

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

INDUSTRIAL SAFETY AND HYGIENE (IS&H)

OBJECTIVE IS&H-1:

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

Criteria

- The IS&H program and associated organization are established and functioning to support reactor operation with the CS. The IS&H functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented. The IS&H organization is adequately staffed with qualified personnel.
- The IS&H program has been revised and ensures that the new hazards associated with CS operations have been identified and appropriate controls have been implemented by operations and IS&H support personnel.
- The RRD job hazards analyses are conducted, as necessary, by experienced engineering personnel, IS&H technicians, other applicable subject matter experts, operations supervisors, and operators to identify and mitigate hazardous situations and conditions.
- The IS&H-related equipment needed to support reactor operation with the CS has been identified, reviewed, selected, maintained, and where applicable, tested and calibrated to ensure adequate personnel protection.
- IS&H personnel demonstrate a working knowledge of reactor operation with the CS, the associated systems and components related to safety, and applicable safety management program requirements.
- IS&H personnel demonstrate the ability to carry out normal, abnormal, and emergency response procedures under their cognizance in support of reactor operation with the CS.

Approach

Record Review: Review the documentation (e.g., administrative procedures, organization charts, and position descriptions) which establishes the roles, responsibilities, interfaces, and staffing levels for the IS&H group that supports reactor operation with the CS. Review a representative sample of job hazard analyses associated with the reactor systems and the CS to determine if any items should be followed up during observation of the shift performance phase. Review selected training records (such as lesson plans, examination results, and

postdrill critique reports) for IS&H personnel to assess the training and qualification program's effectiveness in establishing an adequate level of knowledge.

Interviews:

Interview selected IS&H support personnel to determine if they are familiar with their roles, responsibilities, and interfaces with the reactor operation, particularly as these relate to the CS. Interview selected IS&H support personnel to evaluate their knowledge of reactor and CS operations and associated IS&H requirements and how they support those operations. Assess their understanding of their actions in response to abnormal and emergency conditions, as well as their understanding of how these actions relate to the CS DSA and the HFIR Updated Safety Analysis Report.

Interview selected IS&H staff to ascertain their familiarity with the IS&H hazards and controls associated with the CS modification. Determine if they have adequate knowledge of ES&H protection issues.

Shift Performance:

Walk down the HFIR and CS areas with select IS&H technicians to determine if appropriate IS&H-related equipment is supplied, maintained, and reviewed to ensure personnel are properly protected. Observe the performance of selected reactor and CS procedures/work packages to assess the adequacy of the job hazard analyses (including the involvement of operators, operations supervision, IS&H personnel, and appropriate subject matter experts in the process). Observe drills, routine evolutions, and normal operations, as needed, to assess the ability of IS&H support personnel to respond to hazardous situations and support reactor operation with the CS.