementation requires a COLR revision, the analysis was recently implemented for L2C15 (March 2013) and will be implemented for Unit 1 for L1C16.

During the preparation of the 2013 10 CFR 50.46 Annual report, the LaSalle UFSAR was reviewed for potential changes as required by NF-AA-102. The review of the UFSAR revealed that the UFSAR had not been updated to include changes related to the GEH LOCA analysis for ATRIUM-10 fuel. LS-AA-107 requires UFSAR updates to be completed within six months of implementation of a change to a site. Therefore, because the analysis was implemented in March of 2013, the procedure has not been violated.

GEH has been requested to provide recommendations for UFSAR changes related to the GEH LOCA analysis for ATRIUM-10 fuel.

No operating limits for the current LaSalle 2 Cycle 15 are affected by this issue. The analysis has not been implemented for LaSalle Unit 1. No other Exelon plants are affected by this issue.

**Immediate actions taken:**

GEH has been requested to provide recommendations for UFSAR changes related to the GEH LOCA analysis for ATRIUM-10 fuel.

**Recommended Actions:**

Incorporate GEH recommendations for UFSAR changes related to the GEH LOCA analysis for ATRIUM-10 fuel. . K. McCoskey  
Ensure the GEH LOCA analysis for ATRIUM-10 fuel is included in the L1C16 reload (SRLR and COLR) and the appropriate UFSAR updates have been made . A. Wong

What activities, processes, or procedures were involved?  
NF-AA-102, LS-AA-107

Why did the condition happen?  
Missed opportunity to remind GEH to deliver associated UFSAR changes with the GEH LOCA analysis for ATRIUM-10 fuel

What are the consequences?  
None

Were any procedural requirements impacted?  
None

Were there any adverse physical conditions?  
None

List of knowledgeable individuals:  
Kristin McCoskey, Hossein Youssefnia, Charlie Lamb(GNF), Leah Crider (GNF)

Repeat or similar condition?  
No

Operable Basis:

Reportable Basis:

Functional Basis:

SOC Reviewed by: JENNIFER DOUGHERTY 04/09/2013 14:14:12 CDT  
SOC Comments:  
4-9-13 SOC comments:  
1. 4D Create actions

Manager review performed by: M H YOUSSEFNIA 04/10/2013 13:43:58 CDT  
Manager Comments:  
Create actions as per SOC comments.

|                                                                                       |                          |                              |  |
|---------------------------------------------------------------------------------------|--------------------------|------------------------------|--|
| <b>Assign #: 01</b>                                                                   |                          | <b>AR #: <u>01497553</u></b> |  |
| <b>Aff Fac:</b> Cantera                                                               | <b>Assign Type:</b> TRKG | <b>Status:</b> COMPLETE      |  |
| <b>Priority:</b>                                                                      | <b>Assigned To:</b>      | <b>Due Date:</b> 04/23/2013  |  |
| <b>Schedule Ref:</b>                                                                  | <b>Prim Grp:</b> ACAPALL | <b>Orig Due Date:</b>        |  |
| <b>Unit Condition:</b>                                                                | <b>Sec Grp:</b>          |                              |  |
| <b>Assignment Details</b>                                                             |                          |                              |  |
| <b>Subject/Description:</b> LASALLE UFSAR UPDATES FOR THE GEH ATRIUM-10 LOCA ANALYSIS |                          |                              |  |
| <b>Assignment Completion</b>                                                          |                          |                              |  |
| <b>In Progress Notes:</b><br><hr/>                                                    |                          |                              |  |
| <b>Completion Notes:</b>                                                              |                          |                              |  |

|                                                                                                                                    |                             |                                  |  |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|--|
| <b>Assign #: 02</b>                                                                                                                |                             | <b>AR #: <u>01497553</u></b>     |  |
| <b>Aff Fac:</b> Cantera                                                                                                            | <b>Assign Type:</b> ACIT    | <b>Status:</b> ACC/ASG           |  |
| <b>Priority:</b>                                                                                                                   | <b>Assigned To:</b> GEIGKC  | <b>Due Date:</b> 07/17/2013      |  |
| <b>Schedule Ref:</b>                                                                                                               | <b>Prim Grp:</b> A8064ENSAF | <b>Orig Due Date:</b> 07/17/2013 |  |
| <b>Unit Condition:</b>                                                                                                             | <b>Sec Grp:</b>             |                                  |  |
| <b>Assignment Details</b>                                                                                                          |                             |                                  |  |
| <b>Subject/Description:</b> Incorporate GEH recommendations for UFSAR changes related to the GEH LOCA analysis for ATRIUM-10 fuel. |                             |                                  |  |
| <b>Assignment Completion</b>                                                                                                       |                             |                                  |  |
| <b>In Progress Notes:</b><br><hr/>                                                                                                 |                             |                                  |  |
| <b>Completion Notes:</b>                                                                                                           |                             |                                  |  |



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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|--|
| <b>Assign #: 03</b>                                                                                                                                                           |                             | <b>AR #: <u>01497553</u></b>     |  |
| <b>Aff Fac:</b> Cantera                                                                                                                                                       | <b>Assign Type:</b> ACIT    | <b>Status:</b> ACC/ASG           |  |
| <b>Priority:</b>                                                                                                                                                              | <b>Assigned To:</b> NFSAW   | <b>Due Date:</b> 02/20/2014      |  |
| <b>Schedule Ref:</b>                                                                                                                                                          | <b>Prim Grp:</b> A8064ENSAF | <b>Orig Due Date:</b> 02/20/2014 |  |
| <b>Unit Condition:</b>                                                                                                                                                        | <b>Sec Grp:</b>             |                                  |  |
| <b>Assignment Details</b>                                                                                                                                                     |                             |                                  |  |
| <b>Subject/Description:</b> Ensure the GEH LOCA analysis for ATRIUM-10 fuel is included in the L1C16 reload (SRLR and COLR) and the appropriate UFSAR updates have been made. |                             |                                  |  |
| <b>Assignment Completion</b>                                                                                                                                                  |                             |                                  |  |
| <b>In Progress Notes:</b><br><hr/>                                                                                                                                            |                             |                                  |  |
| <b>Completion Notes:</b>                                                                                                                                                      |                             |                                  |  |