**LWVNM Spent Nuclear Fuel & Greater than Class C Waste Storage**

**Proposed Consensus Questions (8)**

**1/7/21**

1. ***(Douglas)*** Does the League believe that Aging Management Programs (AMP) required for safe long-term storage of Spent Nuclear Fuel (SNF) are sufficient to ensure continued safety to workers, the public, and the environment? If not, what additional measures should be implemented?

* PRO – AMPs in use have justified storage in Spent fuel pool for 60 years with subsequent dry storage for 60 additional years. AMPS approach:
  + Ensuring only appropriate canister/cask storage materials utilized (licensing & certification)
  + Evaluates their potential deterioration/degradation from the environment (e.g., corrosion)
  + evaluates the container ability to shield from undue radiation exposure by spent fuel contents - regulated by 10CFR72.
  + Comparison with other similar environments and materials plus modelling and testing are also applied as justification.
* CON- the 1st Dry Cask Storage System in the US was Surry in VA 1986 (34-year history). CISFs may operate for 100 years, only modeling and testing have been used to validate this projected storage period, as no extended operational experience exists.

2. ***(Douglas)*** Which factors are now considered in siting nuclear waste storage facilities?  (Currently – environment, geology, proximity to large populations centers, potential for site disturbance, competing uses for the region, availability of rail infrastructure, acceptance by the local communities)

Should there be others?

(Factors influencing NM/TX selection

* PRO - HOLTEC & ISP are both privately owned corporations that requested siting of the proposed SNF storage facilities. Both the NM & TX regions currently serve multiple Nuclear Facilities and geology is well characterized. Local community supports this effort and has trained workforce knowledgeable of nuclear hazards and precautions.
* CON – although the prior Republican NM Governor Martinez Administration in 2013 requested that the US DOE Secretary site SNF Storage in SE NM, the current Democratic Governor Lujan-Grisham Administration opposes this facility. TX continues to voice opposition although the local residents support the ISP effort for economic development.)

3***.(Merryman)*** Which alternative, if any, does the League support for long term SNF storage?

* 1. Does the League support permanent geologic repositories for disposal of spent nuclear fuel as the best option?
     + PRO - THE 1987 Nuclear Waste Policy Act limited US sites considered for permanent geological repositories to Yucca Mountain, NV and the local community is supportive. Following >40 years of characterization and study the YM Nuclear Safety Analysis Report was completed and approved by the US NRC. YM operation would be managed by a US DOE contractor (similar arrangement to WIPP and national laboratories).
     + CON – NV Governor & Congressional Delegation opposes.
  2. Should the League support US SNF Reprocessing (done by some countries, ruled out by US government due to potential proliferation concerns)
     + PROs – these countries currently reprocess SNF for Nuclear Power Plant fuel and minimization of radioactive waste residue: Japan, China, Russia, France, UK, Belgium, Netherlands, Germany, and India.
* CON – US Government stopped the fledgling SNF reprocessing effort to eliminate availability of material for nuclear weapons as a nonproliferation measure.

4. ***(Douglas)*** Should national interests override state or local interests in the siting of SNF/GTCC storage facilities (GTCC is highly radioactive components from nuclear reactors, it is not SNF and cannot undergo nuclear fission reactions) or repositories for disposal of spent nuclear fuel? Discuss

* PRO – SNF is currently stored at **75** sites in **35** states. Consolidating would minimize potential for radiation exposure to workers and the public and concentrate surveillance and testing tasks for increased safety. Cleanup and Restoration of the 75 sites following SNF removal would promote Community Reuse.
* CON- SNF is located in communities benefiting from the nuclear power produced.

1. ***(Douglas)*** How can New Mexico be assured that the state and/or local community will not suffer financially in the event of an accident or abandonment by the owner/operator?

* PRO – The nation needs the increased safety and security of a consolidated SNF/GTCC facility and benefits to 75 sites where SNF/GTCC is currently stored. The economic benefits to Lea County and surroundings appear minimal. Forecast is a total of 135 onsite workers during the two-year construction phase and 55 operations and security personnel thereafter. Not a lot for constructing a $117 million facility that will cost $103 million per year to operate. However, there may also be economic costs to the area associated with demands upon infrastructure, water supplies. Additionally, no economic incentives to NM were noted.
* CON – Private ownership of the SNF Storage facility introduces concerns. US DOE Operation (required for Yucca Mountain Repository and adjacent Monitored Retrievable Storage Facility) would have been covered by Price Anderson Amendment (PAAA) indemnification with penalties for violations and guarantees of some compensation to the general public for accidents. Of greater concern is the abandonment issue. The government supposedly cannot establish a “temporary” storage facility with provision for a permanent facility. Are privately-owned facilities exempt from that requirement?

1. ***(Merryman)*** Does LWVNM agree that tests and analyses performed to date by DOE national laboratories and other nations with nuclear power demonstrate that Spent Nuclear Fuel storage & handling safety measures adequately protect the public from radiation exposure? If not, what additional reassurances would be sufficient?

* PRO – There has been ongoing research conducted by a system of universities, national laboratories, private companies and government agencies, and commissions, along with that of the greater international nuclear community, that have characterized the composition and properties of SNF over 50 years. In that time, conservative dosage calculations and modeling has been employed to develop SNF canisters over that 50 years. Extensive testing has gone into the durability of these canisters in a wide range of normal and abnormal operations.
* CON – There are questions of about the embrittlement of the canisters due to material compatibilities over time. The NRC has commissioned more extensive lifetime studies for these canisters.

1. ***(Merryman)*** What are your concerns regarding transportation of spent nuclear fuel?  How would you like to see those concerns addressed?

* PRO – following 9/11 the nation has heightened awareness of potential sabotage or terrorist actions which could be catastrophic when nuclear material is involved. US NRC/DOT adopted counterterrorism procedures and increased security measures. Provisions identified as “security-related” are not subject to typical transparency and “right to know” provisions but instead are shared with only “need to know” personnel. 10CFR71 regulates SNF Transportation.
* CON – The condition and rating of rail infrastructure (NM & TX transport) is regulated and inspected by the Federal Railroad Administration, not NM state officials (see 10-3-20 FRA presentation to NM Interim Radioactive and Hazardous Materials Subcommittee).

1. ***(Douglas)*** Community involvement:

* How should the local communities in a state be engaged with the site process? (current – NRC public meetings, elected official agreement, incentives attractive to community)
* Should there be compensation for a community?
* How should sovereign entities within a state be consulted on the site selection and development?