



**NEVADA LEGISLATURE**  
**LEGISLATIVE COMMITTEE ON HIGH-LEVEL RADIOACTIVE WASTE**  
*(Nevada Revised Statutes 459.0085)*

**SUMMARY MINUTES AND ACTION REPORT**

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The second meeting of the Nevada Legislature's Legislative Committee on High-Level Radioactive Waste was held on May 14, 2008, at 9:30 a.m. in Room 4401 of the Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas, Nevada. The meeting was videoconferenced to Room 3138 of the Legislative Building, 401 South Carson Street, Carson City, Nevada. A copy of this set of "Summary Minutes and Action Report," including the "Meeting Notice and Agenda" ([Exhibit A](#)) and other substantive exhibits, is available on the Nevada Legislature's website at [www.leg.state.nv.us/74th/Interim](http://www.leg.state.nv.us/74th/Interim). In addition, copies of the audio record may be purchased through the Legislative Counsel Bureau's Publications Office (e-mail: [publications@lcb.state.nv.us](mailto:publications@lcb.state.nv.us); telephone: 775/684-6835).

**COMMITTEE MEMBERS PRESENT IN LAS VEGAS:**

Senator Mike McGinness, Chair  
Assemblyman Harry Mortenson, Vice Chair  
Senator Warren B. Hardy II  
Assemblyman William C. Horne  
Assemblywoman Valerie E. Weber

**COMMITTEE MEMBER PRESENT IN CARSON CITY:**

Senator Dean A. Rhoads

**COMMITTEE MEMBERS ABSENT:**

Senator John J. Lee  
Assemblyman Joseph M. Hogan

**LEGISLATIVE COUNSEL BUREAU STAFF PRESENT:**

Susan E. Scholley, Chief Principal Research Analyst  
Matthew S. Nichols, Senior Deputy Legislative Counsel  
Sally Trotter, Senior Research Secretary

## **OPENING REMARKS**

Senator Mike McGinness, Chairman, welcomed members, presenters, and staff to the second meeting of the Legislative Committee on High-Level Radioactive Waste (HLRW). He noted this would probably be the last meeting of the HLRW Committee for the 2007-2008 interim.

## **APPROVAL OF MINUTES OF THE JANUARY 15, 2008, MEETING**

- The Committee **APPROVED THE FOLLOWING ACTION:**

ASSEMBLYWOMAN WEBER MOVED TO APPROVE THE MINUTES OF THE JANUARY 15, 2008, MEETING OF THE LEGISLATIVE COMMITTEE ON HIGH-LEVEL RADIOACTIVE WASTE HELD IN LAS VEGAS, NEVADA. THE MOTION WAS SECONDED BY SENATOR HARDY AND PASSED UNANIMOUSLY.

## **UPDATE ON ACTIVITIES OF NEVADA'S AGENCY FOR NUCLEAR PROJECTS (NANP)**

- Robert R. Loux, Executive Director, NANP, reported on current issues before the Surface Transportation Board (STB) relative to the Department of Energy's (DOE) filing an application to construct a rail line from Caliente to Yucca Mountain and provided an update on pre-licensing activities. Mr. Loux acknowledged the passing of the NANP's lead attorney, Joe Egan, and reassured the Committee that a plan had been developed by Mr. Egan for the firm to continue to represent the State upon his death. He commented that another attorney would take over Mr. Egan's duties in early summer 2008. Mr. Loux stated that the DOE was seeking the STB's exclusive jurisdiction over the application on the basis of the DOE's statement that the route would be a shared-use rail line. He clarified that a dedicated line to transport only high-level radioactive waste would not require review by the STB and would instead allow Nevada to be involved in the review of the application. Mr. Loux reported a motion was filed by the NANP in April 2008 to reject the DOE's application based on its failure to commit to the shared use status of the rail line, to provide a safety plan, and to identify an operator, all of which are required elements of the application. Currently, Mr. Loux said there are approximately 33 parties that have applied to participate in the proceeding, including the California Attorney General, many local governments, and rural property owners. He reported the deadline for the DOE to respond to the applications to participate is August 29, 2008.

Continuing, Mr. Loux provided a recap of the challenge to the DOE's certification of the Licensing Support Network (LSN). He reported that the NANP had recently certified its document collection which was challenged by the DOE and stated that both DOE's and NANP's challenges have been denied and are now on appeal to the full U. S. Nuclear Regulatory Commission (NRC).

Mr. Loux explained the NANP's concern with regulatory time frames associated with the DOE's filing of a licensing application and advised that the NANP has requested additional time to file contentions when the DOE files its licensing application.

Mr. Loux added that it was likely the NANP would challenge aspects of the application due to possible omissions. In conclusion, he remarked there are a number of other elements the DOE would need to secure through a legislative package in the United States Congress before obtaining a license to construct, including obtaining exclusive jurisdiction over certain lands and securing water rights.

Mr. Loux provided a Microsoft PowerPoint presentation ([Exhibit B](#)) that included data and information on waste isolation using drip shield barriers. He pointed out major concerns with installation; high temperatures and heat; tight tolerances; rock falls and tunnel degradation; expense and depletion of palladium and titanium supplies; excessive radiation release; and corrosion and failure of drip shields. Concluding, Mr. Loux reiterated that these concerns further promote the State's arguments against the Yucca Mountain site.

- Vice Chair Mortenson mentioned the fact that Mr. Egan was a graduate nuclear engineer, as well as an attorney. He commented on the tremendous work Mr. Egan did for the Committee and noted he would be difficult to replace.
- Chair McGinness extended the sympathies of the Committee to Mr. Egan's family. He asked Mr. Loux whether it was appropriate for the Committee to consider some action given the impending license application.
- Mr. Loux responded that it would be helpful for the Legislature to reaffirm its opposition to the Yucca Mountain project through a resolution next legislative session.
- Chair McGinness stated the Committee would address this matter under Agenda Item IV.

## **OVERVIEW OF REVIEW PROCESS FOR LICENSE APPLICATION BY THE U. S. DEPARTMENT OF ENERGY FOR THE PROPOSED YUCCA MOUNTAIN REPOSITORY CONSTRUCTION AUTHORIZATION**

- Lawrence E. Kokajko, Director, Division of High-Level Waste Repository Safety, NRC, provided a Microsoft PowerPoint presentation on the NRC licensing process ([Exhibit C](#)). He reported the NRC was established by Congress in 1975 as an independent regulatory agency. Mr. Kokajko stated the primary mission of the agency is the protection of public health and safety and the environment and the promotion of common defense and security. Mr. Kokajko provided an overview of the duties and responsibilities of the NRC. He reported the first step the NRC staff must take after receiving the DOE application is to decide whether to accept the DOE application,

which would not occur until a thorough review of the soundness of the DOE's safety case and the environmental impact statement (EIS) had been conducted. He discussed possible outcomes of the NRC's EIS adoption determination and the process if the application is accepted for review. Mr. Kokajko gave an overview of the formal hearing process on the license application and noted that Nevada may participate as a party as long as it files at least one admissible contention and that Nevada may also file contentions that it is not practical for the NRC to adopt the DOE's EIS. If Nevada chooses not to be a party, it may participate instead as an interested government. Concluding, Mr. Kokajko stated that any decision by the NRC on a potential license application for the repository will be based on the NRC staff's comprehensive, independent safety review and will include full and impartial public hearings.

In response, to Vice Chair Mortenson's comments regarding mechanical engineered barriers, Janet P. Kotra, Ph.D., Senior Project Manager-Regulatory Communication, Division of High-Level Waste Repository Safety, NRC, stated the DOE's application would need to support the effectiveness and reliance on a system of multiple barriers, which includes natural and engineered barriers. She noted the application would be reviewed carefully to ensure all requirements would be met.

- Mr. Kokajko added that the application had not been reviewed; therefore, it would be speculative to suggest how the DOE would approach the barrier issue.
- Chair McGinness asked about the time frame for the initial review of the application, funding, and additional personnel requirements. In response, Mr. Kokajko stated that Section 6321 of 10 *Code of Federal Regulations*, addressed the review requirements and he affirmed the hiring of additional personnel in expectation of the DOE's application.

In response to a question from Vice Chair Mortenson regarding the timeframe for the evaluation of the technical aspects of the application, Mr. Kokajko replied that the full determination would take three to four years and 8 to 24 months would be set aside for the technical review.

- Dr. Kotra added that the ability to comply is dependent on the quality of the application received and, if necessary, the NRC would devote additional time toward the technical review.
- Assemblyman Horne asked for clarification regarding the initial review process and asked when Nevada would be entitled to review the application.
- Mr. Kokajko responded that the DOE would distribute the application to the State, as well as the local government agencies the same day it is provided to the NRC.
- Assemblywoman Weber inquired about any differences in qualifications of personnel conducting the initial review and those conducting the technical review.

- Mr. Kokajko replied every scientific and engineering discipline was represented on the NRC staff and that the same staff would participate in both reviews.
- Dr. Kotra reiterated the staff members' qualifications and expertise.
- In response to Chair McGinness' question regarding the location of the hearings and participation by the affected units of local government, Andrea L. Silvia, Attorney, Office of the General Counsel, NRC, stated that the affected units of local government could participate.
- Mr. Kokajko responded that most of the hearings would be held in Las Vegas but some classified hearings may be held in Maryland.

## **PRESENTATIONS ON NEW AND CURRENT NUCLEAR PLANTS AND RECYCLING/INTEGRATED USED FUEL MANAGEMENT STRATEGIES**

### ***Nuclear Energy Institute (NEI)***

- Paul Seidler, Senior Director, NEI, discussed the history and membership of the NEI. He offered a Microsoft PowerPoint presentation ([Exhibit D](#)) that included a brief overview of nuclear energy around the world; sustained reliability and productivity; power plant output and economic performance; and Nevada's energy consumption. Mr. Seidler commented that 95 percent of the existing nuclear plants in the United States have extended their life or are in the process of having their life extended an additional 20 years. He displayed charts relating to nuclear power in the future and public support for nuclear power. He discussed the preparations necessary for new nuclear plant construction and provided a table of new nuclear plants under consideration along with a map that indicated potential locations of the nuclear plants. Mr. Seidler reported on integrated used fuel management and goals for used fuels. He utilized a flow chart to explain the new strategic direction for used fuel management and concluded with remarks in support of interim storage of used fuel.
- Vice Chair Mortenson remarked on electricity costs involved in the enriching process and carbon dioxide release into the air by coal plants, as well as repository costs and the hazards of radioactive carbon dioxide to the environment.
- Mr. Seidler explained the environmental consequences of nuclear power are less versus all other electric sources and stated that ultimately any decision to build new plants would be an economic decision.
- Anthony E. Hechanova, Ph.D., Director, Nuclear Science and Technology Division, Harry Reid Center for Environmental Studies, University of Nevada, Las Vegas (UNLV), stated he intended to provide an understanding of clear fuel recycling and offer some solutions for nuclear waste recycling. Dr. Hechanova informed the Committee that he represented himself and that neither he nor UNLV has any affiliation

with the NEI. He stated that UNLV does not support or oppose any of the different technologies provided in his presentation. Dr. Hechanova's Microsoft PowerPoint presentation included:

1. An explanation of used nuclear fuel;
2. The fission process and products;
3. Accumulation of used nuclear fuel in the United States;
4. Incentives for recycling and transmutation;
5. Recycling impacts on toxicity;
6. Number of repositories needed;
7. Advanced fuel cycles;
8. Other separations technologies;
9. Management options; and
10. Structure for a global partnership.

Dr. Hechanova stated that if the current energy level production continues using nuclear power we will need four repositories by the end of the century. He discussed the United States Global Nuclear Energy Partnership objectives and noted there are many other issues being explored at UNLV such as exploration of alternatives to the Yucca Mountain repository, fusion/fission hybrid energy, gas coal reactors, and nuclear power for transportation. (See [Exhibit E](#).)

- Assemblywoman Weber asked if reprocessing was considered when the original nuclear plant in France was designed and was planned for at the time the licensing applications were submitted in the United States.
- Dr. Hechanova replied the disposal of high-level nuclear waste was first studied in the early 1950s and at that time it was expected that waste disposal would consist of reprocessed rather than used nuclear fuel.
- Vice Chair Mortenson asked about the uranium extraction process and wondered if the recycled fuel would be considered low-level waste and, if so, where it would be stored.
- Responding, Dr. Hechanova stated it would have to be determined if the recycled fuel would be reclassified as low-level waste. He commented that the law would have to be revised in order to keep recycled waste out of a high-level storage site.
- Victor Gilinsky, Ph.D., Consultant, NANP, provided a Microsoft PowerPoint presentation ([Exhibit F](#)) on the reprocessing of nuclear waste. He discussed the history of reprocessing and recycling and the recycling processes used in France. Dr. Gilinsky commented that the U.S. Global Energy Nuclear Energy Partnership's approach was to

utilize one repository. He stated that no part of the DOE's nuclear storage plan had been proved commercially. Dr. Gilinsky discussed reprocessing security issues, costs for commercial processing, and presented a flow chart of the DOE storage plan that he noted is still in the planning stage. He reported there are safe methods for storage without reprocessing and no significant shortage of uranium is likely to occur for many years. Dr. Gilinsky opined that dry cask storage would be the simplest and most cost effective method.

Discussion ensued between Senator Hardy and Dr. Gilinsky regarding the cost effectiveness of the waste repository versus surface storage. Additionally, Senator Hardy commented that there were actually two separate issues involved: storage of nuclear waste and finding new sources of energy.

- Vice Chair Mortenson commented on problems with fast breeder reactors.
- Senator Rhoads asked if there were any other states using dry casks for storage.
- Responding, Dr. Gilinsky stated that dry casks were used all over the country and there were only one or two sites with limitations that prohibited dry cask storage.

#### **CONSIDERATION OF LEGISLATIVE RECOMMENDATIONS ON YUCCA MOUNTAIN**

- Chair McGinness stated he will consult with staff after the DOE files its license application and readdress the issue of a legislative resolution at that time ([Exhibit G](#)).
- Senator Hardy mentioned his interest in bringing the two sides together. He noted that recycling seems to be limited by the economic issues and turning the free market loose may be a solution. In addition, Senator Hardy wondered what regulatory or legal barriers exist and concluded it was a big project that could not be solved in 30 days. He suggested it was a topic the Committee should examine and consider.

#### **NATIONAL CONFERENCE OF STATE LEGISLATURES (NCSL)—OVERVIEW OF NCSL ACTIVITIES AND STATE POLICY TRENDS REGARDING NUCLEAR WASTE AND RELATED MATTERS**

- Melissa Savage, Program Director, Environmental and Natural Resources Program, NCSL, testified via teleconference. Her discussion referenced a handout ([Exhibit H](#)) provided to members with an update on recent NCSL activities. She stated that during the Spring Forum meeting in April 2008 in Washington, D.C., an informational session organized by members of the high-level waste working group was held on interim nuclear storage issues. Ms. Savage reported that as a result of the Forum, members considered an amendment to the NCSL Radioactive Waste Policy that would: (1) add language expressing support of interim storage solutions; (2) urge Congress to work closely with state legislatures, local governments, and Governors to look at interim

storage for the United States; and (3) work with any states that would be interested in hosting an interim storage site.

- Senator McGinness noted that contact information was made available in the handout provided by Ms. Savage.

## **PUBLIC COMMENT**

- Abbey Johnson, Nuclear Waste Advisor for Eureka County, Nevada, discussed the activities of the affected units of local governments in their efforts to advocate for Web streaming of the upcoming licensing hearings by the NRC. She stated that this technology would make the process more transparent and readily accessible to all interested parties of the affected local governments and the public. She advised the Committee that the local governments were all working together on this issue.
- Richard DeKlever, Consultant, Las Vegas, Nevada, stated that products other than drip shields are available and advocated the use of a zirconium alloy that is chopped and leached during the recycling process. He noted the process could be done during recycling by the use of robots. He commented this would eliminate the cost and depletion of titanium resources.



## **ADJOURNMENT**

There being no further business to come before the Committee, the meeting was adjourned at 12:24 p.m.

Respectfully submitted,

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Sally Trotter  
Senior Research Secretary

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Susan E. Scholley  
Chief Principal Research Analyst

APPROVED BY:

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Senator Mike McGinness, Chair

Date: \_\_\_\_\_

## LIST OF EXHIBITS

[Exhibit A](#) is the “Meeting Notice and Agenda” provided by Susan E. Scholley, Chief Principal Research Analyst, Research Division, Legislative Counsel Bureau (LCB).

[Exhibit B](#) is a Microsoft PowerPoint presentation offered by Robert R. Loux, Executive Director, Nevada Agency for Nuclear Projects (NANP), Office of the Governor, dated May 14, 2008.

[Exhibit C](#) is a Microsoft PowerPoint presentation titled “NRC’s Licensing Process: Judging The Safety Of A Proposed Repository,” prepared by Lawrence E. Kokajko, Director, Division of High-Level Waste Repository Safety, United States Nuclear Regulatory Commission, dated May 14, 2008.

[Exhibit D](#) is a Microsoft PowerPoint presentation titled “Nuclear Industry Update,” provided by Paul Seidler, Senior Director, Nuclear Energy Institute, dated May 14, 2008.

[Exhibit E](#) is a Microsoft PowerPoint presentation titled “Used Fuel Recycling and Advanced Fuel Cycles,” prepared by Anthony E. Hechanova, Ph.D., Director, Nuclear Science and Technology Division, Harry Reid Center for Environmental Studies, University of Nevada, Las Vegas, dated May 14, 2008.

[Exhibit F](#) is a Microsoft PowerPoint presentation titled “Reprocessing and Recycle: Why renewed interest? How would they relate to Yucca Mountain?” submitted by Victor Gilinsky, Ph.D., Consultant, NANP, dated May 14, 2008.

[Exhibit G](#) is a document titled “Nevada Committee on High-Level Radioactive Waste,” provided by Susan E. Scholley, Chief Principal Research Analyst, Research Division, LCB, dated May 14, 2008.

[Exhibit H](#) is a handout titled “Nevada Legislature Committee on High-Level Radioactive Waste,” submitted by Melissa Savage, Program Director, Environmental and National Resources Program, National Conference of State Legislatures.

This set of “Summary Minutes and Action Report” is supplied as an informational service. Exhibits in electronic format may not be complete. Copies of the complete exhibits, other materials distributed at the meeting, and the audio record are on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. You may contact the Library online at [www.leg.state.nv.us/lcb/research/library/feedbackmail.cfm](http://www.leg.state.nv.us/lcb/research/library/feedbackmail.cfm) or telephone: 775/684-6827.