



FPL Energy Duane Arnold, LLC
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Palo, Iowa 52324

FPL Energy.

Duane Arnold Energy Center

January 28, 2008

NG-08-0001
10 CFR 50.90

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Duane Arnold Energy Center
Docket 50-331
License No. DPR-49

Response to Request for Additional Information Related to Technical Specification Change Request (TSCR-092): Consolidated Line Item Improvement; Adoption of Changes to Standard Technical Specifications Under Technical Specifications Task Force (TSTF) Change Number TSTF-448, Revision 3 Regarding Control Room Envelope Habitability

- References:
1. Letter, G. Van Middlesworth (FPL Energy Duane Arnold) to Document Control Desk (USNRC), "Technical Specification Change Request (TSCR-092): Consolidated Line Item Improvement; Adoption of Changes to Standard Technical Specifications Under Technical Specifications Task Force (TSTF) Change Number TSTF-448, Revision 3 Regarding Control Room Envelope Habitability," dated June 29, 2007, NG-07-0493 (ML072040245)
 2. Letter, K. Feintuch (USNRC) to Richard L. Anderson (FPL Energy Duane Arnold), "Request for Additional Information Related to Amendment Request to Change Technical Specification Sections 3.7.4 and 5.5.13 Based on Model Text from Technical Specifications Task Force Traveler TSTF-448, Revision 3, Control Room Habitability (TAC No. MD6020)," dated December 3, 2007 (ML073201102)

In Reference 1, FPL Energy Duane Arnold requested an amendment to the Duane Arnold Energy Center (DAEC) Technical Specifications (TS) consisting of a Consolidated Line Item Improvement that adopts changes to TS Section 3.7.4, Standby Filter Unit (SFU) System, and adds Technical Specification Section 5.5.13, Control Building Envelope Habitability Program, consistent with Technical Specifications Task Force (TSTF) Change Traveler TSTF-448, Revision 3.

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NRR

By letter dated December 3, 2007, the Staff issued a request for additional information (Reference 2) regarding Reference 1. A conference call with the NRC on Reference 2 was also held on January 8, 2008. In this phone call, it was agreed that the DAEC TS should reflect the testing that was performed in the response to Generic Letter 2003-01, "Control Room Habitability." FPL Energy Duane Arnold also agreed to perform a periodic surveillance of on-site and off-site stationary and mobile hazardous chemical sources that could potentially threaten Control Building (CB) habitability. The response to the request of Reference 2 is provided in Enclosure 1 to this letter.

Enclosure 2 to this letter provides replacement marked-up and clean-typed TS pages, as well as revised Bases mark-up pages, reflecting the changes to TS 5.5.13.d (TS page 5.0-19) discussed in Enclosure 1. These pages supersede their corresponding pages in Reference 1.

This letter does not alter the evaluation or conclusions of Reference 1. The proposed Amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c). Associated TS Bases changes will be completed per the TS Bases Control Program (TS 5.5.10).

FPL Energy Duane Arnold requests an implementation period of 180 days after issuance of the license amendment.

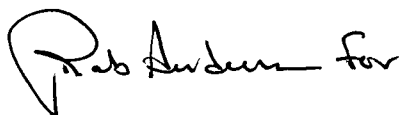
A copy of this submittal is being forwarded to our appointed state official pursuant to 10 CFR 50.91.

The following commitment is made in this letter:

FPL Energy Duane Arnold will implement a yearly check of on-site and off-site stationary and mobile hazardous chemical sources that could potentially threaten CB habitability within 180 days following staff approval of the license amendment request of Reference 1.

Commitments made in Reference 1 remain valid and are not changed by this submittal. If you have any questions, please contact Steve Catron at (319) 851-7234.

I declare under penalty of perjury that the foregoing is true and correct. Executed on January 28, 2008.

 for 1/28/08

Richard L. Anderson
Vice President, Duane Arnold Energy Center
FPL Energy Duane Arnold, LLC

Enclosures

NG-08-0001

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cc: Administrator, Region III, USNRC
Project Manager, DAEC, USNRC
Senior Resident Inspector, DAEC, USNRC
D. McGhee (State of Iowa)

Enclosure 1

**Response to Request for Additional Information Related to Technical
Specification Change Request (TSCR-092): Consolidated Line Item
Improvement; Adoption of Changes to Standard Technical Specifications
Under Technical Specifications Task Force (TSTF) Change Number TSTF-448,
Revision 3 Regarding Control Room Envelope Habitability**

Response to Request for Additional Information Related to Technical Specification Change Request (TSCR-092): Consolidated Line Item Improvement; Adoption of Changes to Standard Technical Specifications Under Technical Specifications Task Force (TSTF) Change Number TSTF-448, Revision 3 Regarding Control Room Envelope Habitability

NRC Question 1:

The licensee stated that the wording for [Technical Specification] TS 5.5.13.d differs from the model wording used in TSTF-448. More specifically, the wording has been changed to specify that the Control Building (CB) pressure is measured relative to the outside atmosphere instead of relative to all external areas adjacent to the CB Envelope.

It is the NRC staff's understanding that the primary purpose of measuring differential pressure (dp) relative to all external areas adjacent to the control room envelope (CRE) boundary is to determine the direction of air flow across the boundary of the CRE. It is not clear how measuring dp relative to outside atmosphere will provide any meaningful information that can be used to determine the direction of air flow across the CRE boundary.

Therefore, the NRC staff is requesting that the licensee measure dp relative to all external areas adjacent to the CRE boundary, as stated in TSTF-448, or explain in detail how measuring dp relative to outside atmosphere will provide information that can determine the direction of air flow across the CRE boundary.

FPL Energy Duane Arnold Response:

FPL Energy Duane Arnold plans to measure, at designated locations, the CB Envelope pressure relative to all external areas adjacent to the Duane Arnold Energy Center (DAEC) CB Envelope boundary, as stated in TSTF-448, Revision 3. The replacement marked-up and clean-typed TS pages, as well as revised Bases mark-up pages, reflecting this change to TS 5.5.13.d (TS page 5.0-19) are provided in Enclosure 2. A conference call with the NRC on Reference 2 was also held on January 8, 2008. In this phone call, it was agreed that the DAEC TS should reflect the testing that was performed in the response to Generic Letter 2003-01, "Control Room Habitability." Therefore, the measurements are planned to be conducted in a manner consistent with the "Tracer Gas Test" performed in response to Generic Letter 2003-01, "Control Room Habitability."

NRC Question 2:

The licensee referenced a previously performed hazardous chemical evaluation as docketed in a letter to the NRC dated January 28, 2005 (ADAMS Accession No. ML050390308). This evaluation found that there are no on-site or off-site stationary or mobile hazardous chemical sources that threaten CB habitability.

What program or programs currently exist at Duane Arnold Energy Center to ensure that the licensee revisits the issue of on-site and mobile sources of hazardous chemicals on a periodic basis?

FPL Energy Duane Arnold Response:

A conference call with the NRC on Reference 2 was held on January 8, 2008. In this phone call, FPL Energy Duane Arnold also agreed to perform a periodic surveillance of on-site and off-site stationary and mobile hazardous chemical sources that could potentially threaten CB habitability. FPL Energy Duane Arnold will implement a yearly check of on-site and off-site stationary and mobile hazardous chemical sources that could potentially threaten CB habitability within 180 days following staff approval of the license amendment request of Reference 1.

References:

1. Letter, G. Van Middlesworth (FPL Energy Duane Arnold) to Document Control Desk (USNRC), "Technical Specification Change Request (TSCR-092): Consolidated Line Item Improvement; Adoption of Changes to Standard Technical Specifications Under Technical Specifications Task Force (TSTF) Change Number TSTF-448, Revision 3 Regarding Control Room Envelope Habitability," dated June 29, 2007, NG-07-0493 (ML072040245)
2. Letter, K. Feintuch (USNRC) to Richard L. Anderson (FPL Energy Duane Arnold), "Request for Additional Information Related to Amendment Request to Change Technical Specification Sections 3.7.4 and 5.5.13 Based on Model Text from Technical Specifications Task Force Traveler TSTF-448, Revision 3, Control Room Habitability (TAC No. MD6020)," dated December 3, 2007 (ML073201102)

Enclosure 2

**Revised Proposed Technical Specification (Mark-Up and Clean-Typed) and
Bases Changes (Mark-Up)**

5.5 Programs and Manuals

5.5.13 Control Building Envelope Habitability Program (continued)

- c. *Requirements for (i) determining the unfiltered air leakage past the CBE boundary into the CBE in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CBE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.*
 - d. *Measurement, at designated locations, of the CBE pressure relative to all external areas adjacent to the CBE boundary during the pressurization mode of operation by one subsystem of the SFU System, operating at the flow rate required by the VFTP, at a Frequency of 24 months on a STAGGERED TEST BASIS. The results shall be trended and used as part of the 24 month assessment of the CBE boundary.*
 - e. *The quantitative limits on unfiltered air leakage into the CBE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air leakage measured by the testing described in paragraph c. The unfiltered air leakage limit for radiological challenges is the leakage flow rate assumed in the licensing basis analyses of DBA consequences.*
 - f. *The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CBE habitability, determining CBE unfiltered leakage, and measuring CBE pressure and assessing the CBE boundary as required by paragraphs c and d, respectively.*
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BASES

BACKGROUND
(continued)

The SFU System is a standby system, parts of which also operate during normal unit operations to maintain the *CBE control room environment*. Upon receipt of the initiation signal (indicative of conditions that could result in radiation exposure to *CBE occupants control room personnel*), the SFU System automatically starts and a system of dampers isolates the *CBE control building* to *minimize prevent* infiltration of contaminated air into the *CBE control room*. Outside air is taken in at the normal ventilation intake and is passed through one of the charcoal adsorber filter subsystems for removal of airborne radioactive particles before being mixed with the recirculated air. The air (outside and/or recirculated) is cooled by Air Conditioning (AC) units supplied by the Control Building Chillers (CBCs). The SFUs and AC units share common ductwork such that either SFU may supply outside air to either AC unit. However, the CBCs and AC units are addressed as part of LCO 3.7.5, "Control Building Chiller System."

The SFU System is designed to maintain a *habitable environment in the CBE the control room environment* for a 30 day continuous occupancy after a DBA without exceeding 5 rem total effective dose equivalent (TEDE). A single SFU subsystem *operating at a flow rate of 1000 cfm ±10%* will pressurize the control room to ≥ 0.1 inches water gauge pressure above atmospheric pressure, under calm wind conditions (i.e. less than 5 mph wind speed) *relative to the Reactor Building and outside atmosphere*. *A single SFU subsystem operating at a flow rate of 1000 cfm ±10% will also pressurize the CBE to a positive pressure above atmospheric pressure, under calm wind conditions (i.e. less than 5 mph wind speed) relative to external areas adjacent to the CBE boundary*. This will *minimize prevent* infiltration of air from *all surrounding areas adjacent to the CBE boundary surrounding buildings*.

Other areas in the *CBE control building* that directly communicate with the *CBE control room* via HVAC system ductwork or doors are also required to maintain a positive pressure relative to the adjacent areas outside the *CBE control building*. This will assure that leakage is from the *CBE control building* to the adjacent areas or outdoors. SFU System operation in maintaining a *habitable environment in the CBE control room habitability* is discussed in the UFSAR, Sections 6.4 and 9.4.4, (Refs. 1 and 2, respectively).

(continued)

5.5 Programs and Manuals

5.5.13 Control Building Envelope Habitability Program (continued)

- c. Requirements for (i) determining the unfiltered air leakage past the CBE boundary into the CBE in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CBE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.
 - d. Measurement, at designated locations, of the CBE pressure relative to all external areas adjacent to the CBE boundary during the pressurization mode of operation by one subsystem of the SFU System, operating at the flow rate required by the VFTP, at a Frequency of 24 months on a STAGGERED TEST BASIS. The results shall be trended and used as part of the 24 month assessment of the CBE boundary.
 - e. The quantitative limits on unfiltered air leakage into the CBE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air leakage measured by the testing described in paragraph c. The unfiltered air leakage limit for radiological challenges is the leakage flow rate assumed in the licensing basis analyses of DBA consequences.
 - f. The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CBE habitability, determining CBE unfiltered leakage, and measuring CBE pressure and assessing the CBE boundary as required by paragraphs c and d, respectively.
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