



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

January 17, 2012

Mr. Peter Wells  
Vice President  
Duane Arnold Energy Center  
3277 DAEC Road  
Palo, IA 52324-9785

SUBJECT: DUANE ARNOLD ENERGY CENTER – REQUEST FOR ADDITIONAL  
INFORMATION RE: AMENDMENT TO CHANGE EMERGENCY ACTION  
LEVELS (TAC ME6508)

Dear Mr. Wells:

By letter dated May 31, 2011 (Agencywide Document Access and Management System (ADAMS) Accession No. ML111540279 [package]), NextEra Energy Duane Arnold, LLC (the licensee) requested an amendment to the operating license for the Duane Arnold Energy Center (DAEC) to revise their emergency plan. Specifically, the licensee requested prior approval for a number of changes to their emergency action levels (EALs), which are actually contained in their emergency plan implementing procedures but are considered an integral part of the DAEC emergency plan and is controlled accordingly.

The NRC staff has determined that it needs additional information to complete its review. On January 4, 2012, the NRC staff transmitted a draft Request for Additional Information (RAI) (ADAMS Accession No. ML12011A060) and discussed the draft RAI with Mr. Thomas Byrne, a member of your staff in a conference call on January 10, 2012.

The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources.

Enclosed please find the final RAI items. Your staff agreed that you can provide your response within 30 days of the date of this letter. Please feel free to contact me if you need further clarification of the RAI.

Sincerely,

A handwritten signature in black ink that reads "Karl D. Feintuch".

Karl D. Feintuch, Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-331

Enclosure: As Stated

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

DUANE ARNOLD ENERGY CENTER

LICENSE AMENDMENT REQUEST TO REVISE EMERGENCY PLAN

DOCKET NO. 50-331

By letter dated May 31, 2011 (Agencywide Document Access and Management System (ADAMS) Accession No. ML111540279 [package]), NextEra Energy Duane Arnold, LLC requested an amendment to the operating license for the Duane Arnold Energy Center (DAEC) to revise their emergency plan. Specifically, the licensee requested prior approval for a number of changes to their emergency action levels (EALs), which are actually contained in their emergency plan implementing procedures but are considered an integral part of the DAEC emergency plan and is controlled accordingly.

The licensee stated that the license amendment request was for revision of selected EALs and not the entire EAL scheme. However, in effect, the licensee actually submitted their entire EAL scheme and is therefore the scope of this review, i.e., the acceptability of the proposed EAL scheme to meet the standards of 10 CFR 50.47 and the requirements of 10 CFR Appendix E. In addition, the staff noted numerous changes to the previously approved EAL scheme that were not specifically noted as those requiring prior NRC approval. These changes were also reviewed as part of this license amendment due to the importance of ensuring an acceptable EAL scheme is in place as all offsite actions are predicated on timely and accurate EAL classifications.

DAEC's letter stated that the current DAEC EAL scheme is based on generic development guidance from Nuclear Energy Institute (NEI) document entitled NEI-99-01, "Methodology for Development of Emergency Action Levels," Revision 4, January 2003, (ADAMS Accession No. ML041470143). Since 1992, numerous enhancements and clarification efforts have been made to the generic EAL development guidance resulting in the most recent document, NEI 99-01, Revision 5, "Methodology for Development of Emergency Action Levels," (ADAMS Accession No. ML080450149), which was found to be acceptable for use as generic EAL development guidance by the Nuclear Regulatory Commission (NRC) staff by letter dated February 22, 2008 (ADAMS Accession No. ML080430535).

The proposed EAL scheme was developed using the generic development guidance from NEI 99-01, Revision 5 with numerous differences and deviations based upon design criteria applicable to the site as well as licensee preferences for terminology, format, and other licensee-desired modifications to the generic EAL scheme development guidance provided in NEI 99-01 Revision 5.

Attached are the requests for additional information (RAI) items to facilitate the technical review being conducted by the Operating Reactor Licensing and Outreach Branch staff. Timely and accurate response to these draft RAIs is requested.

Enclosure

1. Section 3.0 of Enclosure 1, "Evaluation of Proposed Change" the last sentence in the last paragraph states that any changes to the approved ICs [initiating conditions] and EALs will be made in accordance with 10 CFR 50.54(q). It is the expectation of the staff that changes to the EAL basis information and operating modes will be controlled in the same way as any changes to the approved ICs and EALs. Please explain the rationale for not controlling the EAL Basis Document, as a whole, in accordance with 10 CFR 50.54(q) or revise this statement accordingly.
2. EAL RU2.2: The use of "offscale high" readings for EAL thresholds is problematic as it is difficult to differentiate between failed instrumentation and actual plant conditions. Please explain how you will differentiate between the two, in the time allowed, for EAL declaration purposes and how this wording will not result in erroneous declarations, or revise accordingly.
3. EAL RA2: The staff requires further justification for the removal of the level threshold previously approved for EAL RA2.3. The proposed justification for the change is confusing in that it uses a calculation as a basis for the change when in fact there are three unique EAL thresholds expected for this EAL. One is based upon a valid Hi-Rad alarm from RM-9178, a valid reading > 100 millirem/hr from RM-9178, and indication of lowering fuel pool water level from LI-3413. Redundancy is expected for this EAL due to the significance of the concern and the availability of instrumentation. Please provide further justification that supports this revision, or revise accordingly.
4. EAL RA3: Please explain why the Secondary Alarm Station is used as a threshold for this EAL as this EAL only requires either the Control Room, and either the Central Alarm Station or Secondary Alarm Station, not both (typically). Please justify or revise accordingly.
5. EAL CG1: The staff noted an apparent typographical error in the IC. In addition, the staff recommends developing this EAL using the table as provided in the endorsed EAL scheme development guidance as it aids in clarifying the logic for this EAL, however, the staff has no technical opposition to the proposed format and wording. Also, please move the wording "...for 30 minutes or longer" from the bulleted list of conditions provided in CG1.2 to the threshold for "RPV level cannot be monitored." This is a known error in the guidance document which will be corrected in a future revision.
6. EAL EU1: Please provide basis information related to how security events at the ISFSI [independent spent fuel storage installations] are classified.
7. EAL HU2.1: Note that consideration of "...adjacent areas" was removed as history had shown this to be an area of confusion throughout the nuclear industry and resulted in a delay in classification in some cases.
8. EAL HA1: Please be aware that the areas of concern are expected to be areas where equipment necessary for safe operation, shutdown, and/or cooldown are located AND where the equipment is at risk from the given hazard. For example, not all areas are susceptible to vehicle crashes, high winds, tornados, or turbine blade failure. Please ensure to consider this when developing the list.

9. EAL HA2: Please provide the list of areas applicable to this EAL.
10. EAL HA32: Please revise the list of areas applicable to this EAL to ensure consistent, and accurate, EAL declaration. Only those areas that contain equipment that must be operated locally for safe operation, safe shutdown, or safe cooldown should be listed. If an area does not contain equipment that must be operated locally, then consideration for not including this area should be given. Note that the need to operate the equipment is not a threshold, i.e., the impediment to access an area, developed as per the above guidance, is the expectation for this EAL. Also, consider adding guidance information that allows the decision-maker to use reasonable judgment when considering declaring this EAL. For example, a small CO<sub>2</sub> bottle leaking in a large room/area may not warrant declaration.

January 17, 2012

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Vice President  
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Sincerely,

/RA/

Karl D. Feintuch, Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-331

Enclosure: As stated

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