

NRR-DMPSPeM Resource

From: Purnell, Blake
Sent: Thursday, April 12, 2018 8:07 AM
To: Gropp Jr, Richard W:(GenCo-Nuc)
Cc: Gudger, David T:(GenCo-Nuc); Wrona, David
Subject: Calvert Cliffs, Ginna, and Nine Mile Point - Request for Additional Information Regarding License Amendment Request to Revise Emergency Action Level Schemes (EPID-L-2017-LLA-0237)
Attachments: Exelon EAL Scheme RAI 2.pdf

Mr. Gropp:

By application dated May 31, 2017 (Agencywide Documents Access and Management System (ADAMS) Package Accession No. ML17164A149), as supplemented by letter dated January 31, 2018 (ADAMS Package Accession No. ML18037A653), Exelon Generation Company, LLC (the licensee) submitted a license amendment request for Calvert Cliffs Nuclear Power Plant, Units 1 and 2; Nine Mile Point Nuclear Station, Units 1 and 2; and R. E. Ginna Nuclear Power Plant. The amendments would revise the emergency plans by changing the emergency action level schemes for these facilities. The proposed changes are based on the Nuclear Energy Institute's (NEI's) guidance in NEI 99 01, Revision 6, "Development of Emergency Action Levels for Non-Passive Reactors," which was endorsed by the U.S. Nuclear Regulatory Commission (NRC) by letter dated March 28, 2013 (ADAMS Accession No. ML12346A463).

The NRC staff has reviewed the application and determined that it needs additional information to complete its review. A response to the attached request for additional information is requested to be provided within 30 days from the date of this email. This request was discussed with the licensee's staff on April 10, 2018.

Sincerely,

Blake Purnell, Project Manager
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission

Docket Nos. 50-317, 50-318, 72-8, 50-220,
50-410, 72-1036, 50-244, and 72-67

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Subject: Calvert Cliffs, Ginna, and Nine Mile Point - Request for Additional Information
Regarding License Amendment Request to Revise Emergency Action Level Schemes
(EPID-L-2017-LLA-0237)

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From: Purnell, Blake

Created By: Blake.Purnell@nrc.gov

Recipients:

"Gudger, David T:(GenCo-Nuc)" <David.Gudger@exeloncorp.com>

Tracking Status: None

"Wrona, David" <David.Wrona@nrc.gov>

Tracking Status: None

"Gropp Jr, Richard W:(GenCo-Nuc)" <Richard.Gropp@exeloncorp.com>

Tracking Status: None

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Options

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REQUEST FOR ADDITIONAL INFORMATION
LICENSE AMENDMENT REQUEST TO REVISE
EMERGENCY ACTION LEVEL SCHEMES
CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2
CALVERT CLIFFS INDEPENDENT SPENT FUEL STORAGE INSTALLATION
NINE MILE POINT NUCLEAR STATION, UNITS 1 AND 2
R. E. GINNA NUCLEAR POWER PLANT

DOCKET NOS. 50-317, 50-318, 72-8, 50-220, 50-410, 72-1036, 50-244, and 72-67

By application dated May 31, 2017 (Agencywide Documents Access and Management System (ADAMS) Package Accession No. ML17164A149), as supplemented by letter dated January 31, 2018, (ADAMS Package Accession No. ML18037A653), Exelon Generation Company, LLC (Exelon, the licensee) submitted a license amendment request for Calvert Cliffs Nuclear Power Plant (CCNPP), Units 1 and 2; Nine Mile Point Nuclear Station, Units 1 and 2 (NMP-1 and NMP-2, respectively); and R. E. Ginna Nuclear Power Plant (Ginna). The amendments would revise the emergency plans by changing the emergency action level (EAL) schemes for these facilities. The proposed changes are based on the Nuclear Energy Institute's (NEI's) guidance in NEI 99-01, Revision 6, "Development of Emergency Action Levels for Non-Passive Reactors" (henceforth referred to as NEI 99-01), which was endorsed by the U.S. Nuclear Regulatory Commission (NRC) by letter dated March 28, 2013 (ADAMS Accession No. ML12346A463).

The NRC has reviewed the application and determined that the information below is needed to complete its review. The numbering is continued from the previous request for additional information (RAI) issued on December 12, 2017 (ADAMS Accession No. ML17331B134).

RAI-28 (NMP-1)

In the January 31, 2018, letter Exelon provided a revised fission product barrier threshold CT5 for the drywell radiation monitor reading in NMP-1. The proposed potential loss threshold is "Drywell radiation reading > 1.1 E+04 R/hr (1100 R/hr)." ¹ The two numerical expressions are not equivalent. Provide the correct value for the NMP-1 CT5 threshold.

RAI-29 (CCNPP, Ginna, NMP-1, and NMP-2)

For each facility, Exelon's proposed EALs MA5 and CA2 establish the alert threshold for a hazardous event affecting safety systems needed for the current operating mode. In its January 31, 2018, response to RAI-27, the licensee stated it revised EALs MA5 and CA2 for each facility based on the NRC staff's response to emergency plan frequently asked question (EPFAQ) 2016-002 (ADAMS Accession No. ML17195A299). For example, Exelon EAL MA5 is based on EPFAQ 2016-02 EAL SA9. The licensee states: "The wording has been modified from the NRC recommended language contained in EPFAQ 2016-002 to better clarify the intent

¹ The units are roentgen per hour (R/hr).

of EPFAQ 2016-002, and these would be considered as deviations from NEI 99-01, Revision 6 as discussed in EPFAQ 2016-002.”

EPFAQ 2016-02 EALs SA9 and CA6

EPFAQ 2016-02 EAL SA9 and CA6 have similar wording, but apply to different operating modes. SA9 states, in part:

Notes:

- If the affected SAFETY SYSTEM train was already inoperable or out of service before the hazardous event occurred, then this emergency classification is not warranted.
- If the hazardous event only resulted in VISIBLE DAMAGE, with no indications of degraded performance to at least one train of a SAFETY SYSTEM, then this emergency classification is not warranted.

- (1) a. The occurrence of ANY of the following hazardous events:
[bulleted list of hazardous events]

AND

- b. 1. Event damage has caused indications of degraded performance on one train of a SAFETY SYSTEM needed for the current operating mode.

AND

2. EITHER of the following:
- Event damage has caused indications of degraded performance to a second train of the SAFETY SYSTEM needed for the current operating mode, or
 - Event damage has resulted in VISIBLE DAMAGE to the second train of a SAFETY SYSTEM needed for the current operating mode.

Exelon Proposed EALs MA5 and CA2

Exelon’s proposed EALs MA5 and CA2 have similar wording, but apply to different operating modes. Exelon proposed EAL MA5 states, in part (emphasis added):

Notes:

- If the only affected SAFETY SYSTEM train was already inoperable or out of service before the hazardous event occurred, then this emergency classification is not warranted.
- For SAFETY SYSTEMS with multiple trains **if the hazardous event only resulted in VISIBLE DAMAGE or degraded performance to the one train**, then this emergency classification is not warranted.

- If it is determined that the conditions of MA5 are not met then assess the event via HU3, HU4, or HU6.
1. The occurrence of ANY of the following hazardous events:
[bulleted list of hazardous events]

AND

2. a. Event damage has caused indications of degraded performance or **VISIBLE DAMAGE** to one train of a SAFETY SYSTEM **required by Technical Specifications** for the current operating mode.

AND

- b. ANY of the following for SAFETY SYSTEMS with multiple trains:
 - Event damage has caused indications of degraded performance to a second train of the SAFETY SYSTEM **required by Technical Specifications** for the current operating mode.
OR
 - Event damage has resulted in VISIBLE DAMAGE to a second train of the SAFETY SYSTEM **required by Technical Specifications** for the current operating mode.
OR
 - **An additional train of the SAFETY SYSTEM is inoperable or out of service.**

Discussion

Rather than clarify the intent of EPFAQ 2016-002, Exelon EALs MA5 and CA2 appear to be inconsistent with EPFAQ 2016-002. The text in bold above for Exelon EAL MA5 is significantly different than EPFAQ 2016-002 EAL SA9. This also appears to be the case for Exelon EAL CA2. The EPFAQ EALs result in an alert only when event damage has caused: (1) indications of degraded performance in one train needed for the current operating mode and (2) indications of degraded performance or visible damage to a second train needed for the current operating mode. Exelon's proposed EALs MA5 and CA2 appear to require an alert for other conditions.

EXAMPLE 1: A hazardous event causes only visible damage to two trains of a safety system needed for the current mode of operation. The EPFAQ EAL would not require an event declaration but Exelon's EAL MA5 or CA2 would result in an alert declaration.

EXAMPLE 2: A hazardous event caused indications of degraded performance in only one train while a second train was out of service. The EPFAQ EAL would not require an event declaration. The second note for Exelon EAL MA5 or CA2 suggests no event declaration is needed. However, the logic for Exelon's EALs (criteria 2.a and 3rd bullet of Item 2.b) suggests an alert should be declared.

Request

For Exelon EALs MA5 and CA2, provide justification to support the deviation from the guidance in NEI 99-01, Revision 6. Describe the difference between “SAFETY SYSTEM required by Technical Specifications for the current operating mode” and “SAFETY SYSTEM needed for the current operating mode.” Explain how emergency directors will be able to accurately and consistently apply EALs MA5 and CA2.