Nuclear Criticality Safety

Implementation of NCS Controls at TA-55

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Presented by:
William Crooks, III
NCS Division Leader

James Bunsen

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Outline

- Process for responding to Abnormal Conditions
- Implementation Methods
- Responsible Organization for Maintenance of Controls
- Responsible Organization for Implementation of Controls
- Hurdles
- De-implementation of Controls

Los Alamos National Laboratory
Implementation Methods

Administrative Requirements
- Detailed Operating Procedures
- Criticality Safety Postings
- NCS Review

Engineered Requirements
- Design features of the structure or component
- Facility or programmatic operations fabricate/install
- Engineered Control Verification
- NCS Annual Review
Organizations Responsible for Implementing NCS Requirements

- Los Alamos National Laboratory
- NCS Board
- Hazardous Materials Management
- Nuclear Material Support
- Defense Power Systems
- Actinide Material Processing & Power
- ARIES
- Heat Source Technologies
- Material Recovery
- Metal Production
- Machining
- Assembly
- Production Agency Quality
- Assembly
Revision/Removal of NCS Requirements

- Revise & Re-Post New Requirements
  - Operations completes an ‘FMO Posting’ Form
- FMO Termination Form & Walk down
  - All material has been de-inventoried
  - Location is de-posted
  - MC&A location is terminated
  - Terminated from FMO baseline
Hurdles met During Implementation

- Transference of requirements to operational knowledge
- Scheduling of FMOR/ FMO Posting activity
Response to Potential Process Deviations

- Anyone calls in a potential process deviation
- NCS Response
- Determine Infraction Level
- Infraction Recovery
Conclusion

- NCS Program Implemented by Operations Organizations
- NCS Division Supports Implementation
  - Graded approach based on organizational expertise
- Administrative & Engineered Requirements
  - Posted on each location
  - Reviewed annually
- Pause Work/Potential Process Deviations