NAC INTERNATIONAL

Post-submission Public Meeting, 28 January 2013
NAC-LWT Amendment for HEUNL

Docket No. 71-9225

Agenda

- Introduction
- Licensing and Schedule Considerations
- Proposed CoC changes for HEUNL contents
- Loading and unloading of the HEUNL and containers
- Acceptance testing of HEUNL containers
- Maintenance program for HEUNL containers
- Public Comments/Questions

Introduction

- Request to include Highly Enriched Uranyl Nitrate Liquid (HEUNL) as authorized content in the NAC-LWT Cask

Licensing and Schedule Considerations

- NAC-LWT Amendment Request submitted to the NRC December 28, 2012
- Amendment request (Revision LWT-12E) is based on NAC-LWT SAR, Revision 41
- Approval is requested by August 1, 2013 to support shipping schedules

Package Details

PROPOSED CoC CHANGES

Proposed CoC Changes

- Requires the loading of 4 HEUNL containers
  - Containers shall be empty or at fill capacity
  - Dilution to achieve fill capacity is permitted
  - HEUNL shall meet the type and form of material table
- Proposed CoC (i.e. Rev. 59) is based on the proposed CoC for the NRU/NRX amendment request (i.e. Rev. 58), which is currently under NRC review

Parameter	Liquid HEU
Maximum HEUNL payload per Container	64.3 L (17.0 gal)
Maximum Cask Heat Load	12.88 W
Maximum Per Container Heat Load	3.22 W
Maximum HEUNL Heat Load	0.05 W/L
Maximum Curie Content (gamma emitters)	9.0 Ci/L
Maximum ^{235}U content	7.2 gU/L

Package Details

HEUNL AND CONTAINER LOADING / UNLOADING

HEUNL and Container Loading / Unloading

- HEUNL containers can be filled and then loaded vertically using the DTS or may be loaded into the LWT horizontally and then filled to capacity
- Likewise, filled HEUNL containers may be unloaded vertically using the DTS or may be drained while within the LWT cask; this unloading option requires the LWT to be in a horizontal position

Package Details

ACCEPTANCE TESTING OF HEUNL CONTAINERS

Acceptance Testing of HEUNL Containers

- The boundary of the HEUNL containers shall be hydrostatically tested prior to first use following fabrication, and periodically during service (after every 50 fill/drain cycles), or after vent and/or drain valves are rebuilt or replaced
- The hydrostatic test is performed in accordance with ASME B&PV Code, Section III, Subsection NB, Article NB-6000, to 188 +10/-0 psig (1.25 x 150 psig = 187.5 psig)
- Test is conducted with demineralized water and with the fill and drain valves installed
  - Test pressure is held for a minimum of 10 minutes followed by an inspection of the container

Package Details

MAINTENANCE PROGRAM FOR HEUNL CONTAINERS

Maintenance Program for HEUNL Containers

- For each loaded shipment, the HEUNL container shall be visually inspected for damaged prior to filling and for evidence of leakage prior to installation of the container lid when filled
- If replacement of the fill and/or drain valves is warranted, and after every 50 fill/drain cycles, the hydrostatic testing shall be performed to re-qualify the boundary prior to returning the HEUNL container to service

PUBLIC COMMENTS
QUESTIONS