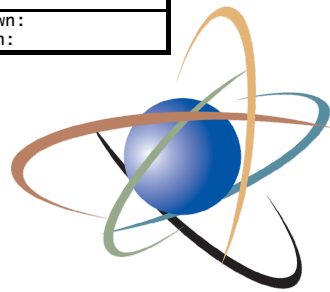
	Nuclear Regulatory Commission Exhibit # - NRC112-00-BD01 Docket # - 07007016 Identified : 7/11/2012
Admitted: 7/11/2012 Rejected:	Withdrawn: Stricken:



# U.S. NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

*Protecting People and the Environment*

---

## **GE-Hitachi Global Laser Enrichment LLC Facility Mandatory Hearing**

July 11-13, 2012

**NRC Staff Presentation Topic 2:  
Licensing an Evolving Design**



Presenters:

Timothy C. Johnson

Brian W. Smith

Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards  
Nuclear Regulatory Commission



## Purpose of Testimony

- Explain Staff's approach to reviewing design of proposed facility
- Basis for level of detail needed for review and license approval
- Evolving aspects of design
- How staff will ensure future design changes fall within license parameters



## Applicable Regulatory Requirements

- 10 CFR Part 70, “Domestic Licensing of Special Nuclear Material”
  - 10 70.22(a)(7)
  - 10 CFR 70.23(a)(3)
  - 10 CFR 70.62(a)-(c)
  - 10 CFR 70.64
  - 10 CFR 70.65(b)
  - 10 CFR 70.72



## Guidance Documents Used

- NUREG-1520, “Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility” (Ex. NRC005)
  - Provides guidance to NRC staff on the scope, areas of review, and acceptance criteria for licensing fuel cycle facilities
  - Standard review plan (SRP) for fuel cycle facilities



## Applicability of NUREG-1520

- SRP applicable to GLE facility because hazards are similar at other fuel cycle facilities
  - handling of uranium hexafluoride cylinders
  - processing of uranium hexafluoride as a gas and sometimes as a liquid
  - use of autoclaves for feeding and sampling uranium
  - nuclear criticality
  - equipment decontamination operations
  - laboratory activities
  
- Relative risk of proposed facility will inform the level of evaluation needed for specific review areas



## Applicability of NUREG-1520

- Hazards and plant functions similar at GLE and other enrichment facilities
  - Handle uranium hexafluoride using similar methods
  - Have similar enrichment assays
- Separate SRP prepared for Mixed Oxide Fuel Fabrication Facility because of significant differences in the functions and hazards



## Level of Detail - Overview

- Enrichment facility licenses are combined construction and operating licenses
- Regulatory requirements for content of Part 70 applications are general
- Regulatory requirements for ISA Summary content are sufficient detail to understand functions





## Level of Detail – Regulatory Requirements

- Regulatory requirements for IROFS are brief description in sufficient detail to understand function in relation to performance objectives
- For enrichment facilities, regulations require inspection to verify that facility was constructed in accordance with the requirements of the license



## Level of Detail – Staff Policy Guidance

- R. Pierson memorandum (2006) (Ex. NRC021) presented regulatory requirements for license applications and ISA Summary
- Pierson memorandum stated a final design level-of-detail was not necessary



## Level of Detail – Approach in Other Reviews

- NRC staff applied the same standards of level-of-detail to the Louisiana Energy Services, USEC Inc., and AREVA enrichment plant licensing



## Level of Detail - DPO

- Differing Professional Opinion (DPO) filed during USEC Inc. licensing (Ex. NRC022)
  - Issue: whether Pierson Memo guidance and NUREG-1520 comply with Part 70
- DPO decision (Ex. NRC023)
  - both documents comply with Part 70
  - Affirmed on appeal to EDO (Ex. NRC024)
- DPO resulted in revisions to SRP in NUREG-1520, Revision 1 (Ex. NRC020)



## Future Design Changes

- NRC expects changes to the baseline design
- Primary changes expected to be in cascade design



## Future Design Changes (continued)

- Primary facility hazard is in sampling system where cylinders containing liquid uranium hexafluoride
- NRC does not expect significant changes in sampling systems
- NRC does not expect significant changes in feed, withdrawal, or blending systems where large quantities of uranium hexafluoride in solid or gaseous form are present



## Tracking of Design Changes

- Design change processes required under the regulations in 10 CFR 70.72
  - Configuration management program is required
  - 70.72 process requires certain changes to be submitted to NRC for approval
  - 70.72 process requires an annual report describing changes
  - Staff reviews annual report and performs inspections to ensure that process is properly conducted



## **License Condition – Changes to LA**

- GLE also requested authorization to make changes to License Application
  - Changes that decrease the effectiveness of commitments require submittal to NRC for approval
  - Reports to be provided on changes made under authorization
  - License Application change process will be authorized in a license condition as discussed in SER Section 1.2.3.7.2 (Ex. NRC001)





**U.S. NRC**

UNITED STATES NUCLEAR REGULATORY COMMISSION

*Protecting People and the Environment*