U.S. DEPARTMENT OF ENERGY

DOE-EM/UK NDA Bilateral Agreement

Benefits and Opportunities

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Bilateral Agreement/Statement of Intent

- **What is it ?**
  - **An agreement between UKNDA and DOE to collaborate and share information in the field of nuclear technology, legacy waste management (inc spent fuels), D&D, contractor incentivization, policy, contract management…..**
- **Why does it exist?**
  - **Scale and scope of our respective programs are similar as are the technical issues and challenges**
  - **Reducing budgets drive the need for collaboration, cooperation and renewed focus on 'lessons learned' and information sharing**

Focal Points to Date (1)

- **Because of the similarities in the programs, the possibilities for collaboration are numerous. We have focused on a relatively small number which offer the greatest potential to both parties**
  - **Spent fuel management**
    - **Non standard fuels disposition**
    - **Plutonium management**
    - **Aging facilities management and monitoring**
    - **Fuel drying technologies and dry storage**
  - **D&D**
    - **Decontamination technologies**
    - **In situ decommissioning**
    - **Sodium Passivation**

Focal Points to Date (2)

- **Waste Processing**
  - **Thermal Treatment Technologies (as alternatives to vitrification)**
  - **Glass chemistry/formulation**
  - **Hot Isostatic Pressing**
  - **Tank Corrosion and Structural Integrity**
- **Waste Management**
  - **Ion exchange resin disposal**
- **Non technical/Commercial**
  - **Project Management**
  - **Supply chain management**

Update on progress (1)

- Excellent progress being made across the board
- Numerous information exchange activities underway in all topic areas
- Joint R&D activities underway (e.g. in glass chemistry) have already demonstrated the benefits of leveraging funding
- A number of collaborative initiatives are in their formative stages particularly in the spent fuel area
  - non standard fuel disposition, aging facilities management, remote welding of canisters, non-intrusive monitoring of canisters
- Opportunities are developing for the insertion of program needs from DOE into current NDA programs and vice versa
  - UK is developing scope that can be completed by CH2MHill Washington Idaho (CWI) on sodium passivation
  - US is considering scope that can be completed under Sellafield Limited remote canister welding program

Update on progress (2)

- Numerous face-to-face technical exchanges have been completed between key technical experts
  - NDA/NNL/SL/UK regulators participated in US Spent Fuel Technical Meeting
  - NDA/Sellafield/NNL personnel to Idaho National Lab on HIP
  - NDA/ Dounreay Site Restoration Ltd (DSRL) staff to Idaho on sodium passivation
  - NDA/SL/NNL to Savannah River on plutonium management
- Strong "Communities of Practice" forming across the board at all levels
  - DOE, NDA
  - Prime contractors – Sellafield Ltd, CWI, Babcock, Dounreay Site Restoration Ltd, WRPS
  - National Labs – NNL, INL, SRNL
  - Universities – Sheffield, FIU
- Quarterly newsletter "Across the Pond" prepared and posted on both UKNDA and USDOE websites

Next Steps

- Continue to develop current topic areas to further leverage joint skillbases, experience and funding
- Add more topic areas as the need (and funding) arises
- Include Office of Nuclear Energy in SOI renewal discussions
- Begin the process of comparing and jointly developing R&D plans to introduce leveraging opportunities in addition to “retroactive insertion”
- Expand collaboration to include
  - peer review participation
  - external technical review team participation
  - staff exchanges (all levels)
  - student exchanges
- Launch a web-based Information Portal to facilitate information sharing among the community as a whole