

Request for Additional Information No. 24, Revision 0

6/27/2008

U. S. EPR Standard Design Certification  
UniStar  
Docket No. 52-020  
SRP Section: 13.03 - Emergency Planning  
Application Section: 13.3  
NSIR LIB (EP) Branch

QUESTIONS

13.03-1

Subject: TSC Habitability –  
*[Basis 10 CFR 52.81, 10 CFR 50.47, 10 CFR Append E, RG 1.206, RG 1.101]*

The Final Safety Analysis Report (FSAR) (Tier 2) section 6.4.21 states that the TSC is part of the Control Room Envelope (CRE). Section 6.4.4 states “The total effective dose equivalent (TEDE) for the MCR occupants throughout the duration of any postulated DBA does not exceed the limits of GDC 19.” Section 13.3 says “This space is within the Safeguard Building. It is also within the control room envelope (CRE) which maintains habitability during normal, off-normal and emergency conditions”

What are the assumptions of the above referenced DBA and “off-normal and emergency conditions” for the EPR?

Please identify and justify any differences in the degree of radiological protection for personnel in the TSC versus the Control Room during a DBA.

13.03-2

Subject: TSC Power –  
*[Basis 10 CFR 40.47(b)(8), NUREG-0696 section 2.8; Information Notice (IN) 2004-19]*

Does the TSC have a backup source of power if the primary source of power should fail? Please provide more detail regarding the backup power capabilities of the TSC including what functions (e.g., technical data systems, HVAC, communications, etc.) would or would not have backup power. Discuss how long it would take to transfer power to the backup source and restore the function of the TSC if the primary power source is lost.

13.03-3

Subject: TSC Size and Staffing Levels –  
*[Basis 10 CFR 52.81, 10 CFR 50.47, 10 CFR Append E, RG 1.206, RG 1.101]*

The FSAR (Tier 2) section 13.3 states “Space suitable for a technical support center (TSC), which demonstrates compliance with the design requirements for

staffing levels consistent with current operating practices, and Revision 1 of NUREG-0654/FEMA REP-1 (Reference 2), is provided within the integrated operations area adjacent to the main control room (MCR)... refer to Figures 6.4-1—Control Room Envelope Plan View 1 and Figure 6.4-2—Control Room Envelope Plan View 2. A detailed description of CRE habitability, including radiological protective provisions, is provided in Section 6.4”

Please identify the number of work stations by function and expected occupancy levels of the TSC. Is the TSC sized to accommodate a minimum of 25 persons, including 20 persons designated by the licensee and five NRC personnel? NUREG-0654 states on page 52 “Each licensee shall establish a Technical Support Center and an onsite operations support center (assembly area) in accordance with NUREG-0696...” Does the TSC meet all of the other acceptance criteria of section 2.4 of NUREG-0696 “Functional Criteria for Emergency Response Facilities”? These criteria are:

- Working space, without crowding, for the personnel assigned to the TSC at the maximum level of occupancy (minimum size of working space provided shall be approximately 75 sq ft/person);
- Space for the TSC data system equipment needed to acquire, process, and display data used in the TSC;
- Sufficient space to perform repair, maintenance, and service of equipment, displays, and instrumentation;
- Space for data transmission equipment needed to transmit data originating in the TSC to other locations;
- Space for personnel access to functional displays of TSC data;
- Space for unhindered access to communications equipment by all TSC personnel who need communications capabilities to perform their functions;
- Space for storage of and/or access to plant records and historical data; and
- A separate room adequate for at least three persons to be used for private NRC consultations.

If not, please justify why it is not appropriate for the TSC to meet the criteria of section 2.4 of NUREG-0696.

13.03-4

Subject: TSC/OSC/Decontamination Facility –  
*[Basis 10 CFR 52.81, 10 CFR 50.47, 10 CFR Append E, RG 1.206, RG 1.101]*

The FSAR (Tier 2) section 13.3 states “Space suitable for an operational support center (OSC), which demonstrates conformance with the design requirements for staffing levels consistent with current operating practices of NUREG-0654/FEMA REP-1 revision 1 (Reference 2), is provided within the Access Building. This building also contains a personnel decontamination area. Adequate voice communications in these facilities is provided by the plant telephone, paging and radio systems as described in Section 9.5.2.2.1 through Section 9.5.2.2.4. The Access Building is described in Section 12.3.1.6.”

Thus, Section 13.3 would seem to imply that the OSC is discussed in the Section 12.3.1.6 description of the Access Building but we were not able to find such a discussion of the OSC there. Please provide a detailed description of the OSC. Additionally, please provide a detailed description of how the decontamination facility would protect from contamination not only the personnel entering the OSC but also those personnel in the TSC given that the expected level of interaction between personnel in the TSC and OSC.

13.03-5

Subject: Communication-

*[Basis 10 CFR 52.81, 10 CFR 50.47, 10 CFR Append E, RG 1.206, RG 1.101]*

The FSAR (Tier 2) section 9.5.2.1.1 states "Offsite communication consists of at least two independent communication subsystems to provide emergency communication links from the Emergency Operation Facility (EOF) to the onsite MCR and Technical Support Center (TSC) as well as to the NRC and other federal, state, and local government agencies. A backup power source is provided for the offsite communication systems."

Please provide a brief description of the two independent communication subsystems.

Will the TSC voice communications equipment include the following features/capabilities?:

- Hotline telephone (located in the NRC consultation room) on the NRC emergency notification system (ENS) to the NRC Operations Center;
- Dedicated telephone (located in the NRC consultation room) on the NRC health physics network (HPN);
- Dedicated telephones for management communications with direct access to the control room, the OSC, and the EOF;
- Telephones that provide access to onsite and offsite locations;
- Intercommunications systems between work areas of the TSC, if needed for the TSC functional performance or if the TSC is comprised of separate functional areas; and
- Communications to licensee mobile monitoring teams and to State and local operations centers prior to EOF activation.

If the TSC does not have these features, please justify why these features are not appropriate.

13.03-6

Subject: Technical Data and Data Systems –

*[Basis 10 CFR 52.81, 10 CFR 50.47, 10 CFR Append E, RG 1.206, RG 1.101]*

In accordance with section 2.9 of NUREG-0696, will the TSC have the capability to display the following data?:

- Plant systems variables,
- In-plant radiological variables,
- Meteorological information, and
- Offsite radiological information

Will storage and recall capability for the TSC data set cover at least 2 hours of pre-event data and 12 hours of post-event data? Please provide a detailed description of the ability to display, trend and graphically manipulate the data.

If the TSC does not have any of these capabilities, please justify why these capabilities are not appropriate.

13.03-7

Subject: Instrumentation for Monitoring Plant Conditions Following an Accident—*[Basis 10 CFR 52.81, 10 CFR 50.47, 10 CFR Append E, RG 1.206, RG 1.101, GL 82-33]*

As stated in 10 CFR 52.47(a)(21), the standard design application must include proposed technical resolutions of those Unresolved Safety Issues and medium- and high-priority generic safety issues, which are identified in the version of NUREG-0933, “A Prioritization of Generic Safety Issues,” current on the date up to 6 months before the docket date of the application (current version is dated August 2004), and which are technically relevant to the design

Generic Letter 82-33, Supplement 1 to NUREG-0737, “Clarification of TMI Action Plan Requirements – Requirements for Emergency Response Capability,” provides clarification regarding post-TMI requirements for emergency response capability; including applicability of Regulatory Guide (RG) 1.97, “Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident,” Revision 4, June 2006, to emergency response facilities.

Regulatory Guide 1.97 describes acceptable methods for complying with agency regulations relating to criteria for accident monitoring instrumentation. Supplement 1 to NUREG-0737 provides requirements for emergency response facilities, including the applicability of RG 1.97 to the TSC and Emergency Operations Facility (EOF). Additional detailed design and functional criteria relating to the TSC, OSC, and EOF are provided in NUREG-0696.

Does the EPR have instrumentation for following the course of accident that meets all of the above referenced guidance for the TSC and OSC? If not, then please explain.

Since no mention is made to the EOF in the FSAR, is this considered outside the scope of the EPR design and thus left to COL applicant to specify?