Kazakhstan Nuclear Technology Safety Center

Presentation on
Kazakhstan Nuclear Technology Safety Center

to

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History and Background

- November 1997 - agreement between US and Kazakhstan to conduct joint safety projects officially started the program
- BN-350 reactor (liquid sodium, fast reactor) on Caspian Sea, and several test reactors inherited from the Soviet era
- Reactor designers and analysts not in Kazakhstan, but are from Russian institutes (e.g., IPPE in Obninsk)
- No in-country safety infrastructure
- Project underway to package and transfer present spent fuel and blankets
- BN-350 scheduled to be shutdown in 2003, possibly sooner

Goals and Objectives

- Create and then augment safety analysis infrastructure - necessary to create nuclear safety capabilities
  - office
  - computers, network, and codes
  - internet site

- Create a cadre of people capable of performing modern safety analysis
  - training in use of codes
  - education towards providing a "safety culture"

- Augment the infrastructure
  - performance of joint 'safety analysis projects (BN-350)
  - performance of joint research projects
  - exchange of data important to reactor safety
  - staff and student exchanges

Progress

- Funding was available in FY98 for only planning, work started in earnest FY99
- Detailed program plan was developed to build safety infrastructure
- Progress in infrastructure development
  - Minister of Science of Kazakhstan provided a building to house the NTSC and the KAEA—the KAEA has moved in, and the NTSC floor is undergoing required renovations
  - Computer equipment (8 PCS and a Sun workstation to run the large safety analysis codes, plus networking equipment) has mostly been delivered to the NTSC

Progress (continued)

- Progress in creating a trained cadre of personnel
  - Very successful safety analysis workshop held in Almaty in November
    - In-depth review of SAR for BN350 fuel packaging using US safety review standards
    - Provided NTSC and KAEA with guidelines for review
  - Six more planned (two SAR reviews, criticality, thermal-hydraulics, accident analysis, and structural analysis)
- Progress in augmenting the infrastructure
  - Initial discussions on staff assignments to ANL, joint materials research, etc, but no commitments to date

Prognosis

- Staff of the NTSC identified, quarters being renovated, computers being installed are good signs of Kazakhstani commitments
- Excellent relations with the NTSC and KAEA
- Net result: Kazakhstan is serious about wanting to create a safety culture