

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

QUALITY ASSURANCE (QA)

OBJECTIVE QA-1:

The RRD QA program has been appropriately modified to reflect the CS modification and its reactor interface, and sufficient numbers of qualified QA personnel are provided to ensure services are adequate to support reactor operation. The QA functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with line management control of safety. QA personnel exhibit awareness of the 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 QA personnel related to reactor operation and the associated hazards is adequate. (Core Requirements 1, 2, 4, 6, and 9)

Criteria

- The QA program and organization have been appropriately modified, if necessary, and are functioning to support HFIR operation with the CS. The QA functions, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented.
- The QA function is adequately staffed with knowledgeable, qualified personnel.
- QA personnel demonstrate a working knowledge of HFIR operations with the CS, the associated systems and components related to safety, and the applicable safety management program requirements.
- The RRD implements a documented, approved QA program for HFIR that is based on an appropriate national consensus standard.
- HFIR operations have a defined set of QA procedures that apply to the work being performed.
- Evidence exists that the QA program has been fully integrated into HFIR operations.
- An adequate vendor/supplier qualification and oversight program is in place for all quality and ES&H-significant procured equipment, items, and service providers, in particular those applicable to HFIR and CS operations.
- A formal program of assessments is defined, scheduled, and implemented, including both line management and independent verification that HFIR operations meet expectations and requirements.
- Deficiencies and non-conformances are properly identified, documented, and tracked to a timely closure.
- Quality program training is provided to managers and operations and support personnel to assure that they have adequate knowledge for implementing quality program requirements.
- A formal process is in place to prevent the introduction and use of suspect and counterfeit items.
- Safety software is identified, and a formal process is in place to control its development, maintenance, and use.

Approach

Record Review: Review selected documentation (e.g., administrative procedures, the RRD QA program, organization charts, and position descriptions) which establishes the roles, responsibilities, interfaces, and staffing levels of the QA group that supports HFIR operation with the CS. Review QA program implementation records (e.g., assessment reports, noncompliance reports, evidence files, receipt inspections, procurement documents, software verification, software validation, software change requests, etc.).

Interviews:

Interview selected QA personnel to determine if they are familiar with their roles, responsibilities, and interfaces with the operations organization and to ensure that they are effectively implementing their responsibilities. Interview QA personnel assigned to support reactor operation with the CS to evaluate their knowledge of reactor operation, the CS, and quality requirements and how they support those operations. Interview line management and operations personnel to evaluate their understanding of the QA program and to verify that specific requirements are being implemented. Interview software managers to verify software QA implementation.

Shift Performance:

Observe QA support staff interactions in HFIR routine activities and during simulated operations. Inspect document and records management facilities.