

Fukushima Recommendation 4.2 COLA Response – Discussion of STP RAI

DCWG, Rockville, MD
March 5, 2013

Introduction

- UNE and PPL intend to reply to the Fukushima Recommendation 4.2 COLA RAI 379/121 with a License Condition
- NRC has stated that additional detail is required, and that the RAI sent to NINA on February 7, 2013 can provide useful information regarding the additional detail that could be required of UNE and PPL
- UNE, PPL and AREVA have performed a preliminary review of the referenced NINA RAI and are prepared to provide initial feedback and ask questions for clarification
- The objective of this discussion is to progress toward an understanding of a follow-up RAI to UNE and PPL for Recommendation 4.2
- The following slides are organized by the questions in the referenced NINA RAI

STP RAI 1E.2.4-01 Applicable Beyond-Design-Basis External Events



- Identify and characterize the applicable beyond design basis external events to each site
- UNE and PPL can confirm that the FSAR description of external events conforms with NEI 12-06, Section 4.1 “Site-Specific Identification of Applicable Hazards” guidance

STP RAI 1E.2.4-02 Initial Phase



- (a) The installed equipment required to maintain the core cooling, containment and SFP cooling functions during the initial phase will be identified in the US EPR Fukushima Technical Report
- (a) **Needed clarification:** What is meant by “installed equipment and resources”?
- (b) Any supplemental equipment required during the initial phase – and the availability/qualification – will be identified in the US EPR Fukushima TR
- (c) The connections required for supplemental equipment will be described in the US EPR Fukushima Technical Report
- (c) **Needed clarification:** What is meant by “how to connect and integrate the supplemental equipment with the installed DBE equipment”?
- (d) The sequence of events, including compensatory actions, will be described in the US EPR Fukushima Technical Report

STP RAI 1E.2.4-03 Transition Phase

- (a) The required coping capability in the transition phase will be described in the US EPR Fukushima Technical Report
- (b) UNE and PPL can provide a list of required portable equipment for the transition phase based on the coping capability described in the US EPR Fukushima TR.
- (b) **Needed clarification:** What is meant by “equipment and resources”?
- (b) **Needed clarification:** What is meant by “demonstrate the adequacy of the capability of the portable equipment”?
- (c) **Needed clarification:** What is meant by “describe how to transfer”?
- (d) **Needed clarification:** What is meant by “how to integrate the supplemental equipment”?
- (e) The instrumentation required for monitoring of safety functions will be described in the US EPR Fukushima Technical Report
- (e) The specific instrumentation required for monitoring and control of portable equipment will be provided after development of procedures (later)
- (f) UNE and PPL can provide the conceptual approach for providing reasonable protection of equipment
- (g) UNE and PPL can provide the duration of the transition phase

STP RAI 1E.2.4-04

Final Phase



- (a) UNE and PPL can provide the required coping capability in the final phase
- (b) UNE and PPL can provide the required off-site equipment for the final phase
- (b) **Needed clarification:** What is meant by “equipment and resources”?
- (c) **Needed clarification:** What is meant by “how the off-site equipment will integrate”?
- (d) UNE and PPL can provide when off-site resources are required
- (e) UNE and PPL can provide the conceptual approach for sustaining coping capability indefinitely

STP RAI 1E.2.4-05 Alternating Current-Independent Water Addition (ACIWA)



- ACIWA is not applicable for the US EPR
- The AC independent equipment used for mitigating strategies will be described in US EPR Fukushima Technical Report

STP RAI 1E.2.4-06

Procedures and Training



- (a) UNE and PPL can include a discussion of beyond design basis events in FSAR Section 13.5
- (b) 'Procedures and Training' for the ACIWA is not applicable for the US EPR

STP RAI 1E.2.4-07

FLEX Program

- UNE and PPL can clarify which sections of NEI 12-06 are applicable. At this time no deviations are planned.

STP RAI 1E.2.4-08

Guidance and Strategies



- At this time there is no plan for a separate appendix to NEI 12-06 for the US EPR.
- **Needed clarification:** What portion of Appendix F would be required as guidance (in addition to NEI 12-06)?

STP RAI 1E.2.4-09

Multi-Unit Concern

- UNE and PPL are both single-unit sites. Multi-unit dose assessment and command and control will be addressed in response to Recommendation 9.3 Tier 2, Emergency Planning.

STP RAI 1E.2.4-10

FSAR Revision

- UNE and PPL can revise the FSAR to supplement the US EPR FSAR description of the generic response to Order EA-12-049 with site-specific information

Conclusion/Questions



- UNE and PPL can begin preparing this additional information, but we request that a new RAI be issued (are any additional questions planned for the US EPR?)
- It is anticipated that the proposed License Condition will be retained (see attached)

Proposed License Condition for NTTF 4.2



Prior to initial fuel load, [UNE/PPL] shall address the following requirements using the guidance contained in JLD-ISG-2012-01, Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, Revision 0:

- a. [UNE/PPL] shall develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment and spent fuel pool cooling capabilities following a beyond-design-basis external event.
- b. These strategies must be capable of mitigating a simultaneous loss of all ac power and loss of normal access to the normal heat sink and have adequate capacity to address challenges to core cooling, containment, and spent fuel pool cooling capabilities on the [CC3/BB] site.
- c. [UNE/PPL] must provide reasonable protection for the associated equipment from external events. Such protection must demonstrate that there is adequate capacity to address challenges to core cooling, containment, and spent fuel pool cooling capabilities on the [CC3/BB] site.
- d. [UNE/PPL] must be capable of implementing the strategies in all modes.
- e. Full compliance shall include procedures, guidance, training, and acquisition, staging, or installing of equipment needed for the strategies.