



# Trojan ISFSI License Renewal Application Pre-Submittal Meeting

February 2, 2017



Enclosure 3

- Provide information to the NRC staff on the Trojan license renewal application
- Answer questions and obtain feedback from the NRC staff on the license renewal application

- PGE name, address, description including state and principal location
- Name, business address, and citizenship of directors and principal officers
- Name, business address, and citizenship of co-owner directors and principal officers
- Trojan co-owners:
  - Portland General Electric
  - Eugene Water and Electric Board
  - PacifiCorp
- Glossary of terms
- List of Acronyms
- Regulatory Compliance Cross Reference Matrix

- Sufficient funds for radiological decommissioning are available in the PGE and PacifiCorp Nuclear Decommissioning Trusts, and through the EWEB Net Billing Agreement with the Bonneville Power Administration
- In accordance with 10 CFR 72.30, PGE submitted a decommissioning funding plan in 2012, and the first three-year update in 2015
- Due to the timing of this renewal so soon after the 2015 submittal, and the absence of any radiological decommissioning scope change, PGE plans to use the 2015 update for this license renewal application

- There have not been significant environmental changes over the life of the Trojan ISFSI
- Based on the scope of changes, a supplement to the Environmental Report was prepared rather than a full revision

- The application includes a description of the process followed
- Identification of ITS components, and non-ITS components whose failure could prevent fulfillment of an ITS function
- ITS functions considered:
  - Confinement
  - Radiation shielding
  - Sub-criticality control
  - Heat-removal capability
  - Structural integrity
  - Retrievability

**Table 2-1 – Summary of Scoping Evaluation Results**

SSC	Scoping Results		In-Scope SSC
	Criterion 1 <sup>1</sup>	Criterion 2 <sup>2</sup>	
MPC	Yes	N/A	Yes
Transfer Cask	Yes	N/A	Yes
Concrete Cask	Yes	N/A	Yes
Fuel Assembly	Yes <sup>3</sup>	N/A	Yes
ISFSI Pad	No	No	No
ISFSI Security Equipment	No	No	No
Transfer Station (including Transfer Station Pad and Impact Limiter)	Yes	N/A	Yes
Fuel Transfer and Auxiliary Equipment	No	No	No

**Notes:**

(1) SSC is Important to Safety (ITS)

(2) SSC is Not Important to Safety (NITS), but its failure could prevent an ITS function from being fulfilled

(3) Fuel pellets not included

- Part level summary of materials and environments for SSCs within scope of renewal
- Environments:
  - Inert gas (inside MPC)
  - Ambient (includes air contaminants; shielded from sunlight, rain, wind)
  - Embedded (sealed inside another material)
  - Exposed (exterior surfaces affected by sunlight, rain, wind, weather)
- Time-limited aging analyses:
  - MPC fatigue
  - Neutron absorber depletion
  - Transfer Cask fatigue
  - Cladding integrity
- Aging management programs

- Visual inspection of accessible MPC surfaces through inlet and outlet vents, using videoscope or equivalent
- Meet VT-3 standard per ASME B&PVC Section XI Article IWA-2200
- May be upgraded to VT-1 at discretion of inspector
- Performed on first cask placed in service (also coldest cask)
- 5-year frequency  $\pm$  25% (continues inspections already performed in years 2008 and 2013; next inspection scheduled in 2018)
- Acceptance criteria: no indication of localized corrosion pits, etching, stress corrosion cracking, or red-orange colored corrosion products in the vicinity of canister fabrication welds and closure welds
- Unacceptable indications entered into Corrective Action Program

- Pre-service visual inspection and once per year ( $\pm 25\%$ ) while in use
- Inspecting for:
  - Loss of material due to corrosion
  - Chipped, cracked, or blistered paint
  - Dents, scratches, gouges, or other damage
  - Deformation, cracks
  - Integrity of water jacket (no leaks)
- Transfer Cask no longer used to lift fuel at Trojan (only supports fuel while in Transfer Station)
- Unacceptable indications entered into Corrective Action Program

- External (concrete) visual inspection on 5 year interval ( $\pm 25\%$ )
  - Covers all 34 casks on pad
  - Staining, scabbing, spalling, cracking
  - Indications greater than 1/2-in diameter/width and 1/4-in depth
  - Exposed reinforcing steel
  - Per existing Structural Inspection Program procedures
  - Evaluated per ACI 349.3R-02
- Internal (coated steel) visual inspection on 5 year interval ( $\pm 25\%$ ) in conjunction with MPC AMP inspection
  - Using videoscope or equivalent
  - VT-3 standard per ASME B&PVC Section XI Article IWA-2200
  - May be upgraded to VT-1 at discretion of inspector
  - Performed on first cask placed in service (also coldest cask)
- Unacceptable indications entered into Corrective Action Program

- Pre-service visual inspection and once per year ( $\pm 25\%$ ) while in use
- Inspecting for:
  - Corrosion
  - Chipped, cracked, or blistered paint
  - Dents, scratches, gouges, and other damage
  - Similar to Transfer Cask visual inspection
- Includes Transfer Pad
  - Similar to Concrete Cask exterior inspection
- Includes Transfer Pad Impact Limiter
  - No aging mechanisms requiring management
  - Samples analyzed on scheduled basis to verify material properties
- Unacceptable indications entered into Corrective Action Program

- SAR sections revised to include aging management information:
  - Chapter 3, Principal Design Criteria
  - Chapter 4, Installation Design
  - Chapter 9, Conduct of Operations
- Technical Specifications Section 5.0 (Programs) revised to reference Aging Management Program

- Undertaken every 5 years
- Begin in year 2024, based on Trojan license renewal in year 2019
- Content:
  - Summary of research findings, operating experience, monitoring data, and inspection results made available since last assessment
  - Aggregate impact of findings, including any trends
  - Consistency of data with the assumptions and inputs in Trojan's TLAAs
  - Effectiveness of AMPs
  - Corrective actions, including any changes to AMPs
  - Summary and conclusions

- Application credits Trojan's existing Structural Inspection Program, which includes periodic inspections of:
  - Accessible MPC surfaces
  - Transfer Cask
  - Concrete Cask external surfaces (concrete)
  - Concrete Cask internal surfaces (coated steel)
  - Transfer Station
- Baseline MPC inspection will be 20 year inspection in 2023
- No significant defects found that would impact safety functions
- MPC inspection summary submitted to NRC following 2008 and 2013 inspections
- MPC inspection summary will also be submitted to NRC following 2018 inspection

- Application to be submitted prior to March 31, 2017

Questions?