Savannah River
NUCLEAR SOLUTIONS℠
FLUOR • NEWPORT NEWS NUCLEAR • HONEYWELL

Criticality Safety Control Implementation at Savannah River Nuclear Solutions

2018 ANS Winter Meeting

David Erickson
SRNS CS SME

November 12, 2018

Topics To Be Covered

- What are the main implementation method(s) at your facility?
- Who/What organization is responsible for implementation of NCS requirements?
- How is deimplementation controlled/performed (removal of NCS requirements for a process)?
- What hurdles are met during implementation (e.g., physical modifications)?
- What group or organization takes ownership of NCS controls, assumptions (from analysis), and process boundaries (normal condition)?
- Who/What organization responds to abnormal conditions?

What are the main implementation method(s) at your facility?

- **Complex NCSE change(s) (annual update [TSR/DSA change]):**
  - Document Safety Basis Implementation Plan
  - Revise/issue/approve the following:
    - *Procedures/postings*
    - *NCS Training*
    - *NCS linking documents (LDD)*
- **Minor NCSE change(s) (no TSR/DSA change):**
  - Document Implementation Plan
  - Revise/issue/approve the following:
    - *Procedures/postings*
    - *NCS Training*
    - *NCS linking documents (LDD)*

Who/What organization is responsible for implementation of NCS requirements?

- **The Operation organization or the Engineering and Operations organizations.**
  - Operations plays the major role for implementing NCS requirements.
  - Development and revision of the implementing procedures is an iterative process supported by Operations, Engineering, Nuclear Safety and Criticality Safety.
  - NCS reviews/approves all implementing items (training, procedures, postings, etc.) .

How is deimplementation controlled/performed (removal of NCS requirements for a process)?

- **Operation Shutdown/Closure:**
  - Cancel operating procedures/postings
  - Archive NCSE
  - Revise training
  - Revise LDD (delete specific cross-walk data)
- **Operation Standby:**
  - De-activate operating procedures/postings
  - NCSE remains active
  - Revise training
  - Revise LDD (note that operation is not currently being performed)
- **For both situations DSA/TSR changes may also be necessary and implementation plans utilized.**

What hurdles are met during implementation (e.g., physical modifications)?

- **Facilities are old and/or have been repurposed.**
  - Minimal engineered features are available or credited.
  - The few engineered features utilized have been implemented for some time.
- **Other hurdles identified during implementation are generally related to administrative controls and communication between organizations or facilities.**
  - Implementation plans are frequently being utilized to mitigate these issues.

What group or organization takes ownership of NCS controls, assumptions (from analysis), and process boundaries (normal condition)?

- **Most all organizations (e.g., Operations, Engineering, NCS) take ownership of NCS requirements to ensure proper implementation and compliance.**
- **Ownership:**
  - Evaluation, analysis and procedure approval – NCS
  - Implementation – Operations or Operations/Engineering

Who/What organization responds to abnormal conditions?

- **Depending on the nature of the abnormal condition different organizations would respond.**
- **Operations and Engineering are usually involved in all.**
- **If it is thought to have NCS connotations then NCS would be notified to respond.**
- **Other organizations that could also be involved/notified include:**
  - Nuclear Safety
  - Radiation Protection
  - Fire Protection
  - NMC&A
  - Transportation

Questions?