June 24, 2008

Mr. Richard L. Anderson
Vice President
Duane Arnold Energy Center
3277 DAEC Road
Palo, IA 52324-9785

SUBJECT: DUANE ARNOLD ENERGY CENTER - ISSUANCE OF AMENDMENT REGARDING ADOPTION OF CHANGES TO TSTF-448, REVISON 3, "CONTROL ROOM ENVELOPE HABITABILITY" (TAC NO. MD6020)

Dear Mr. Anderson:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 269 to Facility Operating License No. DPR-49 for the Duane Arnold Energy Center.

This amendment consists of a change to the Technical Specifications (TS) in response to your application dated June 29, 2007, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072040245), as supplemented by a letter dated January 28, 2008 (ADAMS No. ML080390536) and a letter dated May 08, 2008 (ADAMS No. ML081420014), which requested revisions to TS consistent with NRC approved Technical Specification Task Force (TSTF)-448, Revision 3, "Control Room Habitability."

A copy of the Safety Evaluation (SE) is also enclosed. A Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

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

Enclosures:
1. Amendment No. 269 to License No. DPR-49
2. Safety Evaluation

cc w/encls: See next page

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Vice President
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Palo, IA 52324-9785

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ADAMS ACCESSION NUMBER: ML081690425 Pkg. ML081690465 TS:ML081780556

OFFICE	NRR/LPL3-1/PM	NRR/LPL3-1/LA	NRR/ITSB/BC	NRR/SCVB/BC	NRR/LPL3-1/BC
NAME	KFeintuch	BTully	RBElliott	RDennig	LJames(P.Tam for)
DATE	06/23/08	06/23/08	06/23/08	06/24/08	06/24/08

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(note) = per Memorandum (ML073130139) dated November 16, 2007, to William Cartwright, Edward Williamson, Assistant General Counsel (Acting) for Operating Reactors in the Office of the General Counsel, USNRC, wrote "In accordance with the NRR LIC procedures, we agree with the NRR recommendation that OGC need not review future

amendment packages that adopt the TSTF-448."

Duane Arnold Energy Center

cc:

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FPL ENERGY DUANE ARNOLD, LLC

DOCKET NO. 50-331

DUANE ARNOLD ENERGY CENTER

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 269
License No. DPR-49

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by FPL Energy Duane Arnold, LLC dated June 29, 2007, as supplemented by a letter dated January 28, 2008 and a letter dated May 08, 2008, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-49 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 269, are hereby incorporated in the license. FPL Energy Duane Arnold, LLC, shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 180 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by P.Tam for/

Lois James, Branch Chief
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility Operating License
and Technical Specifications

Date of Issuance: June 24, 2008

ATTACHMENT TO LICENSE AMENDMENT NO.269

FACILITY OPERATING LICENSE NO. DPR-49

DOCKET NO. 50-331

Replace the following pages of the License and Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
License Page 3	License Page 3
TS Page 3.7-7	TS Page 3.7-7
TS Page 3.7-8	TS Page 3.7-8
TS Page 3.7-9	TS Page 3.7-9
TS Page 3.7-10	TS Page 3.7-10
TS Page 5.0-18	TS Page 5.0-18
TS Page 5.0-19	TS Page 5.0-18a

2.B.(2) FPL Energy Duane Arnold, LLC, pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended as of June 1992 and as supplemented by letters dated March 26, 1993, and November 17, 2000.

2.B.(3) FPL Energy Duane Arnold, LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

2.B.(4) FPL Energy Duane Arnold, LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated radioactive apparatus components;

2.B.(5) FPL Energy Duane Arnold, LLC, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not to separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I; Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

Maximum Power Level

2.C.(1) FPL Energy Duane Arnold, LLC is authorized to operate the Duane Arnold Energy Center at steady state reactor core power levels not in excess of 1912 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No.269, are hereby incorporated in the license. FPL Energy Duane Arnold, LLC shall operate the facility in accordance with the Technical Specifications.

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO.269 TO FACILITY OPERATING LICENSE NO. DPR-49

FPL ENERGY DUANE ARNOLD, LLC

DUANE ARNOLD ENERGY CENTER

DOCKET NO. 50-331

1.0 INTRODUCTION

By application dated June 29, 2007, as supported by supplements dated January 28, 2008, and May 08, 2008, FPL Energy Duane Arnold, LLC (the licensee) requested changes to the Technical Specifications (TS) for the Duane Arnold Energy Center (DAEC).

On August 8, 2006, the commercial nuclear electrical power generation industry owners group Technical Specifications Task Force (TSTF) submitted a proposed change, TSTF-448, Revision 3, to the improved standard technical specifications (STS) (NUREGs 1430-1434) on behalf of the industry (TSTF-448, Revisions 0, 1, and 2 were prior draft iterations). TSTF-448, Revision 3, is a proposal to establish more effective and appropriate action, surveillance, and administrative STS requirements related to ensuring the habitability of the control room envelope (CRE).

In Nuclear Regulatory Commission (NRC) Generic Letter (GL) 2003-01 (Reference 1), licensees were alerted to findings at facilities that existing TS surveillance requirements (SRs) for the Control Room Emergency Ventilation System (CREVS) may not be adequate. Specifically, the results of ASTM E741 (Reference 2) tracer gas tests to measure CRE unfiltered inleakage at facilities indicated that the differential pressure surveillance is not a reliable method for demonstrating CRE boundary operability. Licensees were requested in GL 2003-01 to address existing TS as follows:

> *Provide confirmation that your technical specifications verify the integrity [i.e., operability] of the CRE [boundary], and the assumed [unfiltered] inleakage rates of potentially contaminated air. If you currently have a differential pressure surveillance requirement to demonstrate CRE [boundary] integrity, provide the basis for your conclusion that it remains adequate to demonstrate CRE integrity in light of the ASTM E741 testing results. If you conclude that your differential pressure surveillance requirement is no longer adequate, provide a schedule for: 1) revising the surveillance requirement in your technical specification to reference an acceptable surveillance methodology (e.g., ASTM E741), and 2) making any necessary modifications to your CRE [boundary] so that compliance with your new surveillance requirement can be demonstrated.*

If your facility does not currently have a technical specification surveillance requirement for your CRE integrity, explain how and at what frequency you confirm your CRE integrity and why this is adequate to demonstrate CRE integrity.

To promote standardization and to minimize the resources that would be needed to create and process plant-specific amendment applications in response to the concerns described in the GL, the industry and the NRC proposed revisions to CRE habitability system requirements contained in the STS, using the STS change traveler process. This effort culminated in Revision 3 to traveler TSTF-448, "Control Room Habitability," which the NRC staff approved on January 17, 2007.

Consistent with the traveler as incorporated into NUREG-1433, the licensee proposed revising action and SRs in TS 3.7.4, "Standby Filter Unit (SFU) System," and adding a new administrative controls program, Specification 5.5.13, "Control Building Envelope Habitability Program." The purpose of the changes is to ensure that CRE boundary operability is maintained and verified through effective surveillance and programmatic requirements, and that appropriate remedial actions are taken in the event of an inoperable CRE boundary.

The NRC staff acknowledges that Duane Arnold's plant-specific terminology for the CRE is the Control Building Envelope (CBE) and that, for the purposes of interpreting and responding to TSTF-448, Revision 3 requirements, the terms CRE and CBE are equivalent. Within this Safety Evaluation (SE) CRE will be generally used for referencing requirements, and CBE will be used for referencing DAEC plant characteristics and responses to requirements.

Some editorial and plant specific changes were incorporated into this SE resulting in minor deviations from the model SE text in TSTF-448, Revision 3.

2.0 REGULATORY EVALUATION

2.1 Control Room and Control Room Envelope

NRC Regulatory Guide (RG) 1.196, "Control Room Habitability at Light-water Nuclear Power Reactors," Revision 0, May 2003, (Reference 4) uses the term "control room envelope" in addition to the term "control room" and defines each term as follows:

Control Room: The plant area, defined in the facility licensing basis, in which actions can be taken to operate the plant safely under normal conditions and to maintain the reactor in a safe condition during accident situations. It encompasses the instrumentation and controls necessary for a safe shutdown of the plant and typically includes the critical document reference file, computer room (if used as an integral part of the emergency response plan), shift supervisor's office, operator wash room and kitchen, and other critical areas to which frequent personnel access or continuous occupancy may be necessary in the event of an accident.

Control Room Envelope*: The plant area, defined in the facility licensing basis that in the event of an emergency, can be isolated from the plant areas and the environment external to the CRE. This area is served by an emergency ventilation system, with the intent of maintaining the habitability of the control room. This area encompasses the*

control room, and may encompass other non-critical areas to which frequent personnel access or continuous occupancy is not necessary in the event of an accident.

NRC RG 1.197, "Demonstrating Control Room Envelope Integrity At Nuclear Power Reactors," Revision 0, May 2003 (Reference 5), also contains these definitions, but uses the term CRE to mean both. This is because the protected environment provided for operators varies with the nuclear power facility. At some facilities this environment is limited to the control room, at others, it is the CRE. In this SE, consistent with the proposed changes to the TS, the CRE (and its plant-specific equivalent, the CBE) will be used to designate both. For consistency, facilities should use the term CRE with an appropriate facility-specific definition derived from the above CRE definition.

2.2 Standby Filter Unit System

The SFU System (the term used at Duane Arnold Energy Center for the Control Room Envelope Emergency Ventilation System) provides a protected environment from which operators can control the unit, during airborne challenges from radioactivity, hazardous chemicals, and fire byproducts, such as fire suppression agents and smoke, during both normal and accident conditions.

The SFU System is designed to maintain a habitable environment in the control room envelope for 30 days of continuous occupancy after a Design Basis Accident (DBA) without exceeding a 5 rem total effective dose equivalent (TEDE).

The SFU System consists of two redundant subsystems, each capable of maintaining the habitability of the CBE. The SFU System is considered operable when the individual components necessary to limit operator exposure are operable in both subsystems. A SFU subsystem is considered operable when the associated:

- Fan is operable;
- High efficiency particulate air filters and charcoal adsorbers are not excessively restricting flow, and are capable of performing their filtration functions;
- Heater, demister, ductwork, valves, and dampers are operable, and air circulation can be maintained; and
- CBE boundary is operable (the single boundary supports both subsystems).

The CBE boundary is considered operable when the measured unfiltered air inleakage is less than or equal to the inleakage value assumed by the licensing basis analyses of design basis accident consequences to CBE occupants.

2.3 Regulations Applicable to Control Room Habitability

In Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," General Design Criteria (GDC) 1, 2, 3, 4, 5, and 19 apply to CRE habitability. A summary of these GDCs follows.

GDC 1, “Quality Standards and Records” requires that structures, systems, and components (SSCs) important to safety be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety functions performed.

GDC 2, “Design Basis for Protection Against Natural Phenomena,” requires that SSCs important to safety be designed to withstand the effects of earthquakes and other natural hazards.

GDC 3, “Fire Protection,” requires SSCs important to safety be designed and located to minimize the effects of fires and explosions.

GDC 4, “Environmental and Dynamic Effects Design Bases,” requires SSCs important to safety to be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing, and postulated accidents, including loss-of-coolant accidents (LOCAs).

GDC 5, “Sharing of Structures, Systems, and Components,” requires that SSCs important to safety not be shared among nuclear power units unless it can be shown that such sharing will not significantly impair their ability to perform their safety functions, including, in the event of an accident in one unit, the orderly shutdown and cooldown of the remaining units.

GDC 19, “Control Room,” requires that a control room be provided from which actions can be taken to operate the nuclear reactor safely under normal conditions and to maintain the reactor in a safe condition under accident conditions, including a LOCA. Adequate radiation protection is to be provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of specified values.

Prior to incorporation of TSTF-448, Revision 3, the STS requirements addressing CRE boundary operability resided only in the following CRE ventilation system specifications:

- NUREG-1430, TS 3.7.10, “Control Room Emergency Ventilation System (CREVS);”
- NUREG-1431, TS 3.7.10, “Control Room Emergency Filtration System (CREFS);”
- NUREG-1432, TS 3.7.11, “Control Room Emergency Air Cleanup System (CREACS);”
- NUREG-1433, TS 3.7.4, “[Main Control Room Environmental Control (MCREC)] System;” and
- NUREG-1434, TS 3.7.3, “[Control Room Fresh Air (CRFA)] System.”

In these specifications, the SR associated with demonstrating the operability of the CRE boundary requires verifying that one CREVS train can maintain a positive pressure relative to the areas adjacent to the CRE during the pressurization mode of operation at a makeup flow rate. Facilities that pressurize the CRE during the emergency mode of operation of the CREVS have similar SRs. Other facilities that do not pressurize the CRE have only a system flow rate criterion for the emergency mode of operation. Regardless, the results of ASTM E741 (Reference 2) tracer gas tests to measure CRE unfiltered inleakage at facilities indicated that the differential pressure surveillance (or the alternative surveillance at non-pressurization facilities) is not a reliable method for demonstrating CRE boundary operability. That is, licensees were able to obtain differential pressure and flow measurements satisfying the SR limits even though unfiltered inleakage was determined to exceed the value assumed in the safety analyses.

In addition to an inadequate SR, the action requirements of these specifications were ambiguous regarding CRE boundary operability in the event CRE unfiltered inleakage is found to exceed the analysis assumption. The ambiguity stemmed from the view that the CRE boundary may be considered operable but degraded in this condition, and that it would be deemed inoperable only if calculated radiological exposure limits for CRE occupants exceeded a licensing basis limit; e.g., as stated in GDC-19, even while crediting compensatory measures.

NRC Administrative Letter (AL) 98-10, "Dispositioning of Technical Specifications That Are Insufficient to Assure Plant Safety," (AL 98-10) states that "the discovery of an improper or inadequate TS value or required action is considered a degraded or nonconforming condition," which is defined in NRC Inspection Manual Chapter 9900; see latest guidance in Regulatory Issues Summary (RIS) 2005-20 (Reference 3). "Imposing administrative controls in response to an improper or inadequate TS is considered an acceptable short-term corrective action. The NRC staff expects that, following the imposition of administrative controls, an amendment to the inadequate TS, with appropriate justification and schedule, will be submitted in a timely fashion."

Licensees that have found unfiltered inleakage in excess of the limit assumed in the safety analyses and have yet to either reduce the inleakage below the limit or establish a higher bounding limit through re-analysis, have implemented compensatory actions to ensure the safety of CRE occupants, pending final resolution of the condition, consistent with RIS 2005-20. However, based on GL 2003-01 and AL 98-10, the NRC staff expects each licensee to propose TS changes that include a surveillance to periodically measure CRE unfiltered inleakage in order to satisfy 10 CFR 50.36(d)(3), which requires a facility's TS to include SRs, which it defines as "requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and *that limiting conditions for operation will be met*." (Emphasis added.)

The NRC staff also expects facilities to propose unambiguous remedial actions, consistent with 10 CFR 50.36(d)(2), for the condition of not meeting the limiting condition for operation (LCO) due to an inoperable CRE boundary. The action requirements should specify a reasonable completion time to restore conformance to the LCO before requiring a facility to be shut down. This completion time should be based on the benefits of implementing mitigating actions to ensure CRE occupant safety and sufficient time to resolve most problems anticipated with the CRE boundary, while minimizing the chance that operators in the CRE will need to use mitigating actions during accident conditions.

2.4 Adoption of TSTF-448, Revision 3, by Duane Arnold Energy Center

Adoption of TSTF-448, Revision 3, will assure that the facility's TS LCO for the SFU System is met by demonstrating unfiltered leakage into the CBE is within limits; i.e., the operability of the CBE boundary. In support of this surveillance, which specifies a test interval (frequency) described in RG 1.197, TSTF-448 also adds TS administrative controls to assure the habitability of the CBE between performances of the ASTM E741 test. In addition, adoption of TSTF-448 will establish clearly stated and reasonable required actions in the event CBE unfiltered inleakage is found to exceed the analysis assumption.
The changes made by TSTF-448 to the TS requirements for the SFU System and the CBE boundary conform to 10 CFR 50.36(d)(2) and 10 CFR 50.36(d)(3). Their adoption will better

assure that the Duane Arnold Energy Center CBE will remain habitable during normal operation and design basis accident conditions. These changes are, therefore, acceptable from a regulatory standpoint.

3.0 TECHNICAL EVALUATION

The NRC staff reviewed the proposed changes against the corresponding changes made to the STS by TSTF-448, Revision 3, which the NRC staff has found to satisfy applicable regulatory requirements, as described above in Section 2.0. The isolation mode of the SFU System at DAEC pressurizes the CBE to minimize unfiltered air inleakage. The proposed changes are consistent with this design.

3.1 Proposed Changes

The proposed amendment would strengthen CBE habitability TS requirements by changing TS 3.7.4, SFU System, and adding a new TS administrative controls program on CBE habitability. Accompanying the proposed TS changes are appropriate conforming technical changes to the TS Bases. The proposed revision to the Bases also includes editorial and administrative changes to reflect applicable changes to the corresponding STS Bases, which were made to improve clarity, conform with the latest information and references, correct factual errors, and achieve more consistency among the STS NUREGs. Except for plant specific differences, all of these changes are consistent with STS as revised by TSTF-448, Revision 3.

The NRC staff compared the proposed TS changes to the STS and the STS markups and evaluations in TSTF-448. The NRC staff also reviewed the proposed changes to the TS Bases for consistency with the STS Bases and the plant-specific design and licensing bases, although approval of the Bases is not a condition for accepting the proposed amendment. However, TS 5.5.10, “TS Bases Control Program,” provides assurance that the licensee has established and will maintain the adequacy of the Bases. The proposed Bases for TS 3.7.4 refer to specific guidance in NEI 99-03, “Control Room Habitability Assessment Guidance,” Revision 0, dated June 2001 (Reference 6), which the NRC staff has formally endorsed, with exceptions, through Regulatory Guide 1.196, “Control Room Habitability at Light-Water Nuclear Power Reactors,” dated May 2003 (Reference 4).

3.2 Editorial Changes

The licensee proposed editorial changes to TS 3.7.4, SFU System, to establish standard terminology, except for the plant-specific Control Building Envelope (plant specific name for Control Room Envelope), Standby Filter Unit System (plant specific name for Control Room Emergency Ventilation System), and “radiological, chemical, and smoke hazards (or challenges)” in place of various phrases to describe the hazards that CRE occupants are protected from by the SFU System. The terminology “Control Building” more accurately labels the plant area to which TSTF-448, Revision 3, applies at DAEC than does the terminology “Control Room”. These changes improve the usability and quality of the presentation of the TS, have no impact on safety, and therefore, are acceptable.

3.3 TS 3.7.4, SFU System

The licensee proposed to revise the action requirements of TS 3.7.4, SFU System, to acknowledge that an inoperable CBE boundary, depending upon the location of the associated degradation, could cause just one, instead of both SFU Subsystems to be inoperable. This is accomplished by revising Condition A to exclude Condition B, and revising Condition B to address one or more SFU Subsystems, as follows:

- Condition A: One SFU Subsystems inoperable for reasons other than Condition B.

- Condition B: One or more SFU Subsystems inoperable due to inoperable CBE boundary in MODE 1, 2, and 3.

This change clarifies how to apply the action requirements in the event just one SFU Subsystem is unable to ensure CBE occupant safety within licensing basis limits because of an inoperable CBE boundary. It enhances the usability of Conditions A and B with a presentation that is more consistent with the intent of the existing requirements. This change is an administrative change because it neither reduces nor increases the existing action requirements, and, therefore, is acceptable.

The licensee proposed to replace existing Required Action B.1, "Restore control building boundary to OPERABLE status," which has a 24-hour Completion Time, with Required Action B.1, to immediately initiate action to implement mitigating actions; Required Action B.2, to verify, within 24 hours, that in the event of a DBA, CBE occupant radiological exposures will not exceed the calculated dose of the licensing basis analyses of DBA consequences, and that CBE occupants are protected from hazardous chemicals and smoke; and Required Action B.3, to restore CBE boundary to operable status within 90 days.

The 24-hour Completion Time of new Required Action B.2 is reasonable based on the low probability of a DBA occurring during this time period, and the use of mitigating actions as directed by Required Action B.1. The 90-day Completion Time of new Required Action B.3 is reasonable based on the determination that the mitigating actions will ensure protection of CBE occupants within analyzed limits while limiting the probability that CBE occupants will have to implement protective measures that may adversely affect their ability to control the reactor and maintain it in a safe shutdown condition in the event of a DBA. The 90-day Completion Time is a reasonable time to diagnose, plan and possibly repair, and test most anticipated problems with the CBE boundary. Therefore, proposed Actions B.1, B.2, and B.3 are acceptable.

The licensee proposed to add a new condition to Action F of TS 3.7.4 that states, "One or more SFU Subsystems inoperable due to an inoperable Control Building Envelope (CBE) boundary during movement of irradiated fuel assemblies in secondary containment, during Core Alterations, or during operations with a potential for draining the reactor vessel (OPDRVs)." The specified Required Actions proposed for this condition are the same as for the other existing condition for Action F, which states, "Both SFU Subsystems inoperable during movement of irradiated fuel assemblies in the secondary containment, during Core Alterations, or during OPDRVs." Accordingly, the new condition is stated with the other condition in Action F using the logical connector "OR.". The practical result of this presentation in format is the same as specifying two separately numbered Actions, one for each condition. Its advantage is to make

the TS Actions table easier to use by avoiding having an additional numbered row in the Actions table. This new condition in Action F is needed because proposed Action B will only apply in Modes 1, 2, and 3. As such, this change will ensure that the Actions table continues to specify a condition for an inoperable CRE boundary during refueling, Core Alterations, and OPDRVs. Therefore, this change is administrative and acceptable.

In the isolation mode, the SFU System isolates unfiltered ventilation air supply intakes, filters the emergency ventilation air supply to the CBE, and pressurizes the CBE to minimize unfiltered air inleakage past the CBE boundary. The licensee proposed to modify the CBE pressurization SR. This SR requires verifying that one SFU Subsystem, operating in the isolation mode of operation, can maintain a pressure of greater than or equal to 0.1 inches water gauge, relative to the outside atmosphere during the isolation mode of operation at a makeup flow rate of 1000 cfm [cubic feet per minute]. The modification of this SR is proposed because measurements of unfiltered air leakage into the CRE at numerous reactor facilities demonstrated that a basic assumption of this SR, an essentially leak-tight CBE boundary, was incorrect for most facilities. Hence, meeting this SR by achieving the required CBE pressure is not necessarily a conclusive indication of CBE boundary leak tightness, i.e., CBE boundary operability. Based on the adoption of TSTF-448, Revision 3, the licensee's proposal to modify SR 3.7.4.4 is acceptable.

The proposed CRE inleakage measurement SR states, “Perform required Control Building Envelope unfiltered air inleakage testing in accordance with the Control Building Envelope Habitability Program.” The Control Building Envelope Habitability Program TS, proposed TS 5.5.13, requires that the program include “Requirements for determining the unfiltered air inleakage past the Control Building Envelope boundary into the Control Building Envelope” in accordance with the testing methods and at the frequencies specified in Sections C.1 and C.2 of RG 1.197, Revision 0 (Reference 5). This guidance references ASTM E741 (Reference 2) as an acceptable method for ascertaining the unfiltered leakage into the CRE. The licensee has proposed to follow this method. Therefore, the proposed CRE inleakage measurement SR is acceptable.

3.4 TS 5.5.13, Control Building Envelope Habitability Program

The proposed administrative controls program TS is consistent with the model program TS in TSTF-448, Revision 3. In combination with SR 3.7.4.4, this program is intended to ensure the operability of the CBE boundary, which as part of an operable SFU System will ensure that CBE habitability is maintained such that CBE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CBE under DBA conditions without personnel receiving radiation exposures in excess of 5 rem TEDE for the duration of the accident.

A Control Building Envelope Habitability Program TS acceptable to the NRC staff requires the program to contain the following elements:

Definitions of Control Building Envelope and Control Building Envelope boundary:
This element is intended to ensure that these definitions accurately describe the plant areas that are within the CBE, and also the interfaces that form the CBE boundary, and are consistent with

the general definitions discussed in Section 2.1 of this SE. Establishing what is meant by the CBE and the CBE boundary will preclude ambiguity in the implementation of the program.

Configuration control and preventive maintenance of the Control Building Envelope boundary:
This element is intended to ensure the CBE boundary is maintained in its design condition. Guidance for implementing this element is contained in RG 1.196 (Reference 4), which endorsed, with exceptions, Nuclear Energy Institute (NEI) 99-03 (Reference 6). Maintaining the CBE boundary in its design condition provides assurance that its leak-tightness will not significantly degrade between CBE inleakage determinations.

Assessment of Control Building Envelope habitability at the frequencies stated in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0 (Reference 5), and measurement of unfiltered air leakage into the Control Building Envelope in accordance with the testing methods and at the frequencies stated in Sections C.1 and C.2 of Regulatory Guide 1.197:
This element is intended to ensure that the plant assesses CBE habitability consistent with Sections C.1 and C.2 of RG 1.197. Assessing CBE habitability at the NRC accepted frequencies provides assurance that significant degradation of the CBE boundary will not go undetected between CBE inleakage determinations. Determination of CBE inleakage using test methods acceptable to the NRC staff assures that test results are reliable for ascertaining CBE boundary operability. Determination of CBE inleakage at the NRC accepted frequencies provides assurance that significant degradation of the CBE boundary will not occur between CBE inleakage determinations.

Measurement of Control Building Envelope pressure with respect to all areas adjacent to the Control Building Envelope boundary at designated locations for use in assessing the Control Building Envelope boundary at a frequency of 24 months on a staggered test basis (with respect to the SFU Subsystems):
This element is intended to ensure that CBE differential pressure is regularly measured to identify changes in pressure warranting evaluation of the condition of the CBE boundary. Obtaining and trending pressure data provides additional assurance that significant degradation of the CBE boundary will not go undetected between CBE inleakage determinations.

Quantitative limits on unfiltered inleakage:
This element is intended to establish the CBE inleakage limit as the CBE unfiltered infiltration rate assumed in the CBE occupant radiological consequence analyses of DBAs. Having an unambiguous criterion for the CBE boundary to be considered operable in order to meet LCO 3.7.4, will ensure that associated action requirements will be consistently applied in the event of CBE degradation resulting in inleakage exceeding the limit.

Consistent with TSTF-448, Revision 3, the program states that the provisions of SR 3.0.2 are applicable to the program frequencies for performing the activities required by program paragraph number c, parts (i) and (ii) (assessment of CBE habitability and measurement of CBE inleakage), and paragraph number d (measurement of CRE differential pressure). This statement is needed to avoid confusion. SR 3.0.2 is applicable to the surveillance that references the testing in the CBE Habitability Program. However, SR 3.0.2 is not applicable to Administrative Controls unless specifically invoked. Providing this statement in the program eliminates any confusion regarding whether SR 3.0.2 is applicable, and is acceptable.

Consistent with TSTF-448, Revision 3, proposed TS 5.5.13 states that: (1) a CBE Habitability Program shall be established and implemented, (2) the program shall include all of the NRC staff required elements, as described above, and (3) the provisions of SR 3.0.2 shall apply to program frequencies. Therefore, TS 5.5.13, which is consistent with the model program TS approved by the NRC staff in TSTF-448, Revision 3, is acceptable.

3.5 Implementation of New Surveillance and Assessment Requirements by the Licensee

The licensee has proposed license conditions regarding the initial performance of the new surveillance and assessment requirements. The new license conditions adopted the conditions in section 2.3 of the model application published in the *Federal Register* on January 17, 2007, (72 FR 2022). Plant specific changes were made to the proposed license conditions. The proposed plant specific license conditions are consistent with the model application, and are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Iowa State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATIONS

The amendment changes a requirement with respect to the use of a facility component located within the restricted area as defined in 10 CFR Part 20, and changes SRs. The NRC staff has determined that the amendment involves no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no-significant-hazards considerations, and there has been no public comment on the finding (72 FR 54474). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, on the basis of the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

1. NRC Generic Letter 2003-01, "Control Room Habitability," dated June 12, 2003, (GL 2003-01).

2. American Society for Testing of Materials ASTM E 741 - 00, “Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution,” 2000, (ASTM E741).

3. Regulatory Guide 1.196, “Control Room Habitability at Light-Water Nuclear Power Reactors,” Revision 0, dated May 2003.

4. Regulatory Guide 1.197, “Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors,” Revision 0, May 2003.

5. NRC Regulatory Issue Summary 2005-20: Revision to Guidance Formerly Contained in NRC Generic Letter 91-18, “Information to Licensees Regarding Two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and on Operability,” dated September 26, 2005 (RIS 2005-20).

6. Nuclear Energy Institute NEI 99-03, “Control Room Habitability Assessment Guidance,” Revision 0, dated June 2001.

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