

## **ERL ARR 2 Charge**

- Please perform an independent Accelerator Readiness Review of ERL accelerator and ring for high-current commissioning

Please focus on the following areas:

- Areas identified in the Accelerator Safety Order (training, procedures, CAS, authorization basis documents, USIs)
- Records of past reviews, incidents, actions
- Conduct of Operations procedures
- QA (assurance systems)
- Interlocking safety systems
- Controls system
- Conventional safety practices such as LOTO

The following summarizes focus areas and BNL counterparts.

SAD, ASE, USIs, Activities and Records

Counterparts: D. Kayran, E. Lessard

Past Actions and Reviews, Quality Assurance, Configuration Management, Documents and Records, CAS, Drawings

Counterpart: D. Passarello

Controls System

Counterparts: Charles Theisen, J. Jamilkowski

Conduct of Operations, Commissioning Plan, Commissioning Sequence, Fault Studies

Counterparts: L. Hammons, D. Kayran

Alarming and Interlocking Area Radiation Monitors

Counterparts: D. Beavis, J. Reich

Radiation Protection and Safety, Ozone, Hydrogen, Fault Study Plan

Counterparts: D. Beavis, P. Bergh, R. Karol

Conventional Safety, ODH, Lasers, LOTO

Counterpart: P. Cirnigliaro, L. Hammons

Personal Protection Systems: Interlocks for ACS, ODH, Laser

Counterparts: J. Reich, A. Etkin

The review process should consider:

- Lines of Inquiry
- Document reviews
- Counterpart discussions
- Observations

Please report the following action items:

Pre-Start – actions that should be addressed prior to the Phase II approval by DOE Post-Start – actions that may be completed after Phase II approval; the ARR team should recommend that these actions be identified to the ERL management, and that management’s plan and schedule for completing the actions be provided to and discussed with the Accelerator Readiness Review team

Opportunities for Improvement – actions that the ARR team believes would significantly enhance routine operations.

Please prepare a report as follows:

#### Contents

- Brief discussion of the Findings and Observations within each area of the ARR
- Brief comments on opportunities for improvement
- Pre-start and post-start action items and opportunities for improvement

#### Schedule

- Please prepare a draft report drafted within 7 to 11 days following the on-site work
- Please submit the draft to counterparts for factual accuracy and comments
- Please submit the final report to C-AD management within approximately one week after comments received

#### ARR Team Members

Sayed Rokni, SLAC

Charles Schaefer, BNL RCD

Panakkal Job, NSLS II

Ian Evans, SLAC

Jake Hawkes, BNL QMO

Roger Erickson, SLAC