

We have a clear path forward to commissioning and operations

Readiness of People (including training) (2 prestart, 2 post start)

Pre-Start Findings:

- UITF Facility Manager must establish proficiency levels as required by the 6/19/19 draft of the UOD; was completed on 6/27/19 and will be added to UITF documentation.
- The qualified operator list posted in the control room must be updated to differentiate the classes of operator skills to match assigned tasks.

Post-Start Findings:

- Consider modeling operator training program and records consistent with other JLab accelerators using a graded approach.
- Consider incorporating Human Performance Improvement principles in UITF Operations

Readiness of Documentation (including process and procedures) (6 prestart, 1 post start) of prestart items 3 had to do with safety basis documentation and three related to shift and test plans for commissioning)

Pre-Start Findings:

- Revise and approve the UOD, FSAD and ASE consistent with JLab safety analyses and management processes.
 - Remove reference to Beam Current Monitor as a credited control in FSAD and reissue.
 - Remove reference to the expired 3130 experiment review process in the both the draft UITF ASE and the UOD.
 - Submit the revised ASE for DOE Approval
 - Implement a Shift Plan to establish & document how the Facility Manager authorizes the UITF to be used during commissioning and operations
 - Verify that the use of the Test Plan approach for R&D Activities is consistent with approved JLab requirements. Update UOD as appropriate
 - Use the process/steps from the Commissioning Test Plan to develop a Start Up Procedure to be used in subsequent start ups. Continue to turn Test Plans into formal procedures for later use.
- Post-start Finding:
 - Use the process/steps from the Commissioning Test Plan to develop a Start Up Procedure to be used in subsequent start ups. Continue to turn Test Plans into formal

Readiness of Equipment

No findings

(7) Notable:

- The processes and procedures for configuration management are defined in the JLab Conduct of Engineering manual (ENG-AD-01-001 Rev. C, Section 5.0, Configuration Management). Jlab employs a graded approach that addresses the needs of both a mature accelerator facility and (in the case of UITF) a 'new' machine. This process is well integrated with the Lab's Contractor Assurance System (CAS).
- *Use of common tools (UITFlist, UED, UITFlog, System readiness tool etc.) is to be commended. This consistency makes it easy for the workforce to own, operate and troubleshoot the facility.*
- LOSP appears robust and offers clear expectations for operations and safety requirements. It is written as a clear "user document" and operator expectations are unambiguously conveyed.
- UITF Facility Manager is extremely knowledgeable and demonstrated to the team impressive technical competence in UITF operations and a clear training skill set.
- FM demonstrated to the team the ability to skillfully perform OJT, which is the foundation of the UITF training scheme. Despite the relative lack of rigor in documentation at present, the technical and training skill of the FM gives the team confidence that UITF Operators will be adequately prepared to safely operate.
- Interviews with 2 Operators indicated an adequate understanding and familiarity with UITF operation, safety significant systems.
- Notable: The 3130 Conduct of Operations was clearly modeled on 3120 with all users having ODH and Radworker I training.