

**PROPOSED TRANSPORTATION OF NU-
CLEAR WASTE TO THE YUCCA
MOUNTAIN REPOSITORY**

(108-54)

HEARING
BEFORE THE
SUBCOMMITTEE ON
RAILROADS
OF THE
COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES
ONE HUNDRED EIGHTH CONGRESS
SECOND SESSION

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MARCH 5, 2004
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PROPOSED TRANSPORTATION OF NUCLEAR WASTE TO THE YUCCA MOUNTAIN REPOSITO- RY

Friday, March 5, 2004

HOUSE OF REPRESENTATIVES, COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, SUBCOMMITTEE ON RAILROADS, WASHINGTON, D.C.

The Subcommittee met pursuant to call, at 9:00 a.m. At the County Commission Building, Commission Chambers Room, 500 Grand Central Parkway, Las Vegas, Nevada, Hon. Jack Quinn, chairman of the subcommittee, presiding.

Mr. QUINN. Subcommittee will come to order this morning, and good morning. I bring you greetings from the great State of New York, if that's possible after spending an evening here in this great beautiful city here of Las Vegas, Nevada. We appreciate your hospitality in moving our Subcommittee hearings here to this great auditorium and to be with you here this morning.

As our staff just announced, this is an official meeting of the Subcommittee on Railroads of the full Committee on Transportation and Infrastructure.

We've gone to some lengths to move our normal meeting from Washington, D.C. Up here into a—what we call field hearings so that we can here firsthand from folks who are involved in the matter before us this morning.

As an official meeting, of course, we have witnesses who will provide testimony. We have a panel here of the Railroad Subcommittee and others who we'll introduce in just a few moments, and that means that we will conduct ourselves just like we do at the full-fledged meeting in Washington, D.C. Or here.

If there is anybody in the audience who feels that they have not had a chance to submit prior testimony or add to discussion they've heard this morning, may be an opportunity to ask some questions after they've heard testimony this morning, the proceedings are open for 30 days from today.

Anything that is received through the full committee, the subcommittee, becomes part of the record for the next 30 days.

Our counsel is with us on both sides.

My partner, Ms. Brown from Florida, to my left, is my full partner in the Subcommittee. We play very little politics on the Subcommittee and our full Committee.

We enjoy a great reputation in the Congress in Washington and all around the country, to the extent we are able to get the business of transportation done as correctly as we possibly can with help from an awful lot of people.

Some of the people that would help us do that are you, people that are here this morning.

So we greatly appreciate your input and time. I've have a chance to read through all of the testimony, the work that's gone into that, and it's very, very insightful and will be helpful as we deliberate today.

You won't see this Subcommittee take any kind of votes this morning, so for those of you who haven't seen any of that on CNN, you won't see a vote, you won't see a show of hands. It's not the business we're about this morning.

As a field hearing, we're here to make certain we listen and take back to Washington as much good information as we possibly can in our further deliberations.

I would like to yield for just a quick moment to Ms. Brown for some opening remarks who as my partner of two of the partners in the Railroad Subcommittee enjoy great relationship with our staff and others.

Ms. BROWN. Thank you, Chairman Quinn, and thanks to all of the Members for coming out.

Chairman Quinn, you know that this is Frank's last hearing, I think, and we certainly have appreciated all of the leadership that he's provided—

Mr. QUINN. Sure.

Ms. BROWN. —in this committee, and we certainly wish, you, I in particular—

Mr. QUINN. All of us.

Let me just, Ms. Brown, interrupt this for quick second before we begin the proceedings, before we even get to that point of introducing members and thanking others.

In terms of Congressman Porter, for just a moment, I understand that we've—we've been given news of a great loss, personal loss, here this morning.

Jon, I'd like to yield to you for just a moment to make sure we conduct the record. You might want to—

Mr. PORTER. Thank you, Chairman Quinn, and we'll get to the formal thank you's in a few moments, but I'd like to announce the passing of Governor O'Callaghan.

I think that many of you in this room have known the governor for many, many years, and we received news here a few moments ago. My colleague, Congresswoman Shelley Berkley, and I received a call about 20 minutes ago.

And, you know certainly, it's fitting that the governor be here in spirit, because as a number one fighter against Yucca Mountain and nuclear waste in Nevada, certainly he would send his strong opposition and support of this committee this morning.

But more importantly, the governor is one of those guys that used to talk at 5:30 a.m. And 6 a.m. Shelley, would that be right?

Ms. BERKLEY. Mm-hmm.

Mr. PORTER. First call in the morning Governor O'Callaghan. But there hasn't been a larger champion for veterans, for seniors, for children, for education, for folks that really need—really needed a helping hand was Governor O'Callaghan.

So would you please join me in a moment of silence for the loss of Governor Mike O'Callaghan.

[moment of silence.]

Mr. PORTER. Thank you, Mr. Chairman. Possibly my colleague could also say a few words about it.

Mr. QUINN. Thank you.

Shelley.

Ms. BERKLEY. Thank you, Mr. Chairman, and thank you, Mr. Porter.

I've known Michael O'Callaghan since I was 18 years old. I was a young student at U.N.L.V., and he was governor of the State.

Without Michael O'Callaghan, I can assure you I wouldn't be sitting in the seat that I'm sitting in today. I loved him without reservation. And if you were a friend of Mike's, you knew he loved you without reservation.

I can't imagine this State without this giant, and all the giants that have walked across the State of Nevada. He's head and shoulders above the rest. And if he's listening, I just want him to know how much I love him and appreciate him and will miss him always.

Thank you, Mr. Chairman.

Mr. QUINN. Thank you, Shelley.

Thank you both, Representatives in this area.

I want to also greatly appreciate and mention the hospitality of not only the colleagues here from Nevada while we're examining this important issue but as Chairman of the Subcommittee on Railroads for just over 3 years now I found the best way to study an issue is to hear directly from all of you who are here.

Subcommittee Vice-chairman Jon Porter, of course, has convinced us to be here this morning to gather the Subcommittee on Railroads here in Las Vegas, again, to gain a better understanding.

And you should also—another matter to anybody who's out here, but as a son of a railroad engineer, my father put in 35 years as a railroad engineer. My grandfather, when he came to this country, worked on the railroads.

I've had a deep personal interest in the railroad system in our country and how it serves the people of our country all across, in particular insuring the safety not only of the rail systems, passengers, and its freight, but its neighbors and the hard-working employees become a top priority for all of us who work the railroads.

In this instance, the transportation of hazardous nuclear waste warrants extensive scrutiny and attention. Today we will focus on our Nation's rail policies and statutes as they relate to this issue.

Representatives from the Surface Transportation Board are with us, Federal Railroad Administration has testimony that's been submitted, and the U.S. Department of Energy would lend expertise on railroad operation and safety regulations for our review.

Also participating and being introduced a little bit later for our second panel, we have a number of State and local officials and activists. Hopefully, they'll be able to provide us with valuable insights into the concerns of their fellow residents here.

I look forward to a very informative session this morning, an insightful and helpful one.

Now, after those introductions, Ms. Brown, your opening statement.

Ms. BROWN. Thank you, Mr. Chairman. Once again it's a pleasure to join my colleagues here in the great State of Nevada. I personally think we should do more field hearings in Las Vegas.

Mr. QUINN. You must have won last night.

Ms. BROWN. But all kidding aside, this is a very serious issue with very serious consequences, not just for the citizens of Nevada but for every citizen in the U.S. Like all of the members of the Committee, I have serious concerns about both storing and transporting nuclear waste. I hope we will have some of those concerns addressed at today's hearing.

I intend to keep my statement very brief because I'm here to listen and learn, but I want to welcome our distinguished witnesses and thank them for joining us today.

Today's panel will help make many of the major decisions that will affect how we proceed with this \$57 billion project, and I look forward to hearing from them.

One of the main reasons I joined the Railroad Subcommittee was because I felt as a nation we needed to make major improvements to both our passenger and freight rail infrastructure.

Unfortunately, I don't think we've made the investment needed. It's hard to believe that we would begin to develop a plan for transporting nuclear waste before we get serious about improving our rail infrastructure.

The people at this hearing today have some very tough decisions ahead of them, and I look forward to working with them to make sure that whatever decision we make in dealing with the Nation's spent nuclear waste, it is dealt with in the safest manner possible.

Thank you, Mr. Chairman.

Mr. QUINN. Thank you, Ms. Brown. We turn to Mr. Porter now for opening statements, Jon, who's also the vice-chairman of the Subcommittee in Washington.

Your constituents should know that you serve a very useful purpose for us, not only in our organizational meetings, but also in our discussions of issues, and I want to thank you publicly this morning for doing that, not only for this hearing, but the year round daily basis.

Mr. PORTER. Thank you, Mr. Chairman. We appreciate your being here today and the other members of the Committee plus staff and your investment into our community while we're here. We're hoping that you were able to enjoy the entertainment capital of the world.

And in my office in Washington and my office here in Henderson we talk about having a hearing. It's kind of an inside joke. I'm happy to be here and happy to be back in Las Vegas, especially for today's hearing on the transportation of nuclear waste.

As I said, Mr. Chairman, thank you for agreeing to hold this hearing on the Department of Energy's plan to ship nuclear waste to the proposed Yucca Mountain Repository.

As a lifetime foe of Yucca Mountain facilities, I immediately called you and Chairman Young of the Transportation Committee to ask for a hearing when the Energy Department attempted to select transportation routes through Nevada for nuclear waste without the scrutiny of Congress or the people of Nevada.

For too long, Yucca Mountain has pitted Nevada against 49 other States from both sides of the aisle.

I'm glad to see a bipartisan delegation of members from all the parts of the country here today to learn of the dangers we all face.

As vice-chairman of the Railroad Subcommittee of the House of Representatives, I've had the opportunity to learn firsthand the unique challenges our national railroad system faces, despite the fact the best efforts of our railroads to restore aging infrastructure to thousands of vulnerable bridges, causeways, tunnels, and grade crossings exist in our country.

Each one of these structures is a point that could easily be crippled by a natural disaster or terrorism, exposing our communities to the dangers of spent nuclear fuel.

Danger does not just exist from the choke points in our infrastructure. The risks of collision and derailment exists at every point in the system and especially within the rail yards of our major cities.

Every day thousands of cars are slammed together to form trains. Under current plans, nuclear waste could be mixed in with trains carrying cars, produce, cows, and candy for children.

The Department of Energy assumes that the American people will sit quietly by as 77,000 tons of high-level nuclear waste is shipped past their homes, parked by their schools, crossing their streets, and rolling over the reservoirs.

They assume that they can piggyback on the infrastructure of thousands of communities and private companies, that they can stretch the law and redefine the will of Congress. They assume that they can ignore Federal railroad safety regulations, existing labor contracts, and environmental rules, and economic regulations, and they're wrong.

Mr. Chairman, many people outside of Nevada assume that the fight against Yucca Mountain is over. I and my colleagues will keep fighting to protect Nevada, the American people, their environment, and their wallets from the scientific, financial, and security fraud that is Yucca Mountain.

I hope that this hearing will raise the awareness of the American people to the dangers they would face were Yucca Mountain to open and to expose the dangerous complacency that infects the Energy Department over this issue.

Again, Mr. Chairman, thank you, and I look forward to hearing from our witnesses today.

Mr. QUINN. Thank you, Mr. Porter.

When you say you immediately contacted me, for the record, I'd like to note that that was Christmas Eve at 6:15 in the evening that—when you contacted me. That's almost as immediately as you can get, but thank you for the phone call.

Ms. BERKLEY, your opening statement, please.

Ms. BERKLEY. Thank you, Mr. Chairman. And I would like to thank you and the rest of the members for offering me an opportunity to testify today and welcome to my congressional district. I hope you enjoy our wholesome family entertainment while you're here.

This hearing is of utmost concern to me and my constituents, and, indeed, all of the citizens of the State of Nevada. While we

may be discussing the transportation of nuclear waste today, I am one of those that is confident that Yucca Mountain and the repository at Yucca Mountain will never open; however, I'm pleased to be involved in today's proceeding and enthusiastically join my colleague Congressman Jon Porter in discussing the specifics of transporting nuclear waste.

Yucca Mountain and the proposed shipment and storage of nuclear waste in our State posed one of the West's most serious security threats.

I am concerned about the waste at every stage of its transport. Waste would be vulnerable to attack during packaging, shipment, temporary storage, repackaging, and finally its final location in a single national repository.

It's an alarming fact that the nuclear waste will be stored above ground for several years before it is actually placed in the repository.

Despite the lack of sound science, multiple pending lawsuits, and unaddressed homeland security issues, the president has requested the transportation budget for Yucca Mountain be tripled to a \$186,000,000. He's requesting a massive increase in funds for a project that has not even been licensed.

Additionally, the DOE has yet to release the definite rail routes from reactors across the country to Yucca Mountain. Once residents and lawmakers realize this nuclear waste is going to pass through their backyards, near their schools, hospitals, and places of worship, the DOE, I can assure you, will have yet another fight on its hands.

I call your attention to the fact that the Yucca Mountain's Final Environmental Impact Statement, without factoring in the possibility of a terrorist attack, projects we can expect over 300 accidents.

To this day, DOE and Department of Homeland Security have failed to conduct tests assessing the risk of potential terrorist attacks such as the attack on our nation on 9-11.

The ever present risk for a potential terrorist attack or serious accident involving this waste while on our rails cannot be overstated.

A single truck bomb, a private plane used as a weapon, could cause the release of radioactive waste that would endanger lives, pollute the environment, and cause millions in economic damages.

Just last October 60 Minutes aired a segment depicting a nuclear waste cask fully penetrated by a TOW antitank missile. If this cask had been full of high-level radioactive waste, we could have potentially seen 3,000 to 18,000 latent fatalities and cleanup and recovery costs exceeding \$10 billion.

In response to this possibility, I introduced the Nuclear Waste Terrorist Threat Assessment and Protection Act, which requires a comprehensive analysis of the project's safety and vulnerability to terrorist attacks and the development of a Federal emergency plan including one specifically for airborne attacks to defend the site.

Under my legislation, the analysis and defense plan would cover the site, transportation routes, and shipping casks, waste storage containers, and personnel working for the project, among other items. The Department of Energy has consistently changed regula-

tions and reduced standards in order to railroad Nevadans and put the Yucca Mountain Project through.

DOE has also constantly excluded the State of Nevada on key meetings reviewing technical issues of the Yucca Mountain Project.

Just last November and December DOE and the NRC conducted several secret meetings closed to the public and the State of Nevada regarding a technical review of information gathered by the DOE on the Yucca Mountain Project. This is a blatant disregard for the State of Nevada and an example of DOE's attempt to circumvent additional scrutiny of this ill-conceived project.

The Department of Energy's recent decision designating Caliente as the preferred rail corridor for the shipment of nuclear waste produces new concerns regarding the Native American populations and ranching and mining interests in Nevada.

The costs and difficulty of constructing the Caliente route will be extensive. The location of Yucca Mountain and the selection of the Caliente Rail Corridor would result in severe damage to cultural treasures of both the Western Shoshone and Southern Paiute tribes.

The DOE has acknowledged that the rail corridor could very well cross traditional holy lands important to both of these tribes. The stigma created by a rail route used for the transportation of nuclear waste would also negatively impact tribal business.

The rail lane could split ranches consisting of land both privately owned and publicly leased. The dividing of these lands would adversely affect day-to-day operations of ranches such as the movement of livestock and equipment. Miners would also be unable to use this land once the rail has been constructed.

The Caliente rail route is the second longest of the proposed rail routes to Yucca Mountain, costing almost a billion dollars to construct.

Construction of this route would mean the most expensive and longest new rail construction in the United States in the past 70 years. In the first 100 miles alone, the DOE would have to construct tracks to circumvent or cross nine mountain ranges. In the final 119 miles, the rail corridor would cross into the Nellis Air Force Base gunnery ranges and skirt the vast boundary of Nellis before reaching the southern portion of Yucca Mountain.

Top Air Force officials have already stated their concerns that the transportation routes will adversely affect training missions of our Air Force jet fighters.

You may wonder why would the DOE select such a different route and rail corridor. According to the DOE, the Caliente Corridor is more remote than any other corridors, but in actuality there's no guarantee that nuclear waste shipments will not affect the Las Vegas metropolitan area or Clark County.

DOE has estimated six percent of the rail shipments to the Yucca Mountain Repository will enter Nevada through California traveling through the Las Vegas Valley.

Every day almost 86,000 people who reside, work, go to school, and visit Nevada could be exposed within a half a mile of a proposed rail line to as many as 9600 shipments over the next 24 years.

There are also still many questions regarding the plausibility of constructing and operating the Yucca Mountain Repository. DOE would require \$140,000,000 gallons of water a year to operate the Repository. Where is this water coming from?

The West is experiencing a crippling drought, and we here in Nevada are talking about water conservation and the possibility of restricting growth in the Las Vegas Valley. It would be reckless to supply the water necessary for Yucca Mountain, enough water to supply almost 430 families with water every year.

This project is unprecedented in its scope and nature and the potential harmful consequences for Nevadans and the thousands of communities across our nation on the proposed path of high-level nuclear waste en route to Yucca Mountain.

Once again, I want to thank you, Mr. Chairman, for holding this important hearing. A wakeup call has been issued, and we now more than ever need to take a serious look at the dangers associated with the nuclear waste transport at its source.

And I look forward to the testimony of my fellow panel, members, and further discussion of the transportation of nuclear waste to the proposed repository.

Thank you, Mr. Chairman.

Mr. QUINN. Thank you, Ms. Berkley.

I understand Jim Matheson is a very valuable member to our full Committee and Subcommittee, and he's here from Utah.

We're thrilled to have you join us this morning. Would you please have some opening remarks, Jim.

Mr. MATHESON. Thank you, Mr. Chairman. First of all, I want to associate myself with you with the opening statements of Representative Porter and Representative Berkley.

And, very briefly, I'd just like to state my home town is Utah is—that borders the State of Nevada, and it does not produce high-level nuclear waste, yet more than 80 percent of Utahans will live, work, and travel along the transportation route that have been proposed for servicing Yucca Mountain.

The safety of shipping this material through my district is of obvious concern to me. I'm worried that the United States has not developed a true comprehensive understanding of the risks associated with the transportation of nuclear waste.

And until these concerns can be adequately addressed, the people along the shipment route should not be forced to rely on the hope that nothing bad will happen.

As a father, I don't want my family to be put in harm's way. As a congressman, I don't want my constituents to be put in harm's way.

And I'm concerned that that is exactly the effect of this plan.

Mr. Chairman, I have a longer written statement I'd like to submit for the record, but I'm anxious to get to the panel, so at this point I'll get—

Mr. QUINN. Without objection, your full written statement is part of the record.

Ms. Carson, another valuable member of the full Committee, Subcommittee, has joined us from Indiana.

Ms. CARSON. Thank you very much, Mr. Chairman, Ranking Member Brown, and Representative Berkley and Representative Porter.

For our convenience, this very vital meeting, I'm from Indianapolis, Indiana, and I'm a strong supporter of railroads, believe in them. There's an opportunity for America to get America working again by rebuilding the railroads.

I wanted to clarify my position; however, just because I wanted to do railroads does not mean that I support the project here in Yucca Mountain. As a matter of fact, I'm one of the members who voted against it from the representative up for review.

This issue affects every State where these nuclear materials are stored and every State that would pass through on their way to a central facility. So Indiana, of course, would be one of the States where it would pass through.

And I just believe that the government must work with leaders in the nuclear industry and environment groups, the scientific communities and, most importantly, the localities that would be directly affected in order to find the best possible solution.

I believe with the bright minds and talents that this country has that that can be a collective effort in terms of trying to resolve this environmental impact, severe impact, that it would have on Nevada, and that they can develop a plan that would bode well for all the American citizens.

I have a prepared statement that I will submit for the record, and thank you very much for your hospitality. I've only lost \$20 since I've been here. I'm planning another 20, and that will be it. Thank you very much for hospitality.

Mr. QUINN. Without objection, your full written statement is part of the record.

You've heard from all of us. Let's move to our panels. We have two panels this morning. The first we introduce is Mr. Roger Nober, who's the Chairman of the Surface Transportation Board. And Gary Lanthrum is Director of the Office of National Transportation, Department of Energy.

Our rules are the same here as I mentioned when we began the hearing this morning.

We'd like our witnesses to see if they could keep their oral remarks to about 5 or 10 minutes or so. Certainly it is noted that the full statement is part of the record for everyone to review, and will be retained as part of the full record, but if you could keep your oral statements to about 5 or 10 minutes each, that way we can get to the questioning.

We begin this morning with Mr. Nober, Chairman of the Surface Transportation Board.

**TESTIMONY OF ROBERT NOBER, CHAIRMAN SURFACE
TRANSPORTATION BOARD**

Mr. NOBER. Well, good morning, Chairman Quinn, Ranking Member Brown, and members of the Subcommittee.

And I try to be responsive when following committee rules, and I'll do that today.

My name is Roger Nober, and I'm Chairman of the Surface Transportation Board. I appreciate the opportunity to testify before

all of you today at this field hearing about the Federal jurisdictional issues and railroad operational safety concerns regarding the transportation of nuclear waste to the proposed Yucca Mountain Repository.

The issues which are the subject of this hearing today report not only important to the citizens of Nevada but to the Nation as a whole.

And I commend the members of the Subcommittee for holding this significant hearing.

I will summarize my remarks in my oral statement today, and my full remarks have been submitted to the Committee, to the members, to review for the record.

At the outset, I want to emphasize the Department of Energy has not yet determined whether rail will be the primary means of transportation to serve the Yucca Mountain facility. If it does, then, my testimony today will discuss several options for how the department could choose to structure that new rail line.

Some alternatives would require prior authorization from our agency and others would not.

Now, furthermore, I must also note that our organization is an adjudicatory body, and were the Department of Energy to file an application before us, I cannot say in advance how the Board would act on such a filing.

Now, with these limitations in mind, I will first provide the Subcommittee with an overview of our agency. Next, I will review the current regulatory regime that exists for the licensing of new rail lines. And, finally, I will outline some of the issues that may be raised if the Department of Energy were to choose rail as the primary means of transportation to serve the Yucca Mountain facility.

Now, as all of you are aware, the Surface Transportation Board is charged with the economic regulation of railroads and other modes of surface transportation. Most pertinent to this hearing, the Board must review and approve when railroads seek to abandon existing track or construct new rail lines.

Importantly, in each of the areas over which the Board has jurisdiction, including new rail line construction, that jurisdiction is exclusive.

And, finally, as Administrator Rutter's testimony has outlined, the Federal Railroad Administration and not our agency oversees the safety of railroad operations, including the standards and transportation for high-level nuclear waste.

And, next, I will turn to the aspect of the Board's jurisdiction that are relevant to the issues being raised here today.

Now, under the Interstate Commerce Act, the Board has jurisdiction only over rail transportation by a rail carrier that is providing common carrier railroad transportation over any part of the interstate rail network.

Now, although that's a mouthful, the term "common carrier" is not defined in the statute but is defined by common law and agency precedent. Where we look is to whether there is a "holding out" by the person to serve the public at large.

So the first important point is that persons who are or intend to become common carriers and wish to construct new rail lines must first obtain advance authorization from the Board.

In general, this licensing requirement applies to all the common carrier's lines, including both main lines and, quote, branch lines.

Now, as with most rules, there are exceptions under Section 10906, the Board approval is not required when a railroad wishes to build so-called "auxiliary tracks."

To determine whether a track is an "auxiliary track," we look at the relevant "indicia" of the track itself, such as its length, its weight of rail, its use, and, most importantly, whether the track will open a new service territory for the operating rail carrier.

Now, in some if the track would be something more than auxiliary to existing service, then this exception is not available.

It is important to understand that the Board's jurisdiction is exclusive and the Interstate Commerce Act preempts State and local jurisdictions from applying any overlapping laws and regulations.

Thus, State and local preclearance requirements, including any environmental laws, are preempted from applying to rail carriers because by their nature such restrictions interfere with interstate commerce.

This broad statutory preemption applies even to construction of "auxiliary track" under Section 10906.

Now, by contrast, the construction and operation of private track, which is not covered by the Interstate Commerce Act and not subject to our jurisdiction, therefore, does not require our approval.

While the term "private track" is not defined in the statute, we interpreted it to apply to nonrailroad companies that construct rail lines to exclusively serve their own facilities.

Thus, a party wishing to construct a rail line can decide up front whether it wants to—whether its track will be used to serve the general public in common carriage or only to carry its own products in private carriage; and, therefore, choose the regulatory scheme that will apply to construction of that line.

Now, next I will turn to the procedure we follow when we consider any application for new rail line construction.

The Board's authorization may take one of two forms, a quote, certificate of public means and necessity, unquote, which is a formal application proceeding, or exemption, which is a statutorily-directed procedure that serves to authorize the construction of a line without all of the formal application procedures.

But, in either event, the rail line can only be constructed after there's been a Board proceeding with the opportunities for public participation, close scrutiny of the proposal by the Board, an environmental review, and a full examination of the public interests.

Now, under the law, the Board must consider whether the proposed project would be inconsistent with the public convenience and necessity, which we define using a three-part test:

First, whether the applicant is financially fit to undertake the construction and provide service;

Second, whether there is a public demand or need for the proposed service;

And, third, whether the construction project is in the public interest.

Opponents to the construction project have the opportunity to offer evidence that a proposed line is not in the public interest.

Now, safety and environmental concerns are considered and weighed along with the transportation considerations in evaluating the broader public interest, and the Board's detailed environmental review is always a key component of the agency's process and consideration.

After the record is complete, the statute gives the Board broad discretion to decide whether to approve it, deny the proposal, or approve it with mitigation or other conditions necessary to protect the public interest.

Now, turning to any proposal regarding the new rail lines to serve Yucca Mountain. The core question in determining whether we would have to license the construction and operation of such a rail line would be whether the line would be operated for common carrier service or instead be used as private track.

So if the Department of Energy were to choose rail, then, it would need to decide whether it wanted to structure its proposal to provide for common carrier service in a manner that does not come within the class of auxiliary track.

If it decided to do so, then, such a decision would lead to three basic consequences:

First, the Board would have to license the project before any construction should—could begin. This means the Board would first need to find that it had jurisdiction over the project, then the Board would need to consider whether the project would be consistent with the public convenience and necessity or in the public interest. And, as noted, the public would have full opportunity to participate in that aspect.

Second, the Board would have to comply with the requirements of N.E.P.A. And evaluate the environmental impact before issuing final authority.

Typically, the Board is the lead agency in the environmental review when applying for a new rail line construction, but on occasion, the Board has been a cooperating agency in the preparation of such Environmental Impact Statements. As long as the analysis takes into account the relevant factors for the Board to consider when it reviews the application, an EIS prepared with another agency in the lead would likely be sufficient.

And, third, in the event that the Department of Energy structures this proposal to involve common carriage, the Board's licensing authority would be exclusive.

Under the preemption provision of the Interstate Commerce Act, any State or local permitting or preclearance requirements, including environmental, land use, or zoning requirements, could not be applied to the construction of the proposed rail line or any rail facilities that are part of that line.

Now, if, on the other hand, the Department of Energy chooses to structure this project as private track, then, the Board would not have jurisdiction, and the Department would build its track without notifying the Board.

Of course, if the Board did not have jurisdiction, it would not have to conduct an environmental review, and the statute that expressly preempts State and local governments from regulating rail transportation would not apply.

Now, in conclusion, as my testimony has hopefully explained, whether—what extent the Federal rail regulatory regime will apply to this line cannot be fully known at this time and depends in large measure upon whether the Department of Energy chooses to proceed with rail, and, then, if it does, whether it decides to structure the project as common or private carriers.

And, of course, as I indicated earlier, how the Board would consider any specific application cannot be answered in advance but only upon consideration of the full Board.

Now, I appreciate the opportunity to discuss these issues with you today and, of course, stand ready to answer any questions you will have.

And I would just finally note, I join Congressman Brown in, hopefully, welcoming her colleague Frank Mulvey to join our Board, hopefully shortly as soon as the other body decides to act.

Mr. QUINN. Thank you, Mr. Nober. You need some company over there at the Surface Transportation Board.

Mr. NOBER. I do. I've been alone there for 9-1/2 months, so that's long enough.

Mr. QUINN. Can't think of better company than Mr. Mulvey.

Our policy, again, for those of you who came in late, is we'll hear from all of the witnesses—Mr. Lanthrum will go next—and after we've heard testimony from the panel, we'll begin our roundup questions.

So if you could keep your opening remark to about 5 or 10 minutes or so. You understand that your full report will become a part of the record today. Summarize your remarks, and we'll get to some questions.

TESTIMONY OF GARY LANTHRUM, DIRECTOR, OFFICE OF NATIONAL TRANSPORTATION, DEPARTMENT OF ENERGY

Mr. LANTHRUM. Absolutely. Thank you very much. Good morning, Chairman Quinn, Ranking Member Brown, members of the Committee, and folks in the audience that came out here on this fine day to hear the testimony about transportation options for Yucca Mountain.

My name is Gary Lanthrum, and I am the Director of the Office of National Transportation within the Office of Civilian Radioactive Waste Management of the Department of Energy.

I'm delighted that you invited us here to provide testimony about our transportation plans and current status of our program.

As most of you are aware, on July 23rd, 2002, a Congressional Joint Resolution was signed into law designating the Yucca Mountain site in Nye County, Nevada, for development as a geologic repository for the disposal of spent nuclear fuel and high-level waste.

The Office of Civilian Radioactive Waste Management is tasked with fulfilling the Federal Government's responsibility for safe and secure disposal of spent nuclear fuel and high-level waste at a geologic repository.

I'd like to begin my discussion on transportation matters by stressing that a key element of our transportation responsibility is to build a system that can ship spent nuclear fuel safely.

Fortunately, there is a wealth of successful experience with spent nuclear fuel and radioactive material shipments both in this country and abroad.

Some examples include the fact that since the 1960's in this country alone the department and industry have successfully completed approximately 3,000 spent nuclear fuel shipments without any injury due to the release of radioactive materials or radiation.

Over 2,300 shipments of transuranic waste have been completed to the Waste Isolation Pilot Plant in New Mexico. These shipments have been conducted safely, securely, and have provided valuable lessons on the collaborative planning process between the Department and States that will be affected both by the transportation and the disposal of these materials.

In Europe, France and Britain average 640 shipments of spent nuclear fuel per year, far greater than the 175 annual shipments currently contemplated by the Department of Energy.

Over the past 25 years, more than 70,000 metric tons of spent nuclear fuel have been shipped, and that's greater than the total quantity that is allowed to be shipped to Yucca Mountain by statute.

And this experience provides a very good starting point for R.W. Shipment planning. And I say starting point, because we really are at the very early stages of our transportation planning.

No mode or corridor decision has been made yet. The criteria for routing decisions have not been determined; the final policy for emergency response preparedness support has not been established; and no decisions on specific operating procedures or operating constraints have been made.

What we have done is we've stated a preference on our mode of transport and made a corridor preference. We've also issued a strategic plan for transportation. I'll get back to that in a minute.

The Final EIS for the repository discussed two modes of transportation nationally: Mostly rail and mostly truck.

In Nevada there are three implementing alternatives for transportation: Mostly legal-weight truck; heavy-haul truck, and mostly rail.

In our Final Environmental Impact Statement we stated a preference for mostly rail nationally and in the State of Nevada.

This preference recognized the comments we received from the State of Nevada advocating for the mostly rail scenario.

No corridor preference was stated in the Final Environmental Impact Statement, but five corridors were discussed, and there were a significant number of comments provided in the EIS process.

Of the five corridors, Jean and Valley Modified Corridors begin south of the Repository, and the Carlin, Caliente, and Caliente-Chalk Mountain Corridors begin north of the Repository where they would connect to existing main line rail track.

During the comment period for the Final EIS, Nevadans expressed clear and unwavering opposition to the selection of any corridor that would cut through Las Vegas Valley. The Air Force and Department of Defense expressed clear and unwavering opposition to the construction of any rail access that would transect Nevada Test and Training Range or the Nevada Test Site.

That simply left two viable corridors for our consideration—Caliente and Carlin.

In December of 2003 the Department announced in the Federal Register Notice that the Caliente Corridor was our preference. The statement of our preference was developed with close attention to stakeholder input that had been collected as part of the EIS process. It also included our own desire to minimize land use impacts and other conflicts that would be possible in the establishment of rail access to the Repository.

Of the two corridors that were left for our consideration after looking at stakeholder input, Caliente has the lowest probability of land use conflicts.

At the same time that we issued our statement of preference for the Caliente Corridor, the Department worked with the Department of the Interior to apply for an administrative land withdrawal along the Caliente Corridor. That administrative land withdrawal application has resulted in a segmentation of a one-mile strip of land surrounding the center line of the track in the proposed corridor that's described in the EIS

In the land withdrawal application we've made it abundantly clear that existing land use and existing land users will be honored by the land withdrawal, as we work towards our ultimate goal through the EIS process.

If, in fact, we do select mostly rail as our transportation mode in Nevada we will wind up with a approximately 200-foot wide protected path either side of the right-of-way or permanent land withdrawal, that would surround the central line of the actual rail track itself.

For next steps right now we're still working on the record of decision to formally identify both our mode of transport and our corridor in Nevada if, in fact, mostly rail is selected as the transportation mode in Nevada.

This decision will help define the transportation system. Once the system boundaries are defined, we can begin significant stakeholder interaction on a number of significant topics, like routing, one of the issues that most of you have brought to the floor this morning.

If mostly rail is chosen as the mode in Nevada and a corridor is selected, an EIS will be conducted to address the alignment, construction, operation, and potential abandonment of the rail line within that corridor.

Significant stakeholder involvement will be required to address these topics. Questions about operations of the transportation system will be addressed after key configuration decisions are made.

Obtaining input to the EIS process will be a key element to establishing the operational expectations both nationally and in Nevada.

We would be very interested in receiving input on whether the rail service should be available for shared use by common carriers of other commodities, which will also help define the role of the Surface Transportation Board (STB) in future interactions on our transportation system.

In closing, I would like to reiterate that safety is a key element of our approach to collaborative transportation system development.

We have listened to our stakeholders in announcing our preference for both mode and corridor, and we'll provide many additional opportunities for stakeholders and other interested parties to provide input as we begin developing the infrastructure for the transportation system and as operational issues begin to be addressed.

Thank you for the opportunity to provide my testimony.

Mr. QUINN. Thank you, Mr. Lanthrum, for that testimony.

Let me remind my colleagues now, ladies and gentlemen of the panel, that we will operate under the 5-minute rule. That means you will get time for your question, try to stick to the five minutes. We'd like you to stay within the 5 minutes for the question and the answer, and, then, we'll move on to another questioner.

If we need to have a second or a third round of questions, we'll do that, that's why we're here, but we're going to try to stick to that 5-minute for each additional question.

I want to thank you for your comments, and I'm going to yield right now to Mr. Porter, for the first round of questions.

Mr. Porter.

Mr. PORTER. Thank you, Mr. Chairman, and thank you to the panel for being here today.

I actually have numerous questions so I certainly will heed to the time constraints and will ask some later if possible.

I guess, Mr. Lanthrum, why did the DOE announce its selection 2 days before Christmas when Congress was out of session and, of course, the press was possibly on a holiday? Why would you pick that time? Why would a time like that be picked? Was it so the public would not be aware?

Mr. LANTHRUM. Actually, the time was not picked.

When I started the job in August, I actually came to the Office of National Transportation in August of 2003. I had a couple of significant tasks facing me: One was to get a corridor preference made; and the other was to provide the staffing information to support a decision on both mode and corridor.

I began work on that diligently when I arrived, and the completion of my work finally brought fruition in that December timeframe. If I could have done it sooner, I certainly would have.

Mr. PORTER. The rules are such that it puts limitations on States when it comes to transportation issues.

I admit that the State of Nevada were not rail safety regulations. Which would be stricter? Yours or the State of Nevada's.

Mr. LANTHRUM. Well, since we have not applied—haven't made a decision on rail operations yet, nor have we decided whether if any rail operation would be in common carrier service, or a private rail operation, it's very hard to say.

Now, what we would prefer to do is to address the operational considerations in a partnership with the affected States and regions as we move forward, but no decisions have been made, so it's hard to say which would be more restrictive.

Mr. PORTER. Well, I guess, assuming the State would be more restricted, would consideration be given to the State of Nevada for its regulations.

Mr. LANTHRUM. Consideration would certainly be given. Now, what consideration means is something we would have to work out in collaboration with the State.

The State of Nevada does participate in one of the regional planning groups that DOE participates in. The Western Interstate Energy Board. And we have challenged them to come up with specific projects that they would like to approach with us to move the transportation system forward, and if that is one of the project areas that the region would like to address, we'd be more than happy to consider that with them.

Mr. PORTER. I've met with folks with the rail industry recently and asked for their perspective on transportation, and what really concerns me nationally and certainly here at home is the fact that the high-level nuclear waste could, in fact, be on the car right next to produce or right next to children's candy or automobiles.

What steps are being taken to protect the consumer that has no idea what's going to be on these rail cars and especially in light of the fact that there's consideration for removing placards from the rail cars, from what I understand.

Mr. LANTHRUM. There are a number of operational considerations that have not been broached yet.

One of the operational considerations is whether or not our shipments will remain in common carrier or in dedicated trains.

If they were in dedicated trains, there would be no other contents shipped with the radioactive materials that we would be moving. No decision has been made, but that certainly is one of the topics that's on the table for discussion with the State Regional Groups as we build our transportation plan.

Mr. PORTER. Is it right that you're considering regulations to remove placards from rail cars?

Mr. LANTHRUM. We don't regulate the placarding requirements. That's a DOT requirement, and I'm not sure what the DOT standard is on how to address material placarding and whether or not there would be consideration of the DOT regulations to remove the requirement.

Mr. PORTER. Thank you, Mr. Chairman.

Mr. QUINN. Thank you, Mr. Porter.

Ms. Berkley, questions for the panel.

Ms. BERKLEY. Yes. Thank you, Mr. Chairman.

Mr. Lanthrum, you speak of a lack of accidents in the number of shipments of radioactive waste throughout the United States, but I'd like to call your attention to the Yucca Mountain Final Environmental Impact Statement, which states categorically that we can expect over 300 accidents. And that is not my impact statement; that is the Yucca Mountain Final Environmental Impact Statement.

It is a statistical reality with the number of shipments that we're anticipating of high-level nuclear waste going across 43 States in order to have this nuclear waste buried in a hole in the Nevada desert that there will be 300 accidents, and that is without the possibility of a terrorist attack. I would bring that to your attention.

Would you like me to respond to that, or is that just a—

No. I have other questions that I'd rather spend my time with.

You also mentioned—you spoke of France and England and what they've done with transportation of nuclear waste.

But let me draw your attention to the country of Germany, who has 33 percent of their energy needs are now satisfied by nuclear energy.

The nation of Germany has determined that they have no way to safely store the nuclear waste that's created by their nuclear energy, and they have decided that within 19 years they will be nuclear energy free, and they will be going to wind.

It seems to be that if the Nation of Germany can figure out that this is inherently dangerous for its citizens, that the United States of America ought to be able to do the same. And that also doesn't require a comment.

According to the Yucca Mountain Environmental Impact Statement, a considerable amount of water will be needed not only to construct Yucca Mountain but needed to construct a rail line in the Caliente Corridor.

Can you tell me what plans the Department of Energy has to acquire the needed water?

Mr. LANTHRUM. Since we haven't selected rail as our mode of transportation or made a formal selection of the—any corridor or conducting—construction of a rail line, there are no extant plans for acquiring water requirements. That would be taken care of through the Environmental Impact Statement process.

If we do, in fact, select mostly rail, if we do, in fact, select a corridor for building a rail line, the Environmental Impact Statement process would consider how water would be obtained as well as all the other challenges that would be present for the construction and initial operation of the rail line.

Ms. BERKLEY. And don't you think after 20 years it's just extraordinary to have not even decided at this point what type of mode of transportation, how much it's going to cost, and we're going to protect the millions of people along the proposed transportation route.

Mr. LANTHRUM. As I indicated, I started the job in August with the express task of coming up with both a corridor preference and ultimately a decision on both mode and—corridor, and I'm hoping to be able to execute that fairly soon.

Ms. BERKLEY. The DOE has yet to release the national transportation route and has indicated that it is in the process of finalizing these routes.

When do you intend to hold public meetings?

Mr. LANTHRUM. Actually, the routes will not be announced by the Department of Energy. The routes will be developed in collaboration with the affected States. They will not be our routes. They'll be the States' routes that will have input with us on developing them.

Ms. BERKLEY. And will you not be holding public hearings? Who will be holding these public hearings?

Are you saying you have nothing to do with that?

Mr. LANTHRUM. Right now there are no public hearings anticipated. We do meet with the States, though, and the States have

the option of designating alternate routes for highway shipments where all sorts of hazardous materials are transported.

Ms. BERKLEY. Have you met with the State of Nevada?

Mr. LANTHRUM. We have met with the State of Nevada through the—their participation in the Western Interstate Energy Board. That's where the government's representative has interfaced—

Ms. BERKLEY. And what was the position of the State of Nevada on—in these hearings?

Mr. LANTHRUM. They would very much like us to get to the issue of routing, but until we make our mode decision, it's very difficult to talk about routes. You don't know if you're going to be looking at truck routes or rail routes.

Ms. BERKLEY. And when will you make that decision?

Mr. LANTHRUM. I'm hoping very soon.

Ms. BERKLEY. Do you have a time specific? One month? Two months? Ten years? One Year.

Mr. LANTHRUM. Within the next month and a half I'm hoping to have a decision out.

Ms. BERKLEY. Next month and a half.

Mr. LANTHRUM. That's what I'm pushing for, yes.

Ms. BERKLEY. And will you be meeting with members of the State of Nevada executive branch to help determine this?

Mr. LANTHRUM. We have significant input from the State of Nevada through the EIS process where the options were considered, and so the data that is in there consists of quite a bit of input from both the executive and legislative branches of the State of Nevada and citizens of Nevada.

Ms. BERKLEY. So you mean to tell me that 83 percent of the people of the State of Nevada opposed to shipping nuclear waste to Yucca Mountain and the governor and the executive branch of this State being opposed to it, that they are helping you come up with a route?

Mr. LANTHRUM. The State of Nevada gave very clear input about routes they didn't want to use. They did not want DOE to develop any transportation capabilities through the Las Vegas Valley. That certainly was inputted about how we would move forward. The State of Nevada has also expressed a preference for rail over mostly truck as our mode of transport. We certainly took that into consideration as we developed our plans.

Mr. QUINN. Thank you, Ms. Berkley. I appreciate it.

Mr. Matheson.

Mr. MATHESON. While the testimony has helped confirm the reason why I voted against Yucca Mountain last summer, and that is we don't know what mode we're going to ship this in. We haven't made any decisions, and yet the site was already recommended a license, and Congress already voted on it. I think we're getting the cart ahead of the horse.

And that's why I think it's important to have this hearing today. The transportation risk was never adequately assessed before Congress voted on this, and you just helped confirm that today.

I appreciate your doing that for us.

There have been some proposals. Since we are not yet having made a public decision, as I understand, there have been proposals for the development of a rail truck transfer option where a facility

very well might be located in, say, Utah, and the nuclear waste would be shipped by rail to Utah and, then, transferred to truck for shipment to Nevada.

I'm wondering if there is any consideration being given to use of a site or sites in Utah, or for that matter elsewhere, for a intermodal transfer of spent nuclear fuel from train to truck shipments.

Mr. LANTHRUM. In the Final EIS in looking at the implementing alternatives of transportation within Nevada, as I indicated earlier, there are three options: There's the legal-weight truck option; the heavy-haul option; and the rail option.

We looked in the EIS at a combination possibly of using mostly rail nationally and, then, transferring those shipments to a heavy-haul carrier within the State of Nevada, so you could use the larger spent fuel casks that we transferred by rail to Nevada and, then, transfer to heavy-haul truck to get to the repository.

In the EIS there were a number of locations looked at where the intermodal capability could be installed. I don't believe any of those locations were in the State of Utah.

There are other options that were looked at, although not as extensively in the EIS

One was the possibility of putting legal-weight truck casks on the rail cars, and, then, transferring those at an intermodal facility somewhere onto a legal-weight trucks. They could then go down existing highways.

No additional look has been taken at that capability, and if—if it were, that is something that could be managed in most anywhere, but no specific locations have been selected right now.

Mr. MATHESON. Try another line of question.

As I understand it, the Western Governors' Association has established a specific protocol working relationship regarding the shipment of nuclear waste via highway, but no such relationships or agreements currently exist with respect to rail transport.

What role do you think the States have in designating principal and alternative routes for trains that is the service route for Yucca Mountain?

Mr. LANTHRUM. Actually, the Department of Energy's relationship with the western States for our OCRWM shipments is through the Western Interstate Energy Board, not through the Western Governors' Association.

One of the issues that we have on the table is to talk about routing methodologies, and there is discussion about developing shipment protocols for rail shipments, and certainly the Western Interstate Energy Board will be involved in those discussions when they take place.

Mr. MATHESON. I'm a westerner, so I appreciate that, but we're talking the whole country here. So what's going to be the role of the States throughout this country in terms of establishing or involving establishing the rail routes?

Mr. LANTHRUM. The Office of Civilian Radioactive Waste Management supports four cooperative agreements with regional groups of States.

Transportation planning is not something that can be done effectively on an individual State basis. You really have to look at get-

ting out of Las Vegas into the next State so it really needs a regional perspective as a minimum to be successful.

The four State Regional Groups that we work with are the—the Eastern Conference of Council of State Governments, the Midwestern Conference of the Council of State Governments, and the Southern States Energy Board. Those together with the Western Interstate Energy Board comprise all the States in the continental U.S., and those are the planning groups that we work with on routing issues.

Mr. MATHESON. I appreciate your working on the routing issues.

Do they have any tangible goals? Do they have any authority? Do they have any ability to effect what goals are going to be?

Mr. LANTHRUM. We have actually empowered them to come forward with project proposals that would help move this forward, project proposals that would serve the States' needs as well as of the Department's need.

We have several draft ideas from them.

No formal proposals have been submitted yet. As soon as they are, we'll be working diligently to empower them to help move this project forward.

Mr. MATHESON. And I'm glad that you're asking for these proposals and they're empowered to give you proposals, but ultimately just so I understand, it's your decision, it's not the States' decisions that we're—

Mr. LANTHRUM. For truck shipments the States do have a role in the decision-making process. The States can designate alternate routes for highway shipments.

Mr. MATHESON. What about on rail routes?

Mr. LANTHRUM. On rail routes the responsibility of the States is not as clear, and it's unfortunate that the Administrator of the FRA was not here to talk about how rail operations work.

Mr. MATHESON. Thank you.

Mr. QUINN. Thank you.

Ms. CARSON.

Ms. CARSON. Let me yield to Congresswoman Berkley.

Mr. QUINN. Ms. Carson yields to Ms. Berkley.

Ms. BERKLEY. Thank you, Ms. Carson.

In light of the current situation in France, where there's riots they use explosives on rail lines, what have you done to address the potential of someone targeting a waste shipment with the intent of inflicting maximum damage to the shipment and dispersing radioactive materials on our Nation's highways and rail lines?

Mr. LANTHRUM. As you're probably all mostly aware, the Department of Energy is responsible for moving things that are potentially far more hazardous than spent fuel rods.

The Department is also responsible for nuclear weapons movements and moving special nuclear materials. There is a deinventory of one of the Western States Rocky Flats Plant in Colorado.

All the plutonium that was stored at that site has been removed.

The organization responsible for those movements is the Office of Secure Transportation, and you couldn't ask for an organization that has better awareness of how to manage threats than that organization because of significant responsibility that they have.

We've been working very closely with the Office of Secure Transportation to assess the design basis threat that we need to be aware of, how to mitigate those, and we would be happy at some point to provide a classified briefing to you about how that is going.

Unfortunately, it's not a subject that I'm able to discuss in a public forum.

Mr. QUINN. Would you generate information—you're telling us you're not allowed to discuss this in the public forum, which we understand, but if an individual member such as a member from this panel wanted to have that discussion with you, you are at liberty to have that discussion?

Mr. LANTHRUM. I'd be more than happy to have that discussion.

Mr. QUINN. So, Ms. Berkley, if that is something that you need to find out, I think, if you want to at some point, beyond this forum, we'll arrange for you or others to have that discussion.

Ms. BERKLEY. I appreciate that. I've attended a lot of confidential briefings in the last 5 years that I've been in Congress, and I'm sitting here, and I can't help but think that this is something that the public should know something about because it affects them in a very direct way.

So I'm not sure I will take you up on that; however, I think this is something that the public needs to know, how its government is going to protect the people of this State from a potential terrorist attack against a mobile to mobile.

Let me ask you: What type of a vulnerability testing has been done on transportation casks, taking into account the potential terrorist attack with the use of a demolition device?

Mr. LANTHRUM. Again, a very extensive study has been done of the potential for various weapons attacks and their impacts on transportation casks. The results of those tests, again, are classified. And I could share those in a briefing if you were interested.

Ms. BERKLEY. Well, let me suggest to you 60 Minutes had a—I don't think 60 Minutes is particularly classified—had shown a test done by the Aberline Laboratories of a TOW missile breaching—90 percent breach of a nuclear waste cask.

If that cask had been filled with nuclear radioactive material, I submit to you that that would have been a very dangerous situation that may have cost loss of life and tremendous economic damage.

What are you doing—what is the Department doing to protect the people of this country against that possible terrorist attack situation?

Mr. LANTHRUM. There are multiple things that can be done, but, again, to divulge the specifics is classified. How you would go about approaching mitigating a terrorist threat is a classified activity.

Ms. BERKLEY. Have you been working with the local law enforcement agencies across the country that would be the first responders in case there was a terrorist attack?

Mr. LANTHRUM. Actually, we are required to work with emergency responders where we provide funding through section 180(c) of the Nuclear Waste Policy Act to States to develop the appropriate emergency response—

Ms. BERKLEY. Who here in Clark County have you been working with? Who's the first responders that you've been working with in Clark County, Nevada?

Mr. LANTHRUM. The initial grants for this process will come out in 2005. We've also submitted—

Ms. BERKLEY. So you haven't done it yet?

Mr. LANTHRUM. We haven't done it yet.

Ms. BERKLEY. OK. So, in other words—so let me get this straight. You haven't done anything yet to coordinate with the Homeland Security people first responders on the ground that if, God forbid, there was a terrorist attack and nuclear casks was breached and there was release of radioactive waste, we have had no training and we have had no coordination with local law enforcement at this stage?

Mr. LANTHRUM. That is not correct. The Office of Civilian Radioactive Waste Management is not currently shipping, so it has not begun contact coordination, but the Department itself is doing spent nuclear fuel shipments.

Currently the Foreign Research Reactor Fuel Program and several others are currently shipping those materials, and they do provide training and interface with emergency responders.

There is an extant emergency response and preparedness training effort being put on by the Department. Right now the Office of Civilian Radioactive Waste Management is not doing any shipments, and we won't be for another 6 years, and so it's inopportune for us to be involved directly, but we are peripherally involved. We are connected with the folks who are doing the current training, and we're engaged in that process.

As we get closer to the point where our shipments would pick up, we will become more directly engaged. Our funding will come into play, and we'll be involved more directly in the training.

Ms. BERKLEY. I find this very curious since I've been contacted by the first responders across the country that said they've had absolutely no contact with the Department whatsoever, have no funds, no training whatsoever, and no equipment in case something like this happens.

Let me ask you one other question—

Mr. QUINN. Excuse me, Ms. Berkley. Per the 5-minute rule, we're going into 6 or 7 minutes.

Ms. BERKLEY. I would like to make another round.

Mr. QUINN. Sure. We'll do a second or third if we have to.

I'd like to take an option on one of my questions, if I may. Give you a chance to get a drink of water. And, then, I have some questions for Mr. Nober, if I may.

Mr. Nober, a lot of—I must admit a lot of your oral testimony this morning was legalese, which it has to be, I understand the work that's done, that's the way it is, and until some decisions are made, the Service Transportation Board can't really answer some of the questions that have been asked this morning.

And it is, indeed, unfortunate that Mr. Rutter could not be here from Chicago with regards to the weather because some of the questions could be answered by him.

But my question is a simple one to you. In your opinion, is it legal for a railroad to refuse to carry nuclear waste?

Mr. NOBER. If it is in a common carrier, it is not legal for it to refuse.

Mr. QUINN. They must take it.

Mr. NOBER. They must take it. In fact, our agency ruled that way 25 years ago.

Mr. QUINN. Mm-hmm. Have you had any ruling since then?

Mr. NOBER. We have not. We have not, although we have had a proceeding for over 20 years on how much they can charge for it. That's been ongoing for many years.

But they must carry it, subject to the packaging and safety standards set by the FRA, the Research and Special Programs Administration, and the Department of Energy.

Mr. QUINN. Thank you very much.

Now I yield the remainder of my time to Mr. Porter.

Mr. PORTER. Thank you, Mr. Chairman.

I failed to mention in my opening comments that Congressman Gibbons sends his best and support for the hearing today. I also want to add that for the record he had another commitment in Reno.

Mr. PORTER. Also I'd like to acknowledge to the people here today, Congressman Berkley and myself, although we don't agree on every issue, when it comes to Nevada, it's Nevada first. And I appreciate being here, and I'm willing to answer questions, especially those impacting in Nevada.

Mr. Nober, the Transportation Board requires an actual routing for nuclear waste and other areas.

Whose jurisdiction is that, yours or DOE's?

Mr. NOBER. For construction, for building the new rail line would be our jurisdiction, if—depending on how they set it up. But the routing and the operation would be under the Department of Energy and the Federal Railroad Administration.

Mr. PORTER. It's my understanding that there was a lawsuit sometime back by DOE to see that the cheapest route would be selected, not necessarily the safest but the cheapest.

How does that reconcile with what's in the best interest of the public if we're worrying more about pricing than we are about safety?

Mr. NOBER. Well, sir, I'm—I think that they can both look at price and—but there are a range of routes that are available to ship nuclear waste that are approved by the Department of Energy, by RESPA, and by the Federal Railroad Administration. I think within those the Department of Energy under the existing scheme has some flexibility to try to seek a cheaper rate and cheaper route, but they can't carry nuclear waste on a route that's not approved for it.

Mr. PORTER. That's not approved?

Mr. NOBER. That's my understanding.

Mr. LANTHRUM. That's correct.

Mr. PORTER. I guess the next question is back to something that my colleague was talking about, and that is first responders.

Will they be notified—I guess this is for either one of you gentlemen.

Will first responders be notified when there is a shipment come through their communities with high-level nuclear waste in advance?

Mr. LANTHRUM. Actually, one of the elements of the Nuclear Waste Policy Act in regards to the extent that we're regulated by the Nuclear Regulatory Commission, there are two areas that it cites specifically: One is on certification of casks—we will use NRC certified casks for these transports; and the other is pre-notification. There's a requirement that we follow the same pre-notification requirements that a utility or private sector shipper would have to follow for these shipments.

Mr. PORTER. I understand that's fairly limited, but there really is not a structure in place to notify first responders of the actual transportation through our communities to the—

Mr. LANTHRUM. Actually, there's a very good system in place for notifying the folks that have a need to know.

The current shipments that are done have not only pre-notification that the appropriate folks are provided with, but there's also tracking the shipment. So those people who will be affected and involved in the actual transit of the shipment as it goes from the shipper to the receiver can follow wherever it is and be aware of when it's in their jurisdiction and when they have to be ready for responding if something should occur.

Mr. PORTER. Could you define the people that need to know? Who are those people?

Mr. LANTHRUM. How far it goes down, it's something that changes from State to State.

The governor's designee can determine the degree of communication that a shipment requires, so it's not something that's set in stone.

Mr. PORTER. That's the problem, it's something that's not set in stone.

So my understanding from our first responders, they're not notified today of any waste that comes through the State of Nevada.

Mr. LANTHRUM. Now, there is, I think, a difference in the degree of notification depending on what's being shipped, and—and if you're talking about low-level waste, the degree of notification, that may be less than it would be for spent nuclear fuel.

Mr. PORTER. So what you're—excuse me. So what you're saying is that assuming that there is transportation for a rail system across the United States, you will notify each community in advance of when the

Mr. LANTHRUM. We'll notify the governor and the governor's designee and the emergency responders, that's correct.

Mr. QUINN. Excuse me, Mr. Porter. You used up my time. I yielded to you.

We are going to go to Ms. Brown for questioning and then back to you.

Ms. Brown.

Ms. BROWN. In terms of conducting an EIS on new construction, do you think for consistency's sake that it would be better for the Board to always do the reviews?

Mr. NOBER. My understanding of your question is is it OK for us to allow another agency to be the lead—

Ms. BROWN. Yes, that's another way to put it.

Mr. NOBER. —or whether—

As long as the Environmental Impact Statement that's prepared is sufficient that covers the issues that we would need to cover and that allows the commissioners on the Board to make a fully informed judgment of the environmental effects. Which agency is the lead agency is something of a formality.

What's important in an Environmental Impact Statement is that it analyze the environmental harms, that it analyze alternatives, and that it do so in a comprehensive way so that those of—if it's one that we have to rule on, that we are able to have a full understanding of what the environmental effects of the project are.

So whether or not our agency or Energy is the lead agency is from a—it's more of a formal—formality than substantive. As long as the issues we need to see are done in an administratively sufficient way, I think that's sufficient.

Ms. BROWN. So it doesn't matter whether it's consistent?

Mr. NOBER. Well, as another—the Environmental Impact Statement prepared under Federal law has to be consistent and has to comply with what the regulations are. Those are set out by C.E.Q. About generally how one has to be done.

And the courts, you know, are very free to rule on these things as our agency has found out a couple times in the past year.

So there—I think that the standard which somebody has to prepare for an Environmental Impact Statement are consistent from one Federal agency to the next.

Ms. BROWN. Let me just review.

Nevada officials testified that despite promises to the contrary, DOE failed to consult with the State, local, and private officials before selecting the preferred rail corridor.

In your statement you refer to meeting with State, local, and Indian tribes in the future, but why haven't you already done so all along?

It seems to me that there is a gap between the public's knowledge as to what these routes are going to be. I understand this was done for safety purposes, but I also think that the communities need to know if this material is going to be transported through their area.

Mr. LANTHRUM. Actually, the five corridors that were considered in the EIS, there was considerable opportunity for folks to provide input during the EIS process. That's what it was set up for, was to look at alternatives. It would have been very possible at the conclusion of the EIS process.

When the Final EIS was published, we did state a preference for mostly rail in the EIS, the Final EIS we could have stated a preference for a corridor at the same time. The body of input was provided through the EIS process. There just happened to be a delay between when the Final EIS was issued and when the final corridor preference was stated.

Ms. BROWN. I'm going to give the rest of my time to Ms. Berkley.

Ms. BERKLEY. All right. Thank you.

Say, for example, God forbid, an accident occurs. Who's going to pay for the cleanup? Is it going to be the nuclear industry? The railroad industry? The taxpayers of the United States of America.

Mr. LANTHRUM. The Price-Anderson Act would kick in, and

Ms. BERKLEY. What is that?

Mr. LANTHRUM. That's supported through the—essentially—

Ms. BERKLEY. If Price-Anderson kicks in, that means the taxpayers of the United States of America will have to pay for the cleanup of an accident; is that correct?

Mr. LANTHRUM. That's correct.

Ms. BERKLEY. The Department of Energy has applied for land withdrawal from the B.L.M., and the requested lands have been segregated by the B.L.M. While your request is being considered.

What steps have you taken to notify owners of private lands impacted by the Caliente Corridor for their lands—that their lands may become part of your EIS evaluation and ultimately needed for the rail right-of-way?

Mr. LANTHRUM. Actually, we've had a fair amount of discussion about what our corridor preference means. Again, it's just a preference; it's not a selection.

We've talked and we've had meetings with the N4 Grazing Board. We're trying to set up meetings with the N6 Grazing Board.

As we've indicated, the selection of a preference for Caliente was based largely on it being very remote. Not a lot of people are out there on the mostly B.L.M. Land. We're trying to work with landowners, but, again, this is just—

Ms. BERKLEY. Have you been working with the landowners?

Mr. LANTHRUM. —this is just to explain what our preference statement is because no selection's been made.

Once a selection is made, then, we would go through the more detailed process of discussing what that selection means—

Ms. BERKLEY. So, in other words, after you made the selection, then you go back and you tell them what the impact is going to be on their land?

Mr. LANTHRUM. Well

Ms. BERKLEY. Isn't that a little ass backwards?

Mr. LANTHRUM. Actually, it's a phased approach.

Ms. BERKLEY. A phased approach.

Mr. LANTHRUM. The EIS process was a start. We looked at all the alternatives that we asked for input on, what those alternatives meant. We got quite a bit of input from both individuals and from local governments and other groups.

The next step in the process is to state a preference. We've done that. We're working with folks to explain what the preference means, and there's a lot of input that is being provided.

And when we, in fact, make a selection—

Ms. BERKLEY. Input by whom?

Mr. LANTHRUM. We've gotten a lot of comments from the folks—primarily the land users right now, the folks that have grazing rights on the B.L.M. Land, and we're getting a number of comments.

We've also got comments from Lincoln County and some officials in the City of Caliente. There have been a number of comments we've received. I think it's on the order of 12 comments that have come in now for our preference statement.

Mr. QUINN. Let me interrupt for just a second.

Ms. Brown's time has expired. She had yielded to Ms. Berkley. Let me turn to Mr. Porter, who has his own time right now.

Mr. Porter.

Mr. PORTER. Thank you, Mr. Chairman.

The underlying question—although the State of Nevada is battling Yucca Mountain enforce—and I applaud the State of Nevada—but it's now in the hands of the politicians within the halls of justice instead of the halls of Congress.

I guess my question is why would DOE move forward with site selection and thumb your nose at the legal process? The State of Nevada is currently in the courts of our land to get this resolved.

Why would you move forward in the midst of that with the site selection against the wishes of Nevada? I mean—

Mr. LANTHRUM. Largely because there was a public law passed that designated development of a single geologic repository in Nevada, and that's what we are working on doing. We are following the will of Congress and moving forward.

Mr. PORTER. OK. Let's set aside the rhetoric for a moment. Why would individuals of DOE on the eve of the State of Nevada going to court—why would you move forward with this selection? Let's talk about common sense.

Why would you thumb your nose at the State of Nevada on the eve of the major court hearing?

Mr. LANTHRUM. We don't believe that the moving ahead is thumbing our nose at the State of Nevada.

Clearly we believe that the court will decide what the court will decide. And in the interim there are a number of actions that we can work on in parallel.

Mr. PORTER. I guess, as you mentioned the law, let me comment about real people and real discussions.

DOE made a commitment to the State of Nevada in selecting a preferred method of transportation followed by a corridor selection followed by an alignment.

It appears to me that you reversed those commitments to the State of Nevada. Tell me about that. Why? What am I missing? Why would you reverse your commitment to the State of Nevada on those issues?

Mr. LANTHRUM. The actual process that we went through is more typical of what is done for an EIS where you look at alternatives, you state a preference for one of the alternatives, and then you make a decision.

And there was clearly a need to have a preference stated before an actual selection can be made of the corridor and, ultimately, we will have made all of the decisions that will allow us to pursue the transportation requirements. The specific order was not going to change, necessarily change, the outcome.

Mr. PORTER. Well, it certainly changed the outcome of what—the relations between the DOE and the State of Nevada because, in fact, you did reverse your commitment to the State of Nevada.

I mentioned earlier about the other option, and that is by truck.

Mr. LANTHRUM. Yes.

Mr. PORTER. And correct me if I'm wrong, we're talking about trucks 220 feet long in a line of about 300 feet in total group of

vehicles traveling at about 25 miles per hour through communities across this country.

And my understanding is if, in fact, trucks are chosen, there will be six to seven a day for 30 years traveling through the heart of Las Vegas and through other communities across the country.

Mr. LANTHRUM. Well, again, if the truck mode is chosen, the State of Nevada has significant say on actual routing through the responsibility delegated them from the DOT, and so the State of Nevada has significant input on the actual truck routing. It's a Nevada decision, and we'd be happy to engage the State on that—

Mr. PORTER. Still, am I correct that we're talking about trucks 220 feet long?

Mr. LANTHRUM. If heavy-haul trucks are used, they would be very large to disperse—distribute the load.

If legal-weight trucks are used, it's just typical semi-trailers that go down the standard highways.

Mr. PORTER. DOE's own information, a preferred method is trucks 220 feet long. That's two-thirds of a football field.

Mr. LANTHRUM. Actually, that's only for the heavy-haul trucks.

Mr. PORTER. Well said. Thank you.

Which is a preferred method of transportation?

Mr. LANTHRUM. Actually, it was not preferred. The preference stated in the EIS was rail, not for either truck—

Mr. PORTER. Well said. Rail. But if, in fact, you are to use trucks, the preferred was large trucks traveling through communities.

Our streets and highways can't handle that type of a truck, plus the safety issue next to schools and churches, and communities.

Mr. LANTHRUM. If heavy-haul trucks were required to be used, there would be an upgrade necessary for roads. Again, that upgrade would be located in areas that the State would have significant input on, but our preference right now is for rail, not for heavy-haul truck.

Mr. QUINN. Excuse me. Your time has expired.

Ms. Berkley.

Ms. BERKLEY. Thank you. I just have a few more questions.

Let's get back to the steps you were talking about, a very methodical process of could you tell me what steps the Department is taking to notify holders of leases, permits, rights-of-way on public land impacted by the Caliente Corridor?

What steps have been taken to notify these people that will be impacted at this time?

Mr. LANTHRUM. Since the selection has not been made, the only steps taken so far is to talk to the grazing boards, the N4 and the N6 grazing boards.

Once a selection is made, there will be significantly more input, there'll be scoping meetings, and there will be significant outreach to the community at large.

Currently, we're trying to identify additional members of the community beyond grazing groups that might be interested in talking to us.

We've asked the grazing boards and mining groups, that might be interested in talking to us that have—

Ms. BERKLEY. But this all takes place after the selection is made?

Mr. LANTHRUM. Actually, no selection has been made yet. We are—

Ms. BERKLEY. That's exact—

Mr. LANTHRUM. —reaching out right now to the N4 and the N6 grazing boards. We are asking them for additional land users in the area that might like to talk to us, And that's prior to the selection being made.

Ms. BERKLEY. And will you be speaking with those people that are impacted, directly impacted, or just the grazing board before the decision is made so they will know? They will know exactly what the impact is before, before the decision is made?

Mr. LANTHRUM. We're reaching out to talk with as many people as we can about the preference statement that is somewhat independent of the actual selection.

Ms. BERKLEY. Let's see. The Las Vegas routes were dismissed because—largely because of population density.

Would that also lead to other major cities such as Chicago, Salt Lake, Buffalo, Atlanta, Indianapolis being disqualified from the proposed transportation routes?

Mr. LANTHRUM. Actually, the Jean and Valley Modified Corridors are not dismissed because of population density. They were dismissed—

Ms. BERKLEY. I said the Las Vegas Corridor.

Mr. LANTHRUM. The Las Vegas Corridor includes the Jean and Valley Modified Corridors. Those are the two corridors that we considered that transited the greater Las Vegas Valley. Those were dismissed because of the input on not wanting to do a rail construction along those areas. Those—

Ms. BERKLEY. Population density was not taken into account at all?

Mr. LANTHRUM. Well, the population density might have been part of the Nevada consideration.

Our consideration was only for the comments we received from the State to avoid construction of a rail line in those corridors.

What their basis for that comment was is the State of Nevada concern.

Since the existing rail system in the rest of the U.S. has already been constructed, we're not looking at building railroads anywhere else. We would use the current infrastructure for the rest of our shipments across the country.

Ms. BERKLEY. I see. So just for point of information, with Price-Anderson, I voted against it, and I suspect my colleague did as well. I don't think that the taxpayers of the United States of America should further subsidize the nuclear industry by cleaning up their messes with taxpayers' dollars.

Mr. Nober, could I—I just have one question for you.

Has there been contact between the Federal Railroad Agency and the STB to date concerning the Caliente Corridor? And if so, can you tell me when the meetings took place, who was involved, and what was discussed?

Mr. NOBER. Meeting in what sense? We have not formally discussed with the FRA the Caliente Corridor or any of the, you know, aspect we would have jurisdiction over.

I mean, we did talk to the FRA in preparation for the hearing, but that's, I think, typical, but not in terms of selection.

Ms. BERKLEY. So you have not had any contact with the Federal Railroad Agency regarding the Caliente Corridor, None?

Mr. NOBER. I don't know what you mean by—what do you mean by "contact."

Ms. BERKLEY. Have you had a formal meeting?

Mr. NOBER. No, we've not had a formal meeting with the FRA.

Ms. BERKLEY. All right. Thank you very much.

Thank you, Mr. Chairman.

Mr. QUINN. Thank you.

Mr. Matheson, any more questions.

Mr. MATHESON. Just to follow up on one question from Ms. Berkley, first of all.

Is population density not a consideration at all at the time of the safety of the transportation of nuclear waste when you're picking routes?

Mr. LANTHRUM. Risk is an input in looking at transportation, and risk is a combination of a number of factors.

Some of the guidance, particularly under DOT for highway transport, the guidance under DOT is to use the shortest and quickest routes for transporting.

Mr. MATHESON. Is population one of the factors, population density, figuring out routes?

Mr. LANTHRUM. Population density does contribute to risk calculation.

Mr. MATHESON. Thank you.

Next question. In June of 2002 in a presentation to the Utah Radiation Control Board the Federal Railroad Administration indicated they had fewer than 400 inspectors in all disciplines nationwide.

It's understood there are currently only five inspectors for different disciplines covering all of California, Nevada, Utah, and sometimes Arizona, and Idaho, and only one of those individuals is a hazardous materials inspector.

Is the workload of current inspectors such that they could handle Yucca Mountain shipments?

Mr. NOBER. I'm sorry, Congressman, I can't answer that. I do know that Administrative Rutter addressed hiring of new inspectors in his testimony.

Mr. MATHESON. Do you know, does the Surface Transportation Board recognize State-designated local area hazards?

Mr. NOBER. In what context? In preparing the Environmental Impact Statement—

Mr. MATHESON. I want to know if these would have an effect on the shipment of this material in terms of perhaps further alternate routes or reduction of speed or States designating a certain area over part of that.

How would that play into the operation?

Mr. NOBER. That would not. I mean, that would be up to the Federal Railroad Administration to decide operational—how quickly they could—you know, how fast the transport could operate, under what safety standards.

I will say this: That if our agency licensed—if it's a common carrier line, then, I won't—I think Administrator Rutter's testimony said that, but I think that concomitantly State and local safety regulation of the rail operations are also—

Mr. MATHESON. Last line of questioning.

It's my understanding that currently the Inspector General at the NRC is investigating the issue about quality assurance program relative to full casks will be used for transportation of nuclear waste.

Is there any chance to have any additional testing of the spent fuel transportation casks, and if so, when would that start, how long would it take, and how are we going to do that? What's the scope of the testing?

Mr. LANTHRUM. The Nuclear Regulatory Commission does have what they are calling a Package Performance Study that they are looking at. That is a Nuclear Regulatory Commission activity, and I couldn't respond specifically to any details on that.

Mr. MATHESON. Would that be at all a consideration in you selecting development of transportation plan and the viability of casks?

Mr. LANTHRUM. Our requirement is to use certified casks, certified by the NRC, and their testing program undoubtedly will contribute to their certification process and thereby affect us.

Mr. MATHESON. Thank you, Mr. Chairman.

Mr. QUINN. Thank you.

Ms. Carson.

Ms. CARSON. Thank you, Mr. Chairman. I just have a real quick question.

And I understand your job is to design a way to get rid of this stuff, dump it somewhere.

You're concerned about transport; I'm concerned about saving people's lives. So that's where we're sort of off course.

According to what my office told me, the Department of Energy is predicting that 108,500 shipments will be required over 38 years, and of particular concern to me is that 108,000 of these casks could possibly travel through my district.

Is your plan to transport this to Yucca Mountain by any means necessary? I know it sounds like a simplistic question, but that's the only thing I can understand. Any way you can get it there, you're going to get it there?

Mr. LANTHRUM. We'll get it there compliantly. The number of 108,000 you talked about was the worst-case scenario where legal-weight trucks would be used for the transport.

The movement of 70,000 metric tons of these materials to Yucca Mountain, if rail's selected, would drop the number of shipments by a train down to the neighborhood of 3,000 shipments. Quite a bit of big reduction there.

And, again, the routing decisions and the other aspects of transportation are something we're going to be—continue to work out with the States' regional groups and States' participation in those groups.

Ms. CARSON. Thank you.

Mr. QUINN. Thank you, Ms. Carson.

We're going to finish up, if it's OK, with one last question from Mr. Porter.

Mr. PORTER. Thank you, Mr. Chairman.

I believe both you gentlemen have probably seen this map or have one which is the railroad network of the United States.

In looking at the map there are really two possible corridors into the State of Nevada for rail.

Assuming here for a moment that DOE has successfully via the courts found that they could find the cheapest and least expensive alternatives, what assurances do the people of Southern Nevada have that at some whim of the DOE they will not be transporting hazardous materials through Southern Nevada?

I understand from testimony earlier today that this is the direction at this point to go to Caliente. That's today. What about tomorrow? What assurances do we have in Southern Nevada that it will not cross through the highly populated area of Las Vegas and the communities surrounding Las Vegas?

Mr. LANTHRUM. The greatest assurance that Nevada has is their participation in the State Regional Planning Group that we work with that we'll establish our routing and our operational procedures with.

And we've been very good at sticking to our commitments made with those groups for the shipments the department has had.

Mr. PORTER. I don't think you want to go there with commitments made and commitments kept. And that's the problem. And that's why we're here today.

Mr. NOBER. Congressman Porter, if I could just add one thing, and I don't mean to speak, but one of the advantages of rail is that rail can only go where there are railroads—where there are rail lines.

And if there isn't—if the Caliente line is built, then, you couldn't bring it up through another corridor because there isn't another corridor. It would only be able to go on the route where there are railroads. So that is one assurance that the line is where it is, and the trains can only go where there are tracks, which—I don't mean to sound glib, but it's one of the differences between rail and road where there are lots of different kinds of routing. They can be altered fairly easily.

Mr. PORTER. Well, I really feel sorry for the eastern part of the United States because there are hundreds of accesses through communities.

But, I guess, what you're saying is if there is rail available to Caliente, they're going to use the rail to Caliente. If there isn't, you don't have many other options but to come through Southern Nevada, through the Las Vegas Valley.

Mr. LANTHRUM. Actually, if there is no rail available, then, the option would be to use truck, and the State of Nevada has significant input on the routing that would be allowed for use with truck shipments. And so the State of Nevada would be able to control where these shipments would go through the alternative routing designations authorized by DOT.

Mr. PORTER. Mr. Chairman, can I just ask one follow-up question? Thank you.

You mentioned that we'll have significant input into the transportation if it's on our streets and highways.

What assurances do we have that we really do? We've looked at the waste coming through our community for years, and we've been told that it's a Federal issue, not a State issue.

So what assurances do we have that our wishes will be listened to?

Mr. LANTHRUM. Well, with hazardous materials States can designate alternate routing, and those—we can be held to the States' designated routes. We'd be more than happy to start talking to the State of Nevada about alternative routes for truck shipments.

Even if mostly rail is selected as our mode of transportation, there will be some truck shipments because some facilities don't have the capability or the access for loading rail casks, and for those small number of truck shipments, that would be conducted.

Even if rail is selected as the primary mode, we would be delighted to talk to the State of Nevada about alternative routing and make some agreements.

Mr. QUINN. Ms. Brown, do you have a question?

Ms. BROWN. Yes, sir, just a couple quick comments.

One, I hope we can have a follow-up meeting with the administrator of the Federal Railroad Administration.

I know that we can submit questions, but I think we need to have that meeting face to face because I have grave concerns that I've had since September the 11th, that we have not stepped up to the level where we need to be in the area of rail safety. As we move forward, I do think that we need to have that discussion.

I would like a private meeting to find out what is being done with the affected communities—what discussions have gone on, and perhaps you and I could do that jointly.

Mr. QUINN. Certainly, Ms. Brown. I think that's something we both have talked about before, and we could follow through with that.

The difficulty for our friends who are here with us today in this room, they won't be there for that part of it, but certainly we can report back through the various representatives who are here at the table with us this morning.

Thank you, Ms. Brown. All right. I'm going to do a bit of house-keeping here. I'm going to ask you now with the consent of the committee to allow 30 days for members to revise and extend their remarks and to allow the submission of additional statements and testimony.

Is there objection? No objection.

So what that means for the general public and the two gentlemen here before I dismiss you is that because Administrator Rutter is not here this morning, he was trapped in Chicago trying his darndest to get here three different ways, his testimony is part of the record.

Mr. QUINN. But what that means is that both of you and his remarks become open for any of us here at the table to ask additional questions in writing and then to receive responses from you.

I know you both understand that. I want the audience to know, And I know that my colleagues here on the board understand that as well.

Thank you both for your testimony, for your responses. I want to thank the panel for their professional perusal of some of these important questions.

And we'll take a 2-minute break to get our second panel.

[Recess.]

Mr. QUINN. Let's reconvene.

Mr. Miller, thank you for your help. Appreciate it very much.

This is our second panel this morning. And, for the record, I think we're all here to discuss the Federal rail policy. This is the Railroad Subcommittee after all.

There are communities along the proposed corridor who have submitted testimony by impacts on their communities, which is equally important, and that all becomes part of our record this morning.

And I will yield to the gentleman from our host city, Mr. Porter, to introduce our second panel. Jon.

Mr. PORTER. Mr. Chairman, we do have a superb panel today. I'd like begin by introducing our first speaker, the Honorable Dick Bryan, not only a personal friend for probably 25 years, prior legislator, attorney general, governor for the great State of Nevada, former United States Senator, and advocate for the wishes of the majority of the people in Nevada who are in opposition to Yucca Mountain. I'd like to, once again, introduce my friend, the Honorable Mr. Dick Bryan.

Mr. QUINN. If I might, just for one second, if I could ask you to introduce the full panel now, if you don't mind, and we'll go through our statements.

Mr. PORTER. I guess, just as a sidebar, Mr. Chairman—

Mr. QUINN. Yes.

Mr. PORTER. —I had an opportunity to chair a hearing in D.C. Not too long ago, and at the end of the meeting I guess after 20 years of being in public service I automatically asked for public comment.

Well, I learned quite rapidly from staff as they rushed me as the sitting Chairman that we don't have public comment in Washington, and that's why I'm so happy today that we, in fact, do provide for comment and input for Nevada.

So, yes, I'd like to introduce the balance of the panel.

Next is Mr. Bob Loux, Director, State of Nevada Agency for Nuclear Projects.

Also is Mr. Halstead, the Transportation Adviser.

Mr. Loux probably, if anyone, has the insights and the science of nuclear projects in Nevada, and we appreciate both of you being here today.

Next a good friend, Mr. Stephen Cloobek, who's Chairman and CEO of Diamond Resorts International, a major business leader in the State of Nevada for many, many years, will be here to present some business insights as a member of the community but also as a business leader.

And also very well known and very well respected from the Sierra Club, Mr. Jeff Van Ee, who also is a friend and worked together for many years, will be here with his presentation.

Mr. QUINN. Thank you, gentlemen. Thank you for your help in putting together our panels today for the discussion.

Again, just to repeat, not to overdo it but for all of our panel this morning, we're going to ask if you keep your oral remarks to about 5 minutes. We have your full testimony; we've taken a look at it. That's what will generate our questions more than anything.

We'll also run through one or two or three—as we did the last time four, if it's necessary—rounds, of questions, but if you can keep it to about 5 minutes or so we would appreciate that.

Senator, it's a pleasure to have you with us this morning, and I suppose if anybody's allowed to break the 5-minute rule, it's a former U.S. Senator. You have our undivided attention, sir. It's good to meet you.

**TESTIMONY OF RICHARD BRYAN, FORMER UNITED STATES
SENATOR AND GOVERNOR, STATE OF NEVADA**

Mr. BRYAN. Mr. Chairman, let me preface my comments by thanking you very much for convening the panel here in Las Vegas. We appreciate that. It's always good to see two of our Nevadans who have been such advocates for our cause long-term friend and Congresswoman Shelley Berkley, and long-term friend Congressman Jon Porter.

And it's nice to have the Congressman back in the State. He's had a little medical problem. We're so pleased to have you back on friendly turf.

Mr. Chairman, if I might, just as a personal aside, indicate that you have a background in terms of railroads long before Las Vegas was an international dateline. It was a division point on Union Pacific Railroad.

And the iteration of Las Vegas in its modern sense began just 100 years ago, in 1905, when an auction was held not too far from this very presence, and Las Vegas became a rail center.

So the discussion of rail resonates with a number of us who have lived in the community for a number of years, as I know it does you.

Perhaps what I might be able to provide to the panel is a little historical perspective, and I'm not unmindful of the 5-minute rule, and if I violate that, please call that to my attention.

I know it's been a long day for you and many of my distinguished panel have a full presentation as well.

As Congressman Porter indicated, I've been involved in this issue for approximately 22 years, and I think it's helpful for those of you who may not have the historical perspective that we in Nevada have, understand what brings us here and generates the feelings that have been exhibited by my good friends our two congressional representatives from Nevada who are here today.

The seminal event was the Nuclear Waste Policy Act, which was enacted in 1982. The Act envisioned two repositories for the Department of Energy for the replacement of both the civilian and the high-level nuclear waste.

The Act called on the DOE, as each of you know, to identify three potential sites for the repository and to conduct a multi-scientific evaluation, known as site characterization.

In 1982, I was a candidate for governor, and I must say that my initial reaction was that the Act seemed balanced, fair, but I must say that I disabused of that notion very early on.

From the beginning, there was a problem with the Department of Energy. The Act, as each of you know, contemplated that each of the candidate sites would receive oversight funding. None was forthcoming.

Week after week, month after month. It took a delegation of governors that were from the candidate States to appear before Congressional committees such as your own in order for that money to be released.

I think it would be charitable at best to say that it was an inauspicious beginning in terms of Nevada's relationship with the Department of Energy, and things would get worse,

Mr. Chairman, and members of the Committee. Much worse over the intervening years.

Shortly after the Act was signed into law January of 1983 by then-President Reagan, the Department of Energy made a unilateral decision that it would not look at the granite formations in the Northeast due to extreme political pressure from candidate States in that region.

That internal memoranda is part of Department of Energy record, and if you have any need to examine that, it would be available.

We in Nevada oftentimes are invited to follow the mantra of sound science. We heard that almost ad nauseam. This, Mr. Chairman, and members of the Committee, had nothing to do with sound science. It was pure politics.

There's the campaign of 1984. The good people of the Southeastern part of the country where salt dome formations were being considered as possible candidate sites for the disposition of high-level nuclear waste were assured during the course of that political campaign that their part of the county, their region, would be exempted.

That, I most respectfully suggest to each and every member of the Committee, that had absolutely nothing to do with sound science. That was pure politics.

Ultimately, as you know, in 1986 the Department of Energy recommended three sites to the President for site characterization: Yucca Mountain, the subject of our discussion today; Deaf Smith County, Texas; and the Hanford Site in Washington.

And, then, in 1987 the infamous legislation, which is known to each and every Nevadan as the "Screw Nevada" bill was enacted into law. This had nothing to do with sound science.

It designated only one site, Yucca Mountain for characterization.

And the concept of science to explore the best site in the country, the whole concept, was cast into the ash bin again. The reaction of that was to engender rage on the part of Nevadans. There was no science involved. It was pure, naked politics.

On a personal basis, Mr. Chairman, and members of the Committee, it was that event that made me make a personal decision as a reelected Nevada governor I had two more years left on my term, but I felt that I wanted to be a part of the national debate in Congress, and I became a candid for the United States Senate in that year. And, as you know, I had occasion to serve two terms.

As Congresswoman Berkley and Congressman Porter know, there is no issue during the 12 years that I was privileged to rep-

resent my State and to associate with many of you that engendered more of my time and interest than defending my State against this outrage. I didn't stop there.

The political campaign waged by the DOE and the supporters of the nuclear power industry continued as the Department of Energy continued to confront unexpected difficulties in the siting process.

There was always this quick fix. Let me cite a couple examples.

In 1997, the nuclear industry backed an ill-fated attempt to site an interim storage to bypass the process that you had been a part of, and which we've heard considerable discussion today. Recognizing that if an interim site were located the discussion of a permanent repository as contemplated with the 1987 Act would be rendered moot.

And, then, the Department of Energy and its allies of the nuclear power industry became concerned about the radiation standards. There was an attempt to reduce radiation standards.

We're talking about the health and safety of Nevada and people across the country. Fortunately we were able to veto--the one measure was vetoed by then-President Clinton.

From its inception, this program has been governed by politics, not science. Politics, not science. And there's little reason to believe—and I must say after being privileged to listen to the testimony today and the questions that so many of you asked—it's little reason to believe that politics will not ultimately be involved in the decision made as we go forward with this siting process.

The Department of Energy has played the game of hide the ball. Twenty-two years later we're still talking about the transportation rules, and as we heard from the various nuanced responses today, most of them don't know where that is.

I was in the northwestern part of Lincoln County with my good friend Mr. Loux talking with people in that area. They had no input. They've had no input. They're concerned, but they've had no input.

It seems to me that the selection's going to be made and, then, the decision. But I don't want to repeat the line of questioning that Congresswoman Berkley pursued.

Everyone has understood that the Achilles heel of this approval process is the transportation issue, because not only Nevadans will be affected for 25 to 30 years with more than 30,000 to 100,000 shipments—we don't know what that mode is going to be, as you know, but it will pass through 44 States, including the District of Columbia.

Fifty-one million Americans live within a mile or less of the corridor, and DOE itself has indicated to us that they expect as many as 70 to 310 accidents during the course of this time.

All of these facts and assumptions belie the fact that the DOE has really no plan for nuclear waste shipments to Nevada, and even more disturbing, we're told we're not going to see anything in the foreseeable future.

The American people have a right to understand the risks that are involved in their communities. It's been a focus of intense interest in Nevada for 22 years.

I'm not unmindful of the fact that in other jurisdictions, other constituents, it has not been the subject of much attention.

So if I may, I most respectfully suggest just as a minimum that I would urge you to consider legislation that requires the Department of Energy to develop a credible national safety-based transportation plan before they submit for a repository license for application to the Nuclear Regulatory Commission.

Given the constant terror threats that have been referenced by members of the Committee that we face today as a nation, it would be reckless and irresponsible to proceed without having such a plan.

And I apologize, Mr. Chairman, I did go over a tad. Thank you so much for your courtesy.

I do appreciate it. Thank you, again, for coming to Nevada.

Mr. QUINN. Thank you, Senator. I'm glad you could be here, as well as the whole Committee.

And as we did with our previous panel, we're going to hear from all four of them and, then, we'll have some questions for our panel.

Now we'll hear from Mr. Loux.

**TESTIMONY OF BOB LOUX, DIRECTOR, STATE OF NEVADA
AGENCY FOR NUCLEAR PROJECTS, AND ROBERT J.
HALSTEAD, TRANSPORTATION ADVISOR**

Mr. LOUX. Thank you, Mr. Chairman. Let me also thank you and the Committee for having this hearing in Nevada.

It's a rare opportunity we rarely get to address the members of this congressional hearing here in our State, and we appreciate the opportunity to do so.

Let me indicate that I am the Director of the Agency for Nuclear Projects within the Governor's Office. On the Governor's behalf I'd also like to thank you.

I've noted earlier that I've served for five governors on this issue over the last 20 or so years so I have been involved in this for some time.

With me today is Dr. Bob Halstead, who is the transportation consultant to the State. Bob is actually not a doctor, but he just plays one on TV.

Mr. Chairman, despite our opposition to the construction of a repository at Yucca Mountain, the State of Nevada has taken virtually every possible opportunity to make constructive proposals to the appropriate Federal agencies: The Department of Energy, the Nuclear Regulatory Commission, U.S. Department of Transportation.

The safe and secure transportation of spent nuclear fuel and high-level waste has always been an issue that transcends the pros and cons of Yucca Mountain fate.

Wherever a repository or central storage facility might some day be located, a system for transporting waste must not only be safe as possible but also publicly acceptable.

For the better part of two decades, the State of Nevada has consistently and repeatedly recommended specific measures that the DOE should take to manage the risks associated with the transportation of spent fuel and high-level waste.

In addition, the Western Interstate Energy Board and the Western Governors' Association have done extensive work on nuclear

waste transportation and provided DOE with detailed and substantive guidance over the past 15 years or more.

The DOE's response has been to ignore the information received, most of which they actually paid for, preferring to move forward in a fashion that serves political ends rather than working in concert with affected parties for the development of a workable, defensible, national system for transporting high-level waste.

The fact is the DOE has no transportation plan. Even when Congress last year directed DOE to produce a plan for Yucca Mountain transportation, DOE responded with a meager 10-page outline euphemistically titled "A strategic plan," purporting to discuss how it might go about arriving at a plan.

DOE's "strategic plan" contains no specifics, but is rife with platitudes about consultation and cooperation with the State of Nevada, local governments, Indian tribes, and other stakeholders. Yet even those commitments were dispensed with when DOE first issued its Rail Corridor Identification Notice, the first major decision related to the transportation program.

Of course, in that notice the DOE indicated its preference for the Caliente rail spur as the preferred rail corridor for Yucca Mountain.

Not only was this notice and decision premature, but also nowhere is there any documentation, any analysis, to support a chosen preference.

Only through the conduct and publication of comparative analysis among the identified routes, comparing, contrasting attributes and liabilities, could such a decision be N.E.P.A. Compliant.

DOE promised in the Yucca Mountain EIS to follow a logical, albeit truncated, decision sequence and to consult with stakeholders in the rail corridor selection process, yet DOE's Federal Register notice puts the cart before the horse, or in this case the caboose before the engine, by making the Nevada rail corridor decision before any national mode of transportation has been noticed or before any national routing system has been done.

DOE has not and did not consult with State of Nevada contrary to comments you heard earlier.

We, of course, submitted comments and environmental statements like thousands of other people across the country and Nevada. Yes, we're members of the regional organizations which were referred to previously, but in no way do those contacts or comments substitute for direct comment with the Governor's Office or for anyone with the State of Nevada directly before issuing any sort of notice.

We're not the only people. No local governments were consulted that we're aware of, and the people who stand to be significantly most affected by a decision that the DOE announces in December are ranchers and others whose land and grazing rights are already deemed disrupted by DOE's decision.

In almost 20 years, considering rail access to Yucca Mountain, DOE never once thought to reach out to these ranchers and others to let them know what the Caliente Corridor might mean to them, seek their input, or take a hard look at how their decision to select the Caliente option might impact their lives and livelihood.

DOE's cavalier treatment of the State of Nevada, local governments, ranchers, and others is characteristic of the way the Department has approached transportation from the beginning of the Yucca Mountain program.

The pending Caliente Rail Corridor decision is just the latest example of DOE's disregard for sound and defensible transportation planning.

To ensure the safe and secure system for transporting spent nuclear fuel and high-level waste if, in fact, developed, DOE must be forced to implement a comprehensive, integrated, and simple process for transportation planning.

The only way we know to make that happen is to require you to prepare a programmatic Environmental Impact Statement for spent fuel and high-level waste transportation similar to what Ely did in the Environmental Management Program when it prepared the Waste Management Program at D.I.S. To cover the cleanup of weapon-related facilities.

When planning is not done in a comprehensive and rational way, it's not surprising Federal agencies get into trouble. They miss important and what should be self-evident impacts of their actions, and their decision making is open to charges that it's arbitrary and driven solely by political expediency. And that is exactly what has happened with respect to the Caliente Rail Corridor decision.

Thank you.

Mr. PORTER. [presiding.] Thank you, Mr. Loux. Appreciate it.

Next we have Stephen Cloobek.

Mr. Cloobek.

**TESTIMONY OF STEPHEN CLOOBECK, CHAIRMAN & CEO OF
DIAMOND RESORTS INTERNATIONAL**

Mr. CLOOBECK. Mr. Chairman, I'm going to keep my comments brief, and I hope you can appreciate my unorthodox style, which is to say I have been involved in this issue for approximately 3 years, and I was one of the first business leaders in this community to actively get involved in this issue and take a stand against an ill-conceived, mismanaged opportunity here.

Can you hear me now?

The project that we're speaking of today from a business perspective could never hold water in the real world.

In the business world, as you know, we look at informed risks. We do all of our homework, and, then, we make decisions.

I've participated in the political process now for over two decades aiding those who want to ascend to the Senate and the House, and I've seen the best and brightest.

And I was extremely disheartened over the last 18 months when I saw those individuals who took those hard-earned dollars from me and said to me, "I can't vote against Yucca Mountain." I said, "Why not? Haven't you done your homework? Haven't you studied the science?"

They said, "Well, it's not about the science. I can't get reelected." I said, "Why can't you get reelected?"

"Well, the N.E.I. Is on my back, and they donate money to me, and I got to worry about my family and my future."

It's not about what's best for the constituents in their State, not about what's best for the constituents of the United States, but their on personal future and partisanship. I was extremely disappointed by seeing that.

Getting to my impression of what I saw with the Department of Energy, again, this institution cannot stand for a department that doesn't listen to the constituents of various States and the constituents of the United States.

Their arrogance is overwhelming. Yeah, they have public hearings here in Clark County, if you call it that, with short notice, not letting people speak, scheduling them at five, six o'clock in the afternoon, letting them go to two, three, four in the morning, and the public can speak? Properly? Wrong. Arrogance at its finest.

There's over 300 unanswered questions that this State has to the DOE and still has to date. And you heard the mumbo jumbo today, and you will constantly hear that mumbo jumbo. We wouldn't stand for that in business; we wouldn't do business with a company like that.

You all have situations in your various States with representation where these routes will pass, and your voters have not had the opportunity to understand the fiscal impacts within those communities that it will cost them.

And we estimate over \$360,000,000 just in Clark County alone, which is unfunded, \$2.7 billion over the life of the project just in Southern Nevada.

What about the rest of the areas throughout the United States? The DOE hasn't handled that in their EIS they'll continue to tell you and give you answers of mumbo jumbo, which will ramrod this project through only based for one purpose—greed. The Nuclear Energy Institute wants to build more nuclear facilities.

The DOE and the N.E.I. Are in bed together, and I give you this harsh perspective from one businessman's point of view who's willing to speak out.

And it's extremely odd that in 1998, August 27th, then-Senator Spencer Abraham sent a letter to then-Department of Energy Secretary Bill Richardson. He didn't want any routes of hazardous waste—whether rail or by truck—through his State. Now he's the head of the DOE. He's changed his tune. But he wanted public hearings at that time from the Department of Energy within his State. And I'm sure they were not at nor were they had in any other State in the United States to let the citizens of those States be representative in this government. This is 100 percent a partisan issue and based solely on agreed, and perhaps it's not the best decision for the citizens of the United States.

More science needs to be studied.

Proper information needs to be garnered by every member of the House and the Senate before they make their final decision on the plausibility of the transportation of nuclear waste.

We know it's wrong. Think twice. Don't allow the Department of Energy to railroad this fine committee.

Thank you.

Mr. PORTER. Thank you, Mr. Cloobek. I appreciate it.

Mr. Van Ee.

TESTIMONY OF JEFF VAN EE, TOIYABE CHAPTER, SIERRA CLUB

Mr. VAN EE. My name is Jeffrey van Ee. I'm representing today the Sierra Club in addition to the Toiyabe Chapter.

For the past 30 years I have been a resident of Nevada working on a great many environmental issues. I've left the Yucca Mountain issue to others to lead the charge, and I'm very pleased with the efforts of the Nevada congressional delegation, the State of Nevada, in asking tough questions on this important decision that's going to be made not only for Nevada but for the rest of the Nation.

In preparation for this hearing I reviewed the Final Environmental Statement that the Department of Energy issued, and I'm deeply troubled by what I read in the Final Environmental Impact Statement as well as what I've heard today.

I'm troubled because, number one, the environmental impacts haven't been adequately addressed; and, number two, from a procedural standpoint I don't think the Department of Energy gets it yet, how to do an Environmental Impact Statement that complies with the National Environmental Policy Act.

Now, in my 30 years of working on environmental issues in Nevada I believe that's one of the best of laws that the Congress passed in the environmental area. As you know, it was passed in 1969, a very small law, supported by regulations from the Counsel on Environmental Quality that provided guidance to agencies to analyze the alternatives at an early stage before major decisions were made and to incorporate the public and affected parties in the decision-making process at an early age.

I am astounded that as long as the National Environmental Policy Act has been around that the Department of Energy would issue on December 29th, 2003, a Notice of Withdrawals of Public Land along the "preferred Caliente Route."

That's not the way you do environmental analyses; that's not how you comply with the National Environmental Policy Act.

Once again, they've tipped their hat and indicated there true intentions before the analysis has been done and before the sound science has been done. They've indicated what they probably intended to do from day one.

Now, the particular corridor, their preferred corridor, has a number of environmental impacts, which I've touched on in the prepared statement that is now going to be part of the record.

A couple points I'd like to emphasize is that the impact on endangered species has not been adequately addressed.

And perhaps most importantly the impact on the proposed wilderness study areas in the area has not been addressed.

Now, as you know, being members of Congress, the designation of wilderness areas is the responsibility of Congress. That decision has not been made yet on those W.S.A.'s and wilderness designation in Lincoln County. That decision has not been made by Congress, and, yet, December 29th, 2003, the Department of Energy started laying out their corridor which affects three wilderness study areas and one area that is going to be proposed for wilderness by the Nevada Wilderness Project.

So I think the Department of Energy needs to be told to comply with the National Environmental Policy Act; to allow members of

Congress, the various agencies affected, the public, and the State, to look at an early stage at all of the options, and all of the impacts that are associated with transporting this nuclear waste to Yucca Mountain.

Now having said that, I'm surprised that this hasn't been done. I mean, the site still hasn't been licensed by the Nuclear Regulatory Commission. It seems to me we're, once again, getting ahead of ourselves for expediency and disregarding the risks, the environmental impacts, or, I should say, maybe not adequately addressing them. And I think it's very troubling.

And as a longtime resident of Nevada, and I think it should be very troubling to residents throughout the country that will lie along these transportation routes.

That completes my oral statement, and we have the prepared written statement, which has been reviewed and approved by the Sierra Club, the National Sierra Club.

Mr. PORTER. Thank you. We appreciate your testimony.

I'd like to acknowledge to the panel that we're going to have to conclude by about 11:45 because of flight schedules. We'll take that into consideration as well in asking our questions and responses.

I'd like to ask a question.

Senator Bryan, when you're—again, your years of fighting Yucca Mountain and dealing on a national arena for so many years, as you travel to communities, as I know you did for years, trying to educate your colleagues and, of course, citizens of other States, what did you hear from the local communities as you shared our concerns in the State of Nevada?

Mr. BRYAN. Congressman, as you know, the strategy that the Department of Energy and nuclear industry have pursued—and I use them interchangeably, because on this issue there's not a dime's worth of difference between the two—has been to—with respect to the issue which would ignite national public interest, they kept the transportation issue quiet.

They've withheld that information, as I said in my prepared testimony, that is what is the Achilles heel nationally of this project.

And so you go into communities, as I know you have and your Nevada colleague Congresswoman Berkley, people would be totally unaware of the issues.

When you made them aware of the fact that they may be getting tens of thousands of shipments through their communities adjacent to their schools, playgrounds, and other recreational facilities, that really gets their attention, and so part of the strategy that I know that you and—and Congresswoman Berkley and the rest of the delegation is to try to focus attention on this issue.

The strategy has been to marginalize and isolate and make this only a Nevada issue when, as you know, it has national implications and national safety implications as well.

Mr. PORTER. Thank you, Senator.

Ms. Brown.

Ms. BROWN. Mr. Halstead, you did not get a chance to speak, so may I ask you a question.

In reviewing this State of Nevada Agency for Nuclear Project, it concludes that data reported in the thousands that Environmental

Impact Statement underestimated construction costs, construction time, and travel time.

Do you have an estimate of the true time and costs?

Mr. HALSTEAD. Representative Brown, we did our own independent study in 1998, and some of those numbers would have to be updated, but I think the hallmark number that we came up with of about \$2.6 billion to build the routes for and operate with heavy-haul truck during the 10 years of operation, looking at the same route the DOE was looking at at the time, I'd say that's still a pretty good number.

At that time DOE was estimating the cost of building that route at 1.0 to 1.3 billion. Subsequently, for reasons that they've never explained, but I think perhaps to make the project be more saleable to the Congress and other arenas, they dropped their estimate of the costs, so that they're now saying that the construction and the operating costs is only about—is in the range of 800 to \$900,000,000, which we believe is just absolutely too low.

Ms. BROWN. I have a question for the person from the Sierra Club.

Who do you believe is best qualified to undertake the—well, do you think that the science have evolved so that there are other things that could be done as opposed to this particular site that would be safer to the communities?

Mr. VAN EE. I think there's some significant questions that remain to be resolved, and I think the response is that the waste should be kept at the sites where it is today until we resolve some of these questions.

We're in a rush to make long-term decisions that will have tremendous impacts not only on Nevada but the rest of the Nation.

Ms. BROWN. In looking at those countries that have dealt directly with this a lot longer than we have, how do they handle these problems, you know, like in Europe and other places.

Mr. VAN EE. Well, you know, this isn't one of my big issues that I've focused on, but as Congresswoman Berkley pointed out, Germany is rethinking their commitment to nuclear energy.

Other European countries are rethinking their commitments as well when they look not only at the cost of producing electricity from nuclear energy relative to other options, but the cost of containment and the risks of containing that waste.

So I think this country needs to rethink our energy policy as well.

Ms. BROWN. Just one quick statement. I just want you to know, an issue like this, it can't be partisan, it has to be bipartisan, and I'm hoping that we're moving in that direction because the safety is bedrock for everybody and for the future.

And I yield my time I have left to Ms. Berkley.

Mr. PORTER. Thank you.

Ms. Berkley.

Ms. BERKLEY. Thank you, Mr. Porter. I want to personally thank all of the panel members for doing an extraordinary job.

As much time as I devote to the Yucca Mountain issue, I am delighted that other Members of Congress have an opportunity to hear the people that I work with on a daily basis when it comes to this issue of Yucca Mountain.

And I believe with all of my heart that Yucca Mountain will never be a reality not only because it is extraordinarily expensive, extraordinarily dangerous, but there is no way, no way to safely transport 77,000 tons of toxic nuclear waste across 43 States in order to be buried in a hole in the Nevada desert.

It does nothing to promote the future energy needs of this nation. It is extraordinarily expensive. The last estimate was \$308 billion to complete the Yucca Mountain Project.

But when my colleagues hear from you, they have a better understanding of what we in Nevada have been dealing with for over 22 years, and I appreciate your presentations.

I do have a couple of questions of Mr. Halstead.

Could you explain to us how well the Caliente Corridor Route affects—how can the Corridor Route affect Las Vegas?

Mr. HALSTEAD. I'd like to do that, Congresswoman Berkley, if I can use the house A.V. System for a second. It will only take about 90 seconds.

Ms. BERKLEY. I think that would be great.

Mr. HALSTEAD. Let me say, as I'm going to the A.V. System, that there are four important regulatory issues here:

First, there are no Federal regulations that governs selection of routes for spent nuclear fuel; and

Secondly, there is no State role in picking the rail routes for spent fuel;

Thirdly, the railroads actually believe it's safer to make these shipments through downtown because that's where the better quality track and signals are; and

Fourth, the DOE said they will not dictate routes to the railroads they're going to hire for Yucca Mountain.

So these are the numbers. The minimum number of shipments that would go through downtown Las Vegas, based on DOE's calculation, are about 6 to 700 casks, and that could involve 200 to 700 trains.

We looked at this to find a maximum impact scenario, and we found it could be much greater, about 8600 casks, about more than 2800 trains, perhaps as many as 8500 trains if they're shipped one at a time.

So, first of all, there's a big spread, but—but it's a minimum of seven percent and maximum of 90 percent of the shipments to Yucca Mountain through downtown.

DOE's route map is here, and I've highlighted the existing line in pink and the Caliente route in blue.

So DOE does acknowledge we're talking about the same routes. The minimum impact scenarios for cross country shipments in terms of impacts on Las Vegas assumed that the Union Pacific and Burlington Northern Lines that go through the Northern corridors that go through Colorado and Nebraska would be used with a minor flow of shipments on the Burlington Northern Santa Fe.

However, the State did a series of routing studies beginning with studies down at the U.N.L.V. Transportation Research Center. I'd like to acknowledge that Dr. Shashi Sathison Nambisan is here with us today. He did the first set of this routing work.

And we hired Planning Information Corporation of Denver to redo the analysis, and, then, we had U.N.L.V. Transportation Re-

search Center reconfirm these routes because we weren't sure if we were seeing the same reality as DOE.

The bottom line is—a very likely scenario is the consolidation of shipments on Burlington Northern-Santa Fe coming east to west, and that means that up the 90 percent of the shipments would come through downtown.

And the rail line here, you can see the Rio, you can see Circus Circus, and there actually was a train on the track at the time we took those pictures.

And, then, the route continues right behind the back parking lot of this building.

We're right here, and the railroad is right here. And when you actually measure these distances, you find it's the length of a football field and two end zones from the side of a rail cask to the door to the chambers.

I suggest this is a classic example of unique local conditions, and the reason why rail shipments of spent nuclear fuel should not be shipped through downtown to a corridor. As you pointed out, there might be a combination of 80 to 90,000 residents and nonresident people.

Thank you.

Ms. BERKLEY. Thank you.

Mr. Loux, you've answered this in your testimony, but I'd like you to emphasize it in as short of time as possible, but I think it's very important for you to explain to us, yet again, what has been your experience in seeking information from the DOE regarding nuclear waste transportation?

Mr. LOUX. Congresswoman Berkley, I can sum it up in the very first sentence which we had just actually done.

Until now—

Ms. BERKLEY. So is it your testimony that they're consulting, and there are regional groups, and they're getting input from the grazers and the grazing board? Any of that true?

Mr. LOUX. I can't speak to the grazing board issue. I know that they've had one meeting of the Western Interstate Energy Board in San Diego on this issue in the recent time. There has been previous meetings many, many years ago, but there has been no, zero, contact with State of Nevada of any kind on anything to do with transportation of material to Yucca Mountain.

Ms. BERKLEY. Thank you, Mr. Loux.

Mr. Van Ee, you also answered a part of this, but I'd appreciate it if you could emphasize for us.

Was the DOE receptive to the concerns of the environmental community when drafting the Final E.I.S.?

Mr. VAN EE. The Final Environmental Impact Statement covered a lot of ground. Sierra Club representatives throughout the country commented, but there wasn't a lot of focus on the transportation issue; In my opinion, not enough focus on the transportation issue. It was too much all in one process.

So I think the Department of Energy needs to do a more rigorous EIS Process for the transportation since that has been contemplated. And, in particular, on the Caliente route. I mean, they should have started it sooner than to wait until after the withdrawals have been made.

Ms. BERKLEY. Is that Ms. Brown's time or mine?

Mr. PORTER. You used both, but—

Ms. BERKLEY. May I have another round session or—

Mr. PORTER. And I appreciate when you ask a question it's coming from me also so we'll share time.

Ms. BERKLEY. May I take your time?

Mr. PORTER. Thank you.

Mr. Van Ee, the environmental perspective. Assuming for a moment that there's not an EIS anywhere, what parts of our environment are going to be sacrificed without the proper studies with shortcuts? What impacts on our environment without the proper EIS?

Mr. VAN EE. Well, I don't know that we know all of the impacts, but the initial indications are that it will impact some of these wilderness study areas that have been selected years ago because of their pristine nature.

It will impact endangered species. It will impact the commercial viability of central Nevada.

I pointed in out in my written statement that the Nevada Commission of Tourism is emphasizing the other side of Nevada. They're saying Nevada is wide open, and so we in Nevada, with a tourism-based economy, we focus not only in Las Vegas, as Mr. Cloobek was focusing on, but we're also now starting to focus on rural Nevada. That will be affected by the nuclear train going through the wide open, pristine places that we have in Nevada.

Mr. PORTER. Mr. Van Ee, I'd like to continue.

I've heard from members here today, my colleagues, that they're shocked and surprised and/or happy to be here to hear testimony from yourself and the other members of the panel.

As a partner in Nevada, the Sierra Club, and with great respect, what has the Sierra Club nationally—obviously, there are some things that we could do better, that we could help you with, get this message out from the Sierra Club across the country?

Mr. VAN EE. Well, I think the Sierra Club is getting the message out, as difficult as it is, to get the message from the Department of Energy.

I mean, we still don't have a clear view of where the transportation routes are going to be in throughout the Nation. So, consequently, it's hard to get people to focus in their busy lives, with the many issues that they're pursuing, to focus on this issue.

The resources that the State of Nevada has been bringing to bear on this to ask the good questions, to challenge the Department both legally and procedurally those resources--while they may not be enough, they're hard for the Sierra Club to match.

And I, once again, want to express my appreciation for what the State of Nevada is doing to help protect all of us from bad decisions that may be made during this—throughout this process.

Mr. PORTER. Mr. Cloobek, if you could comment, again, on the impact to our business community and our vibrancy as an international tour destination if there was a catastrophic loss in Southern Nevada.

Mr. CLOOBECK. Fortunately, the county has done numerous studies on the anticipated dollar loss to this community.

As you know, we have done everything we could to create a world-class resort environment, and we've done so. We are the largest destination in the United States as a resort community, the second only in the world to Paris.

Ms. BROWN. Or Orlando.

Mr. CLOOBECK. We still have more hotel rooms than you do.

Ms. BROWN. Yes, sir.

Mr. CLOOBECK. And the effects would be devastating in this community. You can kiss the State's economy good-bye if there was an accident on the way to Yucca Mountain, because you and I both know that CNN would say "A nuclear accident near Las Vegas." How would Orlando react if they had the same situation? Your economy would be devastated. And there's no thought in EIS with regard to those issues.

And, most importantly, the transportation issues here are not just NIMBY issues. Those issues exist in Indianapolis, Indiana; in Chicago, Illinois; throughout Michigan; and anywhere that you see those rail routes or heavy-haul truck routes because you've not had open hearings to allow the taxpayers to understand that they do not have the infrastructure necessary for a major disaster.

And the DOE will absolutely ignore this issue, as you saw it today with their—their commentary. And you ask the DOE—I'm just a local businessman. I ask the DOE questions all the time, and, "No, I can't answer that." "Why can't you answer? It's a question. I'm a taxpayer. I want to know the answer." "Well, I've got to reflect on that." And they don't get back to you.

And it's a consistent practice, and their arrogance, and you as a committee have got to stop the insanity. You can't allow a department, which takes taxpayer dollars, and let them ramrod bad decision making down the throats of all Americans. There is not a good policy on this topic.

Thank you.

Mr. PORTER. Ms. Berkley.

Ms. CARSON, any questions.

Ms. CARSON. I will yield—

Mr. PORTER. To Ms. Berkley?

Ms. CARSON. Yes.

Ms. BERKLEY. Thank you. Mr. Cloobek, thank you very much for being here. I think Mr. Porter answered—or asked the question that I was going to ask regarding consequences to the Las Vegas economy if there was a nuclear train incident.

But there's one thing in your testimony that I just wanted to clear up.

Spencer Abraham has not changed his tune in any way. He still doesn't want nuclear waste to go through the State of Michigan, so I think it's important for that record.

Senator, you and I have been dealing with this issue for many, many years. I remember as a young child seeing you working on this issue.

Mr. BRYAN. That's really painful. Really painful. But true. But true.

Ms. BERKLEY. Every now and then I speak to some well-meaning but misinformed Nevadan talking to me about making a deal with the Department of Energy so that the State of Nevada can be a

party to incredible gifts from the United States Government to when it comes to education, our roads, our schools, our livelihood, that we would be getting so much if we would negotiate with the Federal Government and why are we in Congress being stubborn about this. We are losing billions of dollars for the State of Nevada.

Could you comment on that and explain why that perhaps is not the most rational suggestion that can be made?

Mr. BRYAN. Well, let me say I think that a majority of Nevadans and you, Congresswoman Berkley and Congressman Porter, reflect that we are not going to sell out our birthright for a pottage of lentils.

There is no compromise with respect to the health and safety of the people that you represent and that I've been privileged to spend a lifetime here.

Now, with respect to that illusory benefits, because, as you pointed out—and I wish you could have been a little bit more gentle in doing so—I am a bit long in the tooth. I'm older than any member of the panel.

I've heard this refrain again. When I was governor, I was told that if only you would negotiate on this issue we would get the Superconductor Collider that was at that time involved with particle physics. That project was abandoned because of its costs and the lack of cost-benefit analysis.

And, then, I was told, you know, we would not get that agreement with respect to the allocation of the Colorado River if we didn't negotiate with them. Negotiating benefits is an argument that has been cleverly developed by the nuclear power industry because they know that Nevadans have common sense, and nobody in his or her right mind would want this facility in their State. No one.

And so the only argument that they can make is, one, well, it's going to happen anyway, the inevitable argument, and, gee, there's so much in the way of benefits out there. I think that's absolute nonsense.

First of all, if it's inevitable, why has the industry paid for dozen, maybe even hundreds, of lobbyists to importune your colleagues spending hundreds of thousands of dollars of Nevada to promote this concept?

And, secondly, why would anybody give us any benefits if it's inevitable?

As I say as a lawyer, nobody is going to retain me as a client to represent them on the advocacy of the sun rising in the east and setting in the west. It's inevitable.

So, I mean, that argument has, to my judgment, just spun out of whole cloth. There are no benefits for us in Nevada, and there is no compromise.

It seems to me, as a responsible public official, and I would say that all of you in Nevada have done a marvelous job on this. To compromise the health and safety, not just of this generation but future generations.

We can't succumb to the Challenger mentality that maybe safety issues can be resolved without complications and move forward with the mission. That's what got us in deep trouble before in the

scientific community, and the consequences, as you pointed out, could be catastrophic for us in the Nation as we proceed.

Thank you.

Mr. PORTER. Thank you.

Ms. BERKLEY. Can I ask one follow-up question? Can I punctuate this, Mr. Bryan, with you for a moment?

We are running a \$555 billion deficit in the Federal Government this year, and in the foreseeable future that sea of red ink will not be reversed.

This administration has tripled the transportation budget for Yucca Mountain for \$186,000,000 and has doubled the Yucca Mountain project to 888,000,000 of our taxpayers' dollars.

If, in fact, there was—and I agree with you, there is no compromise, and there is no pot of gold at the end of this rainbow—where would the Federal Government be getting the money that they would be showering upon the people of the State of Nevada when we are running \$550 billion deficit? And may I remind you—and I'm sure you do not need any reminding—that does not include the cost of the Iraqi war.

Mr. BRYAN. Well, first of all, I don't think for the reason that your question implies it would be forthcoming, but if they chose to do so, they would in effect be borrowing from our grandchildren. I'm a grandparent now. I'm going to survive. There's nothing going to happen in my lifetime on this issue, even if every circumstance proceeds as the Department of Energy hopes.

But it's my feeling that we're talking about future generations of Nevadans, future generations of Nevada. They would have to mortgage their birthright as well. It's simply not going to happen. We're all realists.

Those of you who served and represented us so ably at the national level know that there would be no inducement to give us anything if, indeed, it's inevitable it's going to happen.

That's not the way human nature responds. We do not respond that way in our day-to-day personal intercourse, nor in the political process you're a part of.

There simply is no, as you phrased it, pot of gold at the end of the nuclear rainbow.

Ms. BERKLEY. Thank you.

Mr. PORTER. Thank you.

Senator, I would like to add something for my colleague from Nevada.

I guess, as we speak of history, and certainly we have both Houses of Congress that have supported Yucca Mountain, and the current administration, but history has proven that and there has been multiple administrations, both Democrats and Republicans, there has been multiple Members of Congress, and as was noted early by Mr. Bennett Johnson, who was the godfather of Yucca Mountain, a Democrat, I just want to make it clear that this has been truly a battle against—us against them of 43 other States, and I appreciate comments regarding administration, and I disagree with the administration on its position, but the past presidential administration under Mr. Clinton spent about \$8 billion to continue this project.

So at home we talk about what we can do together, and this committee is a very fine partisan one. I appreciate every member being here.

But history has proven there has been 49 other States, both Democrats and Republicans, that have been trying to send nuclear waste to Nevada.

I just want to add that to the record, and I personally do not agree with this administration or the past administrations, or prior administrations of their position, but it's been a battle, other Members of Congress informing their constituents that this was the right thing for them, which is certainly not the right thing for us.

And with that, Mr. Matheson—

Mr. MATHESON. Just I want to say that I thought that the testimony of this panel was very important to have on the record with respect to what was brought here to validate the quality issues that I have and the people that have articulated them better than I have in the past.

But I certainly do agree with Senator Bryan, I think politics are driving this rather than science.

Mr. Loux' discussions about the lack of real interaction with the States, because I don't think Western Interstate Energy Board necessarily is the right venue to which the Department of Energy has been talking to States, and Mr. Cloobek's comments about if you were making decisions in the private sector about this, you would do a thorough business risk assessment, and it hasn't happened from the process here, and, again, Mr. Van Ee's comments about the process getting turned a little backward. I think all of that has been very helpful on the record, and I just want to thank the panel for that.

Ms. BROWN. First of all, Senator, I want you to know I don't know how the discussion got around to you personally, but I just want you to know you look better than all of us up here, and you certainly are sharp on the issue—

Ms. BERKLEY. I'll second that.

Ms. BROWN. —and we take exception—exception noted. But I want you to know that.

Mr. BRYAN. You're very kind. I don't think that is true, but I will never disagree with a Member of Congress. Let me just say there's less stress in my life than you have in yours.

Ms. BROWN. On a serious note, I am very concerned with the testimony that we've heard prior to this committee concerning the fact that there is going to be some information issued in less than a month and, from my understanding, that the States have not been engaged, there have not been discussion, and I don't know what we could do about that but I really think we need to take that back to the Congress and try to get some clarity on that because, clearly, the States have not been engaged in any discussion. Correct me if I'm wrong about that.

You said it a couple of times, but I just want to follow up on that.

Mr. LOUX. You're absolutely correct. I mean, we have—as I mentioned earlier, we did submit comments, like others, and we are a part of these regional groups and have historically some interaction with DOE years ago but not recently, and there has been no con-

tact with the State of Nevada about transportation issues whatsoever over the last couple of years.

Ms. BROWN. And your presentation, sir, about, you know, the map is coming right through the area of heavy traffic, traffic and people, and, you know, and that people is not a major consideration concerns me also.

Mr. HALSTEAD. If I might add, we did have an opportunity after a long period of time in which there were no discussions on January 30th when the Western Interstate Energy Board group met with the DOE group, and I showed them the same slides that I have shown you today about the rail routes through Las Vegas, and I thought we had made the point and I was astounded today to hear that even when we had an opportunity to explain it's not the land use. Land use is important on the two routes of Las Vegas. It's the fact that we have 86,000 people, resident and non-resident, within a half mile of the rail corridor, which is 30 miles long from Las Vegas and raises peculiar concerns about we'll have accidents and about terrorism because of the proximity of the Las Vegas Strip.

So I'm dumbfounded that even after the time of not having an opportunity to explain, then when we showed them the same pictures and plans, that they would say that they don't understand our concern about shipments through downtown Las Vegas.

Ms. BROWN. Did anyone else want to—

Ms. CARSON. What happens now with the disposal?

Mr. LOUX. The material's currently stored at nuclear power plants.

Ms. CARSON. They keep them in the nuclear power plants throughout the country?

Mr. LOUX. Correct.

Ms. CARSON. Conceivably could they destroy it there where they store it—

Mr. LOUX. Uh-huh.

Ms. CARSON. —all around the—

Mr. LOUX. The Nuclear Regulatory Commission established by rule that storing this material at nuclear power plants, in particular in dry storage out of pools, is as safe as repository for perhaps the next 150 years.

Ms. CARSON. That they can retain it?

Mr. LOUX. They can be safely stored there.

Ms. CARSON. For a hundred years.

Mr. LOUX. Yes.

Ms. CARSON. So you don't anticipate the Yucca Mountain being an issue for at least a hundred years?

Mr. LOUX. Well, I wouldn't say that. The Department of Energy would like to make it an issue—

Ms. CARSON. I'm trying to simplify this.

Mr. LOUX. —it is an alternative that no one—that is not being looked at, if we have time in this country to actually find, for instance, a good geologic site, perhaps refine our strategy to get more—if we want a hearing at all, but it certainly can be safely stored at the power plants for the next 100 to 150 years to allow time to explore those options.

Ms. CARSON. You know, that was what I said in my opening statement, that we ought to be having a great deal of latitude in terms of looking at other possibilities rather than zero in on the one area.

Mr. LOUX. You're absolutely correct.

Ms. CARSON. With all these scientific plans floating around this country.

Mr. BRYAN. Could I respond just——

Mr. PORTER. Senator Bryan.

Mr. BRYAN. Yes.

Mr. PORTER. And, then, Senator, what we're going to do is conclude after that.

Ms. CARSON. I'm sorry. I didn't mean to take——

Mr. BRYAN. You know, the tragedy here is that this debate is unnecessary. This policy decision that is being forced upon us is not dictated by any national policy other than the nuclear power industry.

I mean, the spent fuel rods that we're talking about can be stored, as Mr. Loux pointed out, at sites safely. That has been determined. That can be done. There's no need to move this waste through 43 States and the District of Columbia and expose 51,000,000 people to the risks that are involved. That is unnecessary.

That's the sense of outrage that all of you should feel. This is not something that's a tough call that you got to do. Many decisions you make are tough calls. This is one that need not be made, and that's what engenders a sense of rage that we have in Nevada here.

Ms. CARSON. I appreciate that, but I certainly did enjoy my time out here.

Mr. BRYAN. Thank you.

Mr. PORTER. That summarizes it quite well.

Let me say thank you very much to all the panels today. We appreciate your being here.

For those that would still like to submit, we have approximately 30 days to submit questions. We'll be happy to accept any and all questions. We appreciate you all for being here.

Members of the Congress, thank you very much for sharing.

[Whereupon, at 11:42 a.m., the subcommittee was adjourned.]

Testimony of the Honorable Richard Bryan
before the
House Committee on Transportation and Infrastructure
Subcommittee on Railroads

Las Vegas, Nevada

March 5, 2004

Mr. Chairman and members of the committee, my name is Richard Bryan, and I am pleased to have the opportunity to testify today on such an important issue facing the people of the state of Nevada and the nation.

By way of background, I have been involved in the public policy debate over the disposal of high-level nuclear waste since I was elected governor of the State of Nevada in 1982. I believe it is helpful to examine some of the history of the Department of Energy's high-level waste program in order to provide the proper context for the topic of today's hearing - the transportation of nuclear waste to Yucca Mountain, Nevada. In 1982, the Nuclear Waste Policy Act was enacted by Congress. The Act envisioned two repositories to be constructed by the DOE for the emplacement of both civilian and defense high-level radioactive waste. The Act called on the DOE to identify three potential sites for the first repository and to conduct a multi-year scientific evaluation, known as site characterization, of each of the three sites.

My initial reaction to the proposed Nuclear Waste Policy Act was that it seemed balanced and fair. From the beginning, however, there was a problem with DOE. The Act contemplated that the candidate states would receive funding as part of the oversight process. None was forthcoming. I made an appearance before a Congressional Committee and only then was money made available to us. It was not an auspicious beginning and things would get worse - much worse in Nevada's relationship with the DOE.

Shortly after the Act was signed into law in January of 1983 by then-President Reagan, the DOE made a unilateral decision that it would not look at the granite formations in the Northeast due to intense political pressure from the candidate states in that region. Then in the 1984 Presidential campaign, President Reagan assured those in the Southeast that the salt dome formations in their region would not be considered. In 1986, the DOE recommended three sites to the President for site characterization: Yucca Mountain, Nevada; Deaf Smith County, Texas; and the Hanford Site, Washington. Then in 1987, the infamous legislation, which became affectionately known in these parts as the "Screw Nevada" bill, was enacted that turned the original concept of the Nuclear Waste Policy Act on its head. The concept of the DOE using science to search the country for the right location was cast into the ash bin because politics, not science, dictated that only one site would be studied - Yucca Mountain.

The Screw Nevada Bill ignited rage among Nevadans. There was no science involved, it was pure naked politics. That was the seminal event that led to my decision to leave the governor's office and run for the United States Senate in 1988. As Congresswoman Berkley and Congressman Porter know, there was no issue more important to me during the twelve years I served in the Senate than Yucca Mountain.

The political campaign waged by the DOE and its supporters in the nuclear power industry did not end in 1987, however. As the DOE continually ran into unexpected difficulties at Yucca Mountain resulting in significant delays for the repository program, the nuclear industry kept coming to Congress in hopes that it would provide a legislative "quick fix" for the problem at hand.

In 1997, the nuclear industry backed an ill-fated attempt to site an interim storage facility at the Nevada Test Site. Their motives were clear - they could not care less about science, they just wanted to get rid of the waste. Similarly, in 2000, the DOE and the nuclear industry cried "chicken little" about an EPA proposed rule governing radiation standards designed to protect human health and the environment. Their solution was to enlist their allies in Congress and attempt to legislate weaker radiation standards in order to ensure that the Yucca Mountain project could move forward.

From its inception, the nuclear waste program has been governed by politics, not science. There is little reason to believe that the transportation component of the program will be any less so. In fact, the DOE's transportation strategy to date appears to be not to have a strategy. The DOE has decided that hiding the ball is the best political strategy as far as a transportation plan goes.

The DOE and the nuclear industry know full well that the issue of transporting nuclear waste across the country could prove to be the Achilles heel of the repository program. They have intentionally kept policymakers in the dark about transportation modes and routes in order to prolong the inevitable political backlash that will occur once the public becomes aware of the magnitude of the program and the dangers involved. What we are able to surmise about the transportation of nuclear waste to Yucca Mountain is that it will occur around the clock for 25 to 30 years and involve some 30,000 to 100,000 shipments. The waste likely will pass through 44 states, including the District of Columbia, and travel within a mile of 51 million American households. Furthermore, no government agency has demonstrated the safety of the casks that will be used to transport the waste under conditions that would be encountered in an accident or terrorist attack. The DOE itself says over the lifetime of this disposal process, one could expect 70 to 310 accidents.

All of these facts and assumptions belie the fact that the DOE has no plan for shipping nuclear waste to Yucca Mountain. Even more disturbing, the DOE admits that it does not intend to produce a plan in the foreseeable future. The potential consequences of an accident or terrorist attack on a nuclear waste shipment would be devastating, and the American people need to understand that their highways, communities, and

neighborhoods are the sites for potential releases of the deadliest substance known to man.

At a minimum, I would urge you to consider legislation that requires the DOE to develop a credible, safety-based transportation plan before they submit a repository license application to the Nuclear Regulatory Commission. Given the constant terrorist threats we face today as a nation, it is reckless and irresponsible for the DOE to move ahead with their work at Yucca Mountain without a plan that includes a thorough risk assessment of transporting high-level nuclear waste over a hundred million miles across the country.

Thank you again Mr. Chairman for giving me the opportunity to testify today.

**Congressman Jim Gibbons
House Subcommittee on Rail
Field Hearing, March 5, 2004
Las Vegas Nevada**

Statement and Questions for the Record

Mr. Chairman, first, I would like to extend my deepest appreciation to my fellow Nevadans, Congressman Jon Porter and Congresswoman Shelley Berkley, for inviting me to participate in this very important Hearing today to address what certainly is the State of Nevada's number one issue and gravest concern: the proposed nuclear waste repository site at Yucca Mountain.

I would also like to thank Chairman Quinn and his staff on the Transportation and Infrastructure Committee for scheduling this hearing here in my home state, and for yielding me this time.

Since 1987, Nevada's residents, the State of Nevada and Nevada's Representatives in Congress have worked tirelessly to raise national awareness of the serious concerns we have regarding the construction of a high level nuclear waste repository at Yucca Mountain.

My chief concern with the proposed Yucca Mountain project is that it will inevitably be a detriment to the safety and health of the American public.

As a Member of the Homeland Security, Select Intelligence, and Armed Services Committees in the House of Representatives, it is one of my top priorities in Congress to ensure our national defense and homeland security needs are met.

I am intensely concerned that the transportation of nuclear waste to Yucca Mountain poses insurmountable obstacles to achieving and maintaining the goal of securing our Homeland against those that would do us harm.

Nevada's Congressional delegation are few and Nevada is a state with a relatively small population, so the fight to disseminate information regarding our many concerns with the Yucca Mountain project has been an uphill battle.

However, the issue of transporting 77,000 metric tons of high level nuclear waste through thousands of quiet American neighborhoods, across our nation's rugged terrain, and through our busy city scapes, past schools and hospitals, out to Yucca Mountain has raised the ire of Americans all across the country.

Nuclear waste is no longer just an issue of concern for Nevada.

The transportation of nuclear waste to Nevada jeopardizes the health and safety of all Americans.

It is an issue for all Americans nation-wide and it is up to Congress to oversee and scrutinize the Department of Energy's work in this which is, in my opinion, a flawed and potentially tragic

scheme.

Truthfully, I have seen no evidence to prove that the deadliest material known to man can be safely and securely transported across the nation to Yucca Mountain.

Just one accident could result in the loss of thousands of lives and unimaginable devastation to communities and the environment.

And yet, even scarier than an accident is a malicious terrorist act to derail a shipment or worse - obtain the material for a dirty bomb.

It is my hope that this hearing is only the beginning of the debate on this critical issue - a debate that should have begun years ago.

While the DOE continues to spend millions upon millions of dollars on the Yucca Mountain project - we have yet to begin to address the dangers the transportation of high-level nuclear waste poses to our national security and our citizens' health and safety.

With that, I would like to turn my attention to the panel of witnesses and pose a few questions.

Questions for Allan Rutter, Federal Rail Administrator:

- **Administrator Rutter, as we all know, the high level nuclear waste that may end up in Yucca Mountain must ultimately pass through at least 43 states on its way to Southern Nevada. Along the way this highly toxic substance will pass through neighborhoods, through cities and over very rugged terrain that would provide multiple opportunities for sabotage and may even pose a terrorist threat. Have you done any "red teaming" of the threat against this waste, by yourself or in conjunction with any other federal entity? Have you identified all of the potential chokepoints and planned for exactly how this waste will be secured along the way? Will there be armed federal escorts accompanying this waste to ensure that it is not attacked and that it does not fall into the wrong hands? Because answering these questions will provide you with an answer about whether moving this waste across-country is even feasible in light of the terrorist threat.**
- Just this week, a representative from the Nevada State Highway Patrol visited my office to discuss many issues, and during our conversation the issue of the State Highway Patrol's possible responsibilities to escort the nuclear waste shipments along the transportation routes to Yucca Mountain came up. Concerns like those of the State Highway Patrol lead into a whole new set of security concerns including liability for these shipments, security of these shipments, and the cost of these escorts. If Yucca Mountain does become a reality, from where would your administration prefer these escorts come and how shall the government compensate for the cost of these security escorts?

**REMARKS OF ROBERT J. HALSTEAD, TRANSPORTATION CONSULTANT,
ON BEHALF OF THE
NEVADA AGENCY FOR NUCLEAR PROJECTS
TO THE
RAILROAD SUBCOMMITTEE OF THE U. S. HOUSE OF REPRESENTATIVES
TRANSPORTATION AND INFRASTRUCTURE COMMITTEE
Las Vegas, Nevada
March 5, 2004**

Mr. Chairman and members of the subcommittee, for the record my name is Robert Halstead. I am the Transportation Advisor for the Nevada Agency for Nuclear Projects. Thank you for the opportunity to present testimony today on issues related to transportation of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) to the proposed Yucca Mountain repository site.

The Chairman's letter of invitation indicated the Subcommittee members' interest in Federal jurisdictional issues regarding construction of the proposed new rail line to Yucca Mountain. Several of our Agency staff and contractors have been studying the following questions regarding Federal jurisdiction:

1. The Surface Transportation Board (STB). To what extent, if any, would STB jurisdiction over the proposed rail construction project be affected by various institutional arrangements for DOE and/or DOE contractor ownership and operation of the railroad? What insights can be learned about environmental impact statement scoping and consideration of alternative routes by reviewing the STB actions regarding the Supplemental Environmental Impact Statement (SEIS) for the Tongue River Railroad Co. Western Alignment Construction and Operation Application (commonly referred to as Tongue River III)?
2. The Nuclear Regulatory Commission (NRC). To what extent is the NRC likely to consider transportation construction and operation issues as part of the DOE repository licensing process? To what extent is the NRC likely to consider transportation safety and risk issues as part of the DOE repository licensing process? During the licensing process, will the NRC allow Nevada to challenge DOE use of NUREG/CR-6672 as the basis of the repository transportation risk assessment?
3. The Federal Railroad Administration (FRA). How should we apply FRA Track Safety Standards and FRA protocols for spent fuel transportation in our review of DOE corridor and alignment selection and system design decisions?

The Chairman's letter also invited us to address safety and operational issues connected with the proposed rail line. The key issues are, in our opinion:

1. Shipments through Las Vegas. DOE and Nevada studies indicate that selection of Caliente will result in rail shipments of SNF and HLW through downtown Las Vegas on the Union Pacific mainline, which is located about 120 yards from the door to today's hearing room. The number of rail cask-shipments through Las Vegas over 24 years could be as low as 660 (7 percent of the total) or as high as

8,564 (89 percent of the total). Our studies indicate 39,000 residents of Las Vegas live within one-half mile of the rail line. When the school population, workers, and hotel/casino guests are added in, the average daily exposed population within one-half mile of the route is about 86,000.

2. Topography along the Caliente Corridor. Railroad operation will be challenged by the rugged terrain. The first 100 miles of the corridor, which would also be the first 100 miles of the Chalk Mountain corridor, are especially problematic. The first four mountain crossings alone will likely require grades of 1.3 percent to 2.4 for more than 75 miles of the first 100 miles, and some relatively sharp curves. Train speeds would likely be 15-20 miles per hour upgrade and 25 miles per hour downgrade on these segments. Because of the overall length of the line, 319 miles, DOE studies indicate that the trains will have to operate on other (non-mountain) segments of the line at speeds up to 60 miles per hour in order to comply with the 12-hour limit for crew operations.

We have submitted an attachment addressing these issues in greater detail. Again, thank you for the opportunity to present our views on these important matters.

WM'04 Conference, February 29 – March 4, 2004

Prepublication Draft, 2/29/04

**BEYOND THE MOUNTAINS:
NUCLEAR WASTE TRANSPORTATION AND THE REDISCOVERY OF NEVADA**

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ABSTRACT

The authors review recent activities by the U.S. Department of Energy regarding potential selection of a preferred mode and route for transporting spent nuclear fuel and high-level radioactive waste to the proposed Yucca Mountain repository site. Identification of the Caliente option as the preferred corridor for construction of a new rail line to Yucca Mountain will force DOE to rediscover key aspects of Nevada physical geography and stakeholder interests, factors and forces which will challenge DOE transportation planning. The authors believe that DOE should view the current situation as an opportunity to review State of Nevada recommendations regarding development of the Yucca Mountain transportation system.

INTRODUCTION

Just before Christmas, 2003, Dr. Margaret Chu, Director of the Office of Civilian Radioactive Waste Management (OCRWM), sent a letter to Nevada Governor Kenny Guinn. Dr. Chu notified the Governor that the U.S. Department of Energy (DOE) might soon make major decisions about transportation to Yucca Mountain. The letter reiterated that the DOE Final Environmental Impact Statement (FEIS) had "identified mostly rail as the preferred alternative transportation mode, both nationally and in Nevada, for shipments of spent nuclear fuel and high-level radioactive waste. ... If the Department adopts mostly rail as the transportation mode in Nevada, a rail line to connect the repository site at Yucca Mountain to an existing rail line in the State of Nevada would need to be constructed." (1)

The apparent purpose of the letter was to announce the selection of a rail route to Yucca Mountain: "At this time, the Department is identifying Caliente as our preferred corridor, with the Carlin corridor as the secondary preference. ... Our preference for Caliente takes into consideration its more remote location, and the diminished likelihood of land use conflicts." The Caliente corridor is 319 miles long (513 kilometers), and traverses Lincoln, Nye, and Esmeralda Counties. The letter then clarified that a formal corridor selection had not yet occurred: "If the Department adopts the mostly rail mode, a Record of Decision selecting a rail corridor could be issued no sooner than 30 days after publication of this preference announcement in the Federal Register. DOE will also issue a Notice of Intent in the Federal Register before initiating preparation of a rail alignment environmental impact statement." Dr. Chu concluded: "If there are any facts or views you wish to bring to our attention bearing on our preference for the Caliente corridor, or the ultimate selection of a rail corridor, I would appreciate hearing from you." (1)

On December 29, 2003, DOE published a "Notice of the Preferred Nevada Rail Corridor" in the **Federal Register**. The Notice essentially repeated the information in Dr. Chu's letter to Governor Guinn, but added a potential timeframe for action: "If the Department selects a rail corridor, DOE will issue a Notice of Intent in the **Federal Register** to initiate the preparation of a rail alignment EIS under the National Environmental Policy Act (NEPA) to consider alternative alignments within the selected corridor for construction of a rail line. Under this scenario, the Department would anticipate holding public scoping meetings in early-to-mid February, 2004. The exact date, time, and locations of the meetings would be announced in the Notice of Intent." (2)

Early-to-mid February, 2004, came and went, with no further DOE announcements. Nevadans, however, have already been forced to respond to a potential DOE rail corridor selection, because DOE has requested

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that the Bureau of Land Management (BLM) withdraw 308,600 acres of public land along the Caliente corridor “from surface entry and mining for a period of 20 years to evaluate the land for the potential construction, operation, and maintenance of a branch rail line” to Yucca Mountain. The BLM has already segregated these lands “for up to 2 years while various studies and analyses are made to support a final decision on the withdrawal action.”(3)

As of February 29, 2004, DOE has not formally selected a preferred transportation mode nationally or in Nevada, nor has DOE formally selected a preferred corridor for rail construction in Nevada. The Draft EIS, the Final EIS, and certain EIS references, remain the primary sources of information on the Yucca Mountain transportation options DOE is considering. (4,5) The Nevada Agency for Nuclear Projects has documented major deficiencies in these DOE NEPA documents, and has argued that DOE must reassess its transportation options through the NEPA process, before proceeding to implement any major transportation decisions. (6,7,8,9)

The authors believe that DOE should view the current situation as an opportunity to rediscover certain aspects of Nevada transportation mode and route selection, and to rediscover Nevada's transportation system recommendations. In this paper we address only a few of the corridor-specific issues: physical geography, Native American interests, ranching interests, and impacts on Las Vegas. Many other issues, such as impacts on biological resources, water resources, and military operations, will need to be addressed as part of the BLM land withdrawal process, and as part of the scoping process for a rail alignment EIS, if DOE proceeds with the Caliente rail corridor selection.

REDISCOVERING NEVADA: PHYSICAL GEOGRAPHY

The Caliente corridor preference decision will force DOE to rediscover the physical geography of Nevada. First and foremost, DOE will rediscover Nevada's mountains. Nevada doesn't have the highest mountains, but it may have the most mountains. One popular tourist guidebook claims that Nevada has more than 300 mountain ranges, many with peaks above 7,500 feet, and several with peaks above 10,000 feet. (10)

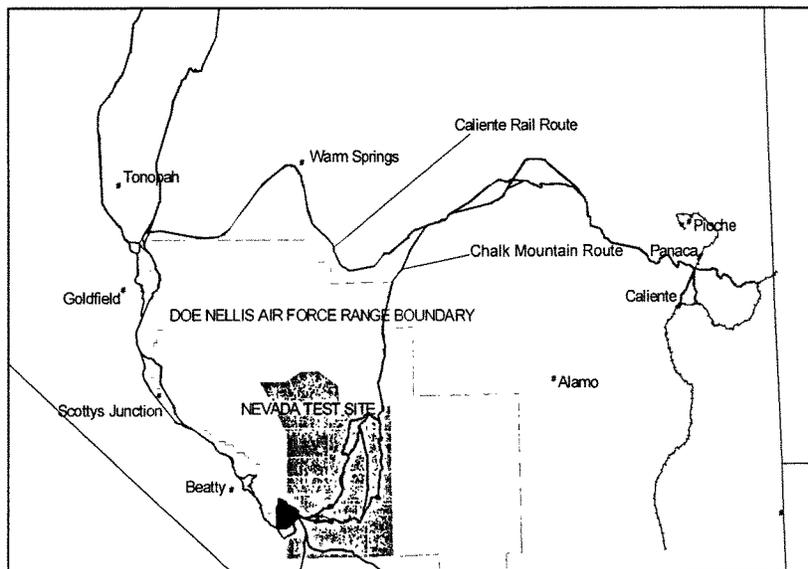


Fig. 1. Caliente and Caliente-Chalk Mountain Corridors

Figure 1 shows the Caliente and Caliente-Chalk Mountain corridors. The Caliente corridor is located primarily within the Basin and Range Region of Nevada, which is divided by more than 150 North-South mountain ranges. (11) These North-South mountain ranges pose a considerable challenge to East-West railroad building. The original DOE Caliente rail route, which followed existing highways U.S. 93 and S.R. 375, was moved 40 miles north in 1992, in large part to avoid Hancock Summit through the Pahrangat Range and Coyote Summit through the Timpahute Range. (12) Figure 2 shows Hancock Summit.

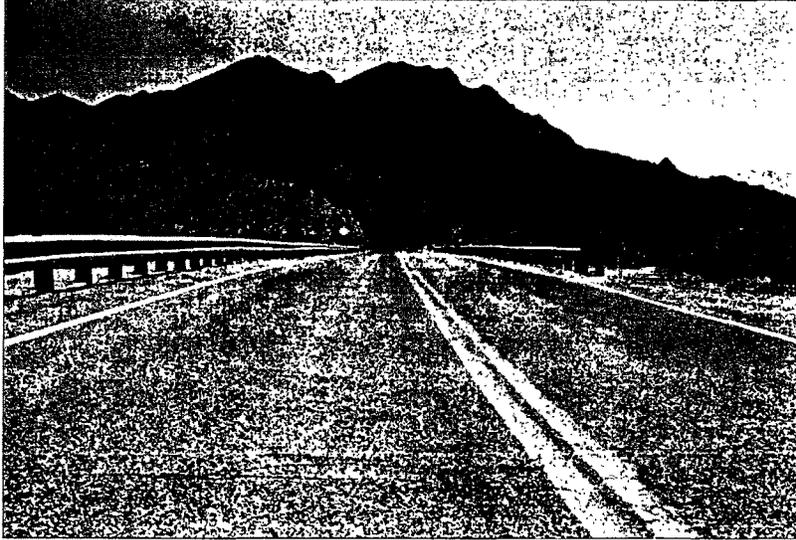


Fig. 2. Hancock Summit

The first hundred miles of the current DOE Caliente corridor must cross, skirt, or dodge the Delamar Mountains, the Chief Range, the Highland Range, the North Pahroc Range, the Seaman Range, the Golden Gate Range, and the Worthington Mountains. Figure 3 shows Bennett Pass, the first major mountain crossing along the corridor. The second hundred miles of the corridor must cross the Quinn Canyon Range, slip between the Groom and Belted Ranges to the South and the Revielle Range to the North, traverse Warm Springs Summit (elevation 6,293 feet) between the Kawich and Hot Creek Ranges, and turn South to avoid Sugarloaf Mountain and the Monitor Hills. In its final 119 miles, the primary corridor must cross into the Nellis Air Force Ranges to avoid mountains and hills near Goldfield, and snake along the Nellis boundary to avoid Stonewall Mountain, Pahute Mesa, Oasis Mountain and Bare Mountain before arriving at the southern extent of Yucca Mountain.

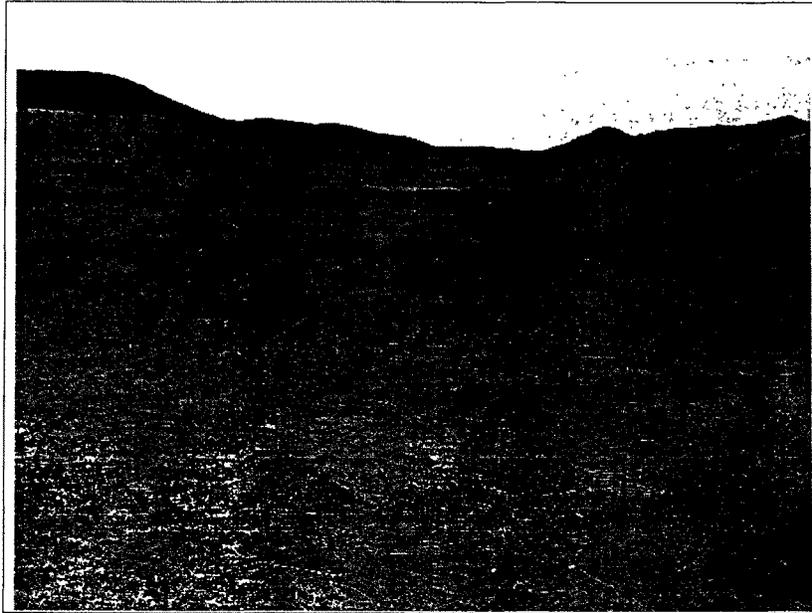


Fig. 3. Bennett Pass

DOE has not to our knowledge revealed a conceptual plan for a specific rail alignment within the current Caliente corridor. A conceptual plan and vertical profile are required for evaluation of feasibility and construction cost. A preliminary analysis of the first 100 miles, prepared for this paper based on previous DOE and Nevada studies, (6,7,8,12) indicates that DOE railroad construction and operation will be challenged by the rugged topography. The first four mountain crossing segments, ranging in length from 7 miles to more than 20 miles, would involve ascending and descending from valley elevations of 4,600 to 5,200 feet, to summit elevations of 5,400 to 6,100 feet. Figure 4 shows Timber Mountain Pass, the highest summit crossed in the first 100 miles. While a specific alignment has not yet been selected, almost any alignment within the proposed corridor will require grades of 1.3 percent to 2.4 percent for 75 of the first 100 miles, even after extensive cut-and-fill activity to limit maximum grades to 2.5 percent. DOE should expect to encounter similar conditions at other locations along the remaining 219 miles.

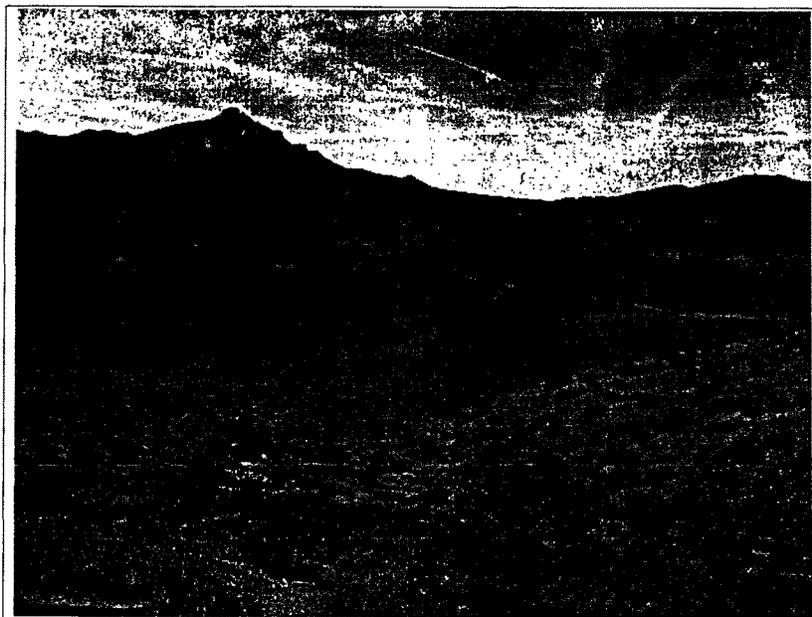


Fig. 4. Timber Mountain Pass

Caliente was the second-longest (319 miles), and most expensive (\$880 million), of five rail access options identified by DOE. Carlin, the longest option, was 323 miles. Either of these routes would be considerably longer than the 113-mile Orin Line constructed by the Burlington Northern to access the Wyoming Powder River Basin coal fields in the 1970s. The Orin Line was the longest new track construction effort in the United States since the 1930s. (8) By way of further comparison, the Caliente route would be longer than the distance from Washington to New York (204 miles); St Louis to Chicago (259 miles); or London to Paris (213 miles). (13)

REDISCOVERING NEVADA: NATIVE AMERICAN INTERESTS

The Caliente corridor preference decision will force DOE to rediscover potential conflicts with Native American interests. Native American concerns have been documented by more than 15 years of studies and analyses sponsored by the Nevada Agency for Nuclear Projects, and are summarized in the Agency's summary impact report. The proposed repository location at Yucca Mountain is a very old border between the Western Shoshone and the Southern Paiute. In the immediate area are several federally recognized tribes and their reservation communities, as well as other urban and rural Native American residents, and organizations such as the Western Shoshone National Council. Most Native Americans in Nevada do not want the disturbance of cultural resources that they see as the inevitable outcome of the Yucca Mountain project. (7)

The entire Caliente corridor lies within lands claimed by the Western Shoshone Nation under the Ruby Valley Treaty. DOE has acknowledged that the corridor may cross traditional holy lands important to the Southern Paiute, Western Shoshone, and Owens Valley Paiute and Shoshone peoples. The Bonnie Claire alternate portion of the Caliente corridor near Scotty's Junction would traverse lands held in trust for the

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Timbisha Shoshone Tribe. (5,6,7,8) According to DOE, “archaeological surveys have been conducted in less than 1 percent” of the total area for the Caliente corridor. [FEIS, 3-151]

Rail shipments to Caliente from California on the existing Union Pacific mainline would traverse almost the entire length of the Moapa River Indian Reservation. All of the truck shipments required under the DOE mostly rail scenario would cross the Moapa River Indian Reservation on I-15 and the Las Vegas Paiute Reservation on U.S. 95. (7)

Tribes potentially affected by transportation to Yucca Mountain have identified the following concerns: DOE & BIA failure to formally recognize affected tribe status and provide financial and technical assistance; protection of religious and cultural sites, and plants and animals, both on and off reservations; implications of rail spur right-of-way acquisition for Western Shoshone land claims (Ruby Valley Treaty); cultural implications of possible radiological contamination and cleanup activities on tribal lands; stigma impacts on tribal businesses; tribal authority to regulate shipments across reservation lands, including pre-notification and monitoring; and tribal roles in emergency response planning and training. (7)

REDISCOVERING NEVADA: RANCHING OPERATIONS

The Caliente corridor preference decision will force DOE to rediscover potential conflicts with Nevada ranching operations. Prior to the DOE corridor preference announcement and proposed BLM land withdrawal, ranching interests along the corridor in Lincoln and Nye Counties had, with few exceptions, not been major participants in the public discussions about transportation access. The Caliente corridor would directly impact ranching operations in Meadow Valley, Reveille Valley, Oasis Valley, and other areas. Since publication of the DOE and BLM notices in December 2003, ranchers have begun to express strong opposition. (14)

DOE corridor preference criteria, specifically avoidance of privately-owned land, ignore the realities of ranching in Nevada. Land ownership does not accurately reflect land-use. Most ranching operations are based upon a combination of privately owned fee land and grazing leases on publicly owned lands. Splitting an existing operation with a rail line that will limit access to the leased land can have significant adverse effects on the operation of the ranch. If the rail line is fenced, the splitting of ranching operations will be perhaps the most significant impact. The rail line will bisect many local roads, and grade separated crossings will be limited to major roads. (7)

Ranching operations will be the most affected by the barrier to movements created by the proposed rail line. Box culverts and bridges are commonly used to provide underpasses under railroad tracks for the movement of livestock and equipment. Underpasses will be limited to locations where underpasses can be constructed based on the topography and the profile of the proposed rail line. The degree of impact is a combination of the proposed at road crossings (either at grade or grade separated) and proposed drainage structures. A preliminary Agency analysis for the Caliente corridor found the average distance between potential crossing locations is 19.2 miles. The longest distance is 39 miles. (7)

The FEIS impact assessment was limited to assessing impacts within a set distance (60 meters and 400 meters, or 200 feet and one-quarter mile) of the identified corridor. Railroad yards, borrow areas, areas for disposal of surplus fill, staging areas, construction camps, lay down areas, access roads to construction initiation points, and other construction and maintenance activities will result in impacts on ranching outside of the identified corridors. (7)

REDISCOVERING NEVADA: LAS VEGAS

The Caliente corridor preference decision will force DOE to rediscover the controversy about shipments of spent nuclear fuel and high-level radioactive waste through downtown Las Vegas. DOE selection of the Caliente rail corridor would directly impact downtown Las Vegas. Additionally, truck shipments required under the mostly rail scenario would impact the Las Vegas metropolitan area. (6,7,8)

The FEIS estimated DOE would make 9,646 rail cask-shipments to Yucca Mountain over 24 years. The FEIS assumed that 660 rail cask-shipments (about 7 percent) would enter Nevada from California, and

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travel to Caliente via the Union Pacific Railroad mainline through Las Vegas. DOE assumed that the vast majority of rail shipments from the East (about 93 percent of the rail total) would use the Union Pacific mainlines from Chicago or Kansas City, via Gibbon, Nebraska, and Cheyenne, Wyoming, entering Nevada from Utah. [FEIS, Pp. J-140 to J-186]

The actual number of rail-cask shipments to Caliente through Las Vegas could be as high as 8,564 over 24 years, or about 89 percent. DOE current policy is that rail carriers will determine the routes used for shipments to Yucca Mountain. Alternative cross-country rail routes are available, and a number of factors could result in the vast majority of shipments from the East traveling to Nevada on the Burlington Northern-Santa Fe or Union Pacific routes across Texas, New Mexico, Arizona, and California. All rail shipments to Yucca Mountain, except those from the Pacific Northwest and Idaho, could therefore travel to Caliente through downtown Las Vegas under credible alternative routing scenarios. (15)

Many thousands of Las Vegas residents live and work near this potential rail route to Yucca Mountain via Caliente. The Union Pacific mainline between Apex Siding on the North and Arden Siding on the South is about 36 miles long. According to the 2000 Census, more than 39,000 people reside within one-half mile of the rail line. A number of large hotel-casinos are located within one-half mile also. When the resident population is combined with the school population, estimated average daily workers, and estimated hotel/casino guests, the average daily exposed population within one-half mile of the routes is currently about 86,000. (8)

If DOE formally selects Caliente as the preferred corridor to Yucca Mountain, tens of thousands of Clark County residents will be affected by the shipments. Moreover, these shipments could continue for a period of four decades or more. The potential for large-scale rail shipments through Las Vegas is a major concern for the State of Nevada, Clark County, and the Cities of Las Vegas and North Las Vegas. In addition to the potential impacts on residents, the proximity of the Union Pacific mainline to the world-famous Las Vegas Strip and to other major commercial properties create truly unique local impact conditions.

Additionally, the FEIS estimates 1,079 legal-weight truck shipments over 24 years for the mostly rail scenario. Under current DOE highway routing preferences, all of the truck shipments to Yucca Mountain would travel through the Las Vegas metropolitan area on I-15, I-215, and U.S. 95. [FEIS, Pp.2-49, J-186]

REDISCOVERING NEVADA RECOMMENDATIONS: ROUTINE RADIATION EXPOSURES

The State of Nevada is concerned about the construction of a high-level nuclear waste repository at Yucca Mountain, including the routine radiation exposures during incident-free transportation of spent nuclear fuel and high-level radioactive waste to the potential repository. These concerns derive from Nevada's experience with nuclear weapons testing at the Nevada Test Site and federal stewardship of approximately 87% of the state's land area. The combined exposures to radiation and Federal decision-making have created a political culture in Nevada that is skeptical of large Federal actions and eager to believe the worst about major Federal activities and their proponents. These concerns have been forcefully expressed by more than 15 years of studies and analyses sponsored by the Nevada Agency for Nuclear Projects. (7)

NRC regulations allow shipping casks to emit a small amount of radiation during routine operations (1,000 mrem/hr at the cask surface and 10 mrem/hr 2 meters from the cask surface). The dose rate allowed under NRC regulations results in near-cask exposures of about 2.5 mrem per hour at 5 meters (16 feet), in measurable exposures (less than 0.2 mrem per hour) at 30 meters (98 feet), and calculated exposures (less than 0.0002 mrem per hour) at 800 meters (one-half mile) from the cask surface. [FEIS, p. J-38]

DOE acknowledges that cumulative routine radiation from shipping casks could pose a health threat to certain transportation workers. DOE proposes to control these risks by restricting work hours and doses for certain jobs. [FEIS, Pp. J-44 to J-45] DOE concludes that members of the general public would not receive significant doses from passing trucks and trains. DOE concludes that even the maximally exposed members

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of the public – a service station attendant, a resident near a rail yard, or a motorist stuck next to a truck cask in a traffic jam – would not suffer significant adverse health effects. [FEIS, Tables 6-9 & 6-12]

Studies prepared for the Agency have found that routine transportation radiation exposures could result in higher doses, both to workers and to members of the public, and in more significant health effects, than estimated by DOE. Moreover, the very fact that these exposures would occur may cause adverse impacts even though the dose levels are well below the established thresholds for cancer and other health effects. (16,17,18,19)

Agency-sponsored studies have found that radiation possesses some unique characteristics as a hazard. One Nevada researcher has grouped these characteristics into the categories of dread, exposure, and familiarity. This paradigm of “riskiness,” now widely adopted in the hazards research field, argues that radiation may be riskier than other hazards because people perceive the risk to be involuntary and uncontrollable (dread). It is reasonable to expect that the public will believe that a large number of people will be exposed to the radiation and that it is a hazard with which they are unfamiliar. Unique local conditions along some potential routes to Yucca Mountain could create elevated radiation exposure zones on private properties, and could constitute at least a ‘nuisance’ or even an actual ‘taking’ of property rights, both in terms of lost value and involuntary assignment of risk of radiological exposure. (7)

To help study and mitigate such risks, the Nevada Agency for Nuclear Projects has recommended to DOE the following measures to manage transportation routine radiation impacts:

1. Reassess potential doses to maximally exposed workers and members of the public.
2. Use more conservative dose conversion factors for estimating latent cancer fatalities (LCF's).
3. Consider health effects other than LCF's, specifically genetic and teratogenic risks.
4. Adopt the ALARA principle on a system-wide basis before proceeding to cask procurement.
5. Ship oldest spent fuel assemblies first, which could result in a potential 20 to 50 percent reduction in dose rate.
6. Assess unique local conditions along potential highway and rail routes in Nevada and identify implications for property rights and values.

REDISCOVERING NEVADA RECOMMENDATIONS: SEVERE ACCIDENTS

The State of Nevada is concerned about severe accidents during transportation of spent nuclear fuel and high-level radioactive waste to Yucca Mountain. These concerns reflect Nevada's experience with transportation accidents and natural disasters, especially those involving rail transport, over the past century. These concerns also reflect more than 15 years of studies and analyses sponsored by the Nevada Agency for Nuclear Projects.

The State particularly disagrees with the FEIS conclusion that the maximum reasonably foreseeable accident scenarios for Nevada are the same as for national transportation. Unique local conditions require special consideration of truck and rail accidents involving commercial and military explosives; massive infrastructure failures resulting from severe earthquakes or floods; and a rail or truck cask involved in an accident with a military aircraft carrying live munitions. (6,7)

NRC regulations specify rigorous accident performance standards for spent fuel shipping casks. NRC does not require full-scale physical testing to demonstrate compliance with these regulations. NRC has proposed demonstration testing of one truck cask and one rail cask as part of the Package Performance Study (PPS). The State of Nevada has recommended an alternative approach to cask testing. (20) Nevada also recommends greater involvement by the Federal Railroad Administration in development of PPS testing protocols. Because of the extremely heavy weight of the new cask-railcar combinations (455,000 lbs as opposed to 255,000 lbs for a normal railcar), NRC should not assume that existing data reflect the type, severity, and frequency of accidents that may occur with the new railcars.

The Nevada Agency for Nuclear Projects has recommended to DOE and NRC the following measures for full-scale cask testing:

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1. A meaningful stakeholder role in development of testing protocols, selection of test facilities, and input on personnel.
2. Full-scale regulatory testing (sequential drop, puncture, fire, and immersion) prior to NRC certification, or DOE procurement, of all casks designs used for shipments to Yucca Mountain.
3. Additional testing (casks, components, models) and computer simulations to determine cask performance in extra-regulatory accidents and to determine failure thresholds.
4. Reevaluation of the Modal Study findings, and if appropriate, revision of NRC cask performance standards.
5. Evaluation of the costs and benefits of destructive testing of a randomly-selected production model cask.

DOE acknowledges that a very severe highway or rail accident could release radioactive materials from a shipping cask, resulting in radiation exposures to members of the public and latent cancer fatalities (LCFs) among the exposed population. In the Draft EIS, DOE evaluated a "maximum reasonably foreseeable accident scenario" involving a rail accident at a generic urban location, resulting in a collective population dose of 61,000 person-rem and about 31 latent cancer fatalities. [DEIS, p. 6-33] In the Final EIS, DOE used an alternative methodology for consequence analysis, (21) and reduced the estimated rail accident consequences to a collective dose of 9,900 person-rem and 5 latent cancer fatalities. [FEIS, Pp. 6-45 to 6-47, 6-49 to 6-50] The FEIS states that clean-up costs following a worst-case transportation accident could reach \$10 billion. [FEIS, J-72 to J-74]

Studies prepared for the Nevada Agency for Nuclear Projects have estimated the consequences of credible worst case truck and rail accidents at representative urban and rural locations along potential Nevada highway routes. A Nevada-sponsored study also examined the consequences of a hypothetical spent fuel accident similar to the July 2001 Baltimore rail tunnel fire. These studies conclude that DOE has significantly underestimated the human health impacts of very severe transportation accidents, and that cleanup costs could exceed \$10 billion. (22,23,24,25)

The Nevada Agency for Nuclear Projects has recommended to DOE the following measures for comprehensive transportation risk management:

1. A comprehensive risk assessment (CRA) should cover all transportation system phases, events, and consequences as suggested by Golding and White (1990).
2. CRA calculates probabilities only where there is existing data, theories, and models that are sufficient to support use of rigorous quantitative methods, and uses sensitivity analysis to illustrate impacts of differing assumptions and variations in quality of data.
3. CRA should be used as a working risk management tool throughout the life cycle of the Yucca Mountain project, with ongoing public participation
4. CRA should be the basis of risk communication throughout life cycle of the Yucca Mountain project.

Comprehensive risk assessment is a precursor of a growing trend in risk analysis and regulation away from "point estimates" in which a single number is presented as a meaningful risk estimate. Instead, a range of possibilities is presented with an associated likelihood, when that likelihood may be estimated.

The Nevada Agency for Nuclear Projects has recommended to DOE the following measures for accident prevention and emergency response:

1. Maximize use of regional organizations such as Western Governors Association (WGA) and Western Interstate Energy Board (WIEB) for planning, implementation, and program evaluation.
2. Coordinate with relevant corridor Indian Tribes and local governments.
3. Develop comprehensive safety program modeled after WGA-State-DOE WIPP Transportation Program.
4. Adopt WIEB (September 1994) proposal for evaluation and final designation of preferred shipping routes.
5. Implement Section 180(c) for financial assistance to state, local, & tribal governments through rulemaking.

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6. Revise DOE Plan for Privatization of Transportation Services to emphasize safety and public acceptance.

The Nevada Agency for Nuclear Projects has recommended to DOE the following measures for development of a preferred transportation system for all shipments to Yucca Mountain:

1. Develop dual purpose casks for at-reactor storage and transport.
2. As noted elsewhere, ship the oldest fuel assemblies first, that is, those with at least 20 years at-reactor cooling.
3. Adopt the transportation modality that makes maximum use of rail.
4. Make mandatory use of dedicated trains, special safety protocols, and special car designs as recommended by American Association of Railroads.
5. Insist that DOE and carriers make early identification of preferred cross-country mainline routes in consultation with stakeholders.
6. Encourage early involvement of corridor states and Indian Tribes, including financial assistance under Section 180(c), as part of the route selection process.

REDISCOVERING NEVADA RECOMMENDATIONS: TERRORISM AND SABOTAGE

The State of Nevada is concerned about terrorism and sabotage during transportation of spent nuclear fuel and high-level radioactive waste to Yucca Mountain. These concerns reflect Nevada's experience with specific instances of terrorism and sabotage like the 1939 Harney rail disaster, an extortion bombing incident at a Nevada hotel, various anti-government attacks and bombings in Nevada, and recent revelations that Las Vegas was not only used as a staging area by Islamic terrorists, but that Las Vegas might be a primary and highly symbolic target for Islamic terrorists. These concerns are bolstered by DOE documents and relevant research on this subject sponsored by Nevada's Agency for Nuclear Projects. (7,26)

DOE acknowledges that shipping casks are vulnerable to terrorist attack and sabotage. DOE-sponsored research (27) indicates certain explosive devices could breach the wall of a cask, "leading to the dispersal of contaminants to the environment." A successful attack on a truck cask would release more radioactive materials than an attack on a rail cask. [DEIS, p. 6-33 to 6-34] DOE has estimated that a successful terrorist attack on a truck cask in an urban area would result in a population dose of 96,000 person-rem, and 48 latent cancer fatalities. [FEIS, Pp. 6-50 to 6-52] While the DOE did not specifically estimate cleanup costs after such an attack, cleanup requirements would likely be similar to a worst-case transportation accident.

Analyses prepared for the State of Nevada estimated terrorism or sabotage impacts would be considerably greater than even these DOE estimates. Nevada contractors replicated the DOE FEIS sabotage consequence analyses, using the RISKIND model for health effects and the RADTRAN model for economic impacts, the same average and maximum inventory release fractions, and a range of population densities and weather conditions.

The Nevada-sponsored study concluded that an attack on a GA-4 truck cask using a common military demolition device could cause 300 to 1,800 latent cancer fatalities, assuming 90% penetration by a single blast. Full perforation of the cask, likely to occur in an attack involving a state-of-the-art, anti-tank weapon, such as the TOW missile, could cause 3,000 to 18,000 latent cancer fatalities. Cleanup and recovery costs would exceed \$10 billion. (28,29,30,31,33)

Beyond attacking a cask with explosives, terrorists might commit radiological sabotage by causing a devastating transportation accident. Published terrorism risk assessments have not, to date, considered the possibility that an intentional, human-initiated event could disperse radioactive material from a shipping cask, let alone consider the implications of a combined bombing and accident tactic. Concerns about terrorism have prompted calls for reappraisals of risk management and assessment practice in order to better understand risk.

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Well before the terrorist suicide attacks of September 11, 2001, concern about the terrorist threat to repository shipments led Nevada's Attorney General to file a petition for rulemaking with the NRC in June 1999. In the petition, Nevada documented the vulnerability of shipping casks to high-energy explosive devices. Nevada also submitted evidence that shipments to a national repository would be dramatically different from past shipments in the United States, and that these differences would create greater opportunities for terrorist attacks and sabotage. The petition requested a general strengthening of the current transportation safeguards regulations and a comprehensive reexamination of the consequences of radiological sabotage. (32)

The NRC published Nevada's petition (Docket PRM-73-10) in the *Federal Register* on September 15, 1999, and accepted public comments through February 2000. The Western Governor's Association endorsed Nevada's petition on behalf of 18 western States. Five other states (LA, MI, OK, VA, and WV) also endorsed all or part of the petition. Four years after the close of the comment period, and more than two years after the 9/11 attacks, the NRC has still not officially responded to Nevada's petition.

The State of Nevada has summarized its terrorism and sabotage concerns in two main areas: Pre-September 11, 2001 concerns (prevention and mitigation regulations and risk assessment protocols); and post-September 11, 2001 concerns (emerging factors relative to terrorism and new requirements for risk assessments). These are summarized below.

The State of Nevada has petitioned the NRC to amend the following regulations to better deter, prevent and mitigate consequences of radiological sabotage against spent fuel shipments:

1. Reexamine Design Basis Threat for Radiological Sabotage - 10 C.F.R. 73.1(a)(1) with the intention of creating a transportation specific model at least as robust as the fixed site model.
2. Expand Definition of "Radiological Sabotage" - 10 C.F.R. 73.2.
3. Strengthen Requirements for Advance Approval of Routes - 10 C.F.R. 73.37(b)(7).
4. Adopt New Requirements for Planning and Scheduling - 10 C.F.R. 73.37(b)(8).
5. Strengthen Escort Requirements for Shipments by Road - 10 C.F.R. 73.37(c).
6. Strengthen Escort Requirements for Shipments by Rail - 10 C.F.R. 73.37(d).
7. Adopt New Regulation to Require that All Rail Shipments be made in Dedicated Trains - 10 C.F.R. 73.37(d).

The State of Nevada has petitioned the NRC to conduct a comprehensive assessment of consequences of terrorist attacks that have the capability for radiological sabotage:

1. Assess attacks against transportation infrastructure used during nuclear waste shipments.
2. Assess attacks involving capture of a nuclear waste shipment and use of high energy explosives against a cask or casks.
3. Assess direct attacks upon a nuclear waste shipping cask or casks using antitank missiles or other military weapons.

In light of lessons learned from 9/11, the State of Nevada recommends that DOE and NRC transportation terrorism risk assessments consider such emerging factors as:

1. Attacks involving multiple weapons and/or combinations of weapons designed to maximize release and dispersal of radioactive materials.
2. Attacks involving coordinated use of hijacked vehicles, including tanker trucks.
3. Attacks involving large groups of well-trained adversaries, including suicide attacks.
4. Attacks involving terrorist infiltration of trucking and railroad companies (or what is known as the active insider).
5. Attacks at locations with a highly symbolic social, political, or economic value.

In light of lessons learned from 9/11, the State of Nevada recommends that DOE and NRC transportation terrorism risk assessments address:

1. Standard socioeconomic impacts, including cleanup and disposal costs and opportunity costs to affected individuals and business.

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2. Economic losses resulting from public perceptions of risk and stigma effects.
3. Impacts on emergency responders and recovery workers, including long term monitoring, care, and health benefits for these first responders.

CONCLUSIONS

DOE plans are currently uncertain regarding selection of a preferred mode and route for transporting spent nuclear fuel and high-level radioactive waste to the proposed Yucca Mountain repository site. The State of Nevada believes that DOE must reassess its transportation options through the NEPA process, before proceeding to implement any major transportation decisions. DOE identification of the Caliente option as the preferred corridor for construction of a new rail line, coupled with the DOE request for BLM land withdrawal along the proposed corridor, will force DOE to rediscover key aspects of Nevada physical geography and stakeholder interests

DOE should view the current situation as an opportunity to rediscover certain aspects of Nevada transportation mode and route selection, including physical geography, Native American interests, ranching interests, and impacts on Las Vegas. Many other issues, such as impacts on biological resources, water resources, and military operations, will need to be addressed as part of the BLM land withdrawal process, and as part of the scoping process for a rail alignment EIS, if DOE proceeds with the Caliente rail corridor selection. DOE should also view the current situation as an opportunity to rediscover Nevada's transportation system recommendations regarding routine radiation exposures, severe accidents, and terrorism and sabotage.

REFERENCES

1. DOE, "Correspondence from M.S.Y. Chu, OCRWM Director, to The Honorable Kenny Guinn, Governor, The State of Nevada" (December 23, 2003).
2. DOE, "Notice of Preferred Nevada Rail Corridor," Federal Register, Vol. 68, No. 248, 74951-74952 (December 29, 2003).
3. BLM, "Notice of Proposed Withdrawal and Opportunity for Public Meeting; Nevada," Federal Register, Vol. 68, No. 248, 74965-74968 (December 29, 2003).
4. DOE, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada," DOE/EIS-0250D, U.S. Department of Energy, Washington, D.C. (July 1999).
5. DOE, "Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada," DOE/EIS-0250 (February 2002). (Available on the web at http://www.ymp.gov/documents/feis_a/index.htm).
6. NANP, "State of Nevada Comments on the U.S. Department of Energy's Draft Environmental Impact Statement," (February 28, 2000).
7. "A Mountain of Trouble: Report on Impacts of the Proposed Yucca Mountain High-Level Nuclear Waste Program," Prepared for NANP (February 2002).). This and other reports prepared for NANP can be accessed on the web at <http://www.state.nv/nucwaste/trans.htm>.
8. R. HALSTEAD, F. DILGER, R. MOORE, "Rail Access to Yucca Mountain: Critical Issues," WM'03, Conference Proceedings, February 23-27, 2003, Tucson, AZ.

WM'04 Conference, February 29 – March 4, 2004, Tucson, AZ

9. "State of Nevada, et al, v. United States Department of Energy, et al, Petition for Review from Final Decisions, Actions, and Failures to Act of United States Department of Energy and Final Decisions and Actions of the President of the United States, Petitioners' Opening Brief, December 2, 2002." Available at <http://www.state.nv.us/nucwaste/news2002/nv021203.pdf>.
10. AAA, "California/Nevada Tourbook," (1996)
11. "The Geography of Nevada," <http://www>.
12. DELEUW, CATHER, AND COMPANY, "Final Yucca Mountain Rail Access Study Caliente Route Conceptual Design Report," Prepared for SAIC, Las Vegas (June 1, 1992).
13. "How Far Is It," <http://www.indo.com/cgi-bin/dist?>
14. M. WAITE, "Rancher Objects to Rail Route," Pahrump Valley Times (January 9, 2004)
15. PIC, "The Transportation of Spent Nuclear Fuel and High-Level Radioactive Waste: A Systematic Basis for Planning and Management at National, Regional and Community Levels," Prepared for NANP (September 1996).
16. R. HALSTEAD, L. AUDIN, R. HOSKINS, D. SNEDEKER, "State of Nevada Comments on the O.C.R.W.M. From-Reactor Spent Fuel Shipping Cask Preliminary Design Reports," NWPO-TN-009-90 Prepared for Nevada Agency for Nuclear Projects (NANP) (December, 1990).
17. G.R. GATHERS, "Calculations with RISKIND for Heavy Haul Truck (HHT) Transport of Spent Nuclear Fuel Casks Via Goldfield, Nevada," Report for the Nuclear Waste Projects Office, State of Nevada, M.H. Chew and Associates, Livermore, CA (2001)
18. G.R. GATHERS, "Calculations with RISKIND for Rail Transport of Spent Nuclear Fuel Casks Via Las Vegas, Nevada" Report for the Nuclear Waste Projects Office, State of Nevada, M.H. Chew and Associates, Livermore, CA (2001)
19. H.R. COLLINS, G.R. GATHERS, R. HALSTEAD, "Radiological Impacts of Incident-Free Transportation to Yucca Mountain: Collective and Maximally Exposed Individual Doses," Paper Presented at Health Physics Society 47th Annual Meeting, Tampa, FL, June 16-20, 2002.
20. R. HALSTEAD, F. DILGER, "Implications of the Baltimore Rail Tunnel Fire For Full-scale Testing of Shipping Casks," WM'03, Conference Proceedings, February 23-27, 2003, Tucson, AZ.
21. J.L. SPRUNG, ET AL, "Reexamination of Spent Fuel Shipment Risk Estimates," NUREG/CR-6672, SAND2000-0234, Prepared by SNL for NRC (March 2000).
22. M. LAMB, M. RESNIKOFF, "Review of NUREG/CR-6672, Reexamination of Spent Fuel Shipment Risk Estimates," Prepared for Clark County, Nevada, by Radioactive Waste Management Associates (October 2000).
23. M. GREINER, "Spent Nuclear Fuel Shipping Cask Performance in Severe Accident Fires: Performance Envelope Analysis, Fire Test Modeling, and Full-Scale Physical Testing," Prepared by University of Nevada, Reno, for NANP (July 20, 2000).
24. M. LAMB, M. RESNIKOFF, R. MOORE, "Worst Case Credible Nuclear Transportation Accidents: Analysis for Urban and Rural Nevada," Prepared by Radioactive Waste Management Associates for NANP (February 2002).

WM'04 Conference, February 29 – March 4, 2004, Tucson, AZ

25. M. LAMB and M. RESNIKOFF, "Radiological Consequences of Severe Rail Accidents Involving Spent Nuclear Fuel Shipments to Yucca Mountain: Hypothetical Baltimore Rail Tunnel Fire Involving SNF," Prepared by Radioactive Waste Management Associates for NANP (September 2001). This and other reports prepared for NANP can be accessed on the web at <http://www.state.nv/nucwaste/trans.htm>
26. R. HALSTEAD, J.D. BALLARD, "Nuclear Waste Transportation Security and Safety Issues: The Risk of Terrorism and Sabotage Against Repository Shipments," Prepared for State of Nevada, Agency for Nuclear Projects, Oct., 1997.
27. R.LUNA, et al., Projected Source Terms for Potential Sabotage Events Related to Spent Fuel Shipments, SAND99-0963, 1999, p.20.
28. L. AUDIN, "Assessing the Risks of Terrorism and Sabotage Against Spent Nuclear Fuel Shipments: A Review of Materials and Issues in the Post-9/11 Environment," Prepared for State of Nevada, Agency for Nuclear Projects, April, 2002
29. M. LAMB, et al, "Potential Consequences of a Successful Sabotage Attack on a Spent Fuel Shipping Container: An Analysis of the Yucca Mountain EIS Treatment of Sabotage" Prepared by Radioactive Waste Management Associates for the State of Nevada, Agency for Nuclear Projects, April 2002.
30. R.J. HALSTEAD, et al, "State of Nevada Studies of Potential Terrorism and Sabotage against Spent Fuel Shipments," WM '01, Proceedings of the Conference on Radioactive Waste Management, February 25-March 1, 2001, Tucson, AZ.
31. R.J.HALSTEAD, et al, "Nuclear Waste Transportation Terrorism and Sabotage: Critical Issues," Proceedings of the 13th International Symposium on the Packaging and Transportation of Radioactive Materials (PATRAM), Chicago, IL, September 4, 2001
32. The text of the petition and comments submitted to the NRC are available on the web at http://3/26/01/ruleforum.llnl.gov/cgi-bin/rulemake?source=NV_PETITION.
33. J.D. BALLARD, "Prepared Statement of J.D. Ballard", Before the Committee on Energy and Natural Resources, United States Senate, 107th Congress, May 22, 2002.

Department of Energy
Office of Civilian Radioactive Waste Management
Testimony to the
Committee on Transportation and Infrastructure
Subcommittee on Railroads
U.S. House of Representatives
March 5, 2004

INTRODUCTION

Mr. Chairman and members of the Subcommittee, my name is Gary Lanthrum, and I am the Director of the Office of National Transportation for the Office of Civilian Radioactive Waste Management (OCRWM) of the U.S. Department of Energy (DOE). I am pleased to appear before you today to discuss OCRWM's transportation activities and plans.

BACKGROUND

On July 23, 2002, a Congressional joint resolution was signed into law (P.L. 107-200), designating the Yucca Mountain site in Nye County, Nevada, for development as a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste. The Office of Civilian Radioactive Waste Management is tasked with fulfilling the federal government's responsibility for safe and secure disposal of spent nuclear fuel and high-level radioactive waste in a geologic repository. We remain committed to the goal of commencing acceptance of these materials in 2010. To reach that goal, the Program is focused on two objectives. The first is submitting, in 2004, a high-quality license application that meets the regulatory requirements of the Nuclear Regulatory Commission. The second is development of a safe, secure, and efficient transportation system.

OCRWM's transportation activities were deferred for many years while the Program focused on scientific site characterization and the technical work supporting the license application. Now,

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OCRWM has begun to revitalize and accelerate the transportation program. Headquartered in Washington and with staff both there and in Nevada, the OCRWM's Office of National Transportation is responsible for designing and developing a safe, secure and efficient transportation system with the capability to support waste acceptance in 2010.

The Department will use its experience in transporting nuclear materials, as well as best practices from domestic and foreign nuclear utility shipments, as the foundation for the OCRWM transportation system. Our experience in transporting waste to WIPP, in conducting shipments of foreign research reactor spent fuel, and in managing the Naval Reactors program has proven that interaction with stakeholders and interested parties is critical to success. The OCRWM Office of National Transportation is committed to working with interested parties in a collaborative process to build a transportation system that supports the OCRWM mission and effectively addresses the concerns of stakeholders.

This Nation has a long and successful record of shipping spent nuclear fuel and radioactive materials. Since the 1960s, the Department and industry have successfully completed approximately 3,000 spent nuclear fuel shipments, traveling over 1.7 million miles without any injury due to release of radioactive materials. The Department of Energy has safely conducted over 2,300 shipments of transuranic waste, covering more than 2.3 million miles, to the Waste Isolation Pilot Plant in New Mexico. In densely populated European countries, spent nuclear fuel has been transported extensively – France and Britain average 640 shipments a year, considerably more than the 175 annual shipments currently contemplated for Yucca Mountain. Over the past 25 years, more than 70,000 metric tons of spent nuclear fuel has been shipped – which exceeds the entire volume allowed by statute to go to Yucca Mountain.

PLANNING

To lay the groundwork for collaborative development of the specific transportation system, in November 2003 we published the *Strategic Plan for the Safe Transportation of Spent Nuclear Fuel and High-Level Radioactive Waste to Yucca Mountain: A Guide to Stakeholder Interactions*. The Plan presents the Department's strategy and describes the process OCRWM will use to work

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cooperatively with states, federally recognized tribes, local governments, utilities, the transportation industry, and other interested parties to refine the transportation system as it is developed.

We have begun interactions with these stakeholders to define the transportation topics they want to address. Initially, their focus is on routing criteria, policies for emergency preparedness support, and infrastructure development. These collaborative efforts are in the very early stages of development. Our working relationship with stakeholders will evolve to effectively address these topics and others as they are identified. Detailed discussions about operations are not likely to be productive until key decisions on transportation mode and corridor (if applicable) are made, and initial stakeholder topics have been addressed more completely.

Previously, the Final Environmental Impact Statement, FEIS, for the repository involved a substantial public involvement process, including public hearings and public comment periods. It was issued in 2002 and stated a preference for mostly rail as the national and the Nevada transportation mode. The FEIS also evaluated five potential rail corridors in Nevada: Caliente, Carlin, Caliente-Chalk Mountain, Jean, and Valley Modified. No corridor preference was stated in the final EIS and no final decision has been made.

Based on the analysis in the Final EIS, there is no clear environmental advantage that would lead us to favor any of the corridor alternatives over the others. Therefore, the Department looked at other factors. One important corridor consideration is the strongly expressed view that the Department should pursue corridors that would not transit the Las Vegas Valley. This consideration would exclude the Jean and Valley Modified corridors. Similarly, we took into account the national security issues raised by the Air Force with regard to the Caliente-Chalk Mountain corridor, and eliminated it from consideration as preferred.

Two corridors remain – Caliente and Carlin, both of which offer remote locations and reduced likelihood of land use conflicts. Caliente has the lowest percentage of privately owned land, which was a key factor in announcing it as the preferred corridor. Approximately one-third of the Caliente and Carlin corridors overlap. In December 2003, the Department issued a *Federal*

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Register Notice announcing Caliente as the preferred corridor for a rail line in Nevada from the existing main line to the repository site. Since the Carlin corridor has similar attributes overall, DOE identified Carlin as its secondary preference.

NEXT STEPS

It is important to note that all the Department has done to date is to state a preference for the transportation mode and rail corridor. We anticipate that in the near future we will issue a Record of Decision to make a transportation mode decision and, as appropriate, a corridor selection, but we have not done so yet. Upon any corridor selection, the Department would publish a Notice of Intent to develop an Environmental Impact Statement for a railway alignment within any selected corridor. We would solicit public comment at open meetings through an EIS scoping process. No actual construction of a rail line can take place until the EIS process is completed and all necessary regulatory approvals are secured.

Application For LAND WITHDRAWAL

While the Department of Energy has not decided upon a transportation mode or corridor, it did identify Caliente as the preferred corridor. In order to preserve alignment options for the potential construction and operation of a rail line within this corridor, the Department of the Interior's Bureau of Land Management published a *Federal Register* Notice on December 29, 2003, indicating that DOE had filed an application to withdraw certain public lands. As stated in the notice, the lands described in the application are segregated from surface entry and mining for a period of two years, unless DOE's application is denied or cancelled, or the withdrawal is approved prior to that date. The segregation of the lands is subject to all prior, existing rights and uses of the land.

The *Federal Register* Notice listed all the land sections affected by this application, but the withdrawal is limited to a one-mile wide corridor running through those sections. The Department applied for the withdrawal of a one mile wide corridor because it is possible that potential environmental impacts may be identified during field surveys or as a result of

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comments made by members of the public bearing on possible rail alignments that could be mitigated by deviations within the corridor. As noted, if the Department selects the mostly rail transportation mode and the Caliente corridor, a final alignment would be decided after completion of an environmental impact statement pursuant to the National Environmental Policy Act. We expect that this process would end in the selection of a rail alignment within a right-of-way or permanent land withdrawal of approximately 100 feet on either side of the selected centerline. New uses of the segregated land through rights-of-way, leases, or permits, may be allowed during the segregative period as long as these uses do not constrain DOE's ability to conduct future environmental analyses, engineering studies, and possible future construction and operations of a rail line. The Department will work with stakeholders on any land use issues.

ENSURING SAFE AND SECURE OPERATIONS

I have described where we stand with regard to our strategic approach to the national transportation system and the potential development of a branch rail line in Nevada. As we look ahead to building and operating a transportation system, ensuring safe and secure operations is our foremost concern.

The Federal agencies represented here play a central role in setting standards to ensure the safe construction and operation of rail lines. In addition, the shipping containers we will use must meet stringent performance standards set by the Nuclear Regulatory Commission. Moreover, we will work with affected states, Indian tribes and other stakeholders to develop safe and secure operating practices and will incorporate them into our DOE protocols.

COLLABORATIVE PLANNING

The operating environment for any rail system to be developed by the Department has not yet been determined. Questions have been asked about potential mixed use of any rail line built to serve the repository, and the Department welcomes input on this and other issues associated with our future transportation operations. Decisions on conduct of future operations will be developed as part of the institutional collaboration defined in our Transportation Strategic Plan,

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and through appropriate discussions with the State of Nevada and local communities. Developing the operating framework and protocols will be a major focus of our institutional activities in the next several years. We anticipate a productive dialogue with states, Indian tribes, and other interested parties on issues that include the selection of transportation routes and modes, emergency response planning and training, safeguards and security, operational practices, communications and information access, worker protection, training, training standards, and qualifications.

CONCLUSION

We believe that we can implement a transportation system that is safe and secure and merits public confidence, and we are committed to doing so. We are still at an early point in the process, but the collaborative approach we have established provides the framework for addressing stakeholder priorities and ensuring coordination with all interested parties.

**REMARKS OF ROBERT R. LOUX, EXECUTIVE DIRECTOR,
NEVADA AGENCY FOR NUCLEAR PROJECTS
TO THE
RAILROAD SUBCOMMITTEE OF THE U. S. HOUSE OF REPRESENTATIVES
TRANSPORTATION AND INFRASTRUCTURE COMMITTEE
Las Vegas, Nevada
March 5, 2004**

Mr. Chairman and members of the subcommittee, for the record my name is Robert Loux. I am the Executive Director of the Nevada Agency for Nuclear Projects, the agency within the Nevada Governor's Office that is charged with overseeing the U.S. Department of Energy's Yucca Mountain repository program. I am grateful for the opportunity to be here today and address the issue of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) to the proposed repository site in southern Nevada, especially DOE's approach to the identification of rail access to Yucca Mountain.

The current approach DOE is using to make transportation decisions is antithetical to what is required for a any sort of rational, supportable analysis. Rather than seeking to approach planning for the largest, most widespread, and longest duration SNF and HLW shipping campaign in history in a comprehensive and integrative fashion, DOE appears to be attempting to segment decision-making, moving forward on what are perceived to be politically expedient aspects while abandoning the analytical underpinnings needed to make decisions defensible and ignoring the implications of such decisions on the wider system.

Let's look for a moment at the current decision process DOE intends to use for making mode and rail access decisions, as reflected in the Federal Register Notice DOE published last December that is the basis for this hearing being held here today.

In that Notice, DOE indicated its preference for the Caliente rail spur as the preferred rail access corridor for Yucca Mountain. Yet nowhere is there documentation of the analyses to support such a preference. Neither the Yucca Mountain final Environmental Impact Statement (EIS) nor any other NEPA document that we are aware of contains a legally and substantively adequate analysis comparing the various rail spur options and justifying either the identification of Caliente as the preferred alternative or the selection of the Carlin route as the secondary preference.

While the Yucca Mountain EIS does not, in our opinion, provide an adequate and supportable basis for making mode and rail access decisions, DOE did promise in that EIS to follow a logical, albeit truncated, decision sequence and to consult with stakeholders in the rail corridor selection process. The EIS says:

- "If the Yucca Mountain site was approved, DOE would issue at some future date a Record of Decision to select a mode of transportation. [p.1-3]

- “If, for example, mostly rail was selected (both nationally and in Nevada), DOE would then identify a preference for one of the rail *corridors* **in consultation with affected stakeholders, particularly the State of Nevada**” (emphasis added) [p.1-3]
- “Other transportation decisions, such as the selection of a specific rail *alignment* within a corridor, would require additional field surveys, **State and local government and Native American tribal consultations**, environmental and engineering analyses, and *National Environmental Policy Act* reviews” (emphasis added) [Pp. 1-3 to 1-4]

DOE chose not to honor even this minimal commitment for some form of logical and defensible decision-making. DOE published its Notice of a rail corridor preference on December 29, 2003, but did not engage in consultations with the State of Nevada or any of the affected stakeholders.

The Notice identifies the Caliente corridor as the “preferred rail corridor” in the event that DOE adopts the “mostly rail mode” and identifies the Carlin corridor as “the secondary preference in the event the Caliente corridor is not selected.” No analysis supporting these decisions was provided.

By issuing the Notice, DOE proceeded to identify a preferred rail corridor *before* adopting a preferred mode and before any national rail routing work had been undertaken. That is very much akin to putting the cart before the horse, or in this case putting the caboose before the engine. The various rail corridor options in Nevada will have significant and differing implications for routes that would be impacted nationally by moving SNF and HLW to Nevada. Without first conducting a comparative analysis of national routes, the identification of one rail access corridor in Nevada over another is like a roll of the dice when it comes to understanding the implications of such a decision for states and cities across the country.

DOE’s Notice also raises many other questions, including the following:

- Why would DOE select a preferred corridor, without first formally adopting a preferred mode?
- If DOE adopts the “mostly rail” mode, what is the actual modal mix would be expected? (Nevada believes that 35 percent or more of the waste would likely still be shipped by truck even if DOE succeeds in building a rail spur, resulting in about a thousand truck shipments per year.)
- Why did DOE fail to consult with the State of Nevada (or anyone else) before selecting the Caliente corridor?
- What specific criteria and data were used to select the preferred rail corridor and secondary preference, and where is the analysis that supports the selections?

- Will other rail corridors remain under consideration, or be reconsidered, if Caliente and Carlin are both found to be infeasible – something that is not beyond the realm of possibility given that these two alternatives represent the longest, most costly, and most difficult of the rail access options discussed in the Yucca Mountain EIS?
- When will DOE issue a Record of Decision regarding mode selection?
- When will DOE conduct a national rail routing assessment to identify preferred rail routes and to understand what the implications of that assessment are for the selection of a Nevada rail access corridor?
- Has DOE completely eliminated consideration of “mostly truck” as the preferred mode? (Under what circumstances would mostly truck be used?)

Mr. Chairman, these questions and hundreds of others that are raised by DOE’s piecemeal approach to spent fuel and HLW transportation can only be answered, we believe, by requiring DOE to undertake a truly comprehensive, integrated, and symmetrical analysis of the transportation system. That can only be accomplished through a full and complete NEPA review, starting with a programmatic EIS for the transportation of SNF and HLW to a repository.

When planning is not done in a comprehensive and rational way, it is not surprising that federal agencies get into trouble; they miss important and what should be self-evident impacts of their actions; and their decision-making is open to charges that it is arbitrary and driven solely by political expediency. That is exactly what has happened with respect to the Caliente rail corridor decision.

Today, you will be hearing from a number of the people who stand to be significantly and most directly affected by the decision DOE announced in the December 29th Federal Register Notice – the ranchers whose land and grazing rights are already being disrupted by DOE’s decision.

The Caliente rail option has been on DOE’s list of possible rail access corridors almost from the beginning of the Yucca Mountain project in the mid-1980s, for almost 20 years. Yet, in all that time, DOE never once thought to reach out to these ranchers; to let them know what the Caliente rail corridor might mean to them; to seek their input; or to take a hard look at how a decision to select the Caliente option might impact their lives and livelihood.

There are other parcels of private land and private interests along the proposed corridor that will also be negatively affected. Most prominent among these is a series of singularly unique and internationally regarded sculptures entitled “City” that have been created over the past two decades by internationally known artist Michael Heizer. Located adjacent to the northeastern segment of the proposed rail corridor, Heizer’s

massive sculpture lies surrounded by two routing options for the rail spur – whatever option is chosen will unavoidably have major impacts on the work. Yet, until DOE published its Notice, DOE was not even aware that this massive project even existed and had not examined how the selection of the Caliente option might impact it - despite having supposedly “studied” the Caliente route for almost 20 years.

DOE’s cavalier treatment of the Nevada ranchers and the Heizer project is characteristic of the of the way the Department has approached transportation planning from the beginning of the Yucca Mountain program. In fact, DOE has no transportation plan. When Congress last year directed DOE to produce it’s plan for Yucca Mountain transportation, DOE responded (some would say contemptuously) with a meager ten page outline, euphemistically titled a “strategic plan,” purporting to discuss how it might go about arriving at a plan. DOE’s “strategic plan” contains no specifics, but is rife with platitudes about consultation and cooperation with the State of Nevada, local governments, Indian tribes, and other stakeholders. Yet even those commitments were readily dispensed with when DOE issued its rail corridor identification Notice – the first major decision relating to the transportation program.

Despite our opposition to construction of a repository at Yucca Mountain, 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).

Mr. Chairman, for us the safe and secure transportation of SNF and HLW has always been an issue that transcends the pro vs. con Yucca Mountain debate. Wherever a repository or central storage facility might someday be located, the system for transporting waste must not only be the safest possible, but also publicly acceptable. To that end, for the better part of two decades the State of Nevada has consistently and repeatedly recommended specific measures that the DOE should take to manage the risks associated with transportation of spent nuclear fuel and high-level radioactive waste. 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.

In all that time, DOE’s response has been to ignore the information it received, preferring to move forward in a fashion that served political ends rather than working in concert with affected parties towards the development of a workable and defensible SNF and HLW transportation system. The Caliente rail corridor decision is just the latest example of DOE’s disregard for sound and defensible transportation planning.

Steps DOE Must Follow in the Process

For the record and for the benefit of the subcommittee, here is how Nevada believes the repository transportation program should be addressed and how programmatic decisions should be made:

1. First, DOE must develop a draft national transportation plan describing a proposed action and alternatives, including a Nevada component that is fully consistent with the national plan (action plus alternatives). This draft transportation plan would then become the basis for a formal NEPA scoping process.
2. Using the draft plan, DOE would initiate a formal scoping process for a transportation programmatic EIS. This must involve an adequate comment period and scoping meetings in states and cities along all proposed transportation routes, both nationally and in Nevada.
3. Upon completion of the scoping process, DOE must prepare a draft EIS that fully assesses impacts for both the national system (proposed action and alternative) and the Nevada system (proposed action and alternatives). DOE should take extraordinary steps to assure that the public and affected cities, counties, and communities along transportation routes, both nationally and in Nevada, are aware of the draft EIS and have ample opportunity to comment on it. DOE must hold hearings on the draft EIS in communities all along transportation routes.
4. Upon completion of the comment period and hearings on the draft EIS, DOE would prepare a final programmatic EIS that fully complies with NEPA and CEQ requirements. The final EIS will set forth the preferred alternative(s) selected by DOE for both the national and Nevada system, assuring that all aspects of each will be internally consistent.
5. DOE would subsequently issue a formal Record of Decision setting forth the integrated SNF and HLW transportation system (both the selected national and Nevada components and the interface between them).
6. The final EIS and the Record of Decision will become the basis for any discussions with the State of Nevada, Nevada local governments, other states and local governments, the transportation industry, etc. for moving ahead with SNF or HLW transportation activities.
7. Additional NEPA analysis supporting key decisions in both the national and Nevada transportation efforts could then be tiered to the final transportation programmatic EIS.

The process we have laid out is not something new or unique to DOE. The Department used just such a NEPA process in compiling the Waste Management Programmatic Environmental Impact Statement that was done in support of planning and decision-making for clean-up of the DOE weapon's complex. By using a this approach, DOE was able to effectively and logically support decisions at the wider programmatic level. Where those decisions led to the need for more operationally-specific actions, additional NEPA reviews logically flowed out of and were tiered to the programmatic EIS. If such a process could be used successfully for DOE's weapons clean-up actions, there is no reason why DOE cannot employ it for the equally complex Yucca Mountain transportation program.

Mr. Chairman, this concludes my remarks. I want to thank you again for the opportunity to testify this morning. I would be happy to respond to any questions that members of the subcommittee might have.

Beyond the Mountains: Nuclear Waste Transportation and the Rediscovery of Nevada

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State of Nevada Agency for Nuclear Projects

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Presentation to

Waste Management '04

Tucson, AZ

March 1, 2004

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Additional documentation available at
www.state.nv.us/nucwaste/trans.htm

Beyond the Mountains

Rediscovery of Nevada Recommendations:

Routine Radiation

Severe Accidents

Terrorism and Sabotage

Rediscovery of Nevada along Caliente Corridor

Physical Geography

Native American Interests

Ranching Operations

Las Vegas

Potential Shipment Scenarios Over 38 Years, 2010-2048

Mostly Truck: 109,000 Cask-Shipments (about 8 trucks per day)

Mostly Rail: 22,000 Cask-Shipments (about 10 rail casks and 2 truck casks per week, plus barge or HHT shipments from 24 reactors)

Current Capabilities: 42,000 Cask-Shipments (about 2 truck casks and 1 rail cask per day, assuming rail spur can be built)

Spent Fuel Transportation Hazard:

Direct SNF exposure deadly for 50+ years

Each cask contains enormous amount of dangerous radioactive materials

Routine radiation from casks hazardous to workers and to some members of public

Cask breach in worst-case accident: 5-4,000+ latent cancer fatalities (LCFs) and \$300,000-10 billion+ cleanup costs

Cask breach in successful terrorist attack: 48-1,800+ LCFs and \$10 billion+ cleanup costs

Shipping casks not tested full-scale

Nevada Recommendations Routine Radiation Impacts

Reassess doses

Use more conservative dose conversion factors for LCFs

Consider health effects other than LCFs

Adopt ALARA system-wide before cask procurement

Ship oldest fuel first (OFF)

Assess unique local conditions along Nevada potential routes

Nevada Recommendations Comprehensive Risk Management

Comprehensive risk assessment (CRA) should cover a transportation system phases, events, and consequences (Golding and White, 1990)

CRA calculates probabilities only where existing data, theories, and models are sufficient to support use of rigorous quantitative methods, and uses sensitivity analysis to illustrate impact of differing assumptions and variations in quality of data

CRA should be used as working risk management tool throughout life of project, with ongoing public participation

CRA should be basis of risk communication throughout life of the project

Nevada Recommendations Preferred Transportation System

Dual purpose casks for at-reactor storage and transport

Ship oldest fuel first (at least 20 years at-reactor cooling)

Maximum use of rail (mode of choice)

Mandatory use of dedicated trains, special safety protocols, and special car designs as recommended by AAR

Early DOE and carrier identification of preferred cross-country mainline routes in consultation with stakeholders

Early involvement of corridor states and Indian Tribes, including financial assistance under Section 180(c)

Nevada Recommendations

Full-Scale Physical Testing of Cask

Meaningful stakeholder role in development of testing protocols & selection of test facilities and personnel

Full-scale physical testing (sequential drop, puncture, fire, and immersion) prior to NRC certification

Additional testing (casks, components, models) and computer simulations to determine performance in extraordinary accidents and to determine failure threshold; Reevaluate Modal Study findings, and if appropriate, revise NRC cask performance standards

Evaluate costs and benefits of destructive testing of a randomly-selected production model cask

Nevada Recommendations

Accident Prevention & Emergency Response

Maximize use of regional organizations such as Western Governors Association (WGA) and Western Interstate Energy Board (WIEB) for planning, implementation, and program evaluation

Coordinate with Indian Tribes and local governments

Develop comprehensive safety program modeled after WGA-State-DOE WIPP Transportation Program

Adopt WIEB Sept., 1994 proposal for evaluation and final designation of preferred shipping routes

Implement Section 180(c) Financial Assistance to State local, & tribal governments through rulemaking

Revise DOE Plan for Privatization of Transportation

Nevada Petition for Rulemaking (1999)
Amend Safeguards Regulations

Design Basis Threat -10 CFR 73.1(a)(1)
Definition of “Radiological Sabotage” – 10 CFR
73.2
Advance Approval of Routes – 10 CFR
73.37(b)(7)
Planning and Scheduling - 10 CFR 73.37(b)(7)
Escort Requirements: Road - 10 CFR 73.37(c)
Escort Requirements: Rail - 10 CFR 73.37(d)
New Provision to Require Use of Dedicated
Trains for All Rail Shipments – 10 CFR 73.37(d)

Nevada Petition for Rulemaking (1999)

Terrorism Risk Assessment

Assess attacks against transportation infrastructure used during nuclear waste shipments

Assess attacks involving capture of a nuclear waste shipment and use of explosives against a cask or casks

Assess direct attacks upon a nuclear waste shipping cask or casks using anti-tank missiles or other military weapons

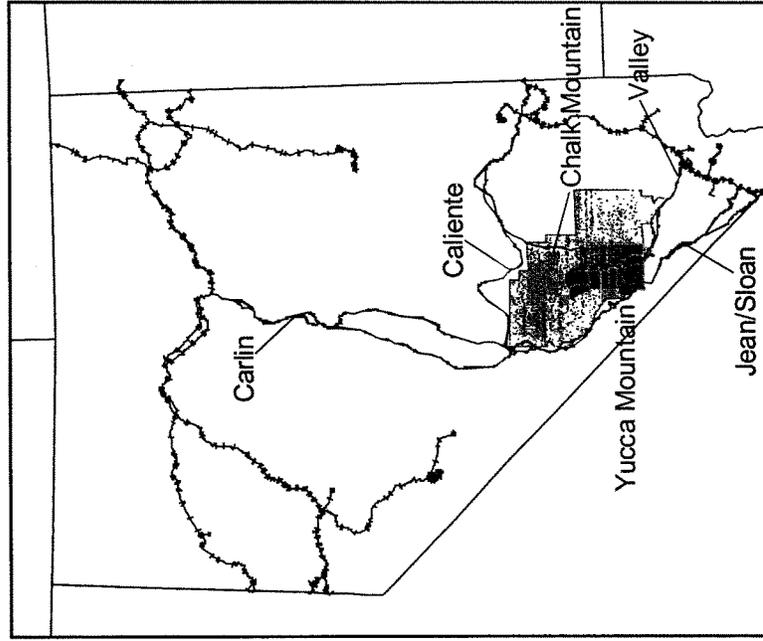
Nevada Recommendations Terrorism Risk Assessment Post 9/11

- Assume use of multiple weapons and/or combinations of weapons designed to maximize release and dispersal
- Assume coordinated use of hijacked vehicles
- Assume larger groups and/or suicide attacks
- Consider terrorist infiltration of transport companies (“active insider” scenario)
- Consider attacks at locations with highly symbolic social, political, or economic value
- Assess standard socioeconomic impacts
- Assess perceived risk and stigma impacts
- Assess impacts on first responders

Yucca Mountain Rail Issues

Currently no rail access to Yucca Mountain
Heavy Haul Truck (HHT) options infeasible
DOE FEIS identified 5 rail options
DOE preference for Caliente, secondary preference for Carlin (FR, December 29, 2004)
Caliente & Carlin options would be longest new rail construction in US since 1930s, cost >\$1 billion
Significant environmental challenges & conflicts with ranching, mining, recreation, and Native American lands & cultural resources

Potential Nevada Rail Routes to Yucca Mt



Native American Concerns

DOE & BIA failure to formally recognize affected tribe status and provide financial and technical assistance

Protection of religious and cultural sites, and plants and animals, both on and off reservations

Implications of rail spur right-of-way acquisition for Western Shoshone land claims (Ruby Valley Treaty)

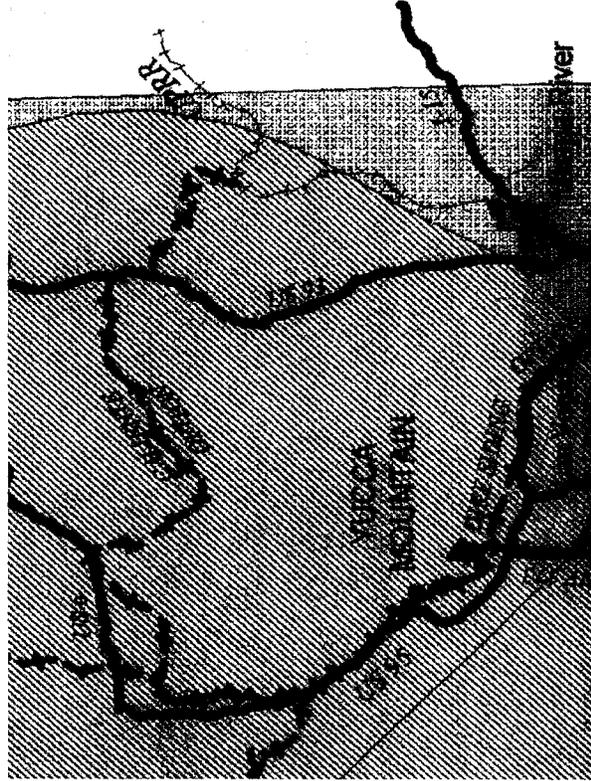
Cultural implications of possible radiological contamination and cleanup activities on tribal lands

Stigma impacts on tribal businesses

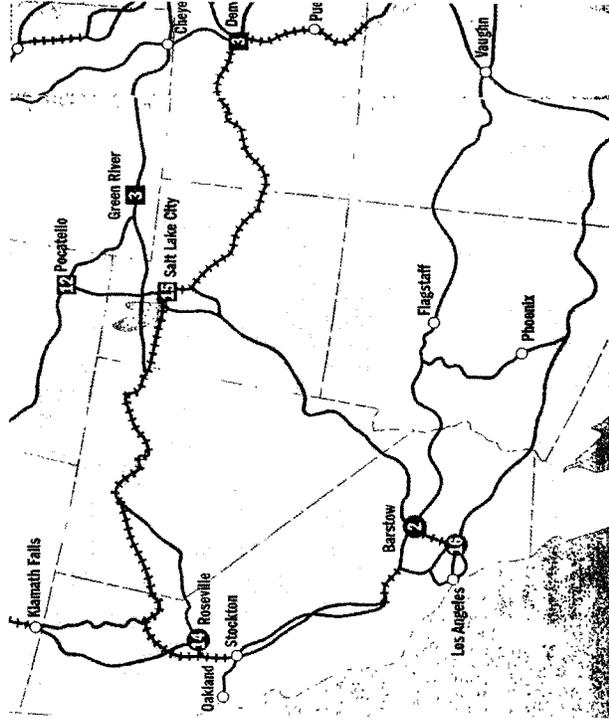
Tribal authority to regulate shipments across reservation lands, including pre-notification and monitoring

Tribal roles in emergency response planning and training

Western Shoshone Land Claims (Caliente Rail Route)



Western Rail Routes



*Statement of Congressman Jim Matheson
Subcommittee on Railroads
Hearing on the Proposed Transportation of Nuclear Waste to the
Yucca Mountain Repository
March 5, 2004*

My home state of Utah, a border state to Nevada, does not produce any high level nuclear waste, yet more than 80 percent of Utahns will live, work, and travel along the transportation routes that have been proposed for Yucca Mountain. The safety of shipping these materials through my district is of obvious concern to me. I am worried that the United States has not developed a true, comprehensive understanding of the risks associated with the transportation of nuclear waste.

An April 2003 General Accounting Office report on rail safety and security points to our nation's lack of preparedness for dealing with terrorist attacks on rail lines. It states that the United States Departments of Homeland Security and Transportation have not developed any plans to specifically address rail security. Before any nuclear waste shipments are made, the Nuclear Regulatory Commission needs to address safety concerns about the transportation of nuclear waste, including a potential terrorist risk to the railroad cars and trucks hauling the waste across America.

Furthermore, I believe it is important to shed light on the allegations that are currently being investigated by the Nuclear Regulatory Commission's Office of Inspector General. These allegations are that approved casks, designed by Holtec to transport nuclear waste, do not correspond to the design specifications that are the basis for the Nuclear Regulatory Commission's approval of the design. If this investigation proves these allegations true, it will be difficult to have confidence in the assurances that may be made by the Nuclear Regulatory Commission about the safety of nuclear waste shipments.

A larger question of why this nation is rushing to ship over 18,000 trainloads of spent nuclear fuel rods across our nation underlies this whole debate. With so many unanswered questions remaining about terrorist threats and the risk of accidents, the prudent decision is to leave it where it is until we have the answers.

Nuclear waste shipments are not an unavoidable law of nature. There is an inherent risk in shipping nuclear waste and in most cases this risk is unnecessary. The movement of nuclear waste affects many people and communities and raises issues of declining property values along nuclear waste transportation routes, emergency response concerns, financial liability (for emergency response and potential accidents) for states along the routes, states rights, and security. Until these concerns can be adequately addressed, the people along the shipment routes should not be forced to rely upon the hope that nothing bad will happen. As a father, I don't want my family to be put in harms way and as a Congressman, I don't want my constituents to be put in harms way, but that's exactly the effect of this plan.

Until the safety of these shipments can be guaranteed, states and local governments are left to deal with the possibility that this waste could cause irreparable harm to their communities and their budgets. For example, Utah's Department of Environmental Quality looked at a "maximum reasonably foreseeable" transportation accident in Salt Lake City, as described by the Department of Energy. It found that one such accident would result in 114 latent cancer fatalities and cost up to \$313 billion to clean up. This is simply too heavy of a burden to place upon our communities without an understanding of the actual risk of accidents like this occurring during the shipment of nuclear waste across our nation.

I look forward to hearing from today's witnesses and listening to their plans to address these concerns.

**Testimony of Roger Nober
Chairman of the Surface Transportation Board
House Committee on Transportation and Infrastructure
Subcommittee on Railroads
Hearing on Transportation of Nuclear Waste to Yucca Mountain Repository
9:30 a.m. March 5, 2004 Las Vegas, Nevada**

Good morning Chairman Quinn, Ranking Member Brown, and Members of the Subcommittee.

My name is Roger Nober, and I am Chairman of the Surface Transportation Board. I appreciate the opportunity to testify before you today at this field hearing about the federal jurisdictional issues and railroad operational and safety concerns regarding the transportation of nuclear waste to the proposed Yucca Mountain repository.

The issues which are the subject of this hearing today regarding the construction of a proposed rail line through Nevada to serve the Yucca Mountain repository and the transportation of spent nuclear fuel and high level radioactive nuclear waste from sites throughout the United States are important not only to the citizens of Nevada but to the nation as a whole. I commend the Members of the Subcommittee for holding this significant hearing.

At the outset, it is important to emphasize that the Department of Energy has not yet determined whether rail will be the primary means of transportation to serve the Yucca Mountain facility. If the Department of Energy does select rail as the primary means of transport for the Yucca Mountain facility, then, as I will discuss below, it has several options for how it could choose to structure that transportation, including filing with the Board to authorize the construction of a new rail line serving that facility. Furthermore, I must note that the Board is an adjudicatory body, and were the

Department of Energy to file for approval of the construction of a rail line to the Yucca Mountain Repository with the Board, I cannot determine in advance how the Board would act on such a filing.

With these limitations in mind, I would first like to provide the Subcommittee with an overview of the Board and its responsibilities. Next, I will discuss the current regulatory regime that exists for the licensing of new rail lines. Finally, I will outline some of the issues that may be raised if the Department of Energy were to choose rail as the primary means of transportation to serve the Yucca Mountain facility.

Overview of the STB

As all of you are aware, this Committee created the Surface Transportation Board when it eliminated the Interstate Commerce Commission in the ICC Termination Act of 1995. The Congress determined that the Board should be a decisionally independent agency administratively affiliated with the Department of Transportation. As such, the Board serves as both an adjudicatory and regulatory body. The Board was created as a three-person, bi-partisan entity, but for the last nine months I have been its only Member.

The Board's primary mission is economic regulation of railroads, but the Board also has jurisdiction over other modes of surface transportation. With respect to railroads, the Congress vested the Board with the fundamental missions of reviewing railroad mergers and line sales, resolving railroad rate and service disputes, and reviewing railroad abandonment and construction applications. The Board has some authority over certain trucking company, moving van, and non-contiguous ocean shipping company rate matters; certain intercity passenger bus company structure,

financial, and operational matters; and rates of pipelines carrying commodities other than oil, gas, or water.

Importantly, in each of the areas over which the Board has jurisdiction, that jurisdiction is exclusive.

The Board's Authority over Rail Carriers

In general, the Board's jurisdiction over rail carriers is set forth in Chapter 105 of Title 49. The Board has jurisdiction over "transportation by [a] rail carrier" (section 10501(a)(1)) that is providing common carrier railroad transportation (section 10102(5)) over any "part of the interstate rail network" (section 10501(a)(2)).

The term "common carrier" is not defined in the statute, but is defined by common law and agency precedent. The fundamental test for whether rail track and services are common carrier in nature is whether there is a "holding out" to serve the public at large. A railroad that is a common carrier has a "common carrier obligation" to provide service to any and all shippers along the line that request service or may want service in the future. 49 U.S.C. 11101(a).

Persons who are, or intend to become, common carriers — and thus subject to the Board's jurisdiction — are subject to the Interstate Commerce Act's regulatory provisions, including the general requirement in 49 U.S.C. 10901 that they obtain advance authorization from the Board before constructing or operating a new or extended line of railroad. In general, this licensing requirement applies to all of such carriers lines, including both "main" lines and "branch" lines, i.e., those lightly used lines over which carriers provide common carrier service to shippers in what are often rural communities.

There are exceptions to the general requirement that common carriers obtain a regulatory license prior to constructing new track. Under 49 U.S.C. 10906, for example, no Board authorization is required when a railroad that is already licensed to provide service wishes to construct so-called “auxiliary tracks.” While the statute enumerates a number of different classes of such track, in practice the Board has applied the same tests for each to determine whether track of a common carrier qualifies for this exception. Track that is used for loading, unloading, storage or switching operations that are “incidental to, but not actually and directly used” in the carrier’s line-haul transportation may qualify for this exception.

To determine whether a particular common carrier rail track would be “auxiliary track,” and thus could be constructed without a license, the Board and the courts look at relevant “indicia” of the track itself (such as the track’s length, the weight of rail, etc.), as well as the track’s use and, most importantly, whether the track would open up new service territory for the operating rail carrier. If the track would be something more than auxiliary to existing service, then the section 10906 exception is not available. But if section 10906 does apply, then this so-called “spur” track, although not subject to Board licensing, is subject to other aspects of Board regulation.

The Board’s jurisdiction over common carrier railroad lines that are part of the national rail network is exclusive (49 U.S.C. 10501(b)), and the statute preempts state and local jurisdiction from applying any overlapping laws and regulations. Thus, state and local permitting or pre-clearance requirements (including environmental requirements) are preempted from applying to such rail carriers because by their nature they interfere with interstate commerce. This broad statutory Federal preemption applies

even to construction of “auxiliary” track under section 10906, which is part of the national rail network, but for which a Board license is not needed and for which the Board does not conduct an environmental review.

Construction and operation of private track — which is not covered by the Interstate Commerce Act and not subject to any aspect of the Board’s jurisdiction — does not require any regulatory authorization by the Board at all. While the term “private track” is not defined in the statute, Congress described private track as follows in its Conference Report on the ICC Termination Act: “[N]on-railroad companies who construct rail lines to serve their own facilities [exclusively]. . . are not required to obtain agency approval to engage in such construction.”

The courts and the Board have long recognized that wholly private operations conducted over private track are not subject to the agency’s jurisdiction. This is so even when such operations are conducted by an operator that conducts common carrier rail operations elsewhere, if it operates on the private track exclusively to serve the owner of the track pursuant to a contractual arrangement with that owner. And, of course, the private track can connect to a common carrier line and the national rail network. However, state and local laws and regulations are not Federally preempted with respect to construction of private track.

Thus, a party wishing to construct a rail line can make an election up front as to whether its track will be used to serve the general public (common carriage) or to carry only its own products (private carriage) and therefore choose the regulatory scheme that will apply to the construction of that line.

The Board's Process For Considering New Line Construction Projects

The Board must authorize any new rail line that will be used by rail carriers to provide new common carrier service before the construction of that line may begin. The Board's authorization may take one of two forms: a "certificate of public convenience and necessity" issued under 49 U.S.C. 10901, or an exemption under 49 U.S.C. 10502 that serves to authorize the construction without all of the formal application procedures. In either event, the rail line can be constructed only after there has been a Board proceeding with the opportunity for public participation, close scrutiny of the proposal by the Board, a full examination of the public interest, and an environmental review.

Under section 10901 the Board is directed to consider whether the proposed project would be "inconsistent with the public convenience and necessity." 49 U.S.C. 10901(c). The Board uses a three-part test to evaluate the public convenience and necessity with respect to a proposal: (1) whether the applicant is financially fit to undertake the construction and provide service; (2) whether there is a public demand or need for the proposed service; and (3) whether the construction project is in the public interest. Opponents of a construction project have the opportunity to offer evidence that a proposed line is not in the public interest.

Safety and environmental concerns are considered and weighed along with the transportation considerations in evaluating the broader public interest, and the Board's detailed environmental review is always a key component of the agency's process and consideration. Typically, the Board is the lead agency in the preparation of an Environmental Impact Statement for a line construction – and affected states, local

entities, agencies, communities, and members of the general public participate in that process. After the environmental review is completed, the Board considers the potential environmental impacts in deciding whether to approve the rail construction proposal as submitted, deny the proposal, or approve it with environmental mitigation or other conditions.

In sum, when the Board considers a rail construction proposal, it gives thorough and careful scrutiny to all transportation, environmental, and safety issues, regardless of whether the process is the formal application process or the petition for exemption process. The statute vests the Board with broad authority to condition its approval of any line construction as necessary to protect the public interest.

Issues that May be Raised by the Department of Energy's Proposal

The core question in determining whether the Board would have to license the construction and operation of a railroad to serve Yucca Mountain would be whether the line would be operated for common carriage, or, instead, used as private track. While the general parameters I discussed earlier are clear, each applicant may make choices as to how to structure the construction and operation of a rail line that can make the Board's analysis quite complex. In practice, this determination is very fact-specific; it might be influenced by who builds the track, who pays for construction and maintenance, who owns the goods being shipped, but the most important determination is whether the line would be held open for service to the general public or reserved exclusively for service to the Department of Energy.

Therefore, if the Department of Energy were to choose rail as its preferred means of transportation, it would then need to decide whether it wanted to structure its proposal to provide for common carriage that does not come within the class of auxiliary track covered by section 10906. If it decided to do so, then such a decision would lead to three basic consequences.

First, the Board would have to license the project before any construction could begin. This means that the Board would first need to find that it had jurisdiction over the project. Then the Board would consider whether the project would be consistent with the public convenience and necessity (if the Department of Energy filed a section 10901 application); or in the public interest (if the Department of Energy filed for an exemption under section 10502). As noted, the public would have a full opportunity to participate in this aspect of the proceeding.

Second, the Board would have to comply with the requirements of the National Environmental Policy Act before issuing final authority to construct and operate the line. This means that the Board would evaluate the environmental impacts of any proposed project. On occasion, the Board has been a cooperating agency in the preparation of environmental impact statements in new rail line construction cases. As long as the analysis takes into account the relevant factors for the Board to consider when it reviews the application, an EIS prepared in that manner would likely be sufficient.

Third, in the event that the Department of Energy structures this proposal to involve common carriage, the Board's licensing authority would be exclusive. Under the preemption provision of 49 U.S.C. 10501(b), any state and local permitting or pre-clearance requirements (including environmental, land use, or zoning requirements)

could not be applied to the construction of the proposed rail line, or any rail facilities that are part of that rail line.

If, on the other hand, the Department of Energy chooses to construct this project as private track, the Board would have no jurisdiction, and it could build its track without even notifying the Board. The Department of Energy could ask the Board to issue a declaratory order addressing the status of the track if it wanted Board confirmation of its decision. If the Board agreed that the track would be private, that ruling could be used to dispel doubt as to the nature of the project. Of course, if the Board did not have jurisdiction over the construction and operation of the track, it would not have to conduct an environmental review pursuant to NEPA. And the statute that expressly preempts state and local government from regulating rail transportation would not apply.

CONCLUSION

In conclusion, it is important to reiterate that the Department of Energy has not yet chosen whether rail will be the primary means of transporting waste to the Yucca Mountain repository. And as my testimony has hopefully explained, whether, and to what extent the federal rail regulatory regime will apply to this rail line cannot be fully known at this time, and depends in large measure on whether the Department of Energy chooses to proceed with rail and then if it does, whether the Department decides to structure the project as common or private carriage.

Of course, how the Board would consider any specific application cannot be answered in advance, but only upon the consideration of the full record. Finally, it is

important to note that regulation of the safety of rail transportation once operations begin is under the jurisdiction of the Federal Railroad Administration.

I appreciate the opportunity to discuss these issues with you today, and stand ready to answer any questions you may have.

TESTIMONY OF THE SIERRA CLUB
Jeff van Ee
BEFORE THE HOUSE SUBCOMMITTEE ON RAILROADS
MARCH 5, 2004

INTRODUCTION

Thank you for the opportunity to present my views, and the views of the Toiyabe Chapter of the Sierra Club, on the Department of Energy's proposed construction of a railroad in Nevada to transport nuclear waste to Yucca Mountain. I have been a Nevada resident since 1972. Since I arrived in the state, I have been actively involved in a variety of environmental issues. A major focus of my efforts has been on public lands issues and on the decision-making processes we use to decide how those public lands can best be utilized.

The Sierra Club has previously provided comments from a variety of sources on the Department's analysis of Yucca Mountain as a suitable place, and method, for disposal of nuclear waste. The Club has been critical of the process in which Yucca Mountain has been evaluated for the safe disposal of nuclear waste for thousands of years. Little has changed over the years in our longstanding concerns that the selection of Yucca Mountain has been driven more by politics and expediency than by an objective, judicious, scientifically-based process. Nevadans have shouldered much of the burden of the nuclear age through contamination of our air, water, soils, and people during the testing of nuclear weapons at the Nevada Test Site. The Atomic Energy Commission and Department of Energy's responses to the environmental and public health threats posed by nuclear testing and nuclear waste have led to a high degree of distrust and disgust among many Nevadans. Skepticism among many Nevadan's continues to be high as the Department of Energy announces a preferred transportation alternative. Serious questions remain about the appropriateness of Yucca Mountain as a site for high-level nuclear waste.

Like many Nevadans, I have not been actively involved with the Yucca Mountain issue; instead, I have relied on the State of Nevada and the Agency for Nuclear Projects to represent my concerns, to ask the tough questions, and to keep the Department of Energy honest. I commend the state for their position and their efforts in seeing that the best possible decisions are made on the fate of this nation's high-level nuclear waste.

THE PROPOSED CORRIDOR

The Sierra Club feels it is premature to be focusing in great detail on a rail corridor through Nevada when serious, fundamental questions remain on: the adequacy of Yucca Mountain to safely contain nuclear waste; the costs, risks, and impacts of transporting that waste throughout the country, and the decision-making process being used to consider alternatives and impacts.

The preferred Nevada rail corridor identified in the December 29, 2003 notice in the Federal Register requires additional analysis. The Department of Energy states that this analysis will come at a later time. While it is natural to expect a higher degree of the analysis of costs and

impacts of constructing a new railroad in Nevada as the time approaches for detailed design, bidding, and construction of the railroad, that time does not seem to be now.

We believe the costs and timeframe for constructing the preferred corridor have been underestimated. Significant technical and environmental questions must be resolved.

INITIAL ANALYSIS OF CORRIDOR IMPACTS

The selected route will cut across the basin-range topography of Nevada through a seismically-active area of the nation. On a simple map, one can envision a single track railroad with dedicated locomotives and trains being used to slowly, carefully make their way across Nevada and around the perimeter of the Nevada Test Site to Yucca Mountain. On the ground, and in the future when construction begins, the conceptual model for design, construction and operation of the railroad may be far different. Steep grades for heavily-loaded trains are not good. Railbeds must be constructed to carry the loads and to keep the tracks from being washed out by flash floods and thrown out of alignment by high-temperatures and seismic activity.

Construction of the railroad will occur in an area downwind of above-ground nuclear tests where soils may be contaminated by radionuclides. Valley fever is a concern when large areas of top soil are disturbed in the southwest. Worker exposure to dust during construction is of particular concern, given the latest revelations about Yucca Mountain workers having been exposed to high levels of silica in the tunneling of the mountain.

Security and safety concerns have been expressed with the transportation of nuclear waste from day one, and after 9/11 they are even more significant. Whatever access people now have to the area will be severely restricted by concerns over security of the railroad right-of-way. A thin corridor which produces minimum impact on the environment and people's lives may be the initial desire, but the reality after the railroad is built may be far different.

In identifying the land potentially affected by a rail corridor, the analysis assumed a corridor width of 400 meters (1,300 feet, or about 0.25 mile). The purpose of the 400-meter width was to provide sufficient space for final alignment to route the rail line around sensitive land features or engineering obstacles. Actual construction and operation in the corridor would mostly require less than about 60 meters (200 feet) of the 400-meter width. [6-75, Final EIS]

The December 29, 2003 notice in the Federal Register for land withdrawals describes a corridor one mile in width. The Bureau of Land Management has been requested by the DOE "... to withdraw 308,600 acres of public land from surface entry and mining for a period of 20 years ... in the event the Nuclear Regulatory Commission authorizes a geologic repository at Yucca Mountain" The notice "segregates the land from surface entry and mining for up to 2 years while various studies and analyses are made to support a final decision on the withdrawal application." Why was this notice issued when no record of decision has been issued for this preferred corridor resulting from the Final EIS for Yucca Mountain? Why now? Are 2 years sufficient? What is the reasoning behind the 20 year withdrawal? Whatever habitats and wildlife migration corridors exist will be bisected by the rail line.

Wilderness Study Areas will be affected.

The operation of a rail line in the vicinity of the Weepah Spring Wilderness Study Area could affect the experience of visitors to the Area. The White River Alternate would not pass near the Area, as indicated in Appendix J, Section J.3.1.2. The proximity of an operational rail line to the Kawich and South Reveille Wilderness Study Areas probably would affect these areas by drawing attention to the rail line during operational or maintenance activities. [6-93, Final EIS]

Only Congress can designate wilderness and remove from consideration formally designated wilderness study areas. No decisions have yet been made on the wilderness study areas that would be affected by the preferred Caliente route. Our Congressional delegation is currently considering wilderness designation in the area affected by the proposed railroad. The right of way would go through part of three BLM WSAs (Kawich, South Reveille, and Weepah Spring) according to the Nevada Wilderness Project's analysis of detailed maps provided by the DOE. The corridor would impact the Quinn Canyon Wilderness addition proposed by the Nevada Wilderness Project by cutting through the southern eighth of the unit.

The DOE's Final EIS on Yucca Mountain states:

The analysis indicates no conflicts with commercial use and no identified conflicts with scientific studies for any of the proposed corridors. [6-75, Final EIS]]

This statement is another example of inadequate analysis being done by the DOE. Today, the Nevada Department of Tourism is advertising "The Other Side of Nevada" to encourage tourism into the rural parts of our state. This tourism campaign is needed to provide new economic opportunities to a region of the state that has lagged behind the booming southern Nevada and Reno areas. I have no doubt that when, and if, nuclear canisters move into Nevada that there will be impacts on our state's tourism based economy. Commercial use, i.e. tourist trips to visit "The Other Side of Nevada" of this portion of Nevada would be affected by construction of the Caliente Route and Yucca Mountain.

The presence of a rail line could influence future development and land use along the railroad in the communities of Beatty, Caliente, Goldfield, Scottys Junction, and Warm Springs (that is, zoning and land use might differ depending on the presence or absence of a railroad), as well as a potential Timbisha Shoshone community at their Trust Lands parcel near Scottys Junction. [6-92, Final EIS]

Endangered and threatened species would be impacted by the rail line.

About 50 kilometers (31 miles) along the southern end of the corridor, including variations in this area, is in desert tortoise habitat. [6-95, Final EIS]
One population of the Nevada sanddune beardtongue, a sensitive plant species, occurs within the 400-meter (0.25-mile) corridor and could be directly or indirectly affected by land-clearing activities and construction of the branch rail

line. [6-97, Final EIS]

Preliminary analysis by the Nevada Wilderness Project indicates a number of impacts. The right of way will impact known occurrences of 8 threatened/endangered/special concern species: 5 plants, 1 reptile, 1 amphibian, 1 fish. The route would also impact nine Great Basin portfolio sites as identified by the Nature Conservancy. These sites represent viable examples of native species and plant communities. The impact of the railroad corridor on undeveloped valleys would be tremendous, with some of the valleys barely having a "real" road (graded, maintained) at this time. The building of the rail line would create the need for not only the line, but a graded road to access much of the length of the rail line. It would create a whole new roads network in south central Nevada. The implication of which could be staggering for species in the area, but also for native rangelands. Big new roads and rail lines bring undesirable exotic plants such as cheatgrass and Russian thistle (tumbleweed). Exotic plants are a growing problem for Nevada's range and ranchers.

The railroad will cut proposed rights-of-way for water pipelines, powerlines, and off-highway trails. The proposed railroad will surely complicate efforts to move those proposed efforts forward.

The railroad will likely require its own communication lines and facilities, powerlines, and infrastructure to create a safe and secure working railroad. These will impact the environment directly through disturbance of the land and indirectly by providing roosting sites for and hazards for wildlife.

In the event of problems, or accidents, with the transport of nuclear waste in Nevada, long delays in getting critical personnel and equipment to the site could occur unless facilities and staging areas were constructed along the route. Additional impacts would result. The DOE needs to be more forthcoming in detailing the additional infrastructure that would be required along with the proposed transportation routes.

Construction camps, staging areas, and gravel pits will be required in isolated areas of the state along the proposed right-of-way. The impacts of these can better be assessed through more detail analysis of the environmental impacts of the proposed rail line.

THE FINAL EIS AND EIS PROCESS IN EVALUATING THE RAIL CORRIDOR

The National Environmental Policy Act and the implementing regulations encourage the tiering of environmental impact studies on large, complex projects. Regrettably, the Department of Energy has done a poor job in staging their environmental analyses and providing an objective analyses of the impacts and alternatives. A Records of Decision should be issued by the lead federal agency which states what the decision was, identify and discuss the alternatives, and "... state whether all practical means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not." [40 C.F.R. Sec. 1505.2] A Record of

Decision from the Department of Energy has not been issued with the issuance of the Final EIS for Yucca Mountain; yet, we find the Department proceeding with the Caliente corridor for rail transportation of nuclear waste in Nevada and a request to the BLM to withdraw public lands from multiple use. This behavior is troublesome, quite possibly illegal, and conveys the impression to Nevadans that this whole effort is being railroaded into Nevada. Sound science and public trust seem to be secondary matters.

The National Environmental Policy Act, with important guidance from the Council on Environmental Quality, can be quite useful in the decision-making process for federal actions that will significantly affect our environment. Environmental impact statements, if properly done, provide the factual basis and expression of concerns from stakeholders that are vital to our democratic, decision-making process. To comply with NEPA for the sake of compliance with the law does an injustice to the Act. The Department should embrace the underlying principles of NEPA to reach out to stakeholders at an early stage to learn of their concerns, to identify alternatives, and to state, after a decision has been made “. . . whether all practical means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not.” The Department should not be allowed to skip steps in the entire decision-making process for isolating and disposing of high-level nuclear waste by selectively evaluating alternatives and not issuing key decision-making documents.

We still do not know if Yucca Mountain will be licensed. We still do not know whether the preferred method of transportation by rail in Nevada and the nation is viable because of safety, security, and infrastructure questions with getting the waste to Nevada; consequently, it seems premature for the Department and the Bureau of Land Management to be withdrawing public land from multiple-use for the “Caliente” corridor when many issues remain to be resolved.

STATEMENT FOR THE RECORD
OFFERED BY ROBERT LIST

HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE
SUBCOMMITTEE ON RAILROADS

Field Hearing
March 5, 2004
Las Vegas, Nevada

Mr. Chairman and members of the subcommittee, I appreciate the opportunity to provide comments for the hearing record, on this issue of critical importance to the nation and the state of Nevada. For the record, I served as Governor of Nevada during the years 1979-1983, and previously served as Attorney General of the State from 1971-1979. My firm, The Robert List Company, provides consulting services to a number of clients including the Nuclear Energy Institute.

As a Nevadan I welcome you Mr. Chairman and members of the subcommittee and appreciate your attention to this vital issue to those of us who live in Nevada. I am especially proud of the priority that Congressman Porter places on assuring that the health and safety of our citizens is appropriately protected.

At the outset, let me draw attention to what I believe is an extremely important development concerning this project. As you know, the Department of Energy on December 23, 2003 announced a preferred rail corridor for movement of used fuel in Nevada to the Yucca Mountain repository, designated the Caliente corridor, based on its more remote location, diminished likelihood of land use conflicts, concerns raised by Nevadans and national security issues raised by the U.S. Air Force on the Caliente-Chalk Mountain corridor. A formal Record of Decision on this announced preference, and initiation of the EIS process for specific rail alignment could begin shortly.

For years, state officials and local representatives from Clark County and its municipalities, including Las Vegas, have expressed deep concern about the implication of shipments of through this populous, and rapidly growing community. The previously mentioned survey of Nevadans indicated that a majority found transportation by railroad away from major urban areas was an acceptable approach, but opposed transportation through the Las Vegas Valley. DOE has now indicated its preference consistent with those concerns.

I applaud the DOE for this announcement, the significance of which has gone largely unnoticed by the Nevada media and public. All Nevadans should be grateful for this important milestone decision, which alleviates much of the

apprehension which has permeated the Yucca Mountain debate over the years.

It is also noteworthy that elected officials directly impacted by the preferred transportation corridor have consistently expressed their desire to work in close consultation with the Department of Energy to make certain that legitimate local interests are taken into account. The testimony submitted by Caliente Mayor Kevin Phillips is representative of this constructive approach.

As you know, strong majorities in the House and Senate affirmed the suitability of Yucca Mountain as the location for a national repository for used nuclear fuel in 2002. During the Congressional debate, both here in Nevada and in Washington, transportation of used fuel was a major issue, and it remains one of the most significant issues that need to be addressed in preparation for acceptance of used nuclear fuel at Yucca Mountain.

It is my firm belief that the Yucca Mountain repository will ultimately be licensed for the long-term disposal of used nuclear fuel. Based on a survey of Nevada residents conducted by Voter Consumer Research last year, 88% of Nevadans agree that it is likely the repository will become operational. I believe it is time we as Nevadans begin to constructively engage with the federal government on the operation of the repository and on transportation to the facility to assure that the safety and security of the citizens of the state are appropriately protected, and that the impacts of the project are mitigated.

More than 3,000 shipments of used nuclear fuel have been safely made in the United States over the last 40 years in the United States. Since 1990, approximately two thirds of these shipments have been made by rail. These shipments have been made using robust containers certified by the Nuclear Regulatory Commission and subject to very stringent safety tests to assure that there will not be harmful release of radioactive materials even in extreme accident scenarios, in close consultation with state and local officials with a particular focus on emergency response and security considerations.

DOE has also conducted over 2,400 shipments of radioactive materials from its facilities, including the Nevada Test Site, to the Waste Isolation Pilot Plant in New Mexico using the same collaborative approach.

I know that this Subcommittee is committed to making certain that when railroads are used to move used fuel it is conducted in a manner that is safe and secure, a commitment that is shared by the nuclear industry. Current U.S. Department of Transportation and Nuclear Regulatory Commission used nuclear fuel transportation regulations provide comprehensive rules which protect public health, safety and security. The nuclear industry policy

on the transportation of used nuclear fuel to a federal repository supports the use of dedicated trains when transporting by rail.]

In closing, let me observe that it is also important that the federal government recognize its responsibility to mitigate the impact of the project, as envisioned in the Nuclear Waste Policy Act. This can include approaches ranging enhanced training for emergency responders that can assist in responding to transportation of other hazardous materials to the economic benefits that could occur from utilizing the rail line constructed for Yucca Mountain transportation in general commerce.

As the project goes forward, I welcome the oversight that I know this subcommittee will provide to make certain that rail transportation of used nuclear fuel is appropriately handled.

USED NUCLEAR FUEL TRANSPORTATION TALKING POINTS

- Strong majorities in the House and Senate affirmed the suitability of Yucca Mountain as the location for a national repository for used nuclear fuel in 2002.
- During the Congressional debate, transportation of used fuel was a major issue.
- More than 3,000 shipments of used nuclear fuel, covering more than 1,700,000 miles, have been completed safely over the last 40 years in the United States. Approximately two thirds of the shipments conducted since 1990 have been made by rail. Worldwide, more than 70,000 metric tons of used fuel has been transported safely in more than 21,000 shipments.
- These shipments were made using robust shipping containers certified by the Nuclear Regulatory Commission and subject to very stringent safety tests to assure that there will be no release of radioactive materials even in extreme accident conditions.
- Used fuel shipments are conducted in close consultation with state and local officials with a particular focus on emergency response and security considerations.
- DOE has also conducted almost 2,400 shipments of radioactive materials from various facilities, including the Nevada Test Site, to the Waste Isolation Pilot Plant in New Mexico using the same collaborative approach with states, local governments and Native American tribes.
- Current U.S. Department of Transportation and Nuclear Regulatory Commission used nuclear fuel transportation regulations provide comprehensive rules which protect public health, safety and security. The nuclear industry policy on the transportation of used nuclear fuel to a federal repository supports the use of dedicated trains when transporting by rail.
- The Department of Energy on December 23, 2003 announced a preferred rail corridor for movement of used fuel in Nevada to the Yucca Mountain repository, designated the Caliente corridor, based on its more remote location, diminished likelihood of land use conflicts, concerns raised by Nevadans and national security issues raised by the U.S. Air Force on the Caliente-Chalk Mountain corridor. A formal Record of Decision on this announced preference, and initiation of the EIS process for specific rail alignment could begin shortly.

Tuesday, March 02, 2004

Jack Quinn
Chairman
Subcommittee on Railroads
US House of Representatives
Committee on Transportation and Infrastructure
Washington, D.C. 20515

Dear Chairman Quinn:

Clark County appreciates this opportunity to comment on the transportation of High-level radioactive waste and spent nuclear fuel to Yucca Mountain (HLW). It is an extremely important issue to Clark County. Since the Clark County Commission passed its first resolution in opposition to the Yucca Mountain Project in 1985, there has been unwavering bipartisan consensus in opposition to the Yucca Mountain Project (YMP). My comments relate to the numbers of shipments through Clark County, the continued absence of a coherent transportation plan on the part of the Department of Energy (DOE), and the difficulties that will confront the DOE as they attempt to construct a rail line to Yucca Mountain. These comments conclude by repeating the advice on transportation planning given to DOE by Clark County over the last ten years.

As of February 29, 2004, DOE has not formally selected a preferred transportation mode nationally or in Nevada, nor has DOE formally selected a preferred corridor for rail construction in Nevada. However, on December 29, 2003, DOE published a "Notice of the Preferred Nevada Rail Corridor" in the Federal Register. The notice, "identified mostly rail as the preferred alternative transportation mode, both nationally and in Nevada, for shipments of spent nuclear fuel and high-level radioactive waste. ... If the Department adopts mostly rail as the transportation mode in Nevada, a rail line to connect the repository site at Yucca Mountain to an existing rail line in the State of Nevada would need to be constructed." The notice included a potential timeframe for action: "If the Department selects a rail corridor, DOE will issue a Notice of Intent in the Federal Register to initiate the preparation of a rail alignment EIS under the National Environmental Policy Act (NEPA) to consider alternative alignments within the selected corridor for construction of a rail line."

Clark County has a vested interest in the timely selection of a feasible rail route to Yucca Mountain and the development of a comprehensive transportation plan to Yucca Mountain that will ensure the safety and security of these shipments. The DOE's preference for the Caliente rail corridor does not preclude the transportation of HLW through Clark County, NV. First, even if the Caliente rail route is constructed, HLW will still traverse Clark County by rail and truck. Assuming the shortest routes for rail and truck are adopted, 594 rail shipments and 2,601 truck shipments will still traverse Clark County under the proposed action.

Thousands of Clark County residents live and work near this potential rail route to Yucca Mountain via Caliente. The Union Pacific mainline between Apex Siding on the North and Arden Siding on the South is about 36 miles long. According to the 2000 Census, more than 39,000 people reside within one-half mile of the rail line. A number of large hotel-casinos are located within one-half mile also. When the resident population is combined with the school population, estimated average daily workers, and estimated hotel/casino guests, the average daily exposed population within one-half mile of the routes is currently about 86,000.

If DOE formally selects Caliente as the preferred corridor to Yucca Mountain, tens of thousands of Clark County residents will be affected by the shipments. Moreover, these shipments could continue for a period of up to 38 years or more if no other repository is constructed. The potential for large-scale rail shipments through Clark County is a major concern. Unique local impact conditions are created by the proximity of the Union Pacific mainline to the Las Vegas Strip and to other major commercial properties. A major accident could have devastating impacts on public health and safety, as well as Southern Nevada's economy.

DOE acknowledges that a very severe highway or rail accident could release radioactive materials from a shipping

case, resulting in radiation exposures to members of the public and latent cancer fatalities (LCFs) among the exposed population. In the Draft EIS, DOE evaluated a "maximum reasonably foreseeable accident scenario" involving a rail accident at a generic urban location, resulting in and about 31 latent cancer fatalities. In the Final EIS, DOE used an alternative methodology for consequence analysis and reduced the estimated rail accident consequences to 5 latent cancer fatalities. The FEIS states that clean-up costs following a worst-case transportation accident could reach \$10 billion. Clark County will be forced to prepare for this possibility.

The most likely result of the DOE's decision is that the difficulties of constructing the rail line to Yucca Mountain will delay the project so severely that the waste will be shipped to Yucca Mountain by legal weight truck. If the waste is transported by truck to Clark County, then all 49,316 shipments will traverse Clark County. Shipments on this scale will require intense preparation on Clark County's part. As Clark County has pointed out, DOE did not properly scope its Draft Environmental Impact Statement and failed to examine appropriate alternatives. Now, the DOE has chosen a route that may be acceptable to the three counties the route traverses, but it is also the route most difficult to construct.

Caliente was the second-longest (319 miles), and most expensive (\$880 million), of five rail access options identified by DOE. The most recent comparable rail construction experience in the US was the Burlington Northern Railroad's construction of the 113-mile Orin Line built to access the Wyoming Powder River Basin coal fields in the 1970s. DOE proposes to construct a rail line longer than the distance from Washington to New York (204 miles); St Louis to Chicago (259 miles); or London to Paris (213 miles) across some of the most rugged terrain in the country.

DOE has not defined a specific rail alignment within the current Caliente corridor. The proposed Caliente rail corridor must cross or avoid eighteen mountain ranges in central Nevada. Among them are: the Delamar Mountains, the Chief Range, the Highland Range, the North Pahroc Range, the Seaman Range, the Golden Gate Range, the Worthington Mountains, the Quinn Canyon Range, the Groom and Belted Ranges, the Revielle Range to the North, traverse Warm Springs Summit (elevation 6,293 feet) between the Kawich and Hot Creek Ranges, and turn South to avoid Sugarloaf Mountain and the Monitor Hills. While a specific alignment has not yet been selected, almost any alignment within the proposed corridor will require grades of 1.3 percent to 2.4 percent for 75 of the first 100 miles, even after extensive cut-and-fill activity to limit maximum grades to 2.5 percent. DOE will encounter difficult terrain along the entire length of the corridor.

Complicating the difficulty of constructing the rail line will be the problem of safely operating a rail system on this rugged and difficult terrain using rail cars roughly twice the weight of regular commercial shipments. DOE should expect to add frequent sidings and handling areas to allow for the additional engines and heavy volume of maintenance equipment that will be required to manage the rail line. The DOE has not described how it will accomplish this sizeable feat of engineering and managerial skill. The apparent decision to embark on the construction of the Caliente rail line greatly increases the likelihood of failure and the need to rely solely on truck transportation.

Since 1999, Clark County following the Nevada Agency for Nuclear Projects, has recommended to DOE the following measures for development of a preferred transportation system for all shipments to Yucca Mountain:

1. Develop dual purpose casks for at-reactor storage and transport.
2. Ship the oldest fuel assemblies first, that is, those with at least 20 years at-reactor cooling.
3. Adopt the transportation modality that makes maximum use of rail.
4. Make mandatory use of dedicated trains, special safety protocols, and special car designs as recommended by American Association of Railroads.
5. Insist that DOE and carriers make early identification of preferred cross-country mainline routes in consultation with stakeholders.
6. Encourage early involvement of corridor states and Indian Tribes, including financial assistance under Section 180(c), as part of the route selection process.

Clark County is concerned about terrorism and sabotage during transportation of spent nuclear fuel and high-level radioactive waste to Yucca Mountain. These concerns derive from Nevada's experience with specific instances of terrorism and sabotage. For example, the 1939 Harney rail disaster, an extortion bombing incident at a Nevada hotel, various anti-government attacks and bombings in Nevada, and recent revelations that Las Vegas was not only

used as a staging area by terrorists, but that Las Vegas might be a highly symbolic terrorist target. Research has bolstered these concerns since September 2001.

In June, 1999 concern about the terrorist threat to high-level waste shipments led Nevada's Attorney General to file a petition for rulemaking with the NRC. Nevada's petition documented the vulnerability of shipping casks to high-energy explosive devices. Nevada also submitted evidence that shipments to a national repository would be dramatically different from past shipments in the United States, and that these differences would create greater opportunities for terrorist attacks and sabotage. The petition requested a general strengthening of the current transportation safeguards regulations and a comprehensive reexamination of the consequences of radiological sabotage. The NRC published Nevada's petition (Docket PRM-73-10) in the *Federal Register* on September 15, 1999, and accepted public comments through February 2000. Four years after the close of the comment period, and more than two years after the 9/11 attacks, the NRC has still not officially responded to Nevada's petition.

Clark County will be uniquely affected by shipments of high-level waste to Yucca Mountain. Tourism in Clark County provides the economic engine for the entire State of Nevada. More than 70% of Nevada's population lives and works in Clark County, mostly in the tourism and tourism-driven construction industries. It is also important to note that Clark County is better prepared for public safety and emergency response than its neighboring counties. Accordingly, we will bear the primary burden for planning, staffing, training, and equipping to prepare for and respond to a HLW transportation accident for the entire region, regardless of DOE's mode and route decisions.

The DOE's hesitant planning for the transportation of high level waste to Yucca Mountain raises questions about both the direction of the entire program and the ability of the DOE to implement that program. Clark County believes that DOE must reassess its transportation options through an open process consistent with the National Environmental Policy Act, before proceeding to implement any major transportation decisions.

Sincerely,

Chip Maxfield
County Commissioner

March 2, 2004

Honorable Jack Quinn
Chairman, Subcommittee on Railroads
House Transportation and Infrastructure Committee
589 FHOB
Washington, DC 20515

Dear Chairman Quinn,

Attached is testimony and comments which I offer for the record of the Field Hearing to be held by your Subcommittee in Las Vegas, Nevada on March 5, 2004. I respectfully request that this testimony and comment be included in the record of the hearing.

As Mayor of the city likely to be most impacted by the transportation of nuclear waste and spent nuclear fuel to Yucca Mountain, I believe my perspective regarding the Caliente Rail Corridor is important. The City of Caliente intends to work constructively with DOE, as we have in the past, to assure the health and safety of our people, to minimize potential risks associated with transportation and to maximize, insofar as possible, any potential economic benefits that may inure as a result of the Yucca Mountain Repository Program and its transportation aspects. I would have liked to have made these points personally before your committee. That however not being possible, I thank you for your courtesy in including my comments for the public record of the hearing.

Sincerely,

Kevin J. Phillips
Mayor, City of Caliente, Nevada

COMMENTS FOR THE HEARING RECORD

Offered by Kevin J. Phillips
Mayor, City of Caliente, Nevada

**TO THE
HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE
SUBCOMMITTEE ON RAILROADS**

Field Hearing
March 5, 2004
Las Vegas, Nevada

Chairman Quinn and members of the subcommittee, my name is Kevin Phillips and I am Mayor of the City of Caliente. Although the following comments have not been solicited, I am providing them in the belief that they lend an important perspective regarding the Caliente Rail Corridor that will otherwise not be available to the subcommittee. I ask that the following comments be included in the hearing record for the March 5, 2004 House Subcommittee on Railroads field hearing.

I note that no representatives of local governments potentially impacted by the Caliente Rail Corridor (Esmeralda, Lincoln and Nye counties and the City of Caliente) have been invited to participate in the March 5 field hearing. In my opinion, the impact of this omission is compounded by the fact that representatives of Clark County have been asked to address the subcommittee even though the Caliente Rail Corridor does not cross any of Clark County.

It appears apparent that the State of Nevada and Clark County will use the hearing to seek to prevent or impede the Department of Energy (DOE) from moving forward in a timely

manner to address transportation modal and routing decisions. Given the numerous options available to DOE to move spent nuclear fuel and high-level radioactive waste through Nevada to the Yucca Mountain site, I do not believe that causing delays in DOE's transportation decision-making is an effective tool for blocking licensing, construction and operation of the repository.

I am of the strong opinion that delays by DOE in making mode and routing choices for transportation through Nevada will have adverse consequences on the management of related risks. Indeed, if the State of Nevada and Clark County are successful in causing delays, then 11th hour mode and routing decisions will preclude opportunities for affected local governments to work cooperatively with DOE to plan a safe transportation system. In addition, last minute transportation decisions will prevent timely identification and implementation of effective measures to mitigate transportation risks, including emergency first response and emergency medical training and equipment, among other options.

It is particularly disturbing that the State of Nevada and Clark County would seek to delay DOE transportation decisions given that any impacts and the need for mitigation will occur at the local county and city level and not in the State Capital or Clark County. Perhaps more disturbing is the fact that both the State of Nevada and Clark County have gone on record recommending rail as the safest mode of transportation and admonishing DOE to keep shipments of spent nuclear fuel and high-level radioactive waste out of the Las Vegas Valley (Clark County). Designation of rail as the preferred mode, and

selection by DOE of the Caliente Rail Corridor as the preferred corridor, satisfies both preferences expressed by the State of Nevada and Clark County.

Mr. Chairman, the City of Caliente commends DOE for seeking to move forward with modal and routing decisions for transporting spent nuclear fuel and high-level radioactive waste through Nevada to the Yucca Mountain site. For some time now, the City of Caliente and numerous other local governments in Nevada have encouraged DOE to make timely transportation mode and routing decisions. We concur with DOE's conclusion that information contained within the Final Environmental Impact Statement for Yucca Mountain contains the information necessary to support selection of a preferred mode of transportation, and in the case of rail, a preferred rail corridor within which detailed environmental and engineering analyses of alignment alternatives can be performed.

It is important to note that three of the four rail corridor alternatives evaluated by DOE within the Final Environmental Impact Statement for Yucca Mountain would result in spent nuclear fuel and other radioactive waste being transported through Lincoln County and the City of Caliente. The Union Pacific mainline bisects the City of Caliente. Annually, over 25,000 shipments of every hazardous substance imaginable are shipped through Caliente by rail. Emergency first response in the City of Caliente is provided by a volunteer force of highly dedicated individuals. Our emergency first responders do not have adequate training or equipment to respond to the myriad of risks posed by existing rail shipments of hazardous materials through Caliente. If not mitigated, shipments of

spent nuclear fuel and other high-level radioactive waste will only serve to heighten risks within the City of Caliente.

I am of the opinion that establishment by DOE of a railhead and/or other rail related operations (i.e. rail to truck intermodal) in or near the City of Caliente will result in locally enhanced emergency first response and emergency medical capabilities. Such congressionally/DOE financed improvements will provide the City with an improved capability to respond to potential accidents involving existing rail shipments of hazardous materials through the City. Given the relatively small increment of additional risk (due to the extreme degree of federal regulation and shipping cask robustness) posed by shipments of spent nuclear fuel and high-level radioactive waste, I believe that residents of the City of Caliente may be able to live under conditions of overall reduced risk following implementation of Yucca Mountain related transportation operations in or near the City of Caliente. This presupposes congressional/DOE enhancement of local emergency first response and emergency medical capabilities. Alternatively, if the shipments of radioactive waste simply pass through the City without the DOE establishing a terminus of activity in the area and congressional/DOE enhancement of local emergency first response and emergency medical capabilities does not occur, I believe the opportunity for mitigation of cumulative risks in Caliente will be foregone.

Mr. Chairman, I ask that you and your fellow subcommittee members give careful consideration to the public health and safety consequences associated with further slowing down the already deliberative and lengthy process that DOE has undertaken to

render Yucca Mountain related transportation modal and routing decisions. Indeed, I would encourage the subcommittee to encourage DOE to keep moving forward in its efforts to establish the environmental, engineering and institutional feasibility of building and operating a direct rail link to Yucca Mountain via the Caliente Rail Corridor. Local governments and their constituents deserve to know sooner rather than later as to whether direct rail access is feasible. If feasible, said local governments are entitled to early identification and implementation of measures to minimize potential risk and other impacts associated with direct rail access and to seek to maximize any potential economic benefits. Accordingly, should DOE conclude that it is preferable to construct a rail line within the Caliente Rail Corridor, the City of Caliente intends to work closely with DOE to identify and pursue all possible economic benefits associated with construction and operation of a branch line serving Yucca Mountain.

In closing, let me reiterate my disappointment that not a single representative of Esmeralda, Lincoln and Nye counties or the City of Caliente, through which the Caliente Rail Corridor passes, was invited to participate on the panel during the March 5 field hearing of the House Subcommittee on Railroads. Your inclusion of these comments in the hearing record will provide an otherwise missing rural local government perspective.

Testimony of
Allan Rutter, Administrator,
Federal Railroad Administration,
U.S. Department of Transportation
before the
Subcommittee on Railroads,
Committee on Transportation and Infrastructure,
United States House of Representatives

March 5, 2004

Chairman Quinn and members of the Subcommittee, I am very pleased to have the opportunity to be here today to testify on the important subject of the transportation of nuclear wastes. The Federal Railroad Administration (FRA), on behalf of the Secretary of Transportation, administers the Federal railroad safety laws, including those concerning the transportation of hazardous materials by rail. Ranking at the top of FRA's priorities is the safety of rail shipments involving Spent Nuclear Fuel (SNF) and High-Level Radioactive Waste (HLRW).¹ We believe that the Federal regulatory structure, planning, monitoring, coordination, and experience have produced a very safe system for the transportation of nuclear wastes by rail, but we understand the need to continue to improve that system to meet the new challenges posed by the expected increase in those shipments and the post-September 11th security environment.

The Safety Record for Rail Shipments of SNF

Rail shipments of Spent Nuclear Fuel (SNF) have a long and very positive safety history, having been transported safely by rail in the United States for more than 46 years. During that time, there has never been a single train accident or incident involving these

¹ The Nuclear Waste Policy Act of 1982 defines "spent nuclear fuel" as "fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing." The Act defines "high-level radioactive waste" as "(A) the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and (B) other highly radioactive material that the [Nuclear Regulatory] Commission, consistent with existing law, determines by rule requires permanent isolation."

rail shipments that has resulted in an injury, a death, or a release of the material from the packaging, and there has never been a single injury or death resulting from any rail shipment of radioactive material.

Approximately 1,200 packages of SNF have traversed our Nation's railroad system since 1957, when the U.S. Navy began shipping SNF by rail. Since that time, the Navy has safely shipped a total of more than 800 packages of SNF in a total of more than 300 train movements. In 1989, Carolina Power and Light, now known as Progress Energy, began intra-utility transfers of SNF from its two operating commercial nuclear reactors to temporary storage at a third reactor facility operated by the company. In 1995, the U.S. Department of Energy began shipment of SNF as part of its Foreign Research Reactor Fuel Program, which is intended to safeguard SNF from research reactors around the world by moving it to the United States and which is an important element in the Nation's nuclear non-proliferation efforts. As a result of these programs, the number of rail movements of SNF increased from approximately 15 per year in the early 1990s to an average of approximately 25 per year from the year 1997 to the present.

Rail Transportation of Radioactive Materials

Railroad transportation is well suited to moving radioactive materials safely and efficiently. Complementary Federal regulations issued by the Research and Special Programs Administration of the U.S. Department of Transportation and the Nuclear Regulatory Commission (NRC) provide for the shipment of even small amounts of SNF, to be transported in specially designed casks or other shipping containers that conform to NRC's regulations for certified Type B packages. Because Type B shipping casks are designed to withstand severe accident impacts without significant release of radioactive

material or increase in radiation dose levels, the casks are typically constructed using thick stainless steel walls and heavy shielding materials, such as lead or depleted uranium. The result is spent fuel casks that are relatively heavy, and that have a high cask weight to payload ratio. The rail shipment of SNF presents an attractive choice over truck shipment because of the higher weight limits for rail versus highway, and the greater efficiency in cask weight to payload for rail casks.

To get a sense of the great efficiencies that can be achieved by moving high-level nuclear materials by rail, consider the data projections presented in the environmental impact statement (EIS) for the Yucca Mountain site. During the 24-year period covered by the EIS, there would be a total of approximately 10,700 rail shipments of SNF, which means that there would be about 150 train movements carrying up to a total of 450 shipments (three cask shipments per train) annually. To carry this same quantity of SNF by truck would require about 53,000 shipments over 24 years, which equates to 2,200 highway movements (one cask shipment per truck) annually. In short, the choice is between 150 train movements per year and 2,200 truck movements per year. The inherent efficiency of rail transportation in moving SNF has a direct bearing on safety, because fewer shipments of nuclear materials lessen not only the exposure to the general public and transportation industry personnel but also the opportunity for a transportation incident.

Furthermore, a consortium of commercial nuclear power producers anticipates that it will initiate anywhere from 50 rail movements (four casks per train) to 100 rail movements (two casks per train) of SNF per year to temporary storage facilities, possibly as early as the year 2006. Therefore, even without any Yucca Mountain shipments, rail shipments of SNF are potentially destined to increase sharply from existing levels.

Promoting Rail Safety: Federal, State, and Local Interagency Effort

To ensure the continued safe and secure transportation of nuclear materials by rail, FRA works as part of a multi-agency team that includes, among others, the following Federal agencies: the Department of Energy (DOE); the NRC; the Transportation Security Administration and Federal Emergency Management Agency of the Department of Homeland Security (DHS); and two sister agencies of the Department of Transportation, the Research and Special Programs Administration (RSPA) and the Federal Motor Carrier Safety Administration (FMCSA). We also work closely with various State governmental organizations, including The Council of State Governments, the Western Governors' Association, and the Southern States Energy Board.

DOE, of course, has broad responsibilities in this area, including planning and arranging for the transportation of SNF and HLRW. This entails providing physical protection during DOE shipments of SNF. NRC, in addition to licensing nuclear facilities, certifies shipping casks for spent fuel, and reviews and approves physical protection arrangements for SNF shipments conducted by its licensees. RSPA sets the standards for the safe transportation of all hazardous materials, which include SNF and HLRW as regulated radioactive materials. RSPA's relevant standards cover hazard communication, shipment documentation, packaging safety, training, and, as of March 2003, security plans. FMCSA oversees the safety and routing of shipments by highway.

FRA's General Role in Promoting Rail Safety

In general, FRA establishes safety standards concerning the design, maintenance, and inspection of many aspects of our Nation's railroad system, including track, motive power and equipment, signal and train control systems, operating practices, and

transportation of hazardous material. Railroads are required to conduct their own inspections to ensure that these safety standards are being met. FRA leads a cadre of roughly 500 Federal and State safety inspectors, excluding specialists, whose role is not to conduct safety inspections for the railroad companies, but rather to monitor the railroad companies' own inspection forces to ascertain whether or not the railroads are in compliance with applicable Federal safety standards. FRA and State inspectors accomplish this task by conducting routine, random, and programmed focused inspections of railroad properties and comparing their findings to a railroad's own inspection records. Thus, while primary responsibility for inspecting the railroad property and operations rests with the railroads themselves, FRA's inspection strategy is to ensure the integrity and effectiveness of the railroads' own inspection programs.

FRA's Role in Promoting the Safety of Radioactive Shipments by Rail

With regard to rail transportation of SNF and HLRW in particular, FRA conducts inspections to verify that shipments are properly prepared for rail transportation and in compliance with all applicable hazardous materials regulations. FRA also helps to ensure that the track, signal systems, grade crossings, bridges, and rail vehicles used for these shipments are in safe condition and that responsible railroad employees involved in these movements are trained, briefed, and properly performing their jobs. In these activities, FRA works very closely with the railroads, their employees, and the affected communities.

Ultimately, the safe movement of SNF and HLRW depends on the application of sound safety regulations, policies, and procedures. This requires extensive planning and coordination among Federal agencies, State and local governments, and commercial transportation companies. In the mid-1980s, partly as a result of the rail shipments from

the Three Mile Island Nuclear Power Plant, FRA implemented a basic focused inspection policy for all known rail shipments of SNF and HLRW. Taking a proactive approach to railroad safety, FRA recognized the need to enhance this policy to ensure that the railroad industry's outstanding safety record for nuclear material shipments could continue unabated despite the sharp increase in such shipments. Therefore, in 1998, FRA developed the *Safety Compliance Oversight Plan for Rail Transportation of High-Level Radioactive Waste and Spent Nuclear Fuel*, known as SCOP, which set forth an enhanced FRA policy to address the safety of rail shipments of SNF and HLRW. Although the SCOP was originally developed to support the DOE's Foreign Research Reactor Fuel Program, FRA believes that this enhanced policy is necessary to ensure the safety of all known future rail shipments of SNF and HLRW, which are destined to increase significantly, with or without the opening of Yucca Mountain.

Development of the SCOP involved a coordinated effort among FRA, DOE, the Association of American Railroads (AAR), railroad labor organizations, and representatives of affected States and Native American groups. FRA wishes to acknowledge the invaluable contribution of its safety partners, whose insight and wisdom were instrumental in formulating the policies and procedures that are incorporated into the SCOP.

Key elements of the SCOP include (1) coordinated planning of the most appropriate and viable routes, (2) ensuring appropriate training of railroad employees and emergency responders, and (3) enhancing and focusing FRA's safety inspections and monitoring activities on all facets of the rail shipments of SNF and HLRW.

Under route-planning provisions of the SCOP, FRA works with DOE, utility companies, or other shippers, and the involved railroad companies in planning and selecting the routes, emphasizing the selection of the highest classes of track. (FRA regulations define various classes of track; each class of track has a maximum allowable operating speed and specific design, maintenance, and inspection requirements. The higher the class of track, the higher the permissible operating speed and the more stringent the safety standards.) In addition, FRA prepares an accident-prediction model for the highway-rail grade crossings along the intended route and uses this model to assist the shipper (including DOE if it is the shipper), in coordinating with appropriate State, local, and tribal agencies in route-planning activities. FRA also coordinates with Operation Lifesaver, Inc., a private safety organization, to increase grade crossing safety awareness and education in communities along routes. We also work with appropriate agencies of the DHS, the NRC and the DOT's Office of Intelligence and Security in identifying security issues and measures, and assist with coordination between the offeror, Federal and local law enforcement representatives, and intelligence communities on security matters. Finally, FRA reviews the emergency response plans of the shipper and the rail carrier to ensure that they adequately address the actions to be taken along the route in the unlikely event of an accident or incident involving the train.

Another important element of the SCOP is training. It is FRA's policy to assist DOE and other shippers in the development of emergency response training and safety briefings and to monitor the rail carrier and the shipper to verify that requisite training and briefings have been performed. FRA also conducts reviews to ensure that train crews who operate the trains in which nuclear materials are transported are properly certified, trained,

and experienced in running over the routes. Finally, FRA checks to see that these crews have received specific training concerning the nature of the shipments.

As explained earlier, FRA's safety inspection program is primarily designed to monitor the safety performance of railroads, which are responsible for performing their own inspections and ensuring the safety of their operations. However, under the SCOP, FRA plays a more direct role by conducting more focused and intensive safety inspections to ensure the highest level of safety for rail shipments of SNF and HLRW. For example, instead of inspecting a limited sample of locomotives and freight cars as we do for routine rail operations, FRA equipment inspectors conduct a thorough inspection of each and every locomotive and freight car for every train that transports SNF. These inspections are intended to ensure that locomotives, freight cars, and the train's braking systems meet all applicable Federal safety standards. Furthermore, along a route, it is FRA's policy to observe the operation of automated warning devices at highway-rail grade crossings, to ascertain that they are operational before the shipment. FRA signal inspectors also conduct inspections of selected grade crossing warning devices to determine the reliability and integrity of the grade crossing warning system. Furthermore, FRA places operating practices experts in the rail carriers' dispatching centers during SNF shipments to observe firsthand the progress of the shipments and any operational problems that might arise. It is also FRA's policy to inspect all the track along the entire route of a shipment; this includes both visual inspections and automated inspections by FRA's track geometry vehicle (the T-2000), which is capable of measuring the alignment, gage, and crosslevel of every foot of railroad track. In addition, FRA reviews the data resulting from the inspections by the rail

carrier's rail flaw detection vehicle to ensure that rail flaw inspections have been performed on the route and that necessary rail repairs have been made prior to the shipments.

It must be emphasized that the SCOP is a living document that has evolved from more than 46 years of accumulated experience regarding the safe movement of nuclear materials by rail. FRA will continue to work in partnership with the rail community and other affected entities to review, evaluate, and update the SCOP periodically to keep pace with the latest developments and technologies involving safe rail transportation in order to continue to ensure the safe and secure movement of nuclear materials over the Nation's rail system.

In order to carry out FRA's safety inspection policies under the SCOP more effectively, FRA has in recent years sought and obtained additional budgetary resources. For FY 2003, FRA received funding to hire eight more safety inspectors. For FY 2004, FRA obtained resources to hire 21 new safety inspectors for the field, an additional bridge engineer and a new radioactive transportation coordinator for headquarters, as well as to obtain an additional track geometry vehicle that FRA will now be able to develop and use. We are in the process of moving forward to fill all of these new positions. For FY 2005, we are requesting funds for additional staff in the Office of Safety, including eight operating practices inspectors and one hazardous materials security specialist for headquarters. We are also seeking funding for FY 2005 to pay for a third track geometry vehicle. These additional resources will help FRA implement the SCOP more effectively and thereby meet the rail safety challenge posed by the anticipated increased volume of radioactive material shipments.

Federal Jurisdictional Issues

In DOE's Final EIS for the Yucca Mountain site, DOE identified "mostly rail" as its preferred mode of transportation, and in its December 2003 Federal Register notice, DOE announced the primary and secondary preferred rail corridors for the construction of a rail line to serve Yucca Mountain. Having now identified its preferred corridor, DOE has indicated that it intends to proceed with selection of a mode of transportation and, if it selects mostly rail as the transportation mode in Nevada, DOE will proceed to actual selection of a corridor. These selections will also be published in the Federal Register in a Record of Decision. If DOE proceeds with mostly rail in Nevada and makes a corridor selection, DOE will take further steps, including the development of an EIS on the particular railway alignment within the corridor.

The Subcommittee has asked that FRA specifically address Federal jurisdictional issues regarding possible construction of a new rail line to reach Yucca Mountain, should DOE decide to use rail as the primary mode of transport to Yucca Mountain. I anticipate that the Surface Transportation Board's testimony will address the scope of its jurisdiction over the construction of rail lines.

If DOE decides to use rail as the primary mode of transport to Yucca Mountain and if STB provides any necessary approval of the construction of a rail line to Yucca Mountain, DOE would seem to have several alternatives for how it might construct the rail line and conduct operations over it. DOE's options could include the following: owning and operating the entire line itself; owning the entire line and having it operated by a contractor, using either DOE owned rolling stock or otherwise; having the line entirely owned and operated by an existing railroad; having the line owned and operated by a newly created railroad; or some mix of these arrangements (e.g., having a major railroad own and

operate the entire new line outside the Federal facility, with DOE owning and operating the portion of the line within its facility). DOE could also decide whether or not to permit other types of rail traffic on the portion of the line outside the Federal facility. We believe that DOE is probably not in a position to select one of these options unless and until it decides that rail would be the primary mode of transport to Yucca Mountain. Until DOE's decisions are made, FRA cannot state precisely how it would exercise its safety jurisdiction.

However, regardless of which option DOE selects, FRA's rail safety jurisdiction is broad enough to include those operations. FRA's jurisdiction under the Federal railroad safety laws extends to all railroads that affect interstate or foreign commerce (see 49 U.S.C. § 20102), whether or not they are common carriers (except for self-contained urban rapid transit systems not connected to the general railroad system) and to every area of railroad safety (see 49 U.S.C. § 20103).

In exercising its safety jurisdiction, FRA may not be able to use some of its enforcement tools (e.g., civil and criminal penalties) directly against DOE concerning any direct actions it performs as part of the rail operation, due to the wording of the Federal railroad safety statutes. However, we are confident that if DOE selects a rail option, DOE would be fully cooperative in achieving practical solutions to any rail safety problems attributable to its own actions. Moreover, any commercial entities (e.g., railroads and contractors) involved with the rail operation would be fully subject to all of FRA's enforcement remedies.

FRA will consider entering into a memorandum of understanding with DOE concerning how FRA and DOE would address any safety issues that might arise in

connection with the rail operation, should rail be chosen as the preferred mode. Such an agreement could focus on the specifics of the option chosen and methods for resolving safety problems FRA might identify. With or without such an agreement, FRA intends to exercise its jurisdiction to ensure that every rail safety issue is fully addressed.

Safety and Security Protocols

Federal regulations for shipment of nuclear material by rail are augmented by a series of safety and security protocols and special operating restrictions that have been agreed upon by DOE and the railroads. These protocols and operating restrictions have evolved over the years and are often tailored to the particular needs of the individual shipments. Under these protocols, a train carrying SNF or HLRW would typically include the cask cars, at least two buffer cars, and an escort car. One buffer car is before and one is after the cask cars; the buffer cars are required by regulation and provide not only separation from the occupied locomotive and from the escort car but also a cushion against direct impacts on the cask cars in the highly unlikely event of a collision. The escort car would be staffed with appropriate security and nuclear safety personnel. Special operating restrictions have included limitations on the maximum speed of trains carrying nuclear materials, requirements to stop opposing trains on adjacent tracks when they meet a train carrying nuclear materials, and requirements that cars carrying nuclear material be switched only with an attached locomotive rather than allowing them to roll to a stop on their own during switching.

Another convention involving the shipment of SNF and HLRW by rail concerns the use of dedicated trains. Until the mid-1970s, most rail shipments of these radioactive materials were handled in regular service trains that carried a wide variety of other freight

in addition to radioactive materials. In 1974, the railroad industry began insisting that radioactive materials shipments move in dedicated trains that transport nothing but radioactive material. There has been much debate about this topic over the years; while many nuclear materials shipments do move in dedicated trains today, this is not the case for all such shipments. (In 1977, the Surface Transportation Board's predecessor, the Interstate Commerce Commission, issued a decision that prevented railroads from mandating the use of dedicated trains.) FRA has engaged the services of the John A. Volpe National Transportation Systems Center to conduct a thorough study, as mandated by Congress, of the safety implications surrounding the transportation of SNF and HLRW in dedicated trains versus regular service trains. FRA has received a draft of this study and is diligently working to review and clear the draft and then forward it through the appropriate channels in the Executive Branch so the report can be approved, issued, and provided to Congress as required. We hope to deliver the study to Congress this year. As also directed by Congress, the Department will consider the results of the study and evaluate whether or not rulemaking is necessary.

The security of rail shipments of radioactive materials has long been a priority even before the tragic events of September 11th. Some of the protocols described above contain stringent security measures to protect against terrorist threats, including the accompaniment of these shipments by armed security forces, direct liaison with State and local law enforcement and first responders, and requirements to protect the cars when sitting in rail yards or sidings.

More recently, Global Positioning System (GPS) technology is being used to track the location of trains carrying radioactive materials. FRA is leading an effort of the

Department of Transportation and the U.S. Coast Guard to build a Nationwide Differential Global Positioning System (NDGPS) that can greatly improve the accuracy of conventional GPS to one to two meters. This level of precision permits the system's user to determine exactly which track (where there are adjacent tracks) a train is occupying. Our goal is to have dual NDGPS coverage for the entire United States. Presently, 85 percent of the continental United States has NDGPS coverage, while 45 percent has dual NDGPS coverage.

Although security concerns have long played a prominent role in assuring the safety of rail shipments of radioactive materials, the events of September 11th have reinforced the fact that we must constantly reassess our assumptions and beliefs. A few weeks after the attacks on the World Trade Center and the Pentagon, the AAR secured the services of an experienced security firm to conduct a comprehensive review and assessment of the security of our Nation's freight railroad system. The security of hazardous materials, including radioactive materials, and defense-related shipments are two areas that have received special emphasis in the security review.

Nothing that we do in transportation can ignore the threats to security posed by terrorist organizations. The Federal agencies responsible for direction or oversight of these movements have worked successfully over the years through the Governors' offices of the respective States to ensure that emergency planning and emergency response agencies have the information and training they need to do their jobs. This sharing of information and cooperation must continue. However, it will be particularly important that specific information regarding routes and timing of individual shipments is kept secure by those with a need to know. Notwithstanding this desire, NRC has indicated to us that under

section 147 of the Atomic Energy Act of 1954, the NRC is barred from prohibiting public disclosure of information pertaining to the routes and quantities of shipments of SNF and HLRW. The Department of Transportation and other participating Federal, State, and local law enforcement and security agencies, including FRA, will continue to evaluate best practices to address security concerns.

Conclusion

FRA believes that it is critical that rail shipments of high-level radioactive materials continue to be conducted with a maximum degree of safety and security. This can be accomplished only through a sound and meaningful safety partnership involving all relevant elements of the nuclear industry, the railroad community, and appropriate Federal, State, and local governmental bodies. Our current safety requirements and practices have evolved over a period of more than 46 years. We must build upon the knowledge and experience we have gained over that period to meet the challenges that are likely to arise with the projected increase in rail shipments of SNF and high-level radioactive materials in today's railroad environment. New challenges will arise regardless of whether or when the Yucca Mountain storage facility becomes operational, and when they do, FRA and its many partners are determined to be prepared to meet these challenges successfully.