NRIC National Reactor Innovation Center

Lessons Learned (FEEED & DEEP)

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FEEED Lessons Learned

1. Design and requirements

- Developer requirements – incorporate INL requirements
  - Interfaces with the DOME test bed: IAG-1044, TFR-1123, and ICD 1015071)
- GDE-987
  - Master Document List developed early
  - Design reviews clearly planned and documented
  - Document early the agreed upon path through GDE-987
- Understanding DOE-STD-1189 Process
  - CDR/PDR/FDR vs. CSDR/PSDR/PDSA/FDSA
  - 90% Design Maturity means FINAL DESIGN
- Identifying code equivalencies and developing plan for how to demonstrate an equivalent level of safety as the code

FEEED Lessons Learned

2. Quality, safety, and Funding

- NQA-1 Audit and Surveillances – Goal to be added to the “Qualified Supplier List”
  - INL clarifying process and approach
- Importance of developing basis for correct classification of SSCs
  - SC – protects the public
  - SS – protects collocated worker or defense-in-depth
- Impact of consistent funding
- Base Schedule on the GDE-987 design and deliverables and the 1189 milestones will follow.

DEEP Lessons Learned

1. Quality and fabrication

- Long Lead Procurement Requests
  - Recent changes need to be incorporated into INL processes
- Fabrication
  - Upfront document reviews (prior to fabrication/testing)
  - Nonconformances – Acceptance of developer dispositions
- NQA-1 Surveillances started early

DEEP Lessons Learned

2. Schedule and Design

- Change Control Board inclusions (INL and Developer)
- GDE-987
  - Agree to design plan before starting DEEP, and then document
  - Documentation that is prepared, reviewed and approved per developer driven plan and NQA-1 processes
- Division of Responsibility aligned early

GDE-987

- Design Basis
- Master Document List
- Design Reviews
- INL review period
- Comment Classification

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