

North Anna

Site-Specific ISFSI License Renewal (SNM-2507)

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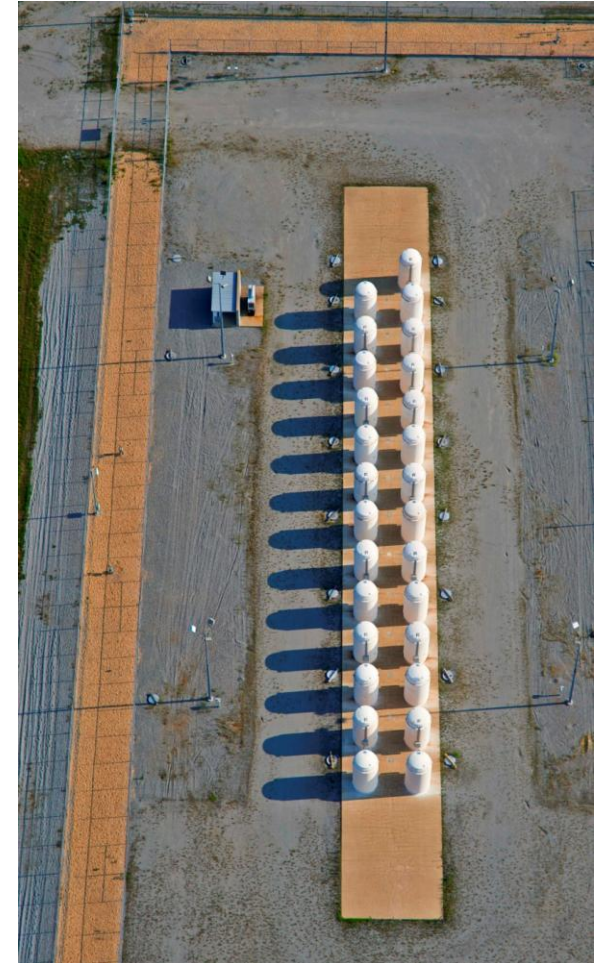


Agenda

- ISFSI Background
- NRC Regulations & Guidance
- LRA Content
- Lead Cask Inspections
- ISFSI Licensing Activities
- Summary

ISFSI Background

- Site-specific 20-year license
- Transnuclear TN-32 dry storage casks (27 casks), storing low burn-up fuel only
- LRA for TN-32 casks, stored fuel assemblies, & pad No. 1
- License expires June 30, 2018



NRC Regulations & Guidance

- 10 CFR Part 72
- 10 CFR Part 51
- NUREG-1927, Rev 0 & Rev 1, as appropriate
- NUREG-1748 (Env. Review with NMSS Programs)
- ISGs
- Other applicable codes & standards

LRA Content

- General Information (Section 1)
- Scoping Evaluation (Section 2)
- Aging Management Reviews (Section 3)
- Aging Management Programs (App. A)
- TLAAs (App. B) - **None**
- SAR Supplement (App. C)
- Tech Specs (App. D) – **No Changes**
- ER Supplement (App. E)
- Additional Information (App. F) – **Lead Cask Inspections**
- Non-Quantifiable Terms (App. G)

General Information

- Application Format and Content
- Information Required by 10 CFR 72.22
 - Facility Description
 - Description of Business or Occupation of Applicants
 - Organization and Management of Applicants
 - Virginia Electric and Power Company (VEPCo)
 - Old Dominion Electric Cooperative (ODEC)
 - Financial Qualifications
 - Financial Assurance for Decommissioning

Scoping Evaluation

- Scoping Methodology
 - Documentation Sources
 - North Anna ISFSI Technical Specifications
 - North Anna ISFSI Safety Evaluation Report
 - TN-32 Dry Storage Cask Topical Safety Analysis Report (TSAR)
 - North Anna ISFSI Safety Analysis Report (SAR)
 - Other – docketed correspondence, etc.
- Scoping Results
 - TN-32 dry storage cask
 - Spent Fuel Assemblies
 - Reinforced Concrete Pad No. 1

Aging Management Reviews

- AMR Methodology
 - Identification of In-scope Subcomponents Requiring AMR
 - Identification of Materials and Environment
 - Identification of Aging Effects Requiring Management/OE
 - EPRI Tools Documents
 - NUREG-1801
 - Determination of the Activities Required to Manage the Effects of Aging
- AMR Summary Results Table
 - Dry Storage Cask
 - Spent Fuel Assemblies
 - Reinforced Concrete Pad No.1

Aging Management Programs

- TN-32 Dry Storage Cask Aging Management Program
 - AMP Description
 - AMP Evaluation using NUREG-1927 program elements
 - Parameters Monitored or Inspected
 - Interseal Pressure Monitoring
 - Radiation Monitoring
 - Visual Inspections of TN-32 Casks
 - OE
 - Recommended Enhancements
 - Conclusion – Implementation of current activities with proposed Enhancements will adequately manage aging effects during PEO

Aging Management Programs

- Monitoring of Structures Aging Management Program
 - AMP Description
 - AMP Evaluation using NUREG-1927 program elements
 - Parameters Monitored or Inspected
 - Groundwater Chemistry Sampling
 - Periodic visual monitoring of Reinforced Concrete Pad No. 1
 - Below grade monitoring if excavated
 - OE
 - Recommended Enhancements
 - Conclusion – Implementation of proposed Enhancements will adequately manage aging effects during PEO

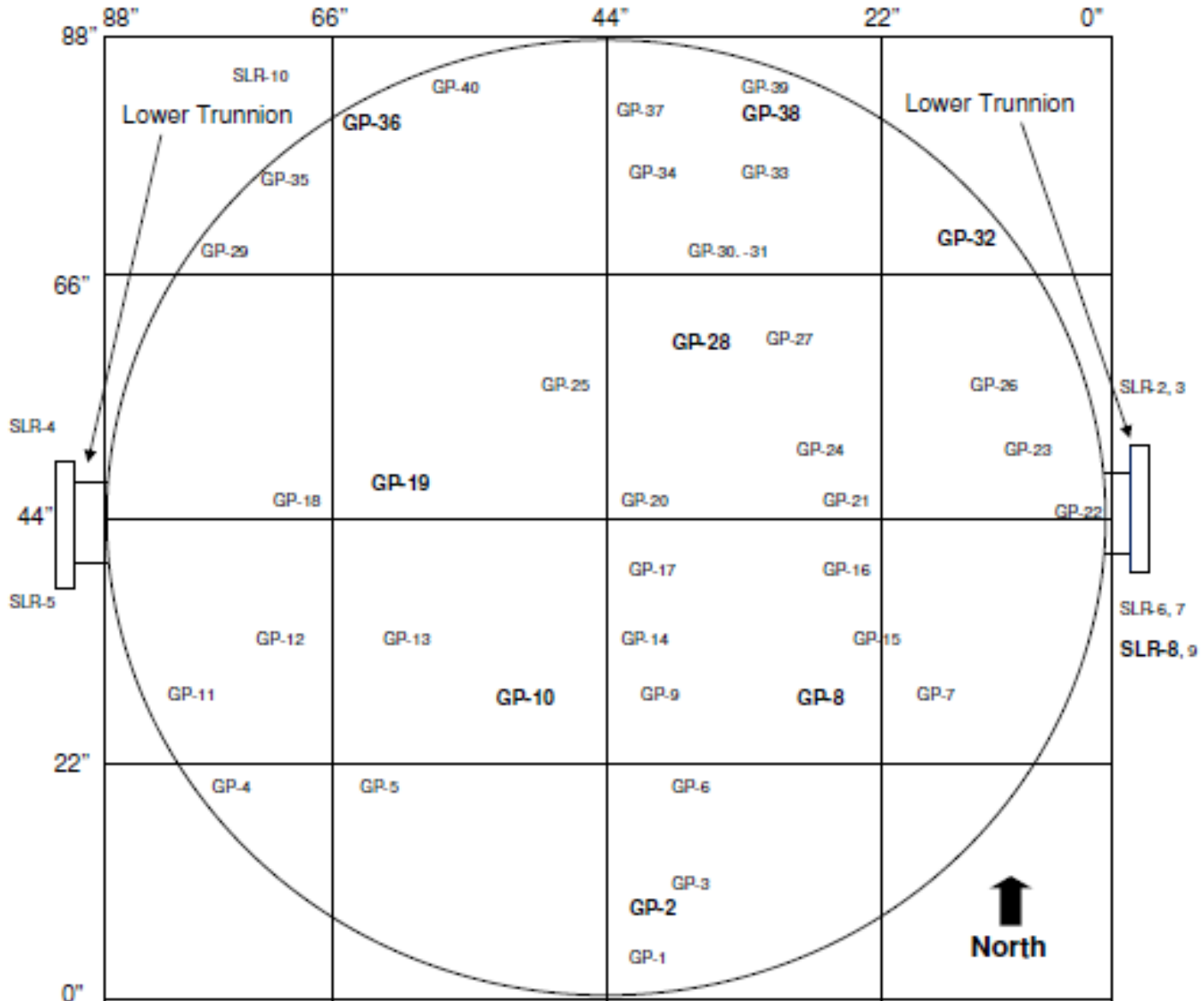
Environmental Report Supplement

- Alternatives
- Affected Environment
- Environmental Impacts
- Cost-Benefit
 - Proposed ISFSI license renewal for an additional 40 years of operation would provide an economic advantage over other storage alternatives

Lead Cask Inspections

- Cask Bottom and Cask Top Inspections
- Selection Criteria included
 - physical location
 - accessibility
 - time since loading
 - decay heat
 - seismic impacts
 - prior OE
- Visual inspection techniques (VT-1 and/or VT-3) of cask bottom, protective cover, & components under the protective cover
- Results determined no detectable loss of material from the base metal, and capability to perform intended functions

Cask TN-32.49 Cask Bottom



GP-2,
GP-19,
GP-22,
GP-10,
SLR-8

Cask TN-32.49 Cask Bottom



GP-2 showing no detectable
loss of material from base metal

Cask TN-32.49 Cask Bottom



GP-19 showing no detectable
loss of material from base metal

Cask TN-32.49 Cask Bottom



GP-22 trunnion showing
no detectable loss of
material from base metal

Cask TN-32.49 Cask Bottom



GP-10 showing no detectable
loss of material from base metal

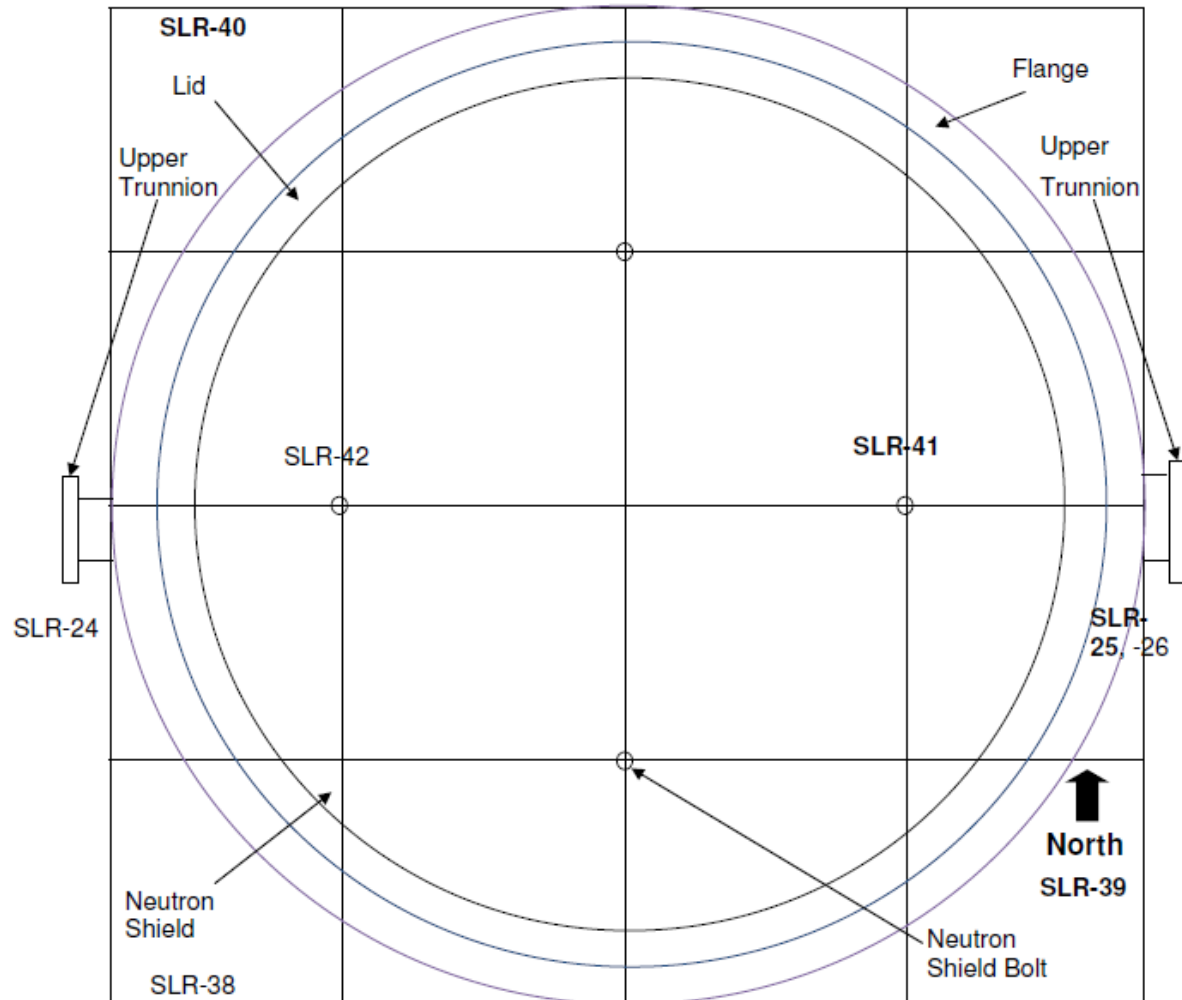
Cask TN-32.49 Cask Bottom



SLR-8 showing no detectable loss
of material from base metal

Cask TN-32.23 Top Inspection

SLR-20,
SLR-35,
SLR-39



Cask TN-32.23 Top Inspection



SLR-20 protective cover
exterior showing no detectable
loss of material from base metal

Cask TN-32.23 Cask Top



SLR-35 protective cover interior
showing no detectable loss of
material from base metal

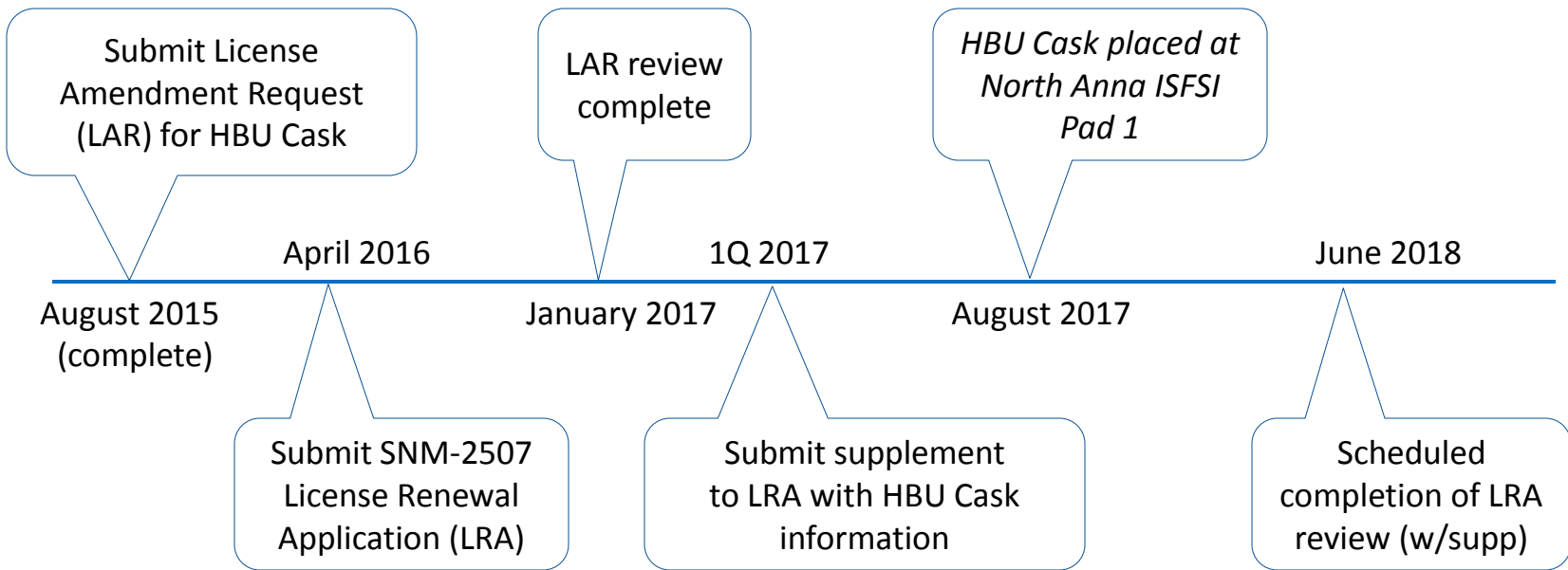
Cask TN-32.23 Cask Top



SLR-39 cask without
protective cover showing no
detectable loss of material
from base metal

ISFSI Licensing Activities

HBU LAR



License Renewal Activities

Summary

- Dominion has successful experience with ISFSI license renewal & aging management at Surry Power Station
- ISFSI LRA is compliant with Parts 72 & 51, followed NUREGs-1927 & -1748 and prepared while maintaining active participation with additional regulatory & industry developments
- The effects of aging for the TN-32 dry storage casks and the reinforced concrete pad will be adequately managed so that there is reasonable assurance that the intended functions will be maintained into the Period of Extended Operation