**ORNL - Restart of the High Flux Isotope Reactor 2-07**

**ENGINEERING (ENG)**

**OBJECTIVE ENG-1**:

The engineering program has been appropriately modified to reflect the CS modification and its reactor interface, sufficient numbers of qualified engineering personnel are provided, and adequate facilities and equipment are available to ensure engineering services are adequate to support reactor and CS operations. The engineering functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with line management control of safety. Engineering personnel exhibit awareness of the applicable requirements pertaining to reactor operation with the CS and with CS operations and hazards. Through their actions, they have demonstrated a high-priority commitment to comply with these requirements. The level of knowledge of engineering personnel related to reactor and CS operations and hazards is adequate. (Core Requirements 1, 2, 4, and 6)

Criteria

- The engineering organization and associated program are established and functioning to support the RRD operations organization. The engineering functions, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented.
- The engineering organization is adequately staffed with qualified personnel.
- Engineering personnel demonstrate a working knowledge of reactor operation with the CS, the associated systems and components related to safety. These personnel also give adequate attention to ES&H protection issues.

Approach

*Record Review*: Review selected documentation (e.g., administrative procedures, organization charts, position descriptions, and internal memoranda) that establish the roles, responsibilities, interfaces, and staffing levels of the engineering support organization.

*Interviews*:

Interview selected engineering personnel to evaluate their understanding of their responsibilities to the RRD operations organization. Interview the cognizant engineers responsible for the HFIR safety systems to assess their understanding of how their actions relate to the safety basis for reactor operations with the CS. Determine if their level of knowledge is adequate to properly assist the HFIR operations organization in maintaining safe reactor operation with the CS. Determine if they have adequate knowledge of ES&H issues. In addition, interview selected management and staff to confirm that the current and projected needs for engineering personnel and equipment necessary for safe HFIR operation and maintenance have been
evaluated and are appropriately captured in the IWP.
*Shift Performance*: Walk down the facility/equipment with appropriate engineering personnel.