

Response to

Request for Additional Information No. 27, Revision 0

7/29/2008

U. S. EPR Standard Design Certification

AREVA NP Inc.

Docket No. 52-020

SRP Section: 18 - Human Factors Engineering

Application Section: 18.1.1.5

COLP Branch

Question 18-1:

NUREG 0711 section 2.4.1 (5): Plant personnel who should be included in the HFE Program encompass licensed control room operators, as defined in 10 CFR Part 55, and the following categories of personnel defined in 10 CFR 50.120:

- 1) nonlicensed operator
- 2) shift supervisor
- 3) shift technical advisor
- 4) instrument and control technician
- 5) electrical maintenance personnel
- 6) mechanical maintenance personnel
- 7) radiological protection technician
- 8) chemistry technician
- 9) engineering support personnel

Section 18.1.1.5 does not explicitly list nonlicensed operators, shift supervisors, or shift technical advisors. Please explain how these groups are included in the HFE program.

This section uses the term "technician generically. Please confirm "technician" includes chemistry and radiological protection technicians.

(Similar to RAI 16 from topical report ANP-10279)

Response to Question 18-1:

Plant personnel addressed by the AREVA NP human factors engineering (HFE) program include licensed control room operators as defined in 10 CFR Part 55 and the following categories of personnel defined by 10 CFR 50.120:

- Non-licensed operators.
- Shift supervisor.
- Shift technical advisor.
- Instrument and Control technicians.
- Electrical maintenance personnel.
- Mechanical maintenance personnel.
- Radiological protection technicians.
- Chemistry technicians.
- Engineering support personnel.

FSAR Impact:

U.S. EPR FSAR, Tier 2, Section 18.1.1.5 will be revised as described in the response and indicated on the enclosed markup.

U.S. EPR Final Safety Analysis Report Markups

operating procedures. The requisite set of knowledge, skills, and attributes, and training objectives and goals required to operate a U.S. EPR are also provided for use in the development of a site-specific training program based on the Systematic Approach to Training (SAT) development protocol accredited by INPO. The training program and procedure development program are described in Sections 18.9 and 18.8, respectively.

18.1.1.5 Applicable Plant Personnel

The HFE program is tailored allowing licensed control room operators the capability to attain, view, assimilate, and act on process data in order to maintain plant safety. HFE principles are also applied to the tasks which relate to plant safety that are

performed by ~~other personnel as listed, including technicians, maintenance personnel, engineering support staff, and management.~~

18-01 →

Plant personnel addressed by the AREVA NP HFE program include licensed control room operators as defined in 10 CFR Part 55 and the following categories of personnel defined by 10 CFR 50.120.

- Non-licensed operators.
- Shift supervisor.
- Shift technical advisor.
- Instrument and control technicians.
- Electrical maintenance personnel.
- Mechanical maintenance personnel.
- Radiological protection technicians.
- Chemistry technicians.
- Engineering support personnel.

18.1.1.6 Effects of Modifications on Personnel Performance

The HFE program applies to the equipment supplied for the original configuration of the U.S. EPR. Modifications to the original interface configuration are required to adhere to the guidelines of Reference 1. Adverse effects caused by modifications on the overall system performance and the performance of personnel who use the equipment are minimized as described in Reference 1 and RG 1.174. Throughout the life of the plant, HFE issues resulting from plant modifications are documented and dispositioned as described in Section 18.12.