

## NRR-DMPSPeM Resource

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**From:** Lashley, Phil H. <phlashley@firstenergycorp.com>  
**Sent:** Monday, November 13, 2017 12:50 PM  
**To:** Venkataraman, Booma  
**Subject:** [External\_Sender] FW: Beaver Valley Emergency Action Level License Amendment Safety Evaluation

Booma,

My apologies, but we identified a couple of additional items on the BV EAL SE. So that you only need to work from one list, I compiled the additional items with the previous list as follows. Additions and clarifying changes to the original list are highlighted. Once again, my apologies for not capturing everything in the first communication.

Page 7, Section 3.1.3 – The SE states that **indications of increasing radiation levels in the plant would be** bound by Recognition Category F, as well as RS1 and RG1. However, the BVPS EAL bases states that the escalation progression would be via Recognition Category R, C, or F.

Page 8, Section 3.2.2 – The SE states that the SAE and GE classification levels are bound by EALs RS1 and RG1. However, the BVPS EAL bases states that the escalation progression is CS1 or RS1.

Page 9, Section 3.2.3 – The SE states that the SAE and GE classification levels are bound by EALs RS1 and RG1. However, the BVPS EAL bases states that the escalation progression is CS1 or RS1.

Page 9, Section 3.2.4 – The SE states that the Alert, SAE, and GE classification levels for a protracted loss of vital DC power are bounded by EALs CA1, CA3, CS1, CG1, RA1, RS1 and RG1. However, the BVPS EAL bases states that the escalation progression would be via IC CA1 or CA3, or an IC in Recognition Category R.

**Page 10, Section 3.2.6 – The SE states that escalation would be bound by CS1, CG1, RS1, and RG1. The BVPS EAL bases states that the escalation progression would be via RS1.**

Page 14, Section 3.5.2 – The SE states that earthquake-induced damage to components containing radioactive materials is bound by Recognition Category F as well as EALs RA1, RS1, or RG1. The BVPS EAL bases states that escalation progression is CA6 or SA9.

Page 14, Section 3.5.3 – The SE provides a list of 5 specific hazards. The BVPS EALs and their bases only describe 4 hazards.

Page 15, Section 3.5.3 – The SE states that hazard-damage to components containing radioactive material are bounded by Recognition Category F as well as EALs RA1, RS1, or RG1. The BVPS **U1** EAL bases state that escalation would be through Categories R, F, S, or C. **The BVPS U2 bases state that for EAL HU3.1 and 3.2, escalation would be through EALs CA6.1 or SA9.1, while EALs HU3.3 and 3.4, escalation would be through Categories R, F, S, or C.**

Page 15, Section 3.5.4 – The SE states that protracted fires involving radioactive materials are bound by Recognition Category F as well as EALs RS1 and RG1. The BVPS EAL bases state that escalation would be through CA6 or SA9.

Page 16, Section 3.5.5 – The SE states that the protracted loss of equipment access is bound by Recognition Category F and EALs RS1 and RG1. The BVPS EAL bases states that it would be through Recognition Categories R, C, or F.

Page 16, Section 3.5.6 – The SE states that the GE classification is bound by Recognition Category F and EAL RG1. The BVPS EAL bases states that it is bound by FG1 and CG1.

Page 19, Section 3.6.2 – The SE does not list the appropriate BVPS EAL numbers. It should be BVPS EALs SU3 and SA3.

Page 19, Section 3.6.2 – The SE states that escalation for SAE and GE are bound by Recognition Category F, as well as EALs RS1 and RG1. The BVPS EAL bases states that it is bound by FS1 or RS1. [Note there is a typo in the BVPS U2 EALs; it states EAL AS1RS1; AS1 does not exist.]

Page 19, Section 3.6.3 – The SE does not list the appropriate BVPS EAL number. It should be BVPS EAL SU4.

Page 19, Section 3.6.3 – The SE states that escalation is bound by Recognition Category F, as well as EALs RA1, RS1, and RG1. The BVPS EAL bases states that it is bound by FA1 or Category R.

Page 20, Section 3.6.4 – The SE does not list the appropriate BVPS EAL number. It should be BVPS EAL SU5.

Page 20, Section 3.6.4 – The SE states that escalation is bound by Recognition Category F, as well as EALs RA1, RS1, and RG1. The BVPS EAL bases states that it is bound by Category F or R.

Page 20, Section 3.6.5 – The SE does not list the appropriate BVPS EAL numbers. It should be BVPS EALs SU6/SA6/SS6. Additionally, under the bullet for SU[6], the SE discusses the failure to automatically shut down, and subsequent manual actions shuts down the plant. Under the bullet for SA[6], the SE states that automatic actions are unable to shut down the plant, and manual actions are unsuccessful. The BVPS SU6 EAL states that the event is caused by either an automatic or manual action fails to shut down the plant, and subsequent automatic or manual actions are successful. The BVPS SA6 EAL states that automatic or manual action fails to shut down the plant and subsequent manual actions fail to shut down the plant.

Page 20, Section 3.6.5 – The SE states that the GE classification is bound by Recognition Category F, as well as EAL RG1. The BVPS EAL bases states that it is bound by FG1 or RG1.

Page 21, Section 3.6.6 – The SE does not list the appropriate BVPS EAL number. It should be BVPS EAL SU7.

Page 22, Section 3.6.7 – The SE does not list the appropriate BVPS EAL number. It should be BVPS EAL SU8. Additionally, the SE states that escalation is bound by Recognition Category F and EALs RA1, RS1, and RG1. The BVPS EAL bases indicates it is only through FS1.

Page 22, Section 3.6.8 – The SE does not list the appropriate BVPS EAL numbers. It should be BVPS EAL SS2 and SG1.

Page 23, Section 3.6.9 – The SE states that indications of hazard-induced damage to components containing radioactive materials are bound by Recognition Category F, as well as EALs RS1 and RG1. The BVPS EAL bases states that escalation would be by FS1 or RS1.

The BV submittal also stated that there were changes made to the Definitions Section of the EPlan. However, the SE does not make any mention of these changes. Was that by design?

Respectfully,

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**From:** Lashley, Phil H.  
**Sent:** Friday, November 03, 2017 12:57 PM  
**To:** 'Venkataraman, Booma' <Booma.Venkataraman@nrc.gov>  
**Subject:** Beaver Valley Emergency Action Level License Amendment Safety Evaluation

Booma,

While we were reviewing the staff's safety evaluation, we noticed some items in the safety evaluation that do not align with the information provided in our application. The specific items are as follows:

Page 7, Section 3.1.3 – The SE states that the SAE and GE classification levels are bound by Recognition Category F, as well as RS1 and RG1. However, the BVPS EAL bases states that the escalation progression would be via Recognition Category R, C, or F.

Page 8, Section 3.2.2 – The SE states that the SAE and GE classification levels are bound by EALs RS1 and RG1. However, the BVPS EAL bases states that the escalation progression is CS1 or RS1.

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Page 14, Section 3.5.3 – The SE provides a list of 5 specific hazards. The BVPS EALs and their bases only describe 4 hazards.

Page 15, Section 3.5.3 – The SE states that hazard-damage to components containing radioactive material are bounded by Recognition Category F as well as EALs RA1, RS1, or RG1. The BVPS EAL bases state that escalation would be through Categories R, F, S, or C.

Page 15, Section 3.5.4 – The SE states that protracted fires involving radioactive materials are bound by Recognition Category F as well as EALs RS1 and RG1. The BVPS EAL bases state that escalation would be through CA6 or SA9.

Page 16, Section 3.5.5 – The SE states that the protracted loss of equipment access is bound by Recognition Category F and EALs RS1 and RG1. The BVPS EAL bases states that it would be through Recognition Categories R, C, or F.

Page 16, Section 3.5.6 – The SE states that the GE classification is bound by Recognition Category F and EAL RG1. The BVPS EAL bases states that it is bound by FG1 and CG1.

Page 19, Section 3.6.2 – The SE does not list the appropriate BVPS EAL numbers. It should be BVPS EALs SU3 and SA3.

Page 19, Section 3.6.3 – The SE does not list the appropriate BVPS EAL number. It should be BVPS EAL SU4.

Page 20, Section 3.6.4 – The SE does not list the appropriate BVPS EAL number. It should be BVPS EAL SU5.

Page 20, Section 3.6.5 – The SE does not list the appropriate BVPS EAL numbers. It should be BVPS EALs SU6/SA6/SS6. Additionally, under the bullet for SU[6], the SE discusses the failure to automatically shut down, and subsequent manual actions shuts down the plant. Under the bullet for SA[6], the SE states that

automatic actions are unable to shut down the plant, and manual actions are unsuccessful. The BVPS SU6 EAL states that the event is caused by either an automatic or manual action fails to shut down the plant, and subsequent automatic or manual actions are successful. The BVPS SA6 EAL states that automatic or manual action fails to shut down the plant and subsequent manual actions fail to shut down the plant.

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Page 22, Section 3.6.7 – The SE does not list the appropriate BVPS EAL number. It should be BVPS EAL SU8. Additionally, the SE states that escalation is bound by Recognition Category F and EALs RA1, RS1, and RG1. The BVPS EAL bases indicates it is only through FS1.

Page 22, Section 3.6.8 – The SE does not list the appropriate BVPS EAL numbers. It should be BVPS EAL SS2 and SG1.

The BV submittal also stated that there were changes made to the Definitions Section of the EPlan. However, the SE does not make any mention of these changes. Was that by design?

It isn't clear if the differences were intentional or not. However, we wanted to communicate these to you for your awareness.

Respectfully,

Phil H. Lashley  
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