Preparing for IAEA Data Reporting (10 CFR 75)

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Preparing for IAEA Data Reporting (10 CFR 75)

- We were YKO, an NRC Licensee

- YKO 741 reporting consisted of:
  - External shipments
  - External receipts
  - Internal material type changes

- Now we are YK1, YK2 and YK3, still an NRC Licensee but with the added IAEA reporting requirements

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- We anticipated that changes due to IAEA reporting would cause the number of 741 transactions to increase by a multiple of 3 to 5 times more than what was produced prior to IAEA
  - YKO activity in February 2014, consisted of 292 transactions
  - One year later, YK1 & YK2 consisted of 861 transactions (almost 3 times)
  - YKO activity in March 2014, consisted of 270 transactions
  - One year later, YK1 & YK2 consisted of 1073 transactions (almost 4 times)

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- YK1, YK2, YK3 741 reporting consists of:
  - External shipments
  - External receipts
  - Internal shipments between YK1, YK2 & YK3
  - Internal receipts between YK1, YK2 & YK3
  - Internal material type changes in YK2
- Now compare to YKO 741 reporting
  - External shipments
  - External receipts
  - Internal material type changes

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- Our uranium account structure (SAP) was originally structured around one reporting facility, YKO
- Changes to SAP had to occur to accommodate the three newly created reporting facilities
  - YK1 = Storage areas
  - YK2 = Process areas
  - YK3 = Recycle/Waste areas

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- Changes to SAP had to occur to accommodate going from NRC reporting codes to IAEA reporting codes
  - Numeric inventory change codes (71,22) change to alpha codes (ND, NE), and the alpha codes had to be added to the front of the batch ID number
  - Numeric composition codes change to the Code 10 (INFCIRC/288) alpha codes as described in our Transitional Facility Attachment (TFA)
  - Added additional reporting requirements for Key Measurement Point (KMP) and Measurement Basis to the 741
  - TFA did not accommodate all the codes that were needed for reporting, so an immediate request was made for a revision

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- Changes to the Physical Inventory Listing (PIL) included:
  - Going from a due date to report of 60 days to 30 days
  - Adding KMP and Measurement Basis codes
  - Changing the numeric composition codes to alpha codes

- Changes to the Material Balance Report (MBR) included:
  - Going from a due date to report of 60 days to 30 days
  - Adding the alpha type inventory change codes that are listed in the Code 10 (INFCIRC/288)
  - Going from reporting four MBRs (YKO – MT 10, 20, 81, 89) to reporting nine MBRs

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- Going from reporting four MBRs (YKO – MT 10, 20, 81, 89) to reporting nine MBRs
  - For YK1, we report material types 10, 20, 81
  - For YK2, we report material types 10, 20, 81
  - For YK3, we report material types 10, 20, 81

- Who noticed that material type 89 went away?

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- Challenges that we faced when we became an IAEA reporting facility
  - MT 89 is not recognized by IAEA, so we have renamed uranium in the cascades to MT 81
  - Reading the Code 10 and understanding the unfamiliar composition codes and how they are put together
    - Physical form
    - Chemical form
    - Containment
    - Irradiation status and quality

Challenges that we faced when we became an IAEA reporting facility

- Applying the Code 10 composition codes to our material
  - Physical form?
  - Chemical form?
  - Containment?
  - Irradiation status and quality?

- OGUB vs. OGRB
- Physical form = O, defined as solids
- Chemical form = G, defined as hexafluoride
- Containment = U, defined as 10-14 t UF6 cylinder (or a 48Y)
  - vs. = R, defined as 2 t UF6 cylinder (or a 30B)
- Irradiation status and quality = B, defined as non-irradiated, pure, stable

Challenges that we faced when we became an IAEA reporting facility

- Reading the TFA and understanding what code combinations can be used, and what cannot
- Identifying all the code combinations that can be used and applying them to SAP
- Creating 741 scenarios with the code combinations and applying them to SAP for correct 741 output
- Understanding the unfamiliar inventory change codes that go on the MBR (PB, RF, RD, RN, SF, SD, SN, PE, MF & 65?)

Summary

- If we had known 5 years ago what we know now:
  - UUSA would have taken a closer look at what was done at the URENCO plants overseas
  - UUSA would have reconsidered using material type 89
  - UUSA would have redefined the SAP module to accommodate all NRC and IAEA codes
- What did we do right?
  - UUSA mapped out the 741 information into scenarios to capture the correct IAEA codes as described in the TFA
  - UUSA stayed in close communication with the NRC and with NMMSS
  - UUSA was flexible so as to accommodate the unexpected changes

Questions?

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