



Accountability
Performance
Accuracy

The Nuclear Materials Management Safeguards System

NMMSS

2016

Annual Users Training Meeting

May 9-12, 2016 | New Orleans, LA

NRC MC&A Inspections Perspective

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Columbia Fuel Fabrication Facility



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NNSA



- Columbia, South Carolina Nuclear Fuel and Components Manufacturing
- NMMSS Reporting Information
Symbol (RIS) = YLM
- ~1,200,000 kg - 1,400,000 kg
Uranium throughput
- Typically on the order of 50,000
discrete items containing
uranium tracked daily



- **Uranium Accountability/Accounting Records**
 - Uranium receipts, shipments and discards are properly documented, and verified including independent uranium measurements
- **Item Control**
 - Used to track discrete items of uranium
- **Measurement Control**
 - Guarantees the accuracy of accountability measurements
- **Special Nuclear Material (SNM) Physical Inventory**
 - Verification of items physically present compared to records
 - Calculation of acceptance values for Inventory Difference

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NRC Interactions

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■ Routine Inspections

- Review of management measures (Organization, Fundamental Nuclear Material Control Plan, Training/Qualification Program, Procedures, Corrective Action Process)
- Review and observation of processes i.e. “Vertical Slice”
 - Item Tracking, Measurements, Operator Qualifications, Laboratory Operations, Measurement Control Practices, Standards Traceability and Instrument Calibrations, Shipper Receiver Difference Evaluations, Item Resolution Program
- Review of inventory results and measurement error calculations

■ International Safeguards

- SNM Imports/Exports - Foreign Obligations Tracking
- Update to Design Information Questionnaire (DIQ)



- Integration with Region II has made inspections more efficient and consistent - We know what to expect
- Challenges in retaining knowledgeable staff and consistency of inspector team – This is no different in private industry
 - Upside is new/different inspectors bring fresh eyes and questioning attitude
- Helpful with international interactions (DIQ Update, IAEA Additional Protocol Reporting, Foreign Obligations Tracking, SNM Imports/Exports)
- Need to assure risk informed response to issues, sharing of operational experience/best practices, and proactive continuous improvement