ORNL - Restart of the High Flux Isotope Reactor 2-07 (Contractor ORR)

Emergency Preparedness

OBJECTIVE EP-1: The emergency preparedness program has been appropriately modified to reflect the CS modification and its reactor interface, sufficient numbers of qualified emergency preparedness staff and management are provided, and adequate facilities and equipment are available to ensure services are adequate to conduct and support reactor operations with the hydrogen-moderated CS. Functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with line management control of safety. (CR–1, CR–2, CR–6)

Criteria

- The emergency preparedness program and organization are established and functioning to support the RRD operations organization. Functions, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented. The emergency preparedness support organization is adequately staffed with qualified personnel.

- Emergency preparedness program requirements for operations with the CS are clearly delineated and are consistent with the UT-Battelle emergency management program and other controlling facility documents.

- Cold source modifications, operation, hazards, and reactor interface have been appropriately incorporated into the emergency preparedness hazards analysis and emergency response procedures.

- The emergency response organization and vital facility support functions are adequately staffed to support operations with the CS. Approved facility documentation appropriately defines the roles and responsibilities of personnel assigned to support emergency response functions.

- Requisite emergency response equipment is installed or appropriately stationed and maintained to support operations with the CS.

Approach

Record Review:

(1) Review selected documentation (e.g., administrative procedures, organization charts, and position descriptions) which establish the roles, responsibilities, interfaces, and staffing levels of the emergency preparedness group that supports CS and reactor operations.

(2) Review documentation to include; emergency management program manual, RRD emergency preparedness hazard analyses, RRD emergency response procedures and emergency management procedures, to ensure that operations with the CS have been adequately incorporated into the emergency management program.

Interviews: Interview selected emergency response personnel who are responsible for providing support to RRD during emergency events associated with the CS to confirm their understanding of roles, responsibilities, and interfaces with the operations organization.

Shift Performance: Walk down CS and reactor interface areas with emergency response personnel and examine the installation of facility emergency response equipment to confirm the capability of these components to support operations with the CS.

OBJECTIVE EP-2: Emergency preparedness staff and management exhibit awareness of applicable requirements pertaining to CS operation, hazards, and reactor operations with the hydrogen-moderated CS. Through their actions, they have demonstrated a high-priority commitment to comply with these requirements. The level of knowledge of emergency preparedness managers and staff related to CS operations, hazards, and reactor operations with the hydrogen-moderated CS is adequate based on interviews. (CR-1, CR-4)

Criteria

- Emergency preparedness personnel demonstrate a working knowledge of operations with the CS, associated systems and components related to safety, and applicable safety management program requirements (including any lessons learned during the previous integrated system testing phases). They also give adequate attention to health, safety, and environmental protection issues.

- Emergency preparedness support personnel demonstrate a functional awareness of program requirements and the ability to carry out emergency response procedures under their cognizance.

- Emergency preparedness support personnel demonstrate a working knowledge of operations with the CS, associated systems and components related to safety and applicable safety management program requirements.

- Emergency preparedness support personnel are knowledgeable of anticipated hazards and likely upset and emergency conditions that may be encountered during operations with the CS.

Approach

Record Review: None.

Interviews: Interview selected emergency response personnel to confirm that their level of knowledge is adequate to support safe and compliant RRD operations.

Shift Performance: None.

OBJECTIVE EP-3: The implemented routine and emergency operations drill program, including program records, have incorporated CS operation, hazards and reactor operations with the hydrogen-moderated CS. Proficiency to appropriately respond to incidents and accidents associated with the CS and its operation has been demonstrated through the implemented routine and emergency operations drill program. (CR–11)

Criteria

- An effective emergency preparedness drill program has been established and implemented. Drills and exercises are routinely performed and documentation exists to show that an adequate response capability exists.

- A sufficient number of drills have been conducted to ensure that likely upset and emergency conditions associated with reactor operations with the hydrogen-moderated CS can be adequately handled. Drill scenarios should test facility response to a broad spectrum of the emergency conditions documented in the CS DSA and facility hazard analysis.

- Operations and facility support personnel demonstrate the ability to effectively respond to emergency conditions simulated in the facility's drill program.

Approach

Record Review: Review records that describe recent emergency preparedness drills and review the facility critique of each drill. Determine if the drill scenarios were adequate and if the necessary numbers of drills have been conducted to fully verify and test compliance with the approved safety basis of the facility. Determine if lessons learned from drills are factored into follow-on drills and training.

Interviews: None

Shift Performance: Observe the facility performance of drill activities including pre-drill briefings, conduct, and post-drill critiques to determine the effectiveness of emergency preparedness control functions and to confirm that facility personnel can successfully demonstrate coordinated response to the postulated emergency situation.