Introduction

Let me preface my remarks this afternoon by saying the State of Nevada contends that DOE should have fully and adequately addressed transportation of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) to Yucca Mountain in the Final Yucca Mountain Environmental Impact Statement (FEIS). Instead, the transportation analysis contained in the FEIS is legally and substantively deficient and entirely inadequate.

We contend that the only acceptable vehicle for engaging in planning for SNF and HLW shipments in Nevada or nationally is the process set forth by the National Environmental Policy Act (NEPA) and its implementing regulations.

That means DOE must commit to the preparation of an Environmental Impact Statement (EIS) for the transportation program. Such EIS must encompass an integrated transportation program that covers both the national transportation system and the transportation system within Nevada.

The EIS must show how the national and Nevada components function in a consistent and integrated manner, and how decisions with respect to the national system affect the Nevada system, and vice versa. What DOE appears to be doing instead is a piecemeal approach to transportation planning, crafting the message to fit whatever audience the Department is trying to appease at the time.

That being said, for the better part of two decades, the State of Nevada has consistently and repeatedly recommended specific measures that the Federal government should take to manage the risks associated with transportation of spent nuclear fuel and high-level radioactive waste.

Despite our opposition to construction of a repository at Yucca Mountain, and to construction of an interim storage facility at the Nevada Test Site, the State of Nevada has taken virtually every possible opportunity to make constructive proposals to the appropriate Federal agencies: DOE, the U.S. Nuclear Regulatory Commission (NRC), and the U.S. Department of Transportation (DOT).

In addition, the Western Interstate Energy Board and the Western Governor’s Association have done extensive work on nuclear waste transportation and provided DOE with detailed and substantive guidance over the past 15 or more years.
WIEB has even developed an extensive High-Level Waste Transportation Primer that provided DOE with a comprehensive framework for an adequate transportation system.

WGA has passed numerous resolutions urging DOE to adopt an integrated and comprehensive approach to transportation planning, including adequate preparations to deal with terrorism and to prevent catastrophic accidents through meaningful cask testing.

**Nevada’s Recommendations**

Since 1997, Nevada's recommendations regarding high-level nuclear waste transportation risk management have been focused on four areas:

1) A comprehensive approach to risk assessment, risk management, and risk communication;

2) Development of a preferred transportation system;

3) Full-scale, physical testing of shipping casks; and

4) Accident prevention and emergency response.

The presentations you will hear from other Nevada transportation experts today will address specific Nevada issues and recommendations in more detail. But let me point out that the basis for any meaningful spent fuel and high-level waste transportation planning must be veracity and accuracy in disclosing the nature, scope, and extent of the effort. Unfortunately, DOE’s pronouncements on the transportation aspects of the Yucca Mountain program, meager as they have been, appear more designed to obscure and minimize the challenges for political reasons than to illuminate them.

**The Numbers Game**

For example, Nevada believes that DOE’s recently-devised estimate of 175 shipments per year to a Yucca Mountain repository is not only inaccurate, but grossly underestimates the nature, magnitude, and scope of the shipping campaign required to support the repository program.

To realize such a low number of shipments, DOE will, among other things, have to ship over 90% of all SNF by rail; assure that each shipment is made up of at least 3 rail cars per train; make thousands of barge and/or heavy-haul truck shipments to move SNF from reactor sites without rail access to rail heads; create staging areas in rail yards and ports around the country in order to assemble the trains; and construct a 300 – 400 mile rail access line in Nevada at the cost of over $1 billion.

Nevada has carefully reviewed the estimates of future spent fuel shipments contained in the DOE Final Environmental Impact Statement for Yucca Mountain and believes these
estimates to be far more realistic than the shipment numbers DOE is currently using. The FEIS includes projections of spent nuclear fuel and high-level radioactive waste shipments for two inventory disposal scenarios (24 years and 38 years) and two national transportation modal scenarios ("mostly legal-weight truck" and "mostly rail").

According to the DOE FEIS, about 70,000 MTHM of spent fuel and high-level nuclear waste could be shipped to Yucca Mountain over 24 years, and about 119,000 MTHM could be shipped over 38 years (2010-2048).

The DOE "mostly legal-weight truck" scenario would result in the largest number of shipments, about 108,900 shipments over 38 years, or about 2,865 per year.

The DOE "mostly rail" scenario, over 38 years, could result in more than 45,000 shipments (about 1,185 per year) or as few as 13,500 (about 355 per year). Commercial spent fuel would compromise about 88% of the wastes shipped to the repository, and about 73% of repository cask-shipments.

We conclude that estimates of projected shipments to Yucca Mountain must continue to consider a range of modal scenarios and shipment numbers.

**Rail Access Issues**

DOE’s blithe assumption that the shipping campaign will involve mostly rail transportation is equally suspect. At present, there is no railroad access to Yucca Mountain. Construction of a new rail spur, 99 to 344 miles in length, could take 10 years and cost more than $1 billion. The alternative to rail spur construction, delivery of thousands of large rail casks by 220-foot-long, heavy-haul trucks, over distances of 112 to 330 miles on public highways, is probably not feasible.

Maximum utilization of rail for cross-country transportation, as described in the FEIS, appears unlikely. Even if DOE is able to develop rail access to Yucca Mountain, the objective of shipping 90 percent of the commercial SNF by rail is unrealistic. DOE acknowledges that 25 of the 72 power plant sites cannot ship directly by rail. Nevada studies show that number could be up to 32 sites.

The "mostly rail" scenario assumes that DOE can ship thousands of casks by barge into the Ports of Boston, New Haven, Newark, Jersey City, Wilmington (DE), Baltimore, Norfolk, Miami, Milwaukee, Muskegon, Omaha, Vicksburg, and Port Hueneme (CA).

Alternately, DOE would have to move thousands of casks from reactors to rail connections using large heavy-haul trucks, which will require special state permits and route approvals.

In the end, even if rail access to Yucca Mountain and all of the other impediments to rail transport can be resolved, “mostly rail” would mean moving no more than 60-75 percent
of the commercial spent fuel by rail, and moving the remaining 25-40 percent by legal-weight truck.

The DOE "mostly legal-weight truck scenario" is the only national transportation scenario that is currently feasible and is the one Nevada believes to be most likely in the event the Yucca Mountain program goes forward. All 72 power plant sites and all 5 DOE sites can ship by legal-weight truck.

Cask Safety and Shipment Safeguards

Nevada, together with other western states and regional groups, has long advocated full scale testing of shipping casks as part of the cask certification process. In light of the new terrorist threats facing the nation and the unprecedented nature and scope of the planned Yucca Mountain shipping campaign, it is imperative that NRC immediately address this issue, and we are gratified that the Commission staff if moving ahead with the Package Performance Study. Nevada experts have been, and will continue to be, closely involved with this effort.

We remain concerned, however, that the Commission has yet to act on the State of Nevada’s rulemaking petition asking NRC to reassess and strengthen protections against and terrorism with respect to spent fuel shipments. That petition was filed in 1999 and, to date, no action has been taken despite the increased urgency occasioned by the events of September 11th and subsequent developments.

I trust that you will find the information provided today by Nevada transportation consultants useful and enlightening. I appreciate the Committee’s willingness to provide this opportunity to present information and perspectives not afforded to you at your transportation workshop in December.