Discussion Topics

NPO Oversight
- Lessons Learned post Uranium Accumulation Events (1b)
- Managing, Evaluating, and Improving Y-12 NCS Program Performance (1b)
- NCS Program Health (1)

Y-12 NCS Improvement Actions
- Key CNS Programmatic Improvements since 2017 (1a)

Key Focus Areas
- Disciplined Operations
  - Personnel Error-related NCS Infractions (2c)
  - Organizational Interface Issues (2b)
- Training
- Process Drift
- Large Geometry Exclusion Area Program (2a)
- Out of Service Equipment
- Criticality Safety Evaluations (2d)
- Repeat infractions (2e)

Conclusions

Other Topics
- Contract Transition (1c)
- Disciplined Operations Council (3)
- Contamination Events (4)

*Item in parenthesis correlates discussion topic to those listed on briefing agenda provided by DNFSB 3/1/21
NPO Oversight – Lessons Learned post Uranium Accumulation Events

• Uranium accumulation events highlighted areas of needed improvement within CNS, and also with NPO oversight
• Key Lessons Learned from events and identified contributing causes distilled into oversight focus areas of:

  Urgency
  Accountability
  Integration
  Engagement
  Transparency
NPO Oversight - Managing, Evaluating, and Improving Y-12 NCS Program Performance

- Continued working level monitoring of NCS program execution
- Enhancement of routine Executive Leadership Team NCS program monitoring
- Engagement of independent assessors (NA-50)
- Integration of NCS oversight across NPO disciplines
- Increased NPO NCS Subject Matter Expert(s) presence in the field
- Real-time evaluation of emerging infractions
- Critical review of CNS corrective actions from development to implementation
The NCS Program at Y-12 is increasing in health

- E-SD-2026, *Enterprise Nuclear Criticality Safety Program Description*
- Non-compliances are being identified and resolved
- NCS corrective actions are being aggressively managed, and seen to completion
- Responsibility for NCS is increasing across organizations
- Infraction severity is decreasing
- Organizational culture improving toward NCS

The NCS Program at Y-12 is being implemented in a manner that ensures safe operations
“Roadmap” document provides an excellent overview of NCS program improvements – both completed and planned.

• Key program improvements include:
  – Greatly increased executive level engagement by both CNS and NPO
  – Enhanced, transparent and aggressive management of criticality safety related corrective actions and improvements via the CNS integrated schedule
    • Concept initiated and closely monitored by NPO
  – Standup of a new CNS organization, led by a Senior Director, to manage and champion site-wide NCS integration
  – Establishment of the Disciplined Operations Council (DOC)
  – Myriad actions to improve and strengthen elements relied upon by the NCS program, such as: IAPP, LGEA, Conduct of Operations, Training, NCS Evaluations
Key Focus Areas – Disciplined Operations

Background
• Disciplined Operations – driving towards a culture of organizational learning that will lead to sustained excellence

NPO Oversight Actions
• Opened NPO Management Concern (MC) to address increased rate of infractions due to personnel error
  – Feedback focused on greater urgency and depth of analysis
  – Driving streamlined material handling practices and metrics enhancements
• NPO identified recent NCS infractions that highlighted organizational interface issues

CNS Actions
• CNS is actively working actions to institutionalize new organizational interface practices, material handling practices, and metrics
Key Focus Areas – Training

Background
• Focus on improving operator knowledge of NCS controls and recognition of abnormal conditions

NPO Oversight Actions
• NPO oversight has been substantial, shaping corrective action timeliness and effectiveness
  – FY19 independent assessment of NCS and conduct of operations training identified MC
  – Feedback spanned technical to managerial improvements
  – Accelerated rollout of more in-depth NCS training

CNS Actions
• CNS is nearing full deployment of new on-the-job training framework that will deliver a greater depth of knowledge in a more structured environment
Key Focus Areas – Unintended Process Change (Process Drift)

Background
• Identified as a primary contributing factor to Uranium Accumulation issues

NPO Oversight Actions
• NPO assessments highlighted a lack of progress on process drift actions
  – Feedback cited strategic issues
  – Drove completion of a barrier analysis and documented, controlled strategy

CNS Actions
• CNS is nearing completion of actions to strengthen process engineer knowledge and field presence, including:
  – Formal qualification, to include process-specific NCS and more in-depth process training
  – Enhanced expectations for upkeep and detail in process descriptions
  – Statistical process control for early identification of trends that may indicate drift
Key Focus Areas – Large Geometry Exclusion Area (LGEA) Program

Background
• Assessments conducted in August 2018 (NPO) and January 2020 (CNS) identified a number of issues with the LGEA program

NPO Oversight Actions
• Reactive assessment by NPO as a result of two deficiencies encountered Aug.-Sept. 2020
• Reactive Assessment concluded corrective actions taken to date did not appear effective
  – Additional corrective actions remain to be completed
  – NPO will reassess in 4th quarter FY2021
• Since reactive assessment:
  – NPO oversight in this areas has increased by conducting focused facility walkdowns
  – Trend of infractions has improved

CNS Actions
• Significant number of actions completed as a result of CNS LGEA assessment January 2020
• Corrective actions identified as a result of each noncompliance
Key Focus Areas – Out-of-Service (OOS) Equipment

Background
• Accumulation concerns progressed to OOS equipment after evaluation of active equipment

NPO Oversight Actions
• Close monitoring of OOS equipment EOC reviews, establishment of analysis, and completion of corrective actions
• Encouraged CNS urgently characterize and/or cleanout identified deposits in OOS processes of concern
• Frequent communication with CNS coupled with NPO walkdowns on recent “legacy items” non-compliances
• NPO recommended establishment of a comprehensive “legacy item” plan and schedule

CNS Actions
• New comprehensive analysis built to modern standards for OOS equipment
• Cleanout and physical isolation of OOS systems from active systems occurring at greater pace
• Development of comprehensive plan for legacy items
Background
• NPO has grown concerned over CSE Update progress

NPO Oversight Actions
• Concern communicated to CNS with expectation for greater progress and urgency
• Two NPO integrated assessments of CSEs underway, with focus areas of:
  – CSE prioritization and quality
  – CSE requirements implementation
• Monthly schedule status briefing in place at NPO ELT request

CNS Actions
• FY21 commitment to update 25 CSEs
• All CSE Updates loaded into the integrated schedule
• Criticality Safety Program Description revised to include 5 year CSE update goal
Key Focus Areas – Repeat Infractions (Recurrence)

Background
• Issue recurrence is an area of focus as it provides a potential indicator of broader issues

NPO Oversight Actions
• NPO review of all non-compliances and incorporation of review into standard escalation meeting with NPO mgmt.
  – Each review and communication focused on safety considerations of event and adequacy of CNS actions underway
• Routine questioning to CNS on recurrence and expanded applicability of corrective actions
• NPO is closely engaged with CNS to ensure effective formal metrics are established and exercised for noncompliance trending

CNS Actions
• Part of CNS Corrective Action Review Board function to track and trend non-compliances, including examination of recurrence
• Generation of new metrics in Roadmap
Conclusions

• The Y-12 NCS Program assures safety and is improving
  – The NCS Program at Y-12 is being implemented in a manner that ensures safe operations
  – The NCS Program at Y-12 is increasing in health
  – NPO and CNS have a common vision for program excellence
  – NPO is committed to advancing the NCS program to be the benchmark for the DOE complex

• NPO oversight of the NCS program is effective
  – Expectations for depth and frequency of NPO oversight are higher
  – NPO oversight is pushing improvements to be realized in NCS program
  – Building on LLs to increase awareness of the NCS program from working level to senior leadership
Other Topics

• Contract Transition
• DOC
• Contamination Events