

13.7 Fitness for Duty

13.7.1 Introduction

Combined license (COL) application (COLA), Revision 4, Final Safety Analysis Report (FSAR) Section 13.7, "Fitness for Duty," describes the applicant's plans to implement the fitness for duty program.

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 52.79(a)(44), COLAs must include a description of the Fitness for Duty (FFD) program required by 10 CFR Part 26, "Fitness for Duty Programs," and its implementation. The FFD program is designed to provide reasonable assurance that: (1) individuals are trustworthy and reliable as demonstrated by the avoidance of substance abuse; (2) individuals are not under the influence of any substance, legal or illegal, or mentally or physically impaired from any cause, which in any way adversely affects their ability to safely and competently perform their duties; (3) measures are established and implemented for the early detection of individuals who are not fit to perform their duties; (4) the construction site is free from the presence and effects of illegal drugs and alcohol; (5) the work places are free from the presence and effects of illegal drugs and alcohol; and, (6) the effects of fatigue and degraded alertness on an individual's ability to safely and competently perform their duties are managed commensurate with maintaining public health and safety.

13.7.2 Summary of Application

In COLA, Revision 4, the applicant addressed COL information items and described conditions of the operations and construction FFD programs for Comanche Peak Nuclear Power Plant (CPNPP), Units 3 and 4. Section 13.7, "Fitness for Duty," of the CPNPP, Units 3 and 4 COL FSAR, Revision 4 incorporates by reference, Section 13.7 of the US-APWR DCD, Revision 4.

US-APWR COL Information Item

- Standard (STD) and Comanche Peak (CP) COL 13.7(1)

The applicant provided additional information in STD and CP COL 13.7(1) to address the COL information item, which states:

The COL applicant is to develop the description of the operating and construction plant fitness for duty programs.

13.7.3 Regulatory Basis

The applicable regulatory requirements for FFD are as follows:

- 10 CFR Part 26, "Fitness for Duty Programs," as it relates to the requirements and standards for the establishment, implementation, and maintenance of FFD programs.
- 10 CFR 52.79(a)(44), which requires a COL applicant to submit a description of the FFD program required by 10 CFR Part 26 and its implementation.

By letter dated December 2, 2009 (ADAMS Accession Number ML092880812), the NRC stated that it considered Nuclear Energy Institute (NEI) 06-06, "Fitness for Duty Program," Revision 5 acceptable for use as a reference to support the development of site specific application.

By letter dated June 4, 2013 (ADAMS Accession Number ML13084A172), the NRC stated that it considered the NEI 06-06, "Fitness for Duty Program," Revision 6 document acceptable, with the exception to the expanded scope language applicable to persons specified in Part 26.4(e), for the the staff to begin the process of formally endorsing this guidance via a Regulatory Guide (RG). NEI 06-06 establishes program level consistency throughout the nuclear power industry in the implementation of 10 CFR Part 26, Subpart K, "Fitness for Duty programs for Construction."

13.7.4 Technical Evaluation

The NRC staff reviewed Section 13.7 of the CPNPP, Units 3 and 4, COLA FSAR, Revision 4 which represents the complete scope of information relating to this review topic. The staff reviewed the following information in the CPNPP, Units 3 and 4, COLA FSAR, Revision 4.

US-APWR COL Information Item

- STD and CP COL Item 13.7(1)

The applicant replaced the contents of the US-APWR DCD Section with the following information in Section 13.7 of the CPNPP, Units 3 and 4, COLA FSAR, Revision 1 that described the FFD program.

The fitness for duty program is implemented and maintained in two phases - the construction phase program and the operating phase program. The phases are implemented as indicated in Table 13.4-201. The construction phase program is consistent with NEI 06-06 (Reference 13.7-201). The operating phase fitness-for-duty program will comply with in 10 CFR 26.

The NRC staff's review of STD and COL 13.7(1) included the following: (1) the adequacy of the FFD program milestones and (2) the implementation to address transition from construction to operation phase, as proposed in the application. The staff determined that the supplemental information in FSAR Section 13.7, did not adequately describe how the applicant would intend to update its FFD program upon the final issuance of the NRC RG. Therefore, in request for additional information (**RAI**) **4243, Question 13.07-1**, dated January 17, 2010, the NRC staff asked the applicant the following question:

Under 10 CFR 52.79(a)(44), the Applicant's FSAR must contain a description of the fitness for duty (FFD) program required by 10 CFR Part 26 and its implementation. How does the Applicant intend to update its FFD program for the construction phase? NEI 06-06 provides examples of the FFD program that is required and, if this guidance is endorsed by the NRC, will provide an acceptable method of complying with the NRC's regulations. If the NRC endorses NEI 06-06, how does the Applicant intend to update its FFD program for the construction phase to comply with NEI 06-06? If future revisions to NEI 06-06 are endorsed by the NRC, how does the Applicant intend to update its

FFD program for the construction phase to comply with certain clarifications, additions, and exceptions in these future, endorsed revisions, as necessary?

By letter dated February 22, 2010, the applicant provided its response to **RAI 4243, Question 13.07-1**. The applicant provided a proposed change to FSAR page 13.7-1, which stated, in part, that the FFD program is implemented and maintained in phases dependent on the activities, duties, or access afforded to certain individuals at the construction site. The construction and operations programs are the two different types of FFD programs. The applicant added that the operations FFD program was consistent with all applicable subparts of 10 CFR Part 26. The construction FFD program was consistent with NEI 06-06 as NEI 06-06 is applicable to persons constructing or directing the construction of safety and security related structures, systems, or components (SSCs) performed onsite where the new reactor will be operated. Management and oversight personnel and security personnel, prior to the receipt of special nuclear material in the form of fuel assemblies, will be subject to the operations FFD program that meets the requirements of 10 CFR Part 26, Subparts A through H, N and O. The construction FFD program will be reviewed and revised as necessary should substantial changes occur to either NEI 06-06 or the requirements of 10 CFR Part 26.

In this same response, the applicant also stated, on page 13.7-1 of the proposed change to the FSAR Section 13.7, second paragraph from the bottom:

10 CFR Part 26, Subpart G. "Laboratories Certified by the Department of Health and Human Services," is not applicable because CPNPP does not have a Laboratory Certified by the Department of Health and Human Services.

The staff believes the applicant misread Subpart G, because Section 26.153(a) states: "Licensees and other entities who are subject to this part shall use only laboratories certified under the Department of Health and Human Services (HHS) Mandatory Testing Guidelines." The staff believes Luminant Generation Company, LLC. (Luminant), is stating that using an Health and Human Services (HHS) lab is optional. HHS labs are used for "testing urine specimens for validity and the presence of drugs and drug metabolites" (Section 26.151). As such, the staff issued follow up **RAI 5400, Question 13.07-4**, on January 25, 2011, in which the applicant was asked to clarify the intent of its response to this RAI.

By letter dated February 28, 2011, the applicant provided the following response to **RAI 5400, Question 13.07-4**:

During the construction phases, CPNPP, Units 3 and 4, will not have a laboratory certified by the Department of HHS located on site, but fully intends to utilize an HHS-certified laboratory contract located offsite, that meets all the requirements in Subpart G, to perform the FFD testing. FSAR Section 13.7 has been revised to clarify the Subpart G requirements as they applied to an offsite contract with an HHS-certified laboratory facility.

The staff reviewed the applicant's response and finds that the applicant's proposed FSAR changes that clarified the use of an HHS-certified laboratory consistent with the requirements of 10 CFR 26. The staff has verified that the applicant has implemented these proposed FSAR changes in COLA Revision 3. As a result, **RAI 5400, Question 13.07-4, is closed and resolved.**

In **RAI 4244, Question 13.07-2**, dated January 19, 2010, the staff asked the applicant to describe how the COLA, FSAR, Part 2, Table 13.4-201, "Operational Programs Required by

NRC Regulation and Program Implementation,” item 20, “Fitness for Duty Program,” comports with 10 CFR 26, Sections 26.3, “Scope,” and 26.4, “FFD program applicability to categories of individuals,” and the guidance contained in the NRC’s December 2, 2009, letter to the NEI.

By letter dated February 22, 2010, the applicant provided its response to **RAI 4244, Question 13.07-2**. The applicant provided proposed changes to FSAR, Revision 1, pages 13.4-8 and 13.4-9, which included a revision to Table 13.4-201, that described the following milestones and implementation of the FFD program for construction and operation phases.

1. Prior to onsite construction of safety or security related SSCs, the FFD Program for Construction workers and first line supervisors will be implemented to meet the requirements of 10 CFR 26.4(f). The applicable requirements include Subpart K, or Subparts A-H, N and O.
2. Prior to onsite construction of safety or security related SSCs, the FFD Program for Construction management and oversight personnel will be implemented to meet the requirements of 10 CFR 26.4(e). The applicable requirements include Subparts A-H, N, and O.
3. Prior to fuel assemblies being received on site, the FFD Program for security personnel will be implemented meet the requirements of 10 CFR 26.4(e)(1). The applicable requirements include Subparts A-I, N, and O.
4. Prior to the earlier of the Licensee’s receipt of fuel assemblies onsite, or establishment of a protected area, or the 10 CFR 52.103(g) finding, the FFD Program for security personnel will be implemented to meet the requirements of 10 CFR 26.4(a)(5). The applicable requirements include Subparts A-I, N, and O.
5. Prior to initiating 10 CFR Part 26 construction activities, the FFD Program for FFD Program Personnel will be implemented to meet the requirements of 10 CFR 26.4(g). The applicable requirements include Subparts A, B, D-H, N-O and at the discretion of the construction site entity, Subpart C.
6. Prior to the conduct of the first full participating emergency preparedness exercise under 10 CFR Part 50, Appendix E, Section F.2.a, the FFD Program for persons required to physically report to the Technical Support Center or Emergency Operations Facility will be implemented to meet the requirements of 10 CFR 26.4(c). The applicable requirements include Subparts A-I, N, and O, except for 10 CFR 26.205-209.
7. Prior to the earlier of Licensee’s receipt of fuel assemblies onsite, or establishment of a protected area or the 10 CFR 52.103(g) finding, the FFD Program for Operation will be implemented to meet the requirements of 10 CFR 26.4(a) and (b). The applicable requirements include Subparts A-I, N and O, except for individuals listed in Section 26.4(b), who are not subject to Sections 26.205-209.

Additionally, in its same RAI response, the applicant stated that CPNPP, Units 1 and 2, have a fully developed FFD program, which includes Nuclear Policy Statement 123, “Fitness for Duty” and Station Administrative Procedure STA-910, “Fitness for Duty Program,” Revision 11, issued December 2009. Luminant plans to develop and implement the construction and operation

phases of the FFD program for CPNPP, Units 3 and 4, by revising both of these procedures. Luminant also proposed an FSAR commitment in Section 13.7 to revise the existing FFD program, Station Administrative Procedure STA-910, to include a section for CPNPP, Units 3 and 4. This new section will address the items identified in NEI 06-06, such as, definitions for construction site and workers, and excluded workers.

In its response to **RAI 4244, Question 13.07-2**, dated February 22, 2010, the applicant provided a sufficient level of detail and addressed all of the milestones established by 10 CFR Part 26, Sections 26.3 and 26.4 for the construction and operation phases. The staff has reviewed Luminant's proposed programmatic changes to its existing FFD procedures and finds these to be consistent with 10 CFR Part 26. The staff has verified that the applicant has implemented these proposed FSAR changes in COLA Revision 4. As such, **RAI 4244, Question 13.07-2**, is closed and resolved.

In **RAI 4245, Question 13.07-3**, dated January 19, 2010, the staff asked the applicant how the proposed license conditions described in the COLA, Part 10 comports with FSAR, Part 2, Table 13.4-201, item 20. In its response dated February 22, 2010, the applicant responded by providing a proposed change to COLA Part 10 Revision 1, pages 1 and 8, which included revision to the table in Part 10 that described the milestones and implementation of the FFD program for construction and operation phases and comports with FSAR, Part 2, Table 13.4-201, item 20. In COLA, Revision 3, Part 10, the applicant deleted the proposed license conditions for FFD. However, the applicant left intact the milestones and implementations described in COLA, Revision 3, FSAR, and Table 13.4-201, item 20, "Fitness for Duty Program," for the construction and operation phases.

The applicant's response to **RAI 4245, Question 13.07-3**, provides a sufficient level of detail and addresses all of the milestones established by 10 CFR Part Sections 26.3 and 26.4 for the construction and operation phases. The staff has verified that the applicant has implemented these proposed FSAR changes in COLA Revision 4. As such, **RAI 4244, Question 13.07-3**, is closed and resolved.

13.7.5 **Post Combined License Activities**

There are no Post-COL activities related to this section.

13.7.6 **Conclusion**

The staff is reviewing the information in DCD Section 13.7 under Docket Number 52-021. The results of the staff's technical evaluation of the information related to FFD incorporated by reference, in the FSAR will be documented in the staff's safety evaluation report (SER) on the DC application for the United States – Advanced Pressurized Water Reactor (US-APWR) design. The SER on the US-APWR is not yet complete, and this is being tracked as part of **Open Item [1-1]**. The staff will update Section 13.7 of this SER to reflect the final disposition of the design certification application.

The staff finds that CPNPP, Units 3 and 4 COL FSAR, Revision 4, sufficiently addressed RAIs: **4243, 4244, 4245, and 5400**, as described in Section 13.7.4 of this report. The staff has determined that the applicant's construction FFD program conforms to the guidance accepted in NEI-06-06, Rev 5 and the applicant's milestones and implementation of the FFD program, described in COLA, FSAR Table 13.4-201, is acceptable as it addressed the requirements in

10 CFR Part 26 for the construction phase. Furthermore, the staff has determined that the applicant's milestones and implementation of the FFD program, described in COLA, FSAR Table 13.4-201, is acceptable as it addressed all of the requirements in 10 CFR Part 26 for the operation phase. The staff also found the applicant's proposal to apply the fully developed program at CPNPP, Units 1 and 2, including the referenced Nuclear Policy Statement 123, "Fitness for Duty" and Station Administrative Procedure STA-910, "Fitness for Duty Program," Revision 11, to be acceptable for both construction and operations phases.