**LWVNM Natural Resources Study 2017-18: Nuclear Waste Storage Issues**

Karen M. Douglas/LWVCNM, March 2017 (final for La Palabra)

**The Issue: Spent Nuclear Fuel from Commercial Nuclear Power Reactors – Storage & Disposal**

High Level Spent Nuclear Fuel (SNF) from commercial nuclear power reactors has been stored in Independent Spent Fuel Storage Installations (ISFSI) using Dry Cask Storage since 1985. These ISFSI are currently licensed for 40 years of safe operation and located in 34 states across the US. Initial tests on High Burnup Nuclear Fuel from ISFSI Dry Cask Storage performed by Argonne National Laboratory (ANL) in 1999 following 14 years of storage indicated no degradation of nuclear fuel. Follow-up testing performed by ANL in 2012 indicated questionable integrity of High Burnup Fuel (increased potential for radiation release) from ISFSI after 27 years Dry Cask Storage. Additional testing is underway with expected ANL results 2017.

Some SNF remains at shut down reactor locations resulting in continuing security concerns and preventing environmental restoration and site reuse.

The Nuclear Waste Policy Act of 1982 required Federal acceptance of Spent Nuclear Fuel in 1998 and commercial nuclear utilities paid >$35B into the Nuclear Waste Fund for this disposal. The Federal government has not opened the permanent repository, thereby continuing utility ownership and security of this high-level radioactive waste at more than 70 locations throughout the US.

Licensing activities at the planned Yucca Mountain Permanent Geologic Repository were suspended due to Nevada elected officials’ opposition; this has resulted in an impasse for SNF disposition. As ordered by the US Supreme Court, the US Nuclear Regulatory Commission (NRC) finalized and published the 5 Volume Safety Analysis Report 2015 for the Yucca Mountain Repository permitting further consideration.

Growing concerns about the temporary storage of Spent Nuclear Fuel in 34 **states** across US indicate a sense of urgency to permanently dispose of this material in a Permanent Geological Repository with safety licensed for 10,000 years. Selection, characterization, and analysis of an alternate site for the Spent Nuclear Fuel Permanent Geologic Repository would probably exceed 20 years.

**Impact in New Mexico**

Discussions of the location of high level spent nuclear fuel will have a significant impact on New Mexico, as two sites are being considered, one in New Mexico and one in West Texas, near the New Mexico border.

Applications for the initial two Consolidated Interim Storage Facilities (CISF) proposed in 2016-17 are being evaluated by NRC. In addition to their impacts on New Mexico communities, they will require transport of SNF from current reactor and ISFSI locations to CISF. Both sites are currently licensed for limited nuclear waste storage/disposal operations:

**Proposed Consolidated Interim Storage Facilities (CISF)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Licensee** | **Location** | **Current License** | **Proposed CISF Area** | **Planned Operation** | **Initial SNF Receipt** |
| Waste Control Specialists | Andrews County, TX | Low Level Waste (<Class C) | 332/14000 Acres | 40 years/8 phases – SNF from shutdown reactors & Remote ISFSI | 2021 |
| Eddy-Lea Energy Alliance | Carlsbad/Hobbs, NM | Defense Transuranic Waste | 500/1000 Casks | 100 years - All SNF | 2022 |

The LWVUS position on storage does not adequately address the national and regional issues described above. We believe a state level study can lead the way to a modification of the LWVUS position, possibly by concurrence, either by other affected states or by LWVUS.

**Study Objectives:**

The overall objective of the study is to inform ourselves about the issue, inform our members, and create a position for advocacy on issues of nuclear waste disposal.

The objectives of the Nuclear Issues study are threefold:

1. Determination of public safety and continuing environmental protection for two candidate Consolidated Interim Storage Facilities (CISF) for Spent Nuclear Fuel (SNF) from domestic commercial nuclear reactors.
2. Review of technical data regarding commercial nuclear power, Nuclear waste including SNF, and options for SNF storage and disposal.
3. Disseminating factual information regarding nuclear issues to LWV membership to promote informed decisions impacting worker and public safety and environmental preservation.

**Scope:**

The **Scope** could include the following tasks with LWV member involvement:

1. Review of research and current literature for determination of safety and environmental concerns regarding extended storage of Spent Nuclear Fuel from commercial nuclear reactors. Write articles explaining the review for La Palabra.
2. Participate in LWVEF Google Group for exchange of information and concerns with other state LWVs (recommended 2016 by LWUS Liaison, Linda Wassenich). **LWVNM member responsibilities** would include: Moderator, Webmaster, Nuclear professionals as technical data reviewers, LWV members to screen information.
3. Revision and Publication of The Nuclear Waste Primer, a Handbook for Citizens - revised edition published 1993 with LWVEF grant. (I have a copy of this text). **LWVNM member responsibilities** would include: Conversion (pdf to word with correction of errors), update of nuclear statistics and addition of recent advancements, editing, distribution and promotion.
4. Nuclear Issues study and Consensus. **LWVNM member responsibilities** would include: NM Local League Program Chairs coordination of 2017-18 **membership** meetings for Nuclear Issues presentations and subsequent Consensus meetings.