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NUCLEAR REGULATORY COMMISSION

Title: BRIEFING ON NATIVE AMERICAN, STATE OF NEVADA, AND AFFECTED UNITS OF LOCAL GOVERNMENTS REPRESENTATIVE RESPONSES TO DOE'S DRAFT ENVIRONMENTAL IMPACT (EIS) FOR A PROPOSED HLW GEOLOGIC REPOSITORY PUBLIC MEETING

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

OFFICE OF THE SECRETARY

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BRIEFING ON

NATIVE AMERICAN, STATE OF NEVADA, AND AFFECTED UNITS OF LOCAL GOVERNMENTS REPRESENTATIVE RESPONSES TO DOE'S DRAFT ENVIRONMENTAL IMPACT (EIS) FOR A PROPOSED HLW GEOLOGIC REPOSITORY

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PUBLIC MEETING

Nuclear Regulatory Commission

One White Flint North

Rockville, Maryland

Friday, January 21, 2000

The Commission met in open session, pursuant to notice, at 9:04 a.m., Richard A. Meserve, Chairman, presiding.

COMMISSIONERS PRESENT:

RICHARD A. MESERVE, Chairman of the Commission

GRETA J. DICUS, Commissioner

NILS J. DIAZ, Commissioner

EDWARD McGAFFIGAN, JR., Commissioner

JEFFREY S. MERRIFIELD, Commissioner

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STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

ANDREW BATES, Acting Secretary

STEPHEN BURNS, Deputy General Counsel

ROBERT HOLDEN, Director, Nuclear Waste Project, National Congress of American Indians

RICHARD ARNOLD, Representative of Native American Tribal Organizations Group

HEATHER WESTRA, on behalf of Darrell Campbell, Treasurer, Tribal Council, Prairie Island Dakota Nation

ROBERT LOUX, Director, Nuclear Waste Project Office

DENNIS BECHTEL, Planning Manager, Nuclear Waste Division, Clark County

LES W. BRADSHAW, Manager, Department of Natural Resources and Federal Facilities, Nye County

MIKE L. BAUGHMAN, President, Intertech Service Corporation, Lincoln County, Caliente City

REX MASSEY, Consultant, RMA Research, Churchill County; Lander County

P R O C E E D I N G S

[9:04 a.m.]

CHAIRMAN MESERVE: Good morning. I wanted to tell you that you were lucky that you're here this morning for the meeting, because we had a meeting in this room yesterday and it was about 20 degrees colder than it is this morning.

We are here this morning to discuss the Department of Energy's Draft Environmental Impact Statement relating to the potential repository at Yucca Mountain. We have a variety of stakeholders that we are going to hear from this morning including representatives of the Native American Tribal Governments, the State of Nevada, and some representatives of affected local governments.

This is the second of three briefings that the Commission is going to benefit from in connection with this subject. There was a briefing in September of '99 by the Department of Energy. That occurred before I had arrived at the Commission but my colleagues that the benefit of that.

We are going to be hearing from the NRC Staff on this issue next week and of course this briefing has been scheduled so that we can obtain the benefit of the views of various of the affected groups.

As I think all of you know, the Department of Energy is the entity which has the responsibility to prepare the Environmental Impact Statement and then they make a

recommendation to the President as to whether to proceed or not with regard to a repository at Yucca Mountain.

The NRC role is if the decision is to proceed is to serve as a licensing agency. We would receive the Department of Energy application in that role and we would go through a process that is much like the process we go through with regard to other licenses in order to evaluate when and if such a license were to be submitted to us.

Nonetheless, although this Environmental Impact Statement is the Department of Energy's, this is a very important document for us. First of all, it is an important document just because of the significance of this issue and I think all of us will be benefitted if it is an impact statement that illuminates the issues fully so that there is a foundation for a sound decision on the issue.

We also have a personal stake in this in the sense that the Nuclear Waste Policy Act requires us in our subsequent actions, if there were subsequent actions we need to take to utilize the DOE Environmental Impact Statement to the extent practicable as our Environmental Impact Statement in any action that we might subsequently be asked to undertake, so we have both as a benefit of good government and for the benefit of the agency strong interests in making sure that this is a complete and accurate and thorough and fair document.

With that as the backdrop, we very much welcome the comments from you. The purpose of our meeting today, however, let me emphasize, is to illuminate issues that we want to consider for purposes of our own comments to the Department of Energy. Any issues that you would like to raise on this issue you should do directly as well, in that your comments directly to the Department of Energy are important. We are not the conduit for comments from affected communities. We want to hear from you so that we get some guidance as to what we should say. We want to evaluate them, but it is in your interest to communicate directly with the Department of Energy as well on these issues and submit your own comments, and that is of course true for all of the interested groups here.

We do have a limited amount of time to be able to hold on this issue this morning, and as a result I request that you abide by the time limits that we have provided for this session. Perhaps the greatest benefit to the Commission is to have ample enough time for us to have an interaction with you in the format of questions and answers and if the time is absorbed on presentations, that obviously is restricted.

Let me say in that connection we did have the benefit of materials that were previously submitted and I am sure that I am sure that my colleagues have all been through

those materials before, so we are not completely unfamiliar with the comments the subject area, and this is for all of the panels, that you intend to cover.

With that, let me turn to my colleagues and see if they have any opening remarks.

COMMISSIONER MERRIFIELD: I would just like to say, Mr. Chairman, I would like to associate myself with the comments you made previously and I think those were very good and just also to note my thanks to all the members of all the panels today for coming. I know it is time and expense. It is important. It is useful on our consideration and I certainly do appreciate it.

CHAIRMAN MESERVE: Thank you. Why don't we proceed. Mr. Holden, are you going first?

MR. HOLDEN: I might as well. I think I am up on the docket. Good morning, Mr. Chairman, and Commissioners. I appreciate this excellent opportunity to be before you at this time. I hope what I say is worth your review.

Just to give you a little bit of background of what I do and whom I do it for, I am Director of the Nuclear Waste Program with the National Congress of American Indians, a tribal government organization. We cover the waterfront in terms of the issues, particularly around trust responsibility matters, the Federal Government, as you know, as a whole entered into treaties with Indian nations many

years ago and after formation of the United States, and we traded lands and our homelands, on which we resided and survived on, and in exchange for that the Federal Government as a whole agreed to provide those things necessary to our survival from that point and that was quid pro quo, I guess.

But many of these lands in addition, beyond those points of the treaties, were taken for various purposes. Sometimes we let them go for national security, places such as Los Alamos, and Hanford, with the idea that they would be returned to us at some point in the future once these national security efforts were met and there was not a need for that endangered situation, that situation had passed.

However, these lands were not returned, and even these days in some of these areas they are contaminated but they still remain our homelands. They still remain part of our culture. They are places where we used to go to meet our spiritual leaders, our churches, if you will, those sorts of things that keep our cultural integrity whole.

But in this area of the Yucca Mountain draft Environmental Impact Statement I am speaking more to policy matters in terms of what is available to the tribes in those areas. I don't think that Congress has done a good job in looking after the needs of those tribes and providing them the ability to acquire technical teams to respond to the draft EISes. It is a matter of balancing budgets perhaps,

but I think that maybe it is an oversight that certainly we have attempted to try to resolve, but it has not happened.

The Department of Energy is aware of the inability of tribes to respond. However, it cries poverty when it comes to these types of activities and as well saying they don't have the resources to do that. However, they continue to request and receive funding for county governments, state governments, and which I am pleased that the people living in these areas are able to put together efforts to assess the technical data, however the people who have lived there for thousands of years, the people who will continue to reside there, they are sitting on the sidelines with no resources and they have the most legitimate reason for looking at these technical reviews or technical assessments.

I appreciate the NRC's efforts, because I am not exactly sure whether this oversight or this lack of participation by the tribes can reach some sort of threshold to be a cause of concern in the licensing process as in, I guess, NEPA actions whenever a party wants to intervene there are ways they can do that as well as become necessary parties, but however they are required to pony up. They have to come up with their own resources to do the studies, but I think as part of the Federal Government that responsibility is assumed by the Commission.

It is unfortunately that even though that

gentleman to my right is representing some of the tribes up there that those tribal representatives cannot, do not have the resources even to be here at this time to perhaps sit in my place. I just hope that we can continue have this dialogue, continue to look for options, to look for resolutions to this short shrift that tribes are given in these areas, because as I said these treaty rights are clear and compelling evidence that DOE needs to provide these tribal governments with technical staff to analyze the thousands of documents that have been generated in the life of this project.

One point, if I might add, is that the DOE is also -- it is my understanding that before you a few weeks ago that DOE stated that they were going to be returning some of the lands that were involved in the Nevada test site back to the tribes, the Timbisha Shoshone, and I am not sure whether that land will be -- even though that is their former homelands and it is good that it's being returned -- I am not sure that that land and the exposure of those people in those areas has been taken into consideration in this draft EIS, whether, you know, the National Cancer Institute and the Centers for Disease Control has studies underway which confirm what Native American people know and other people who are living in that area know, that the radioactive fallout causes severe debilitating harm to their

health, chromosomal damage and mortality. However, nothing has been done in those area. Responsibility has not been accepted to the degree it should.

They are now subject to additional exposure from the facility, from transportation, so I don't think these type of measures were taken into consideration even though this acquisition of land is positive. What does that mean in terms of this draft EIS?

With that, I am glad to answer any questions and once again look forward to working with you and having a dialogue with you on these and other issues.

CHAIRMAN MESERVE: Good, thank you. Why don't we complete the statements from the three of you and then we will turn to question and answer.

Mr. Arnold, would you like to proceed.

MR. ARNOLD: Sure. Thank you. My name is Richard Arnold. I am the spokesperson for the Consolidated Group of Tribes and Organizations, which is a group of tribes and organizations which have cultural affiliation to the proposed site.

Today I am here to share some comments with you, and some of them are actually very timely in that we had a meeting of the tribes last Friday in which comments were provided specific to the EIS, the draft EIS.

By way of background I would like to just share

with you just for a brief moment, if I may, just the composition of what we do and how we have been involved and since when, and actually as I mentioned the tribes that are involved, that represents Southern Paiutes, Western Shoshones, and the Owens Valley Paiutes and Shoshones. Those are three ethnic groups, if you will, that have demonstrated cultural affiliation to the area. Now that is specific to the area and I think that is an important note to qualify, because I think that what happens oftentimes with many EISes is that you look at a site-specific project, but sometimes if you don't look beyond that, that footprint, then you may run short here in looking at the impacts on other communities and/or tribes.

Our position is that there are various other tribes within Nevada and actually from that going cross country when it comes to transportation issues of which I will touch on lightly here.

The other is that we have been involved in this process since 1987 with the Yucca Mountain Project. Primarily it has been cultural resource oriented. From an archeological point of view, people like to look at the artifacts and there is a mystique about the artifacts, but for us it goes much deeper than that.

As Mr. Holden had touched on, this is our church, this is our grocery store, this is our pharmacy --

everything that we need it out there, and not just bound to this site but all over and as such, with their being restrictions to access to that land, even though there are provisions where we can make a phone call and perhaps when it is convenient we can go out to look at various things that we need to look at or conduct various things we need to do, it still kind of impedes the process I think that is not culturally indicative to what we do as Indian people.

In the Consolidated Group we meet periodically. It is basically on more of an as needed basis with the Project as far as when the Department of Energy is able to sponsor a meeting, then the tribes are contacted and we come in and we present our positions and the recommendations which we have been doing over the years.

However, I think that sometimes we, too, just as Mr. Holden had alluded to, were faced with budget considerations, so sometimes when meetings may be happening or should be happening perhaps at a minimum twice per year with the group, sometimes it may be one time a year, but obviously that goes back to the root of the problem of funding.

Funding has been essential, as you know, to all the stakeholders, however the tribes have viewed themselves as not being necessarily -- falling into that category of stakeholders, because we are not just a municipality or a

state government, if you will, but these are tribal governments.

There's Federal mandates that require that kind of interaction between Federal agencies and tribes and so we think that there is definitely a need for increasing that type of a process. It is a very difficult thing obviously to comment specifically on the EIS. However, I will, but just for the record, the tribes out there that are culturally affiliated are opposed to this project, and so it makes it very difficult when you start saying okay, well, gee, you know, you want us to say all these things. Well, we could go on for years, eons, decades, centuries about the faults or the things that go against the grain of our culture.

But it also makes it very difficult because there's other tribes that we recognize in the United States that may be impacted by shipments and things, and so it in essence kinds of pits one against the other, and so it makes it difficult.

Given that, I would just like to share a few comments, if I may, about what we have been doing and how we have been involved, and some of the perceptions that were shared last week at the meeting that we had held.

First of all, we have developed a source document for this draft EIS and in the EIS it was cited 37 times,

various references and things within the draft document. However, the draft document was developed by four tribal representatives that were appointed by the Consolidated Group of Tribes and Organizations, and I think they did a very good job. However, with all due respect, they are not the scientists and the engineers, and when you start dealing with mathematical equations and transportation modeling and all that, sometimes it is a little bit difficult to deal with those things, but the committee had done the best that they could in trying to get some of the perspectives shared prior to the development of the EIS.

With that, I think it makes it very difficult when we start looking at and although referenced things such as environmental justice. Environmental justice is something I think many Indian communities are oftentimes fit within the category of that classification, but oftentimes it is overlooked as far as truly the impacts they will say, gee, you know, the Indian population doesn't make up a significant portion of the population, but these are Federally recognized tribes. They are on reservations. They have a special status. There is a trust responsibility and it goes on and on and on.

The DEIS states that there's going to be no adverse impacts to minority populations with subsistence lifestyles. I find that kind of interesting, as did the

tribes, because that is what we do. Ethnographically in the literature it talks about how we are hunters and gatherers, although we don't necessarily agree with that, because that makes us kind of people that all we're doing is we are concerned with eating and sleeping.

However, we think that we haven't seen, and that was one of the comments made, that there were no systematic studies to evaluate subsistence patterns, lifestyles or epidemiological studies of impacts of things, and so I think that is very, very critical.

The other thing is that a disproportionate impact is going to be felt by the Indian people when it comes to what we term as "holy land violations."

Just as what was said earlier, in my comments and Mr. Holden's, is that these are the places that we need, that we go to, that have been part of our culture. No other group in the United States is going to be impacted as much as tribes will because of what do you do if they wipe out your church, if they wipe out your store, if they wipe out your pharmacy, everything that you need? So there's some significant impacts I think that warrant further consideration.

The other is that either denial or impacts to access to various sites, because I believe that that is critical also in not only the perpetuation of the culture

but also in concern with some of the Federal mandates, so again those are some of the things that I think warrant consideration.

With respect to transportation, I think that that is very critical as well. There's several tribes that are going to be impacted by transportation. Some of those specifically in the Consolidated Group of Tribes and Organizations, we see the Las Vegas Paiute tribe, which is just right down the road on Highway 95 going to the Nevada Test Site on to Yucca Mountain, the Moapa Paiute tribe, which we have interstate going right through their reservation, and then the Timbisha Shoshone tribe, which is in Death Valley, a Federally recognized tribe that technically doesn't have a land base that is trying to get some land, and some of the land that they are looking at falls adjacent to some of the areas on the Nevada Test Site and Yucca Mountain and so there's a lot of concerns that those things I don't believe have adequately addressed, at least in the eyes of those people.

Winding down here, I think that's some of the things that we see as far as when we are informed that the routes, you know, will be selected by the states and things and while we can identify with that, we also think that there needs to be some assurances of some sort to be granted as far as the tribes because the tribes are going to be

impacted on some of those issues as well.

When we were looking at the EIS we had seen how it clearly illustrates the state and county boundaries within EIS in a lot of the maps, but there is no mention or identification actually on those maps of the tribes, and here it is -- these are Federally recognized tribes, Federal mandates that should be included.

With respect to an intermodal transfer facility, we see that there has been no systematic ethnographic studies to evaluate those sites. We were asked to comment on some of those, so we did, but the difficulty came in when we were trying to look at some of those sites, and basically had to do it from table like we are sitting here, and if you could imagine, even trying to do any kind of study, transportation modeling study, if you had to do geological studies and biological studies or maybe even a site characterization or site suitability study from the table here and not ever getting to go out to the field to see and understand the complex relationships that the tribes have -- I think it's a little bit remiss.

We also think it was quite appropriate to have Indian people out when those studies were out there. It was basically done by archaeologists and archaeologists, with all due respect, I mean they have a certain focus. It just scratches the surface of what the Indian culture is all

about, so clearly Indian people need to be involved.

Lastly, some general observations are that we see, and it's maybe more of just a choice of words and things, but in the Appendix D of the DEIS it states how copies of the EIS or DEIS I should say were sent to Governors of the states, territories, and Indian organizations. Now "Indian organizations" has a special connotation, and not "Indian tribes" and so we had recommended that that needs to be also to Indian tribes. We understand that it was sent out to tribes but it is one of those oversights. I think once again how there is not this clear understanding of how to work with Indian people.

With the adverse effects to cultural resources out there, it states that impacts may result from workers and from construction activities, and that a plan for mitigation has been established to monitor those areas and sites, but there is no mention of how Indian people are going to be involved in that.

Beyond that, as I would again remind you, the tribes have been involved in that since 1987 formally. Now if you go back culturally, we were there a way before this thing was even thought of and when that mountain was made.

We need to see that long-term commitment and insurance that tribes will be maintained on a government-to-government relationship as required, and the

funding that I mentioned earlier, that that is what has prevented tribal representatives from coming to these meetings in the past and will continue to prevent them from coming in the future unless there was something, some mechanism to do something there.

A couple last things are that with consideration to National Park Service Bulletins 30 and 38, which evaluate and document historical landscapes and traditional cultural properties, things that haven't systematically been evaluated that potentially could cause some concerns and/or problems down the road, so I think that that needs to be further examined.

Then with the emergency response and preparedness, it goes back to the funding, goes back to kind of just the basic foundation for everything and that if the tribes aren't prepared for this, you know, how can you expect us to in essence not to support because I think it goes against the grain, but to be there to respond adequately on behalf of the constituencies that the tribes have to respond to, and that is essential.

Lastly would be the secondary impacts that we see to any kinds of studies that would be going on. Oftentimes those are overlooked in DEISes and that when you move the dirt from Point A to Point B you get it out of Point A, but when you put it over in Point B you may be impacting

something else, and so I think that has to be given serious consideration, and with that I would conclude my remarks, and I appreciate the opportunity.

CHAIRMAN MESERVE: Thank you. Mr. Darrell Campbell, as I understand it, could not make it because of the weather. Thank you, Ms. Westra for joining us on behalf of the Prairie Island Dakota Nation Tribal Council.

MS. WESTRA: Thank you, Mr. Chairman, Commissioners. The Prairie Island Indian Community appreciates this opportunity to come and brief you on our reaction to the draft Environmental Impact Statement for the proposed repository at Yucca Mountain.

We are here today to state that we do not support the no action alternative which has been described in the draft EIS and we believe that it is necessary to point out that this alternative has some serious ramifications for the Prairie Island Indian Community.

As you may be aware, there is a commercial nuclear power plant immediately adjacent to the reservation and an independent spent fuel storage facility associated with that plant. The tribe receives no benefit, either a tax base or electricity, from the plant. We fund our own emergency preparedness programs and monitoring. Nowhere in the United States is the problem of nuclear waste more evident than at Prairie Island.

The tribe didn't ask for a nuclear power plant to be built right next door to the reservation or a spent fuel storage facility to be constructed and operated there, but there it is, and we feel that dry cask storage is not a permanent solution to this problem. It is merely a temporary one until a more permanent solution has been developed.

The tribe is within feet of this nuclear waste facility, not miles, and to even suggest that the spent fuel will remain onsite either with institutional controls or without is not acceptable to the people of Prairie Island.

In the draft EIS it states that if this waste remains onsite there would be environmental consequences such as contamination to the air, soil, water, et cetera, but there is no mention of what might happen to the people who would be residing there.

We assume that they would either be removed or face contamination, and the tribe has no intention of leaving its land, land that was promised to them by the United States Government and unless the waste is removed, the tribal people and children will be forced to live with this very real health and safety threat.

Like Richard and Robert mentioned, transportation is an important issue that has not been fully evaluated, nor have the transportation packages been fully evaluated and

the associated health and safety concerns, and that all jurisdictions, tribal, state, local must be fully prepared for those shipments and be included in the development of emergency preparedness plans and that we strongly feel, because the tribe has been living next to this situation for such a long time that tribal concerns must be addressed before this moves forward, not just merely considered and discarded.

We feel that the no action alternative means that the Federal Government will continue to deny its responsibility for nuclear waste that sits on Prairie Island and at 71 other sites throughout the country, that the Federal Government has a responsibility to take care of this waste and make sure that it is safe from people.

In closing, we would like to thank the Nuclear Regulatory Commission for reaching out to Indian country as evidenced by this hearing and the recently-published proposed rulemaking regarding pre-notification of shipments. As we have got rail lines going right through the reservation, we will be positively impacted by that and notified of such shipments, so thank you and we would be glad to answer any questions.

CHAIRMAN MESERVE: Thank you all very much.

I have a question that I would like to perhaps direct to Mr. Arnold.

In your comments you indicated that there -- that particular tribes you mentioned have I think you used the term "cultural affiliation" to the area. It would help me if I understood a little more specifically as to what exactly that means, and it's really a two-part question.

First is how often does that mean that people visit the area and for how long and for what purpose, and then secondly, given those uses, are there any mitigative measures that would be acceptable to be able to deal with the cultural interests?

MR. ARNOLD: First, with respect to cultural affiliation, I think in order to define that, it's part of playing into the rules of I guess established practices and ethnographical approaches where there was a literature review done.

I am trying to determine based upon the literature, based upon the information provided by tribal groups who occupied those lands, who used those lands ancestrally and with it it basically is a joint use area and that is why I mentioned three distinct ethnic groups, so it is not just one ethnic group but it is three.

As such, each one of those people or each one of those groups have the ties, and it was interesting in noting that when the Owens Valley Paiute and Shoshone tribes in California, when initially they were brought in, there was

some question as to why they were being brought in, because they are way over in California. The tribes said but no, that is part of our area. Well, later on and probably about 10 years down the road they had found that in doing some obsidian sourcing studies that they had conducted they found out that some of the obsidian and projectile points and different kinds of things out there originated from the Owens Valley, thus confirming. We had known that initially and sometimes we are the last ones to be asked, but that is how we became involved and that is how the cultural affiliation was determined.

With respect to how often, how long and what purpose, that is a real interesting question because I think that, first of all, as I mentioned, there are the meetings that we have and people do go out there, sometimes either in the meetings, sometimes there is a request to go out independently because everything isn't done as a group. I mean a tribe -- if an individual needs to go out for a specific reason, religious, cultural, what have you, then those are dealt with independently and those people would call and make those arrangements so I can't necessarily answer the specific numbers of times.

However, let me share something with you from Southern Paiute perspective. We have in our stories of Creation and our stories of afterlife we have to be able to

go on a journey and our journey follows these trails. These trails, some of them -- they are invisible trails in essence, but they would fall into that category of traditional cultural property as I shared with you earlier.

We need to go on that trail to get to our afterlife. Our trail goes through that area, so when a person passes away, every time there is a funeral we visit that area because we have to go there and we have to talk about that in a traditional, in a native way in the songs that we sing and what have you, so given that, quite frequently we visit that area.

Those are the kinds of things that haven't been evaluated and it makes it very difficult because it is something that is not tangible for people. I mean this is a science-driven project, and so when you see that science and you can lay down those numbers and you can lay down those studies and say here it is, well, how do you do that with somebody that says, you know what? -- but that's part of the holy land, that's part of the journey for the afterlife. How do you measure that? So that makes it very, very difficult.

With respect to mitigative measures, I think that, yes, there can be mitigative measures, and I think the mitigative measures are first and foremost is to be developed in collaboration with the tribes. I wouldn't sit

up here by any means and say you just do A, B, C and D and then it's going to happen, but I think it goes right back to the fundamental communication that is necessary and essential with the tribes that are culturally affiliated.

CHAIRMAN MESERVE: Good. Thank you very much.

MR. HOLDEN: Commissioner, excuse me, if I could, just to add to what Mr. Arnold was saying, it is apparent that the cultural considerations in this draft EIS got short shrift. There's of course no impact and I guess that is using Western standards of measurement and these are the things that Native American people usually face when they want return of lands or when some of these sacred areas are asked -- that may be under Federal control, we have asked for protection of these areas or we have asked for them not to be disturbed by the general public.

Those people that are in charge generally say, well, you know, what lives there? Well, maybe there's a spirit that resides there that we pray to or we are aware of that is part of the Deity, if you will. Well, what color is it? What shape is it? What does it look like? You know, those sort of questions we have at this point had to respond to in years past and I guess the fortunate side is that in this instance there is a cultural group of folks who have responded to some of these questions and to some of these areas that have been disturbed.

A few years ago, when I conducted a meeting of some tribal officials in Las Vegas we went onto a visit to the Yucca Mountain site and there were a group of college would-be archaeologists, anthropologists and I am not demeaning the profession but they were digging in an area and it's obvious what they were doing and I just asked the question, you know, what is it you are doing. They said, well, you know -- and they said what they were doing, and they had sectors and the equipment that they were to dig up the land, and then they said, well, we are not disturbing it, and I said, now how can you not be disturbing it? Well, we are going to put everything back the way it was.

Well, I mean if you did that to a gravesite, if you dug up the grave, if you pulled up the casket, and you put it back the same as it was to begin with, would that not be disturbing, and that is disturbing to us, and those are the sorts of things that we are faced with.

As Mr. Arnold said, there are places, origin of our peoples, Chickasaw Choctaw from Oklahoma, but the place of origin of my tribe is in the Central Mississippi area and even though I am -- we were removed in the 1830s, that is still what I believe to be our place of origin. We did not come from, my people did not come from Alaska. The footsteps may go the other way in our minds, but those are the types of things that we are concerned with and that is

why I think that there would not be this type of consideration, cultural consideration, if it were not for Federal statutes like NEPA and so forth.

CHAIRMAN MESERVE: Thank you. Let me turn to Commissioner Dicus.

COMMISSIONER DICUS: Well, first of all, please accept my apology for being here late. I made every effort to get here. I don't know how to drive on bad roads. I am from the South and three of my colleagues are from New England. I am going to get one of them to give me some driving lessons --

COMMISSIONER MERRIFIELD: Well, you got a four-wheel drive -- so that is a good first step.

COMMISSIONER DICUS: Well, I do have a four-wheel drive vehicle but still I don't quite --

COMMISSIONER DIAZ: -- from me?

COMMISSIONER DICUS: No, you are excused, Commissioner Diaz. You are definitely excused. I don't think I want driving lessons from --

[Laughter.]

COMMISSIONER DICUS: But I do apologize -- only because I need to learn how to drive on ice and snow. I mean the main roads are fine, but my neighborhood was not -- I fractured my kneecap in a fall a few months ago so I am on crutches, which makes me a little more uncomfortable with

bad roads, but I do apologize very much for being late, and it is in no way to any of you, any indication of the seriousness that I give to the issues that we are dealing with, because I consider them to be very serious.

They do have my utmost attention and the part of this meeting that I have missed I will read the transcript so that I know exactly what your issues are, so thank you, Mr. Chairman.

CHAIRMAN MESERVE: Thank you. Commissioner Diaz.

COMMISSIONER DIAZ: Yes, I don't know whether it is -- let me start with a statement, a short statement.

I sincerely believe that the Commission has tried and continues to try to be aware of what your problems and your issues are, and I think it's wonderful that we can interact and listen to you.

I am always left with the impression of wanting to know what more can we do, and I always keep coming personally short on how to respond better or do something that actually is an action that represents how much we value your interest and how much we try to listen to it, and we find ourself wanting, because in many ways this is the Department of Energy's project -- we are an independent agency that is trying to conduct its duties and responsibilities in a certain way is a subset of what the Department of Energy is and so, you know, I wonder if now

that you have gone through this process and you obviously have studied what the responsibilities of the Department of Energy are and the Federal Government and what our role is, in that set of issues is there something else that we are failing to do that you think we can do specifically, because, you know, we think we understand the problem but we are always wanting to know specifically what is it that we could do.

CHAIRMAN MESERVE: By "we" do you mean the NRC?

COMMISSIONER DIAZ: The NRC. The Nuclear Regulatory Commission.

COMMISSIONER DICUS: If I could add a little bit to it, are we clarifying our role? I think that is what the Commissioner -- because I think there was a point in time -- as you know, I came out and met with everyone in April, early May -- and it was clear that our role was not clear and is it clearer now?

COMMISSIONER DIAZ: And maybe that is one thing that we can definitely do -- I mean establish what our role is, but even beyond that, once you understand the different roles, specifically what is it that within our charter, within our capabilities, within our authority, specifically what is it that we could do to, you know -- the third question --

MR. HOLDEN: I think the approach that

Commissioner Dicus mentioned was doing the outreach, going out to Indian country and seeing what is there and listening to those people who don't have the resources to come up here. That is a beginning. You are in their homelands. They will be open to you and then be honest with you to tell you what is in their hearts and what is on their minds and what these things actually mean to them, and their history.

Their history is their culture and they live it every day, many of them. It is not obvious to the untrained eye because many of these people that I have talked with who have gone to Yucca Mountain to see onsite visits there, they'll talk about the things that are still out there. They will talk about what they mean, whereas, you know, some of the technical people who are along on these visits with the contractors, they will try to elicit all the information they can from these people but they will use it to bolster their academic credentials, to write about it, to publish it, to use it for their own purposes. That to me is not what those people intended -- their intention of telling those things, but it is to really emphasize the importance of those areas.

I think that would do, that would be a good faith effort on your parts to make those efforts, to be out there.

MR. ARNOLD: I would like to kind of expand on a couple of things that I think coming from Nevada that I

think it's very timely and appropriate that there be -- what a great opportunity to have you folks to come out and meet with the tribes out there, and hear from them directly, first of all.

Secondly, to go out to the site with maybe some of the tribal representatives to gain better understanding.

That hasn't happened and I think throughout the life of this project that if you don't have that kind of a background, that foundation, it makes it very difficult I believe to really make an informed decision, and it is not that you are coming, paying a visit to people just because of our -- because we have a cultural interest. I mean there's Federal mandates that really require the kind of interaction and responsibility that that needs to occur.

We also recognize that you are the agency, and I appreciate Commissioner Dicus's comments as far as the understanding of what the role of the Commission is, because I believe that the three of us have a clear understanding of what the role is and, however, that may not have spilled over into some of the tribes and to me that is a pretty clear indicator that why don't they know that then? So obviously there may not have been, along the process maybe there was a disconnect of some sort, so that could always be improved, but part of our role, obviously too, is to try to enhance that information to the tribes, so we do that our

behalfs for our constituencies but we are not all things to all people, and so it is very difficult to be there all the time for that.

The others that I think, in looking at the EIS and looking at your responsibility for licensing and things, I think that our role here is to come and share information, what we see from the areas and the people that we represent. That purpose is for us to try to help you make a more informed decision.

So just as with everyone else, I mean we could all come up here and give you a laundry list of everything that we believe needs to happen with the project, for example, that may fall outside the purview of what the Commission is responsible for, but I believe that we just need to make sure that there is that open dialogue, that these kinds of meets do occur, that previously when I was here I had, one, requested, Native tribes needed computers. Here we are, we are supposed to monitor this thing, and some of the tribes got them and some of the tribes didn't.

I mean that is obviously still a need and trying to come up and into the now, what twenty-what? -- century or end because of all the discussion whether or not we are in the 21st or 20th -- but wherever everyone is, we believe that it is critical to maintain the dialogue that is happening here today and to continue on through the life of

this project and beyond.

CHAIRMAN MESERVE: Thank you. Mr. McGaffigan.

COMMISSIONER McGAFFIGAN: Mr. Arnold, I do think from your testimony -- I am sure it is fleshed out in your comments -- there are several things that you are suggesting DOE could do to ameliorate the concerns, although obviously you are opposed, but I think it is also useful to say if you are going to go ahead with it here are a bunch of things that you need to do.

Ms. Westra, you talked about the no action alternative. We just got a letter from our Advisory Committee on Nuclear Waste, and I'm sure it's a public letter because all their letters are public, but it probably isn't in the hands of the public. It's dated yesterday.

They basically say we have probably spent too much time thinking about the no action alternative and we probably -- I can assure you I think a lot of the analysis that is done in this area, whether it is for the Mountain or for alternatives to the Mounts, it gets to be very, very hypothetical and the notion that institutional controls will be lost and your tribe will be at risk, I think, you know, there has to have been a nuclear war or something for that to occur, and there will be far worse things happening to all of us if so, but some of the institutional controls probably will not be lost at Yucca Mountain, although we

have to by statute assume that they are going to be lost after 100 years, and again, something profound would have had to have happened to the nation and to the world for institutional controls to be lost.

So I think that part of the no action alternative which the bottom line of the ACNW is we should stop investing too many resources into it because it's already been over-analyzed, and none of it is realistic, is that we are going to be there, this Commission will be there, barring catastrophe for the world, ensuring that the waste, however long it is there is safety dealt with by the licensee and the tribe is fully protected.

I think we have the resources to do that. I think we invest an awful lot in maintaining our Spent Fuel Project Office and making sure that the casks that are used throughout the industry on an increasing basis are safe.

The part of this that people actually worry that those consequences are real just disturbs me a bit, because I don't think they are. I think it is an artifact of the analysis. DOE is sitting there and somebody came up with the idea that, okay, we have to analyze for 10,000 years at Yucca Mountain, now we will analyze for 10,000 years somewhere else -- we'll do that in a way that assumes the worst, as we are supposed to assume at Yucca Mountain, institutional controls disappear and then bad things happen.

I think that in both cases they are unlikely to happen, but that is more a statement than a question.

We are here and we will be here a long time, I hope. Our successors will be here a long time making sure that bad things don't happen, although we'd just as soon the waste not be next to you forever.

MS. WESTRA: I appreciate your comments and I think, you know, perhaps I didn't adequately articulate our position is that, you know, we don't think that that is realistic either, and to think that it is just going to be left there is not very realistic, but I think that our concern is that if a repository is not licensed, what then? You know, what is Plan B, so to speak?

COMMISSIONER McGAFFIGAN: No one -- the punchline in the ACNW letter is are realistic alternatives likely to be deferral of decision on a repository for, say, 100 years? What would that be, the 156th Congress?

COMMISSIONER DICUS: Sure.

[Laughter.]

CHAIRMAN MESERVE: Commissioner Merrifield.

COMMISSIONER MERRIFIELD: Mr. Arnold, just to follow up on some of the questions that the Chairman asked, one of the issues that we obviously need to look at in the draft EIS and as we move forward in terms of the uses of tribes in the area, its uptake, the possibility that through

food consumption, subsistence, in that area that the members of the tribe or other individuals could have exposure, could you briefly explain what some of the typical subsistence patterns are, either as it relates to Nellis and the Nevada Test Site or in other area adjacent to the area of concern?

MR. ARNOLD: Sure. First of all, those ares are clearly restricted areas with restricted access.

However, just historically Indian people have always relied upon a lot of the plants and animals out there for living and for medicines and what have you. One of the concerns, obviously, is with water, groundwater contamination. You look at the Timbisha Shoshone tribe that is over in Death Valley and so there's no -- or water sources that are from the Indian perspective and also from some of the hydrological studies that it appears that some of the waters would end up down that way over into the Ash Meadows area, which is a national wildlife refuge.

There are several endangered species of plants and actually an endangered species of a fish found nowhere else in the world, little pupfish, and those things, the plants that are out there, those endangered ones, are our medicines off of the Yucca Mountain, off of the test site.

Those places are still used actively, very actively today for medicines that are ingested, medicines that are placed upon your body, food that is digested, all

those things that are essential for us. That still occurs today.

Even when tribal representatives go out to Yucca Mountain, and there are I guess unbeknownst to many people, there are some I guess more pristine areas than others, on Nellis and on Nevada Test Site and things, but there's also a lot of bad areas out there to where a lot of things had happened in the past.

Even in some of those areas, I have seen people collect plants during a visit, and they will take them home because they can't get it from another area or it is because of a certain ceremony perhaps where they need something from this specific area so you would take it home and then you would prepare it.

A lot of these things are essential to what we do. There's -- gosh, it's really unlimited -- because I know that early on in the studies on some of the botanical studies that were done with Yucca Mountain that there were at that time probably I think it was like 80 or 100 different plants that were identified that are used for those foods and medicines that grow out on the test site now, and they also grow in other areas, but sometimes, depending upon from the cultural perspective, where it is located and that's how it is needed, again with any of the impacts, even when it comes to transportation, if there were

an accident -- and we all hope that that would never happen -- but I mean that can decimate a tribe.

One of the things that we always hear is that oftentimes it's tribes that will -- if there was ever an accident or something that would impact that tribe, that's where they are from. I mean everyone else here in this, in the United States with the exception of Indian people, only because were the ones that were here first, I mean they're mobile and so you move from one area to another if you get another job, if you need something else, you go to the store -- you know, this store over here is having another sale -- someone would drive across town to get it.

We can't do that. This is where we are from. This is where everything that we need to survive is from, so that is why we have to stay there, and so if something happened in a reservation area, we're gone.

We don't want that obviously and I think that we have to look at everything very, very critically, and sometimes people think, well, you know, you are just kind of looking at it from maybe a nebulous point of view but we don't really believe that it is because it is truly something cultural.

COMMISSIONER MERRIFIELD: The second question I have for you, in your presentation you talked about the fact, in the environmental justice section, you said no

other people experience holy land violation.

I guess from my understanding, are the areas which are associated with Yucca Mountain, part of Nellis and part of the Nevada Test Site, do those have a particular holy significance to the tribes or is it more of a holistic sense that the entirety of the area has important religious connotations?

MR. ARNOLD: Both. First of all, for Southern Paiutes, Mt. Charleston is our place of origin. And the Southern Paiutes are found in Southern Nevada, Southern Utah, Northern Arizona and Southern California.

So we all share that same story of creation. Many other tribes have their places of creation that are nearby.

So I think that's the first part. The second part is when it comes to asking about the direct area, just to the north of Yucca Mountain at the prow, that is a known religious site that is in the ethnographic literature.

It's known by Indian people. It's a place that was -- we mitigated out, and it was off limits early on in the project, how they were taking rock samples and giving it to the public so they could see what the rocks looked out, without consulting with the Indian people.

We said, you know the nature of this area, so we got that mitigated out. So there are areas right close by.

There are also other archeological sites that have

definite cultural significance. I guess it's -- I'm a little dicey on talking about that, only because of the more information that gets out on some of these, I mean, it's something that when people go out, let's say, well, gee, let me see those sites and those sites.

And so we've been able to mitigate some of that with a preservation in place policy with some of the artifacts and some of the cultural resource sites.

But nevertheless, there are some right there.

COMMISSIONER MERRIFIELD: Just a final brief comment: I think both Mr. Arnold and Mr. Holden talked about an issue of resources and having availability for the tribes to have access to information and to money and to computers and things of that nature.

We, because of our nature, we don't have access to a lot of the money and the funds that are going to Yucca Mountain, although we do receive money from that same source for some of the work that we do here at the Agency in our review.

One of the areas that does come under our purview where we have a lot of concern is the licensing support network, the computer system. We have some very good people here, including the former Secretary of this Agency, who are in charge of putting together a system that makes sense, that will make it so that individuals who live in Nevada

will have an ability to easily have access to the documentation associated with the licensing of that facility.

And I think this Agency is working very hard to make sure that the DOE meets its commitment to make sure that that is fully funded.

As part of that effort, I think we are also trying to make sure that we have the appropriate outreach to libraries and other facilities in Nevada so that for those individuals who may not individually have computer access, that they will be able to go to a local resource close to home, their home, that they can use to have access to that as well.

The last point is that I think we have made -- and Commissioner Dicus is to be commended for her effort. I certainly intend to go out to Yucca Mountain again. I've been there previously.

But I think we've also asked our staff to be more involved in having meetings near the site, so that the individuals who live in Nevada and are members of the tribe can have greater access to those meetings. I think we should continue that. Thank you.

CHAIRMAN MESERVE: Good. I'd like to thank the panel. We very much appreciate their assistance.

On an unrelated subject, let me just note for you

that the Commission did publish an Advance Notice of Proposed Rulemaking on which we requested comment.

And the rulemaking, proposed rulemaking had to do with having licensees notify Native American tribes of planned shipments of spent fuel through tribal lands. And that is something that we currently have pending, and we would welcome comments on that issue from you.

Thank you very much. We'll now hear from a representative, Robert Loux, from the State of Nevada.

MR. LOUX: Good morning. My name is Robert Loux. I'm the Executive Director of the Agency for Nuclear Projects, as I think most of you are aware.

I want to let you know that we certainly appreciate the opportunity to be here today and to give you some of our thoughts about that draft Environmental Impact Statement.

As you might suspect, we have been intimately involved with this particular document for many years, including the scoping process that occurred in the mid-90s.

And, in fact, we made the recommendation to the Department of Energy, and I guess it seems, in retrospect, much more important now that they would have been better served by producing a programmatic Environmental Impact statement, initially, and then tiering from that, other environmental documents, whether they be related to

transportation or the site itself.

The problem with this particular document is that it makes an attempt to do some of the things that would have been much better served in that particular format.

We, as well, have attended nearly every EIS hearing throughout the country, my staff. We have reviewed the transcripts from every hearing, in detail. So I guess I can tell you that we are intimately familiar with the document, and the concerns and the discussions that have taken place regarding the document.

What I'd like to do today is highlight some of the basic concerns that we've got, and, of course, leave some time for questions.

Our overall impression is that the document is fundamentally legally flawed from a number of perspectives, and the laundry list of issues that I have identified for you include many of those. There are many other legal flaws that we have not included in this list.

You virtually, I don't believe, can find -- open a page in the document and not find something that is of a flawed nature.

Let me highlight three or four areas, and then answer questions. I'd like to first highlight, again, the no-action alternative that was discussed earlier.

As you are undoubtedly aware, NEPA requires the

no-action alternative to be realistic, to be reasonable, and to be likely. And by Commissioner McGaffigan's comments and those of others including ourselves, the no-action alternative is truly unrealistic, unlikely to occur, does not represent a legal representation of the circumstances that might exist, especially given the directive of the Nuclear Waste Policy Act that if Yucca Mountain is found unsuitable, the Department is required to revisit Congress for further direction.

Understanding that the no-action alternative is a required NEPA analysis in order to form a baseline from which to analyze the proposed action, but even in that perspective, it has to be, again, realistic, reasonable, and likely, and none of those situations exists, as I think we talked about earlier.

Secondly, there is an inadequate and inaccurate description of the project. There is not a final design, a final layout of the facility, and as a result, it makes it almost impossible then to analyze what the impacts of that facility might be.

And while the Department of Energy has indicated that have bounded the design of the facility, meaning thermal loads and other sorts of things, it simply is not acceptable nor legal to not have a final solidified design from which impacts can be analyzed and evaluated.

Thirdly, as I think many of you have heard already, and I know that the ACNW has remarked to you directly, there is no identification of national transportation routes, making it impossible for anyone outside of Nevada, virtually, to understand what impacts might or might not occur from the transportation of this material, either by rail or highway.

Obviously, if the routes have not been identified, then there has been no analysis of those routes, no analysis of what those impacts might be. And that sort of leads to the next point, which is the process of conducting hearings in other parts of the country.

Frequently we get calls from governors' offices, from other communities across the country about, we hear this hearing is going on, what is this all about? Clearly, there has not been the kind of outreach by the Department of Energy to let other people know throughout the country, what the project is about, or in some cases, where the hearing is or where it's going to be conducted.

The whole approach to trying to acquire public opinion has been a very minimal effort by the Department of Energy, and one that has been forced upon them in many instances, i.e., the hearing outside the state of Nevada.

In many instances, the hearing locations are very obscure, the Department of Energy virtually does no outreach

or publicity to let people know where these hearings are, or when they're going to occur.

And, of course, that goes along with their notion that they really didn't think they needed to disclose or analyze national transportation routes, which were the corollary of that process.

There also has not been an identification or an analysis by the Department of Energy of potential cumulative impacts that might associated itself from the development of the facility.

For example, as many of you are aware, there are some 200-300 million Curies of radiation within the subsurface at the Nevada test site which the Department of Energy has no understanding of where it's located, where its migration in the future might be.

Although there is some work going on in that area, it clearly is going to be very many decades before the DOE, if they at all have come to some understanding about where this contamination from prior DOE activities at the test site, where it's migrating.

As a result, we believe it's going to be impossible for DOE to demonstrate compliance with any regulatory standard without a knowledge of where these 200-300 million Curies of radionuclides from the Nevada test site are and where they may migrate in the future.

And I guess that the last point that I want to make -- and this is probably perhaps the most controversial -- is that in our view, the project that's described in the draft Environmental Impact Statement is not geologic disposal. It's not in compliance with the Nuclear Waste Policy Act nor the 1980 EIS.

And let me provide you a little bit of explanation about that: As many of you are aware, in the late 70s, and, indeed, early 80s, much discussion, much analysis, much study, was done, both by the National Academy of Sciences, as well as others, regarding what the role of engineered barriers should be and ought to be, relative to geologic disposal.

And this, of course, led to the 1980 EIS, which, of course, is the underpinning of this entire program. And in those analyses, and, indeed, in that document, it indicates that geology has to be the primary barrier and that engineering barriers only come into play after the site suitability is determined by its geologic or hydrologic characteristics.

And then, of course, the engineered barriers provide then redundancy, multiple barriers in the system.

In most of the recent performance assessments completed by the Department of Energy in Nevada and discussed in various technical meetings, it has become clear

through that analysis that nearly 95 to 98 percent of the entire performance of Yucca Mountain is associated exclusively with the waste package itself.

And exercises have been conducted by the Technical Review Board as well as others when the various components of performance are pulled out so that you can see what their individual contribution is, and when the waste package is pulled out of that analysis, it's clear that the rest of the entire system, cladding, geology, hydrology, all of the rest of the purported attributes of the system constitute probably less than five percent of the whole performance of the entire project.

As a result, it is no longer geologic disposal. You essentially have an engineered project that simply happens to be under the surface, and as a result, we don't believe that this particular project is in line with the definition of geologic disposal, either in the Nuclear Waste Policy Act, or the 1980 EIS.

And unfortunately, your proposed rule that's currently underway, 10 CFR 63, only reinforces and facilitates that particular notion that somehow an engineered system with geology being a sidebar to that system, qualifies as geologic disposal. In our minds, it does not.

So, from that perspective, once again, the

project, as described in the EIS, is flawed, legally because it does not constitute geologic disposal.

There are a whole myriad of other issues that we have delineated in the very brief outline I have given to you. Of course, we're going to be writing the Department of Energy with more detailed comments in the future.

But from our perspective, this document is so fundamentally and legally flawed that DOE, regardless of what comes out of the final Environmental Impact Statement, we don't believe that they can correct the problems that are in this particular draft.

It is not correctable, it's not fixable, and our recommendation is that this document should be withdrawn. It should be redone with the kind of analysis that we all expected it might have, including analysis of national transportation routes and the like.

We believe that will happen one way or another. If it's either a voluntary action by the Department of Energy or one that's actually imposed on them by the courts, we certainly intend -- and if the document continues to proceed along these lines as it appears, I'm certain that we will be recommending to the Attorney General that we pursue legal action to make sure this document is withdrawn and redone.

With that, I'd be happy to answer any questions

you may have.

CHAIRMAN MESERVE: Thank you, Mr. Loux. I apologize for mispronouncing your name.

MR. LOUX: No problem.

CHAIRMAN MESERVE: I'd like to follow up on your statement about the no-action alternative, and you might be able to correct some misunderstanding I have.

I had understood that the statute, the Nuclear Waste Policy Act, enabled -- basically said that the Secretary need not consider alternative sites to Yucca Mountain. That sort of puts them in the context in the EIS, I think, that the options that you examine are Yucca Mountain, or the alternative, having the stuff stay where it is.

And that my understanding of the no-action alternative, which is the material remaining where it is, that's in the draft Environmental Impact Statement, has two scenarios: One of which is to have the institutional controls fail after 100 years; and then an alternative scenario which picks up on the point which Mr. McGaffigan made, which is, well, it's not really realistic to have that happen and let's assume that the scenario is that we do have institutional controls.

Given what they've done and what the statute allows, what is the failing of the no-action alternative

that you feel they should address?

MR. LOUX: Well, in my reading of NEPA and looking at that particular statute, as well as the exemptions to NEPA that are provided to DOE in the Nuclear Waste Policy Act, it's clear that the no-action alternative, an action that preferred alternative has to be compared to, has to be realistic, has to be likely, has to be reasonable.

And it's clear from the discussion that we're having here today, that that is not the case; that no one believes that material will stay onsite for 10,000 years, either completely without institutional control or with institutional control for 100 years and then no controls, as described in the document.

Neither of those, I don't think anyone believes, is realistic, nor likely, nor reasonable.

One can assume in a cynical way, that the Department of Energy deliberately put those alternatives forward to make them seem so unreasonable that Yucca Mountain seems much more reasonable by comparison.

But aside from that part, we don't think it meets the legal test of NEPA that it be reasonable, that it be likely, that it be realistic.

CHAIRMAN MESERVE: What would be a reasonable, no-action alternative, in your mind? That's granting that they don't have to consider alternative sites.

MR. LOUX: Clearly, looking at -- I don't know what the reasonable alternative might be. The Nuclear Waste Policy Act, as I indicated, requires the Department of Energy, if they find Yucca Mountain unsuitable, to return to Congress and get additional direction.

One could assume from that action that Congress might, in fact, begin a process to look at another site screening process, to look at a myriad of other sites, without comparing Yucca Mountain to another site. They clearly could compare it to a process that led to the selection of other sites, in our mind.

But the current action, again, does not comply with NEPA by the current description of the no-action alternative.

CHAIRMAN MESERVE: Commissioner Dicus?

COMMISSIONER DICUS: Thank you. First of all, I want to make a statement, and then I want to delve into one of your points, your Issue #2 on Inadequate and Inaccurate Projection of Project Description.

But the comment I want to make really has to do with the transportation issue. And I deal with this in a variety of ways, and part of my past life I was on the Southern States Energy Board and dealt with the Transportation Subcommittee.

And we were dealing with this ten years ago, what

should we do if this became a reality? How do we deal with local governments and so forth?

And we came up with a lot of ideas. From a radiological health impact standpoint, transportation is not an issue, but from a social and political standpoint, I recognize that it is, and therefore I recognize that we need to deal with it.

I just want to say that. I have questioned DOE about this, I will continue to question the issue, and I will continue to have it, because I recognize that there are issues that have to be answered.

I look at several of your issues and they deal with transportation.

MR. LOUX: Yes.

COMMISSIONER DICUS: Quite a few of them. Like I said, I have to say that as a health effects specialist, sort of, I guess, I know that the impact is not there, even in an accident scenario.

But that doesn't matter if it does have a social or political impact. So I'm interested in the transportation issue from that point of view.

The question that I have -- and we're struggling with this a bit, even here at the Commission. I think DOE is struggling with it a bit.

On coming up with a final design, for example, for

the casks. What should the casks be? We're talking about thermal loads, we're talking about how we deal with this.

And we're not sure -- I mean, there are two points of view: Yes, let's make a decision and let's go forward and this is it, and we're not going to change; and then there is the point of view, well wait. If we come up with a better mouse trap, shouldn't we change?

So, can you help me with that? You want us to say this is it, period.

MR. LOUX: Well, from a philosophical perspective, I think -- I mean, you're right, you probably don't in some sense want to keep doors closed that might be better opened at some later point in time.

But at the same time, there has to be an ability to understand what the project is and what its impacts might be. I think NEPA requires that; common sense requires that.

COMMISSIONER DICUS: Right.

MR. LOUX: The inability -- if DOE is simply not ready to run with the final design, then this whole decisionmaking process should be put on hold until such time they have arrived at this design, whether that's five years from now, ten years from now, or ever.

I think paying too much attention to the political process is what's harmed this project all the way along. And what you're suggesting is that we leave this open, and

therefore if things change down the road, that would be okay because we simply need to move on with this.

We have this imaginary crisis occurring at all these nuclear power plants. If DOE is simply not ready to proceed with the final design, then they shouldn't be going forward with an Environmental Impact Statement nor a recommendation.

COMMISSIONER DICUS: Okay, if we did go forward with, or DOE went forward with the final design, but we did -- and if we got a license application, if that's the decision, I do say if we get a license application, and if we decide to approve it, then we find something we can do a little different that would even be better. You wouldn't have a problem with that?

MR. LOUX: Let me just say that as long as it was in keeping with the laws of the country, including NEPA, which would probably require a supplement to the EIS, maybe an EA or some other environmental documentation, but if, in fact, the system is not ready to move forward, I don't know why, other than for the external political pressure, we're moving forward.

COMMISSIONER DICUS: Again, I apologize for being late.

CHAIRMAN MESERVE: No problem. Commissioner Diaz?

COMMISSIONER DIAZ: Yes. Notwithstanding your

clear position on the draft Environmental Impact Statement and the fact that it is slow, I find there is an issue in here that from the public health and safety, I think needs to be clarified.

Whether it's Yucca Mountain or any other particular geological site, there are some inherent characteristics of that site that might vary. People look at salt mines some time ago, and they looked at Yucca Mountain as the site that has some intrinsic geological characteristics and barriers, because if not, it would be in open air.

And you raise an issue that I have a problem with from the standpoint of a public health and safety regulator. Given a site, if the licensee now decides to improve by engineered barriers, okay, the public health and safety considerations by, you know, two orders of magnitude, three orders of magnitude, and if the do it by six orders of magnitude, that means that public health and safety impact will be less, because they actually created a better barriers.

That certainly makes me, as a regulator, feel even more comfortable because it is improving the bottom line, the public health and safety.

Therefore, I don't see what the fundamental objection to having engineered barriers that are much better

than originally thought, coming in and reducing the public and safety issue.

Would you care to comment to that?

MR. LOUX: I think you perhaps have a misunderstanding of what I said.

COMMISSIONER DIAZ: Okay.

MR. LOUX: I don't think that there is an objection to engineered barriers. I don't think there is an objection to multiple engineered barriers leading to a greater public health and safety.

I'm just asserting to you that the law requires, in our estimation, that Yucca Mountain be found suitable without regard, necessarily, to engineered barriers. It is the geology and the hydrology that has to be the primary barrier, and, indeed, that is the problem we have right now with the Department of Energy attempting to make a change to the siting guidelines, which, as you know, are mostly geologic and hydrologically driven.

If you can do performance assessment, if you can do performance assessment to lead to a calculation of a regulatory target at some point in time, then clearly all of the elements that are in the siting guidelines are clearly subsets of that performance, and you have to understand those things in order to do performance to begin with.

So, it seems to us, and I think the Act and the

1980 EIS certainly supports it, that the geology has to be primary barrier in looking how the Yucca Mountain project has evolved.

It's clear that's not the case there any longer. As I mentioned at the outset, almost 95 percent of the performance of Yucca Mountain, by DOE's own words, is captured in the waste package itself, leaving perhaps than five percent performance attributable to the site itself.

So I don't think you have geologic disposal any longer. You really have an engineered system that you virtually could take these waste packages, according to DOE, if they last hundreds of thousands of years, and place them virtually anywhere.

That's not what geologic disposal is. That's not what the foundation of this program is. It has to be that the geology is the primary barrier.

You make the evaluation of the site based on the geology, and add the engineering later to provide the kind of additional protection or redundancy that you spoke of.

COMMISSIONER DIAZ: Okay.

CHAIRMAN MESERVE: Commissioner McGaffigan?

COMMISSIONER McGAFFIGAN: I would first like to associate myself with Commissioner Diaz's remarks. I think you're off in claiming that geology has to be the primary barrier, if other barriers get to be orders of magnitude --

MR. LOUX: Not from looking at the law. That's all I look at.

COMMISSIONER McGAFFIGAN: The word, primary barrier, is in there?

MR. LOUX: Yes.

COMMISSIONER McGAFFIGAN: Okay. The no-action alternative, you know, you're claiming it's unrealistic. I think the Option 2 or Alternative 2 is probably unrealistic in the notion that institutional controls fail after 100 years.

Would you agree that the preferred action is unrealistic in assuming institutional controls fail after 100 years at Yucca Mountain?

MR. LOUX: Well, if you look at it in the context of NEPA, the preferred action is the one that you compare to the no-action alternative, and as a result, I don't think the same analysis about necessarily the reasonableness or realistic-ness of -- that test doesn't necessarily apply because it's the preferred action.

COMMISSIONER McGAFFIGAN: I know you're trying to be legal, but is it realistic that institutional controls would fail at Yucca Mountain after 100 years, which is what they have to assume?

We're assuming this is a mandate from heaven that we have to assume institutional controls fail after 100

years at Yucca Mountain. Is that realistic?

MR. LOUX: I think that after 100 years, it's probably not realistic. Probably in a longer period of time then it might be, but that's not an issue that we've spent a lot of time looking at.

COMMISSIONER McGAFFIGAN: The trouble with a lot of this analysis, as I said earlier, is the artificial nature of it. This is not -- some of these assumptions that are made, either on the preferred action or on the no-action alternative, are not assumptions that are realistic in either case.

I can understand why DOE did what it did, in some sense, because they're being forced to make an unrealistic assumption about the preferred action, and they say, okay, well, let's make an equally unrealistic assumption about the other.

MR. LOUX: Well, I suspect that if people have problem with NEPA and they have to go about the business of trying to get it modified.

COMMISSIONER McGAFFIGAN: Okay. You mentioned earlier, and I associate myself with Commissioner Dicus on transportation. You know, you mentioned ACNW in the context of transportation, and they have, I think, said to us they'd like to see more detail on transportation.

But the context is that they think there's no

transportation issue, as Commissioner Dicus alluded to. They feel very strongly that if they -- no radiological health and safety issue associated with transportation.

If that information were properly presented, if Mr. Garrick and his colleagues believe the mobile Chernobyl issue, which is constantly trumpeted in the press and various places around the country, would go away.

And so just so you understand that they're coming at it from a different perspective. That, yes, let's flesh out transportation, but in order to bury this issue once and for all --

MR. LOUX: Well, I think it's a mischaracterization to suggest that they fleshed out transportation. I mean, I think that there is a requirement that DOE has got to identify these routes and have to do the analysis, whether it be on a sociological perception, property value basis or whether it happens to be on a public health basis.

I might disagree with you a little bit on the public health side, but nonetheless, simply to ignore the issue, simply not to do any analysis or identification at all is not acceptable.

COMMISSIONER McGAFFIGAN: How many -- if this document goes forward and is finalized, taking into account, the comments that various entities are likely to make on it,

and if you don't succeed in the courts in getting it defeated, how many supplemental EISs do you believe will be required before the -- or the environmental assessments to get the job done?

MR. LOUX: That's really hard to say, given DOE and the way they conduct business. Clearly, there is a contemplated supplement already relative to transportation in Nevada.

DOE, at this point, has made no commitment about any sort of additional analysis of the national system whatsoever.

I don't think that issue can be covered by some supplement EA, if you would, from this particular document. Had they pursued the path we talked about from the outset, perhaps a programmatic environmental impact statement, then it might be likely to tier lesser environmental documents to take a look at the transportation issue from a national perspective.

But right now, it's very difficult for me to see how the Department of Energy, in the period between the issuance of the draft Environmental Impact Statement, could go out now and actually identify these routes and conduct analysis, and then produce them in the final document. I don't think that's going to be acceptable either.

It seems to me that that analysis has to take

place with a lot more rigor than that kind of process would allow.

But, clearly, there is a need for the Department of Energy to identify routes, nationally, conduct analysis, and have them included in an Environmental Impact Statement.

And for that reason, if not that one alone, the document is legally flawed.

COMMISSIONER McGAFFIGAN: Could I ask one last question? The ACNW also talks to us about the importance of design flexibility, the ability to change the design over time.

Clearly, license amendments would have to be submitted to us if design changes were made, and we'd have to approve them in some sort of formal process.

But they believe that once they get into the Mountain, start building the repository, if that happens, that we'll learn over a period of decades, and that that learning has to be fed back into the final actions with regard to how the rest of the repository is built, and then how it's closed.

Isn't that allowed under NEPA, to go into a project saying here is our design today, as best we understand it, and then to make changes over time, presumably with environmental analysis accompanying the license amendments, if they're required? Isn't that a -- I

think we do that in other areas.

MR. LOUX: Sure. I think I alluded to that earlier, that I think that's a likelihood. But the design description that is in the EIS is not anything that's capable of being analyzed.

There are bounding assumptions on either end, but there is not a final design that's included in the document, which there has to be, in our minds, to make it legal under NEPA.

As a result, I think that later on, if the DOE learns more, if, as you suggest, other things come along, then other modifications to that document can be made through environmental assessments or other environmental documents in compliance with NEPA.

So I think that process is available, but at this point, to assert that basically we don't know what the design is, but we think it falls somewhere in between A and Z, and so that's what you're left to analyze, simply is not acceptable, and I don't think that it complies with NEPA, as well.

CHAIRMAN MESERVE: Commissioner Merrifield?

COMMISSIONER MERRIFIELD: It's interesting, listening to your testimony and having read some of the testimony of the panel that follows.

I have a great deal of sensitivity regarding

reactions of the folks in Nevada. I come from New Hampshire, which was one of the finalists of the East Coast repository some years ago, so I think that, personally, I have a high degree of sensitivity of where you all are coming from.

I do want to make a couple of comments, and I've got two questions. The first one is, given your comments on a no-action alternative, it almost -- I'm also struck that it's one of these rock-and-a-hard-place situations.

Because I think there's been some talk today about how the current no-action alternative isn't very realistic, given some of the assumptions out there. And you allude to the fact that you thought that that wasn't right.

But any other alternative would be an action alternative, so it would seem to me that under NEPA -- I mean, DOE is constricted by NEPA, the way it currently stands. Although it seems somewhat unrealistic, given what's happened, it doesn't seem to me that under NEPA, there is any other alternative, other than to look at the no-action alternative that they put in there. So that's one comment I would leave.

The other one is -- actually, I've got a request. You made some comments relative to your Issue No. 3, the proposed action is inconsistent with NEPA as it relates to geologic disposal versus an engineered facility.

I have a request, if you could provide the specific language within the Nuclear Waste Policy Act that you were referring to in that respect.

MR. LOUX: Sure.

COMMISSIONER MERRIFIELD: And also provide some justification to the Commission for that. You know, I think our staff is looking at that, and may have some differences with it, but if you've got a logical argument and have the citation to that, that's something I certainly would benefit from.

MR. LOUX: I can do that.

COMMISSIONER MERRIFIELD: The first question I have regards the socioeconomic impacts. And this is Issue No. 12, the fact that it ignores economic impacts to Nevada's key industry, tourism.

I guess that I have visited a number of nuclear power plants recently, some of which were subject to the same kind of concerns, if you look back through the history of this Agency, accusations that placing them in this specific area might have dramatic impacts on tourism adjacent to those facilities.

North End, Virginia Power Plant, a lovely site which has very, very expensive homes which have recently been built next to it seems to go somewhat against that.

In addition, obviously Nevada has had a long-time

involvement with the Nevada test site. A number of activities occurred there over a long period of time, yet there was still ongoing and very active activity in Las Vegas, you know, not that far away.

So I guess I don't quite understand, you know, the basis for your analysis that the placement of this material at that site would have a significant impact on, presumably, tourism in Las Vegas.

MR. LOUX: Well, let me answer that a couple ways: First of all, I don't think that there is anywhere else in this country that you can compare to southern Nevada in terms of the impact of tourism and visitors as they relate to the local economies and the local infrastructure.

I mean, I don't care where you want to talk about, there is no place like Las Vegas, relative to these kinds of issues. That's one point.

Your second point is that in the era of the weapons testing days, there certainly was some growth in Las Vegas, without question. The world has changed dramatically since the late 70s and early 80s, relative to how the public views nuclear issues.

You'd have to be in a vacuum not to know that, in fact, the world is upside down at this point. I mean, where there was widespread support for these kinds of facilities in the early 70s, there clearly was a major turnaround in

the late 70s and early 80s.

That dramatically affects how people view nuclear facilities. It dramatically affects their view of how they will visit, retire, relocate, move businesses to places where there are nuclear facilities.

We have got an incredible amount of data that supports this. I'd be happy to provide you with it, and show it to you. I think it's irrefutable.

The idea that someone could do a socioeconomic analysis of the southern Nevada area for some project and not include an analysis of the potential impact on tourism is simply beyond imagination, at least from my perspective.

So we have the data. I can show it to you. I can clear describe to you, how the situation is far different today than it was in the 50s, 60s, and early 70s, relative to weapons testing and the kinds of things that went on in Nevada.

We have data that shows dramatic changes in people's attitudes from those periods of time through the early 80s, relative to nuclear facilities. And I think it actually speaks for itself.

But we think that that's an analysis the Department of Energy should conduct. I think that it's irresponsible that they have not conducted it. We have a lot of data, we conducted it and looked at it. It's simply

not that difficult to do.

And we have even made that data available to the Department of Energy. So it's not only a matter of them not doing it on their own, but it's a matter of them having available to them, data.

And that's not only in this area, whether it be population data or other data that has been available to them, data from the local governments which has been provided to them that they simply did not include.

Another failing under NEPA is to not include information that was readily available to them in terms of analysis. Another --

COMMISSIONER MERRIFIELD: I think that, obviously, we'll take a look at your testimony and thoughts relative to that in our review of the EIS.

I would say, as an aside, that I think that this Agency is as qualified as any in terms of understanding the public impression of nuclear facilities around.

The final one I want to focus on is transportation, as well. Again, you know, Commissioner Dicus and Commissioner McGaffigan talked a little bit about it.

One of the issues, and, unfortunately, it wasn't in your testimony today, one of the words that has been thrown around to some degree by some is referring to the

transportation casks as mobile Chernobyl's. I think this is inaccurate and unfortunate language. I certainly would want to make that point on my behalf.

I have had detailed briefings from the staff on how these casks work, and although I'm not the expert that Commissioner Dicus is, I would share her thoughts that the way in which these are being portrayed are not at all associated with the reality and the scientific uses of these.

I would also note, coming from my home state of New Hampshire where we have Portsmouth Naval Shipyard where we've had ongoing refueling activities associated with our nuclear submarine program for over 50 years at this point, had countless casks that have been shipped via rial through my home state to an ultimate -- or to a destination in Idaho.

You know, given our long history in the Naval program with shipping of casks, I'd be interested to see if you have any information, you know, if you've taken a look at that, and are making comparisons.

It would seem, at least from where I sit, they've had a pretty good record in terms of shipping that fuel around, and I certainly think we feel pretty comfortable with the casks and with the way that they are designed and built.

MR. LOUX: Well, I would agree with you that the record, to date, looks relatively -- I mean, looks fairly good. I mean, I don't think there's any argument about that.

The concern that I think we and many others have with the issue is that you would have as many shipments in one year of Yucca Mountain's shipping campaign -- in any one year -- than you'd have in the entire history of shipments in the country to date.

So simply to say, well, we've done it well 3,000 times in the past, but we may do it 100,000 times in the future, simply is, I think -- I don't think you can simply sit back and rely on the fact that we've done it well in the past, means we don't have to be doing -- I mean, we don't have to really worry about it in the future.

I don't think that's a very responsible way to proceed.

COMMISSIONER MERRIFIELD: Thank you, Mr. Chairman.

CHAIRMAN MESERVE: Mr. Loux, than you very much for your comments.

MR. LOUX: Thank you.

CHAIRMAN MESERVE: Our next panel consists of a variety of representatives of affected local governments. Perhaps they could come to the table?

[Pause.]

CHAIRMAN MESERVE: Good morning. Gentlemen, we have allocated, I think, for the four of you, so I think it's 30 minutes for your presentations. We do -- let me just say that we all have received your slides, and I'd ask you to bear in mind the time as you proceed.

MR. BAUGHMAN: Thank you, Mr. Chairman. Members of the Commission, my name is Mike Baughman, and I will begin the presentation on behalf of the ten affected units of local government in Nevada and California.

Let me begin by just thanking you and the members for responding to our request that we do have this opportunity to brief you on our concerns regarding the draft Environmental Impact Statement.

Let me make our intent today very clear: We hope to influence your comments on the draft Environmental Impact Statement, and we appreciate the opportunity to do that, and we think that the NRC actively seeks public input on major decisions that they make, and certainly your decisions about what you will say about the DEIS is a very important decision.

I would just note also that we had a very excellent meeting with your staff yesterday, and we have a good working relationship with the staff, sharing concerns, issues, and perspective. We hope to continue that.

With me at the table today, at the far left, is

Rex Massey. He represents Lander and Churchill Counties, and he will talk about the DOE EIS process and NEPA process issues. Les Bradshaw, to his immediate right, is from Nye County, and Les will talk about technical issues, and geotechnical issues, in particular.

And then to my immediate left is Dennis Bechtel from Clark County, and he will talk about transportation issues.

All ten affected units of local government have participated actively in preparing this presentation. They are all not represented here today, but know that they have participated with us.

You are aware that the counties were designated by the Secretary of Energy as affected units of local government, pursuant to the Nuclear Waste Policy Act.

We have a fiduciary responsibility under the act to be involved in this program. We are funded by the U.S. Congress to do that, and we are expected by our constituents to represent their interests in terms of protecting the public health and welfare.

You need to know that we are depending upon you as the regulatory agency to protect the public health, safety, and welfare.

Collectively, we represent over a million and a half people in the ten counties, and we have -- are in a

region of the United States which has historically been exposed to a variety of radiologic sources, weapons programs, low-level waste disposal, and then we have ongoing transportation.

And now that the waste management DEIS is out, and the Secretary has designated Nevada as one of the national sites for low-level waste, those shipments will begin to pick up with earnestness, and we will have a lot more shipments of low-level waste coming through our state.

We are in one of the fastest growing, if not the fastest growing region of the United States, and by the year 2035, roughly when emplacement may end, we expect to be an area of about three to four million people. So we represent a lot of folks who are very concerned about having the risks of radioactive wastes concentrated from around the nation to their area.

We have done a variety of things which have really led us to be able to participate today and comment effectively on the DEIS. I won't belabor all of these, but just know that we use the resources that are provided to us to create staffs of very competent folks, to retain consultants.

We have set up advisory committees in these counties to provide for citizen input, for accessing technical resources in the community. Many counties have

participated in tours, to really try to understand the fuel cycle.

What is it about this waste? How does it work? Where is it coming from? In these tours, you need to know that we are meeting with local people, residents, our counterparts in those areas, to find out, for example, you know, how do the people in New Hampshire feel?

Now, I have not been to New Hampshire, but you meet with the county commissioners.

COMMISSIONER MERRIFIELD: It's a lovely state, and I highly recommend you go there.

MR. BAUGHMAN: Well, I used to live in Massachusetts, so I know it's wonderful. But, you know, visiting Surrey, for example, at that site we meet with the county commissioners in Surrey. We meet with the local emergency response personnel, so we have done these things to really understand, you know, the implications for coexisting with nuclear facilities.

We have made extensive use of our university system in Nevada. It's a good system, it's growing, and they have done a lot of technical studies. And I would just note that I think, collectively amongst the ten counties, there has probably been on the order of 100 or more technical studies, various research endeavors undertaken, all of which are being brought to bear as we speak, to

prepare comments on the DEIS, and to really inform the process so that we do make good decisions.

In particular, the counties have worked hard on geotechnical and geohydrology. Very noteworthy is the Nye County Early Warning Drilling Program, and Les Bradshaw from Nye County can give you some more details on that, if you'd like.

We have done independent risk assessments using the DOE's Rad Trend Computer Codes, and we have various hydrologic and socioeconomic assessment things underway.

I'm going to skip a few of these, just in the interest of time. Note that we have provided DOE with copies of technical reports. As Bob Loux indicated, the DOE requested that we provide them with information, presumably to help them prepare the DEIS.

And this was following scoping. They requested us to provide the information. I know that in the case of the counties that I work with, we spent several hours briefing them, going through these documents, and then gave them a big stack of documents and computer codes and whatnot, and encouraged them to use this information in preparing the draft Environmental Impact Statement.

The other counties did the same thing, so DOE has been provided a wealth of information derived from these local areas.

We also provided DOE, probably collectively among the counties, probably over 100 pages of EIS scoping comments, very specific comments on what needs to be in the scope of the DEIS. And those comments were substantiated by this extensive body of research that exists.

We are now preparing comprehensive comments to the DEIS, and I do know -- and I'm just going to provide at this time -- these are a couple of preliminary sets of comments. There is a diskette that contains those.

I do know that my counterparts from the other counties are going to be providing the NRC with comments as well, in advance of the deadline. We encourage you to look at these.

They certainly embellish what we're saying today, and we certainly encourage you to use these as you see appropriate, to inform your own comments.

With that, I would like to turn this over to Rex Massey, who will talk about NEPA procedural issues.

MR. MASSEY: Good morning. I'm Rex Massey, and I'm going to talk about some of the procedural requirements of the EIS. I'll skip over the -- or skip to page 10, and I will note that your counsel had identified a couple of sites in there on one of our slides that may not be accurate.

But what we were trying to say in those first two slides is that at first, we were uncertain -- or, let me

reemphasize -- we were uncertain as to what NRC's role was with the EIS process. I think we're getting a better understanding of that by talking with staff.

And that, secondly, we felt that as an agency that adopted this EIS, that NRC played an important role in ensuring that the analysis of the direct and indirect impacts were thorough, complete, and accurate.

On page 10, we had several areas of concern, and I will mention that they are areas of concern, because, typically, when you go through some of this EIS process, you bring up all these questions, and it may take you awhile to sort of evaluate these concerns and decide whether or not they are valid, or whether or not another opinion exists that makes sense.

So, I'm kind of throwing these out as questions, more or less to ponder and to think about as we move through the evaluation of the draft.

And several items -- and there are many of them, and I think you've talked about several of them with Bob Loux from the State of Nevada, but let me go over these again:

We think the inability to determine potential impacts associated with long-term performance is an issue now. We see that there is an incomplete proposed action, and alternatives. We have some concerns about the

cumulative impact analysis.

There was not a selection of a preferred alternative for the repository design or mode of transportation in the DEIS, and as we touched on, the DEIS doesn't adequately address the transportation and socioeconomic impacts. And we think that there's a failure to adequately consult with federal, state, and local agencies and governments.

Let me touch on the inability to determine potential impacts associated with long-term repositories: What we were looking at there is that this EIS, the technical information there and the evaluation of how the site performs, really runs parallel with the TSPVA.

And I think that it is fair to say that the comments and criticisms that were made about the TSPVA and its ability to predict performance with a comfortable level of assurance might be somewhat lacking.

So if you can't do that now, you really can't come up and say what the impacts are going to be from a repository if you don't have something in place at this point that gives you some assurance of what the long-term performance of the repository will be.

So we take issue with having an EIS that comes out and concludes that there will not be any significant impacts.

There are several items related to that on Slide No. 12; that the regions of influence are too restrictive and do not include potentially affected areas; the DEIS methodologies are too restrictive and unable to identify most indirect impacts; and the cumulative analysis does not consider the collective impact of all actions.

And I would note that this is really not part of my presentation, and I'll step out on a limb here, but I think it's fair to apply that loss -- if you're going to apply the loss of institutional control after 100 years to the proposed action and no-action, then you ought to apply it and look within the cumulative impacts, if there are other sources of radiological contamination that you would lose control of after 100 years.

We didn't see that as sort of a parallel evaluation in the EIS.

Some of the recommendations with respect to the long-term performance assessment: We think that it might be appropriate to go back and prepare a worst-case scenario for the gaps in the relevant information of the scientific uncertainty.

We recognize that even at licensing, there might be some things that we are uncertain about. I think it would be important to understand under what conditions the system doesn't work, in a sense, when is it broken? What

are the probabilities of that occurring? And then what could be the consequences?

I think that makes for a better disclosure of possible impacts. When we get down to it, it may be that the probabilities of these catastrophic events occurring are very minimal, but I think it's important that the public knows that and has a thorough discussion of it.

I think it's appropriate and may be appropriate to reissue the draft EIS, to prepare a supplement when this essential information becomes available, and that the methods, models, and data used in the evaluation should be accepted, defensible, and accurate.

Turning to -- and I think you've discussed some of this on the incomplete proposed action -- but the final repository design is not known. It is not known whether the proposed action or the action alternatives are capable of being implemented, and we don't think one of them can be.

The DEIS uses unproven conceptual designs to evaluate a possible range of impacts. In the EIS they used the term, conceptual, and I think it's appropriate to use conceptual when you're building a bridge or you're building a pipeline.

You know you can build the project. But it's really somewhat inappropriate to use a conceptual concept when you're not really sure that you can actually build the

project that you're thinking about building.

And we saw in the DEIS that the boundary analysis, is, I think, far too often used as a substitute for an incomplete proposed action, and that if we bound this thing wide enough, every possible action that may occur down the road can fall into this boundary.

Let me just mention on Slide 15, we've talked about some of these other things, but the DEIS fails to include a mitigated action proposal. There is really no mitigation in the proposed action. There is no committed mitigation, and, therefore, it's not really mitigation.

And I'm going to step out on a limb here a little bit, and at least give you my personal views. When I read the mitigation section, I really got the sense that by adding the engineered barriers that were going to be added to the repository, are the mitigation. And I just think that's really part of the design and part of the proposed action, and it shouldn't really be considered mitigation.

But it looks, at least appears in that section, to me, that that's what DOE is trying to convey.

Some of the recommendations on page 16: I'd like to see the performance assessment models strengthened, and a near-final design selected. I think it's appropriate when you go into licensing -- and we've talked a little bit about flexibility -- that, sure, there can be some changes made,

but they shouldn't be substantial changes. And the design that is evaluated in the EIS ought to be fairly close and shouldn't be too far from the final design that may be licensed.

And another issue we found is that we think it's important as part of the proposed action to include a total inventory, radiological inventory, that may be placed in the repository.

Right now, this EIS discusses that in cumulative actions, and I think it may be more appropriate to put it up into the proposed action and discuss it there.

On page 17, I won't talk about the cumulative impacts anymore, because I think it has been mentioned. On page 18, I again mention the selection of preferred alternatives, pointing to the transportation mode.

And as you look at the analysis in the EIS, we think there may be enough difference between rail and truck transportation to select a preferred mode, and not just leave that open for any type of transportation mode that DOE or a private contractor may want to decide is appropriate.

On page 19, I won't go into this in too much detail, and we've already talked about it, transportation, socioeconomic impacts, and then on Slide 20, I wanted to mention that we saw failure to adequately consult with federal, state, and local agencies and governments. DOE did

not conduct an effective consultation with federal agencies having significant or statutory roles in the implementation of NWPA.

DOE did not address the concerns of state and local governments and agencies, and DOE did not include data and information collected by local governments for use in the DEIS.

Page 21, some of the recommendations might be that DOE should engage in meaningful consultation with BLM, DOT, EPA, and actively pursue comments on the DEIS. And DOE should conduct meaningful consultations with AULG, and use recent data collected by the AULG, or where DOE disagrees with AULG, identify AULG's perspectives as opposing technical viewpoints. Thank you.

MR. BRADSHAW: Thank you. I'm Les Bradshaw.

On page 22, we have identified a number of technical concerns. With the limited time available, I'm just going to refer to them, and our comments that we will be submitting will have some detail that your staff can track down and trace.

But cumulative impacts, we just don't think that the EIS, while the data was easily available, they decided to stove-pipe the impacts of Yucca Mountain. We cannot believe that this document came out suggesting no impacts. That's just wrong.

The waterborne radiologic consequences, we don't think the DOE used adequate data to support assumptions and models on the waterborne activity of these radionuclides. Even now at this moment we have drill rigs working in Amargosa Valley, trying to help everyone, including the NRC and WTRB, DOE, itself, the State of Nevada, the AULG, to try to understand the groundwater flow regime in this area. It is not known; it is not well known; it is not known well enough to be able to go forward.

The bounding assumptions, a catchword that has been used here, is very -- we are nervous about that. If you lived in Amargosa Valley and you these bounding assumptions made that are going to impact your area and your life for many generations, you would understand.

We believe that DOE should go forward with adequate data. Addressing a comment that was made earlier by one of the Commissioners, DOE is under-funded on this project, as it is. Congress expects DOE to produce information and data, and DOE has told them that they're not getting enough money, and so DOE is forced to just go forward with bounding assumptions.

We suggest that DOE shouldn't do that, and that adequate money ought to be available to them to have the data that they need to be able to make the assumptions and do the modeling that's necessary on the regional groundwater

flow patterns.

The well concentration amongst the constituents, we believe that they have not adequately taken into account, issues such as naturally occurring background materials, the potential impacts of nuclear activities on the Nevada test site, the daughter products.

And you mix that in with the incompletely understood groundwater regime, flowing southward from Yucca Mountain through Amargosa Valley and heading on down south, we believe the database is inadequate, and the EIS should not go forward, based on these skimpy databases.

We're not suggesting that Yucca Mountain shouldn't go forward. That's a national issue. We are simply saying that the data isn't there to make reasonable assumptions upon which predictions about the behavior of this area for the next several generations can be made.

Some people want to have a planning horizon of 100 years, and some, several thousand years, but in any case, we're suggesting we shouldn't rush into this with an inadequate database.

I understand the notion of a flexible plan, and we're not expecting DOE to be able to have every aspect of this thing down, but additional data could be available and rather cheaply and it's just a question of spending a little bit more time at it.

This is not a criticism of DOE's 15 or 18 years of site characterization. We're simply saying that at this point, the data should be -- there should be more data upon which to base these assumptions that have been presented in the EIS.

The uncertainty or risk factors that have been presented in the EIS, we were nervous the first time we cracked the cover of this document when they decided to use the population estimates for Nye county that were based on the 1990 Census, when, in fact, Nevada is one of the fastest growing small towns in America.

And it has been for that ten-year period since the 1990 Census. That's a well-documented growth of 12-15 percent a year.

The Amargosa Valley is growing less rapidly, but still as an example of the assumptions that are made in the EIS for predicting the behavior and the conditions around the Yucca Mountain over the next several hundred years, we are shocked that better data, which was available in the public domain, wasn't incorporated.

We believe that these are fatal flaws, that this document ought to be revised or upgraded so that the true impacts can be determined.

Just very briefly, on page 29, we've suggested some recommendations. We always like to come to the table

with a solution to a problem.

But our solution is the same as what you're heard in the past: Revise, augment, redo, this document. It's just not adequate for the purposes at hand, and we would urge you and your staffs to carefully look at the comments that have been coming in on this issue.

The document, as you read it, the rationales and assumptions are obscurely presented, hard to follow. The basis for the assumptions are oftentimes not readily graspable.

I know there are 40,000 pages of backup documents, but, I'm sorry, we didn't have time to really work those pages.

The population-based analyses, it's just that they should start over on that. There's better data available.

And the document and DOE in their document, should just come out and say that they don't have enough information. It would not be harmful for the nation for DOE to say at this point that they need more data and that they're not ready to go forward.

Dennis Bechtel from Clark County will now discuss the transportation issues.

MR. BECHTEL: Thank you. I appreciate the opportunity to be here. We've appreciated, as Mike indicated, meeting with staff yesterday and sharing a lot of

our more detailed concerns.

And as you're aware, we met with the Commission in March and expressed that transportation was, of course, a key issue, and I appreciate your questions this morning.

I think we feel that the document, to echo Bob Loux, is inadequate with regard to transportation. I think it so narrowly defines the role of transportation in the DEIS that there is really no room to understand whether there is impact or not.

At a minimum, there should be a description of what the transportation system would be.

I think we feel -- I have been a planner for 30 years, an urban planner. And when we do analysis of a 7-11 store, there is more detailed analysis of transportation, potential impacts, than there is in this document.

I think, given the fact that this is a major part of the program, I think the public, nationally, and in Nevada, is owed the more detailed description of this.

We have concern -- by the way, I'm keying on Slide 33 here. That's going to be the emphasis with the time we have available.

I think we feel, on the third bullet there, that as far as risk, the risk is defined inaccurately and incompletely. There was a comment earlier about radiological health risk.

I don't think we, as the public, can assume there will be no risk. Casks are made by humans.

The transport system, by the way, counter to maybe the experience in New Hampshire, will be a private contractor, and I think the military does do a good job of shepherding shipments west. I think it's a little uncertain how DOE is going to handle it, given a privatized system.

We also have concern about just the fact that the data -- Les and others have mentioned the use of the 1990 Census. Well, if you're evaluating radiological risk, health risk by 1990 data, in an area such as southern Nevada, which has almost tripled in size since 1990, that is unsatisfactory.

I might also note that in the case of Clark County, while they were said they weren't going to evaluate transportation risks, they had a very detailed analysis of a road system in southern Nevada, including a beltway system which, by the way, is not in the federal system.

That was funded entirely by local monies. That is a Clark County road, and I think that had DOE taken the time to interact with the local governments, I think that would have been apparent.

I think also since routes were mentioned in Nevada, various modal options, it was incumbent upon them, we feel, to so some analysis of the routes. If you're going

to list them, that's on somebody's template for future consideration.

So I think the document is inadequate in the sense that this comparative analysis of routes was not done.

Also, to kind of play on -- we've mentioned a number of cumulative impacts that weren't evaluated. Again, it's also important to note that the Nevada test site is on the preferred list for a low-level nuclear waste site, and a RCRA decision will be out shortly.

With regard to transportation, those are thousands of other shipments that will occur today, and also within the period, should Yucca Mountain open. And that's a cumulative impact that will affect, being the end of the funnel, Nevada greatly and that's not evaluated.

We also have some recommendations we're offering on page 38, and like the rest of the counties, we'll be submitting more detailed comments and hope that you will take them into consideration when those are submitted.

Mr. BAUGHMAN: Let me just quickly close with some summary conclusions and recommendations:

We would, first of all, certainly encourage the NRC to make comments to the DEIS, to encourage DOE to prepare a final EIS which is responsive to our concerns, concerns of the state, of the stakeholders, but one that can support major federal decisions.

There is probably a suite of about a half a dozen or more decisions that are presumably going to be made off of this document.

And this is your document as well. As you see it today, this is your document. You know that it's coming, and we would assume that you, as well, have to be worried about whether this document serves your needs.

We would encourage you to make better use of local information. And we will just note that.

We've given you comments today, and you're going to get other comments, but DOE needs to make use of that information as well. With regard to encouraging DOE to identify preferred modes and routes for transportation, that's particularly troublesome to us.

If you look at page 398, Section 3211 of the DEIS, you will see there that they say that site-specific transportation decisions will be made following a decision to build the repository.

Now, they don't don't define what decision to build the repository means. If that means granting a license or receiving a license by the NRC, that means that you will be making decisions about whether or not to go forward with this project without the specific information on transportation, and we find that to be totally unacceptable.

Now, the NRC should encourage DOE to reduce uncertainties within the DEIS, and certainly that would improve the analyses.

NRC should encourage DOE to address mitigation and compensation of impacts. I would underscore the compensation side of this thing as well.

If this is such a good project, and if there are no impacts, then why is that no one else in the nation wants it? And the reason is because it's not a good project.

It's not a project that's good for a community. It doesn't help a community. It does posit potential impacts.

The preferred action does save the nation estimated $25-30 billion if the analyses are correct in the DEIS. We believe that a portion of that savings that the nation will garnish should be shared with Nevada.

The NRC should encourage DOE to address -- to meet with affected units of local governments to review comments to the DEIS and to discuss proposed responses thereto.

We would not want to see all of our comments end up in a generic briefing book that says here's the generic comment or comment we constructed from 50 other comments; here's a generic response, and that's the first time we see how they're going to deal with it.

We'd like to sit down with the staff, the DOE

staff, have them discuss with us how they interpret our comments. They may misinterpret what we're saying.

Have them propose to us, how they're looking at responding to that, and we can discuss that. Clearly, you know, they're going to have a final decision, but we think that interaction would be very helpful, and it would produce a better document for you as the NRC.

One comment that's not on here that I must note is the proposed revisions to 10 CFR 960 and the proposed new 10 CFR Part 963 that DOE has got on the streets right now, removes the requirement to consider environmental, socioeconomic and transportation impact issues.

And they are proposing to remove that requirement because they are assuming that that information is adequately addressed within the draft environmental impact statement, and subsequently then will be available to the Secretary to base a site recommendation report upon, and presumably then available to the NRC through the EIS to base your own licensing decisions on.

We have reviewed this document extensively. We note that staff's preliminary comments to you, your staff, have concerns about transportation.

We believe that that assumption that the information is in the DEIS is totally invalid. And so we've either got to leave those requirements in 10 CFR 960, or

we're going to have to do a better job on the DEIS. Thank you.

CHAIRMAN MESERVE: Thank you very much. I'm sure we all appreciate your comments, and we also appreciate your offer to provide us with the drafts of the materials that you've submitted. I can see that we have one set here, and we'd be happy to receive the others and review those.

I have one question that quite frankly has puzzled me from the review of the slides and the comments this morning. In fact, those relate to some of the earlier comments.

There is some criticism of the draft Environmental Impact Statement because it doesn't adequately define the preferred design, details of the design for potential repository at the Yucca Mountain site.

And as I think some of the questions have indicated earlier, it's obvious, I think, that from DOE's point of view, they want preserve as much flexibility as possible; that they expect they're going to be learning as time goes on, and that the design will become more refined as time goes on as they learn.

And the question is -- and this really relates as much, I think, to Slide 14, which Mr. Massey had, which was if the Environmental Impact Analysis has an adequate bounding analysis that encompasses all the areas in which

they want to preserve flexibility, isn't that sufficient?

You have doubts about whether they have bounded it adequately because they haven't looked at the data and so forth, but if they were, in the Environmental Impact Statement, to have an envelope that encompasses the range of alternatives that they want to preserve, isn't that sufficient for this purpose?

MR. BRADSHAW: Well, that's exactly what we're suggesting that DOE ought to do before it comes forward with a document like this, is to have the database to support adequate bounding assumptions.

And so our story today is that they don't. And so the dominoes start to tumble from there.

We are suggesting that they need to slow down, do more work, get those database in place so that they can do adequate bounding assumptions, and then we'll be happy with the flexibility within that.

CHAIRMAN MESERVE: Well, the reason I ask is because some of the slides suggest that they adequately define the preferred alternative, and that, independent of bounding analysis, they haven't been complete, that their comments and your response suggests that they can preserve all the flexibility they want, so long as when they do the analysis, they bound the range of impacts that would arise from the alternatives they seek to preserve.

Is that fair?

MR. BRADSHAW: That would be fair, but, again, at this point, the uncertainties are so broad and so widespread and so deeply rooted that it's -- we're suggesting, let's wait and see until they can make adequate bounding assumptions before we look at the internal flexibilities.

There is no one in the world that wants that repository safer than this group of counties and the State of Nevada. Of course, everyone in the country has a stake in safety, but the down gradient, the hydrologically down gradient impairs people in the Amargosa Valley and heading over are the people who are going to have to deal with these assumptions and these decisions that the nation made.

Let's not go forward with poorly defined databases that support bounding assumptions that make everyone nervous. What is the problem with waiting and getting that data?

MR. BAUGHMAN: Let me just note as well that this issue is also linked to mitigation, because if there is so much flexibility in the design, or you are moving down a track with a preferred alternative, preferred design alternative which then suggests certain mitigation measures, for example, a ventilated repository where we're going to monitor emissions from that site based upon that assumption, and you license on that basis.

Or maybe they submit some supplemental data between now and licensing, they commit to mitigation now for a ventilated project and we then we go to some other project that has a different source exposure pathway, we've not come up with the mitigation for it.

And this document is woefully deficient in mitigation, I would just note. But that's part of the problem with the uncertainty and just flexibility, is, what, exactly are we proposing to mitigate for? And what assurance do we have that the mitigation fits the project?

MR. MASSEY: I just wanted to say one thing that I think Les touched on. Assume that you had a performance assessment process in place that was acceptable and it was supported, and then you could take a host of different designs, plug into that process, predict with some assurance, what might be the outcome.

And then that sets an accurate boundary. But if you cannot establish an accurate boundary, you, in effect, don't have a boundary. And I think part of this may relate back to the idea now that my understanding is that we're going to think about dropping the hot repository design that was in the EIS.

Well, if we add a system in place, we're able to evaluate that alternative, we would have been able to say, well, okay, maybe the hot repository isn't going to work,

and it never would have been proposed as a feasible alternative. That illustrates, I think, what we're trying to get at.

CHAIRMAN MESERVE: Commissioner Dicus.

COMMISSIONER DICUS: Okay. You have heard what I have to say about transportation, so I won't go into that, and I do appreciate the issue.

Going to the comment made a couple of times that the DOE did not conduct effective consultations with Federal agencies and I think you said state and local governments as well with regard to the NWPA, could you elaborate just a bit on that, and this is a kind of multipart question or comment.

There is some concern that DOE might have been consulting with us almost too much, and we were cautious with that. We tried to have a reasonable barrier there. But what I would also ask is the NRC consulting in a way that you think is effective with Federal agencies we must deal with with this and state and local governments?

MR. BECHTEL: With regard to the first part of your question, Clark County and I know other counties sat down with the Department of Energy to try to understand how we could interact during this process. Again, I work for a planning agency. I have been involved in the development of the EISs over a number of years and normally there's too

much interaction. You know, we are kind of a data sink.

A lot of the concerns we had were because of the growth of the area and the fact that we wanted to make sure that -- I mean a lot of the information is actually non-Yucca Mountain related. It is demographics and where development is going to occur and we were essentially rebuffed. I mean we tried but there was no interaction after that.

Mike mentioned the fact that we were then offered the opportunity to submit what DOE called reference documents on data, and we did do that, but lo and behold, they never showed up anyplace, so I don't know. A lot of the information we tried to convey that we couldn't convey may be just sitting down, we did try to get, and that just never happened. I think you can echo that for the rest of the countries.

With regard to the NRC I think recently we have had some good sit-downs. Mike mentioned the meeting we had yesterday and there seems to be a desire on the part of NRC to understand our issues. We are concerned you are the regulatory agency and you are kind of the bottom line, and we hope that the needs we have and the sensitivity reflects into, is translated into some comments that make sure that the EIS, the company's license application is honest.

MR. MASSEY: I don't think that we meant to imply

that the consultation between NRC and DOE wasn't occurring, but we were looking at it more on the fact that in the EIS there is no, I don't believe there is any cooperating agencies and typically agencies are cooperating when they have a statutory rule or function. The Fish & Wildlife Service might be EPA for certain laws and regulations that DOE has to demonstrate that they fulfill in their project, so in that sense -- and we are uncertain whether or not these agencies have made any comments or have been involved directly with the EIS. We just don't know what level that has occurred.

I will give you an example. On the transportation, looking at selecting a possible rail alternative, most of the lands that a rail alternative would go over are public lands that are managed by the Bureau of Land Management, and I don't think there's been any discussion with the Bureau of Land Management on where those alternatives may go, and the BLM -- I don't know this, I am speculating -- the BLM may turn around and say, well, we like the analysis you did in here, it just isn't our analysis, and we are going to require you to go back and relook at these transportation alternatives.

CHAIRMAN MESERVE: Commissioner Diaz.

COMMISSIONER DIAZ: Thank you, Mr. Chairman.

Like all the other Commissioners I really

appreciate the opportunity to interact with you and to listen directly to your concerns. Obviously you have done a very good job in looking at the draft Environmental Impact Statement and to raise some issues and those issues we will pay attention to.

However, I was sitting here and trying to realize, you know, the multiple issues that the Commission faces and trying to put them in the context of what is the best thing for the people of Nevada, which eventually are going to be the ones that are going to be affected by it.

In thinking of this, and in thinking of this and thinking of many other decisions the Commission have to live with or activities or problems not only during the last three and a half years that I have been here but during my previous lifetime in which I actually worked in the nuclear industry, in academia and so forth, I come with a real problem, a real concern for the people of Nevada.

That is the key issue of reality and perception. I think it is so important that the people of Nevada be informed of the reality of the estimates of public health and safety impacts that they are going to be having. This includes tourism.

I just heard a statement obviously done with great concern for the people of Nevada that there are 200-300 million curies of radioactive materials migrating from the

Nevada Test Site. If you compare that with the potential impact of Yucca Mountain it's of course a very small issue. I mean this is one that is already there. It is already existing. It is already in the environment.

The issue with Yucca Mountain is to try to contain it and the selection of the site, not by us but by the Government of the United States and the engineering barriers are all designed to prevent precisely this millions of curies or a few curies of radioactivity migrating.

So at least for experiences in the last three years in which well-intentioned public officials make statement regarding nuclear reactors or the decommissioning site including one which called a beautiful site/town a "nuclear dump" of which the public official had to in a few days land in there with a helicopter and say it is a gorgeous place to live, great businesses, nice people, and so forth, but the impact was done, okay?

Real estate was affected, not because of a real problem, not because of a radiological dose that's going to be there but because the perception that went to the media that this was a real bad problem.

I think you are the very heart of it. You need to be able to pair reality with perception and although this might be a problem larger than we envision or DOE envisions, it has to be something that we do not scare the people of

Nevada beyond what reality is, and I think it is a real role for the State of Nevada and the local governments that we can help with. We can try to put things in context, but it is not just an unbounded issue. The issue has to be bounded and you have every right to demand that it be bounded, and I think we are going to work on that, but we think that -- and allow the media to put limits that really affect the perception of the quality of life of the people from Nevada without a real substantive, scientific fact I think is something that you need to deal with.

We are trying to deal with it. I just want you to know that this is not a minor issue, that your perceptions and the things that get into the press do affect the quality of life directly now, tomorrow, and the day after, and it is this balance that needs to be achieved. That's it, Mr. Chairman.

MR. BECHTEL: If I could maybe comment to that.

As Mr. Loux indicated, tourism is our bread and butter, seventy percent of the income of the State of Nevada and Clark County, and tourism is a very competitive industry. Part of the concern we have with the DEIS was they defined economic effects as jobs, and it was purported as a positive effect, yet there was no analysis of potential downsides if there was, say, an accident in the middle of Las Vegas, how the public would react to that.

The other part, one item I didn't mention, there are many risks out there and I think perception takes on a reality of the public makes decisions about a potential risk.

I'll give you an example, the city of Santa Fe and the Comas v. Santa Fe case, which actually the city of Santa Fe was doing their job as a Government entity and trying to prevent waste from coming through the community unknowing what the impact would be.

They designated a route and someone -- the courts decided based on, and this was years before the WIPP shipments, that in fact that was a taking of that person's property because of the fact that the public was aware that this transportation route was going to happen. They offered a judgment to the individual, which by the way DOE wasn't sued, it was the city of Santa Fe, so we have to be concerned as a community for liability but more importantly people locate in places for reasons of quality of life and any potential risk -- I mean property is very important to America, the United States. That is what we are all about, and any potential effect to that is not a perceived risk.

I mean if there is case law out there that demonstrates an impact, that is reality and that is something we are very concerned about and very concerned that the DEIS did not address that.

CHAIRMAN MESERVE: Mr. McGaffigan.

COMMISSIONER McGAFFIGAN: I may come back to that, but let me just ask, I forget which one of you was hinting at it, and I may have misperceived, so that is why I am asking the question. Somebody said something to the effect I thought that there might be enough in this EIS to chose between rail and road. I would suspect based on the analysis in the EIS you would choose rail, but is that, am I perceiving the comment correctly, whichever one of you made it?

MR. MASSEY: Yes, I think you are. I mean you look at that analysis and is there enough to choose or is there a big enough difference, and we look at the latent cancer fatalities and you have three in one instance and eight or so in another.

COMMISSIONER McGAFFIGAN: With regard to institutional controls, I will take another crack at what reality means here. I continue to be frustrated by different assumptions that get forced on people, but we assume the word "perpetual" institutional controls comes up in a lot of DOE documents with regard to Hanford or Savannah River or whatever.

EPA and RCRA space essentially assumes perpetual institutional controls where people come in and check, because those things have infinite half-lives, so it is a

not uncommon assumption for a lot of work either radiological or hazardous substances that once you have concentrated them on the site you assume perpetual institutional controls.

We are obviously not there. We have these artificial assumptions that come up in both the proposed alternative and the proposed action in the alternative, but I will just leave it at that.

With regard to radiophobia, which is I think the issue that Commissioner was trying to deal with, I think I agree with Mr. Loux that the public probably has become more concerned about radioactive substances but in all honesty, you know, following Commissioner Diaz, it is not an informed judgment. Anybody who is going to travel to Nevada or you guys came here, you have about four, five millirems, right, round-trip air ticket. You are going to get far more -- you know, people love to ski in Aspen. They go from Long Island to Aspen. They get some number of millirems in the air travel and then they will get some number of millirems because Colorado has -- you know, the Colorado plateau is rich in radium, thorium, uranium, et cetera, and radon and they will get a lot more than they get in Long Island for that period that they choose to ski in Colorado or if you guys have ski resorts I'm sorry, I'm not -- I think of Utah, Colorado, New Mexico --

MR. BRADSHAW: Nevada skiing is the best in the world.

COMMISSIONER McGAFFIGAN: I understand. I take it back -- so people are getting dose from naturally-occurring, as a result of their activities.

We don't put up signs "Beware of Moving" -- I will choose another state -- "Beware of Moving to Colorado" despite the fact in Colorado you can get naturally-occurring background radiation. You can get a rem a year, as opposed to sea-level on one of the coasts where you might get 100 millirems a year from naturally-occurring background, so what is it that -- if tourism is the heart of the industry and the biggest threat to you guys would be if people actually started thinking about radiation comprehensively and everybody were wearing their own personal dosimeter and they were really radiophobic, they might not take the airplane flight. They might not want to go to altitude. I don't know what the hell they'd do. They might all want to wear lead clothing, which is slightly impractical.

So feeding the radiophobia is, I think, a concern we have to all have. We have to make these decisions rationally in the context of everything we know, and not create problems where there are not.

MR. BRADSHAW: Well, then we would say, and we agree with that, that things ought to be presented

rationally and factually. We would say as to this EIS that DOE in fact ought to do that. We are all for that, and you can't do that using 1990 census data, for instance, so there's nobody that has a greater stake in an informed, factually cognizant community. We all have to live with it, but I think we as a nation, perhaps as a group dealing with this, we have failed to educate people as to what radiation means, what it is, and so on, but as to this EIS, we say simply state the facts in a way that people can understand it, put out your bounding assumptions, put it out so that people can understand the calculations and so on and the results, and then let it stand, but we are saying they didn't do that.

CHAIRMAN MESERVE: Commissioner Merrifield.

COMMISSIONER MERRIFIELD: Let me start off like my fellow Commissioners. Thank you for coming here and taking the time to put together your testimony.

I have to say given the amount of time you had, and the speed at which you went through it, I think in an articulate, thought-provoking and succinct manner, it certain is a model I think for something perhaps our Staff ought to think about once in awhile in terms of presenting a large volume of material very well in a short period of time.

I did have one question I wanted to direct to Mr.

Massey regarding page 15 of your slides. You talked about the failure of the DEIS to include a mitigation action proposal and I am wondering if you could talk a little bit about what you think would be an appropriate -- what should be in there? What would be an appropriate mitigation action proposal to be included in the DEIS?

MR. MASSEY: I don't know if I can answer that, because the mitigation is going to follow from the impacts that are identified in the EIS.

I think our opinion today is that DOE didn't do a very good job at doing that, so I can't presuppose or say down the road what the impacts ought to be until a thorough and complete evaluation is done and it is accurate and we would accept it to be accurate. It's pretty hard to kind of tell you upfront what the impacts would be and what ought to be the mitigation for those impacts that we have yet to determine.

COMMISSIONER MERRIFIELD: Thank you. I just, Mr. Bechtel, we talked a little bit about the Navy, which I agree with you has a very good record for transporting materials. My understanding is that the railcars are taken by private railroads. As far as the truck transportation I don't know off the top of my head, I don't know if you know whether those are done by Navy-owned vehicle --

MR. BECHTEL: I think they are escorted, whether

it is train or they have it escorted in some fashion, so that may be the difference.

COMMISSIONER DICUS: Right.

MR. BECHTEL: That's the difference.

COMMISSIONER MERRIFIELD: Thank you.

CHAIRMAN MESERVE: Good. I would like to thank all of the panelists today for their participation. This has been very helpful to us.

We will be submitting comments as an agency. I think our deadline is the same as yours in February, I think.

Let me say that all of you, as I think you understand, should submit your own comments directly to the Department. This has been helpful to us though in understanding many of the issues and I appreciate it, so with that we are adjourned.

[Whereupon, at 11:39 a.m., the briefing was concluded.]

CERTIFICATE

This is to certify that the attached description of a meeting of the U.S. Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING ON NATIVE AMERICAN, STATE OF NEVADA, AND AFFECTED UNITS OF LOCAL GOVERNMENTS REPRESENTATIVE RESPONSES TO DOE'S DRAFT ENVIRONMENTAL IMPACT (EIS) FOR A PROPOSED HLW GEOLOGIC REPOSITORY
PUBLIC MEETING

PLACE OF MEETING: Rockville, Maryland

DATE OF MEETING: Friday, January 21, 2000

was held as herein appears, is a true and accurate record of the meeting, and that this is the original transcript thereof taken stenographically by me, thereafter reduced to typewriting by me or under the direction of the court reporting company

Transcriber: Michael Paulus

Reporter: Rose Gershon

DRAFT

January 26, 2000

Wendy R. Dixon, EIS Project Manager
Yucca Mountain Site Characterization Office
Office of Civilian Radioactive Waste Management
U.S. Department of Energy
P.O. Box 30307, Mail Stop 010
North Las Vegas, Nevada 89036-0307

RE: Comments to 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

Dear Ms. Dixon:

Consistent with requirements of the National Environmental Policy Act (NEPA) and consistent with the fiduciary responsibility vested to it through designation by the Secretary of Energy as an "affected unit of local government" pursuant to the Nuclear Waste Policy Act (NWPA) the Board of White Pine County Commissioners are submitting these comments to the Draft Environmental Impact Statement (DEIS) for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada.

White Pine County is submitting these comments with full expectation that they will serve to enable the Department of Energy (DOE) to prepare a Final Environmental Impact Statement (FEIS) which meets the statutory requirements for a "legally sufficient" document which can be used by the Secretary of Energy, the Nuclear Regulatory Commission (NRC), the President of the United States, and the Congress in making major federal decisions regarding the transportation and disposal of spent nuclear fuel and other high-level radioactive waste. Failure by the DOE to adequately address White Pine County's comments in preparing the FEIS may render the document legally insufficient to support major federal decisions.

Please feel free to contact me should you have any questions regarding these comments.

Sincerely,

Julio Costello
Chairman

cc: Nuclear Regulatory Commission
U.S. Environmental Protection Agency
Governor Kenny Guinn
Members, Nevada Congressional Delegation

Comments to 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

Submitted To:
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Office of Civilian Radioactive Waste Management
U.S. Department of Energy
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Submitted By:
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January 26, 2000

Comments to the Yucca Mountain Draft Environmental Impact Statement — White Pine County, Nevada — January 26, 2000

These comments are divided into those concerning process (ie. preparation of the FEIS), those of a general nature (not addressing a specific section of text in the DEIS) and those of a specific nature (addressing a specific section of text, particular table, etc.). General comments focus upon fundamental deficiencies in the DEIS. Substantive changes to the DEIS are required to address the general comments provided by White Pine County. **To the extent that such changes introduce substantial new information or uncover previously undisclosed significant impacts, White Pine County would encourage DOE to issue a revised DEIS for further public review and comment.**

Process Comments

In preparing the FEIS, 40 CFR 1502.9(b) requires DOE to respond to all comments received and to discuss any opposing views on issues raised. White Pine County understands that DOE has the option to group comments together and to provide generic responses to input received. However, given the complexity of the repository project and the geopolitical brevity and differences of the affected region, the County urges DOE to provide individual responses to all comments it receives. White Pine County deserves to know DOE's specific response to each comment and how, if at all, said comment resulted in a revision of the DEIS. **The County requests that DOE prepare a comment response document and that said document be made available prior to or concurrent with release of the FEIS.**

Prior to release of the FEIS, DOE is encouraged to meet with affected units of local government to discuss how the Department intends to revise the DEIS in responding to local government comments. Such a meeting will insure that DOE fully understands the local government comments and that the proposed response or revision to the DEIS satisfies the issue of concern

DOE is encouraged to identify and make commitments within the FEIS to reasonable measures to mitigate significant impacts. The subsequent Record of Decision to be issued by DOE should also identify mitigation measures to be implemented. DOE is discouraged from preparing a separate and stand-alone mitigation plan. Such a document does not fulfill the requirements of and indeed is outside the NEPA legal framework governing the minimization of the effects of major federal decisions.

The DEIS does not reveal the process DOE plans to use in selecting a preferred rail and/or heavy-haul corridors. The baseline information provided in Chapter 3, and the impact analysis provided in Chapter 6 and Appendix J, are particularly deficient regarding impacts on highly populated areas-, engineering feasibility; construction costs, and cost uncertainties; potential for voluntary acquisition of private lands; impacts on Native American lands and cultural resources; and economic development costs and opportunities, including risk-induced socioeconomic impacts. The FEIS must include a specific framework for identifying preferred transportation modes and routes.

General Comments

In its current form, the DEIS does not contain sufficient information to fully assess all reasonable alternatives. For example, the DEIS does not consider specific impacts associated with legal-weight shipments of spent nuclear fuel along U.S. Hwy 93, U.S. Hwy 6, and State Route 318 through White Pine County. Given that this route has been identified by the Nevada Department of Transportation[1] as one of two candidates for designation by the Governor as an alternate to Interstate 15 and U.S. Hwy 95 through Las Vegas and given that the State of Nevada[2] has already encouraged DOE to use the Hwy 93, Hwy 6, SR 318 route to ship LLW and thereby avoid the Las Vegas Valley, it is a clearly reasonable alternative for which specific analysis in the DEIS is lacking.

The Draft EIS does not analyze impacts associated with specific nuclear waste transportation routes, even though it is intended that it will be used at some time in the future to select transportation modes and routes from 75 individual waste sites to Yucca Mountain. Residents along potential transportation routes to Yucca Mountain - through 43 states, and within 1/2 mile of more than 50 million people - are most knowledgeable about local hazards, yet their specific knowledge is co-opted by the generic treatment of transportation risk in this Draft EIS. This generic approach also eliminates any substantial analysis of environmental justice, which leads the Draft EIS to conclude, despite dissenting opinion, that there are no environmental justice issues that require analysis.

With respect to eastern Nevada, the DEIS fails to consider the potential impacts of legal weight truck (LWT) shipments of Spent Nuclear Fuel (SNF) and high-level radioactive waste (HLW) through Elko and White Pine Counties. Studies prepared for the Nevada Department of Transportation (NDOT) have identified Alternate US 93 from West Wendover to Lages Station, US 93 from Lages Station to Ely, US 6 from Ely to Tonopah, and US 95 from Tonopah to Yucca Mountain as a possible route for highly radioactive materials shipments. Appendix J of the DEIS identifies this route, the so-called "NDOT B Route," as a potential state-designated alternative route for truck shipments to the repository. DOE used portions of this route for truck shipments of SNF from the Nevada Test Site the Idaho National Engineering and Environmental Laboratory in the 1980s.

Failure of the DEIS to consider the impacts of legal-weight truck transportation

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1 Adrila-Coulson, M.V., 1989, *The Statewide Radioactive Materials Transportation Plan, Phase II*, College of Engineering, University of Nevada-Reno, Reno, Nevada.

2 Governor Kenny Guinn, *Letter to Chairman Julio Costello of the White Pine County Commission Dated August 24, 1999*, State of Nevada, Office of the Governor, Carson City, Nevada

through White Pine County is made worse by Table J-48 which demonstrates that risks of transporting spent fuel and high-level radioactive wastes through the County are significantly greater than the risks for the Base Case (routes allowed by current Department of Transportation regulations for Highway Route-Controlled Quantities of Radioactive Materials). The fact that LLRW is also being transported on a route through White Pine County raises the specter of significant cumulative impacts.

According to the DEIS, there could be about 49,500 to 96,000 LWT shipments to the repository under the mostly truck scenario. Ninety percent or more of these shipments, an average of 5 to 10 trucks per day, could travel the NDOT B Route through West Wendover, McGill, and Ely.

The Draft document fails to consider unique local conditions along the NDOT B Route that could result in significantly higher routine radiological exposures than those calculated using by DOE using the RADTRAN 4 computer model. For example, individuals who reside, work, or attend school at certain locations within 6 to 40 meters (20 to 130 feet) of a nuclear waste highway route could receive exposures in excess of the average annual background radiation dose. DOE has failed to investigate whether such conditions exist near school zones and pedestrian crossings, left-turn lanes and traffic signals, congested intersections, and uphill grades in West Wendover, McGill, and Ely.

The DEIS also falls to consider unique local conditions along the potential truck route that could cause unacceptable safety and security risks for truck shipments using General Atomics GA4/9 casks. Primarily a rural two-lane highway with numerous steep grades and sharp curves, the route traverses high mountain passes subject to severe winter storms. Long segments (up to 60 miles) have no safe parking areas, few refueling facilities, and limited local emergency response capabilities. The Draft report assumes that almost all truck shipments will be made in the new GA-4/9 casks. The weight of the loaded GA-4/9 cask requires that it be used in conjunction with a specially designed trailer, a lower weight, cab-over-engine tractor, and a single fuel tank. DOE has failed to demonstrate that the GA4/9 system is appropriately designed for a decades-long, nationwide shipping campaign to Yucca Mountain.

The Draft EIS fails to consider unique local conditions along the NDOT B Route which may increase the probability of severe accidents, and which could exacerbate the consequences of a severe accident or terrorist attack resulting in a release of radioactive materials. There are numerous mountain passes, such as White Horse Pass, Currant Summit, Black Rock Summit, Sandy Summit, and Warm Springs Pass. Near-route terrain frequently includes drop-offs into deep canyons or river valleys that would make response to an accident or attack, and recovery of the cask, damaged or not, quite difficult. Route proximity to surface water and groundwater resources 'is a major concern. DOE has failed to address the implications of route-specific conditions for accident prevention, emergency response, and the

economic costs of cleanup and recovery.

The DEIS fails to consider unique local conditions along the NDOT B Route which could result in unacceptable adverse socioeconomic impacts. During the past decade, there has been significant demographic and economic growth in and around West Wendover and Ely. Most of the new commercial development, including hotels, casinos, restaurants, and retail sales establishments, has occurred within two miles of the NDOT B Route. The Draft EIS ignores the potential adverse impacts of large numbers of SNF shipments on tourism-based economics located near highway routes to Yucca Mountain. State-of-the-art risk studies sponsored by the State of Nevada researchers have documented the public perception of risks associated with nuclear waste transportation. DOE has failed to address potential adverse impacts on year-round tourism, seasonal tourism, and special-event tourism; the effects of risk perception on property values along shipping routes; and risk-related impacts on business location and expansion decisions.

The analysis of socioeconomic impacts in this Draft EIS does not include the impacts associated with perceived risk and stigma. It is well documented that negative reaction to nuclear waste ranks highest among reactions to risks within the U.S. population. In response to such perceptions, people behave in ways that have direct and measurable economic consequences (i.e. avoidance of places and products associated with nuclear imagery or stigma). The DEIS ignores this finding and does not consider the economic consequences of such stigma on tourist destinations and agricultural products available in White Pine County.

For White Pine County, a transportation accident just before the peak summer tourist travel season which was characterized by a great deal of media amplification of risks could result in stigmatization of the area and a significant and prolonged decrease in tourist visitation to the County. Information compiled by the Nevada Division of State Parks and the National Park Service indicate that combined peak season (July) visitation to Cave Lake State Park and Great Basin National Park has approached 50,000 visitor days in recent years. With the population of the western states expected to grow by tens of millions over the next 25 years, annual tourist visitation to Cave Lake State Park and Great Basin National Park are expected to also increase annually.

White Pine County has recently adopted a plan for managing the abundant and high-quality surface and ground water resources which characterize the area. Said plan envisions significant portions of these waters being put to beneficial use by way of beverage bottling to meet an ever-growing demand for beverages in the Western United States. The DEIS does not reference the White Pine County Water Resources Management Plan nor the potential for transportation of radioactive wastes through the County to stigmatize area water resources.

With regard to failure of the DEIS to adequately address transportation impacts it is important to note that transportation induced stigma must also be considered within the Final

EIS. Research sponsored by the Board of Lincoln County Commissioners has demonstrated that transportation induced stigma can result in significant economic and fiscal impacts along transportation corridors.[3] In the event of an accident involving transportation of spent nuclear fuel in the weeks preceding peak tourist travel to and/through White Pine County, local businesses may be impacted and tax revenues lost to White Pine County and the City of Ely. It could take several weeks to many months for the area to recover from negative perceptions about safe travel in the County.

Based upon analogous cases (ie. visitation impacts of the accident at Three Mile Island), the DEIS must consider the possible economic and fiscal impacts to White Pine County of a transportation incident/accident which results in stigma induced reductions in tourist visitation to the County. Measures to mitigate such a downturn in tourism must be presented in the EIS. For example, DOE should commit to develop and fund a tourism marketing plan which could be immediately implemented in the event of a transportation accident in the County. Using an IMPLAN-based economic impact model developed for the County by the University of Nevada, Reno (Center for Economic Development), preliminary estimates of the economic impact of losing 30 percent of visitor days during the month if July could result in direct economic impacts of over $400,000 and total economic impacts in excess of $1,000,000 to the local economy.

The DEIS should estimate the number of expected transportation incidents/accidents which might be expected to occur within White Pine County over the 24 shipping campaign. This information could be easily derived from U.S. Department of Transportation incident/accident reports prepared for other shipments of spent nuclear fuel and high-level radioactive wastes. There have been incidents and accidents in the past. There will be such occurrences in the future. White Pine County is concerned that any single transportation incident or accident, even assuming no release of radioisotopes to the accessible environment, could be widely covered by the media, with perceived risks amplified and area stigma a result.

The draft EIS fails to consider transportation impacts on specific Native American communities located in proximity to potential spent nuclear fuel and high-level radioactive waste routes. In particular, there is no evaluation of possible impacts to the Duckwater Reservation, which is located in proximity to US 6 and the NDOT B route.

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3 Himmelberger, Jeffery; Baughman, Mike L.; and Yelena A. Agneva-Himmelberger, October 1993, *Tourism Impacts of Three Mile Island and Other Adverse Events: Implications for Lincoln County and Other Rural Counties Bisected By Radioactive Wastes Intended for Yucca Mountain*, Clark University, CENTED, Worcester MA. and Intertech Services Corporation, Carson City, NV.

The DEIS does not include a reasonable No Action Alternative. It is unlikely that either of the No Action Alternatives included within the DEIS would ever be considered for implementation. In particular, No Action Alternative Scenario 1 entails radioactive waste to be left at the 77 sites where it is now found, but under institutional control for 10,000 years. Scenario 2 envisions loss of institutional control after 100 years. NRC guidelines discourage licensees from assuming institutional control beyond 100 years. However, it is highly unlikely that waste would be allowed to be stored at generator sites without any form of institutional control. A more reasonable No Action alternative would see waste stored on-site indefinitely with continued institutional controls.

White Pine County is troubled by the DOE's failure in the DEIS to recognize the County and its residents as potentially impacted by on-going and proposed radioactive waste management activities in Nevada. During scoping, White Pine County made a credible case for consideration of the impacts of low probability/high consequence events such as volcanism upon the residents and environment of the County.[4] In addition, our scoping comments clearly demonstrated the potential for shipments of spent nuclear fuel and high-level radioactive waste to be transported by legal-weight truck through White Pine County. Despite the direct risk to resident public health, safety and welfare associated with the Yucca Mountain project, the DEIS does not afford any assessment of impacts to residents and the environment in the County.

This failure to consider impacts in White Pine County appears contradictory to the Secretary of Energy's previous action to designate the County as "affected" pursuant to the Nuclear Waste Policy Act. The Secretary's designation, which is not required but is discretionary, clearly suggests the relationship of ongoing and proposed DOE radioactive waste management activities in Nevada to possible localized impacts in White Pine County. It is inconceivable that the Secretary of Energy would consider White Pine County "affected" yet the DEIS would not consider impacts which might accrue to residents and/or the environment of the County.

The DEIS has does not adequately address issues raised and substantiated by White Pine County during the scoping process. A summary of key issues raised by the County which have not been sufficiently addressed within the DEIS follows:

1. The scope of the repository EIS should not be narrowly defined by inclusion of alternatives which are limited to the confines of existing law. Rather, consideration of alternatives that are outside the scope of what Congress has approved or authorized can and should be evaluated in the EIS as the document may serve as a the basis for

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[4] Eldridge, Brent, *November 22, 1995 Letter to Wendy Dixon Containing White Pine County Comments to the Scope of the Repository EIS*, Chairman, White Pine County Commission, Ely, Nevada.

framing subsequent Congressional decisions.[5] In this regard, current legislative proposals concerning interim storage of waste and related transportation systems should be evaluated within the repository EIS. **The DEIS limits the alternatives it considers to only those to which current Congressional authorization exists. The document is therefore not useful as a tool for the Administration or the Congress to use in shaping possible new approaches to management of spent nuclear fuel.**

2. The repository EIS must consider the possibility that U.S. Highways 93 and 6 and State Highway 318 through White Pine County will be used for both high-level and low-level radioactive waste shipments. Alternatives considered within the EIS should consider with and without LLRW shipments along highway access options through White Pine County. **The DEIS does not consider the cumulative impacts (radiological, socioeconomic, etc.) of shipments of HLW and LLW through White Pine County.**

3. The repository EIS must include a comparative evaluation of the extent to which alternatives for accomplishing construction, emplacement, closure, and post-closure phases of the facility achieve containment of radioisotopes during volcanic eruption, earthquakes, and loss of criticality control. The comparative evaluation of alternatives for repository design, construction and operation should consider the full spectrum of uncertainty attendant to such options. In this way, the EIS should facilitate decision-making under conditions of uncertainty. **The DEIS does not provide a comparative analysis in a useful summary form of the extent to which construction design and operational alternatives provide containment of radioisotopes from the accessible environment. It is not easy to conclude from the information in the document which design and operational alternative is preferred.**

4. Beyond construction of the repository, alternative methods for conducting waste emplacement operations should be considered. Critical issues include candidate materials from which waste packages might be fabricated and alternative materials for fabrication of waste package baskets. **The DEIS does not appear to consider technology alternatives or material choice in construction of waste packages.**

5. The EIS should consider the possibility that the repository may never be permanently closed. Long-term below ground monitored retrievable storage at the site should be evaluated within the EIS. A comparative analysis of the merits of backfilling the facility vs. other means of closure should be included within the EIS. Alternative materials which might be used to achieve closure should be evaluated against their contribution to risk management, retrievability and cost. **The DEIS does not consider a repository with indefinite institutional control and lack of closure activity. Alternative methods for closure of the repository are not considered. Retrieval of waste (where waste is taken and how) is not considered within the DEIS.**

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[5] See 40 CFR 1502.14(c) for regulatory guidance on the relationship of NEPA compliance documents to congressional decision-making.

6. The EIS should evaluate the risk management contributions of alternative methods of warning future generations of the hazardous nature of materials located within the repository. **The DEIS does not consider the risk management benefits or the costs of alternative methods for warning future generations.**
7. Alternatives to be considered should include construction and use of a hazardous cargo route around the City of Ely. **The DEIS does not consider the benefit, feasibility or cost of this alternative.**
8. The risks associated with use of U.S. Highways 93 and 6 and State Highway 318 through the County should be compared against the risks of using other routes (ie. I-15 to U.S. 95). **Although Table J-48 provides a summary of risks for each route, there is no analysis of the data in this table. In fact, Table J-48 reveals that the risks of transporting waste through White Pine County are significantly greater than through the Las Vegas Valley. The detailed analysis of routes through the Las Vegas Valley then do not bound the range of expected impacts the text in Chapter 6 implies. Table J-48 makes clear that specific impacts of transportation through White Pine County should have been included within the DEIS.**
9. Legal weight truck operational alternatives which should be considered within the EIS include escorted versus unescorted shipments. **The DEIS does not consider the risk benefit/cost implications of escorted vs. unescorted shipments.**
10. The analysis should evaluate the risk management benefits of time-of-day travel restrictions (ie. to avoid transport past the White Pine County High School during school hours). **The DEIS does not consider time-of-day travel restrictions as a risk management option.**
11. The EIS should assess the regional economic benefits of using of local versus non-local trucking firms. **The DEIS does not provide a comparative assessment of the regional economic benefits of using local v. non-local trucking concerns.**
12. The impacts of alternative vehicle payloads upon highway infrastructure, maintenance costs and traffic safety should also be addressed within the EIS. **The DEIS does not appear to assess added maintenance costs or the change in crash rates per vehicle miles travelled as a result of slow-moving vehicles (ie. heavy-haul trucks).**
13. The EIS must consider alternatives for provision of effective emergency first response capabilities along legal weight truck routes in White Pine County. **The DEIS does not consider existing emergency response capabilities to respond to incidents/accidents involving spent nuclear fuel or high-level radioactive waste.**
14. Because of the latent consequences associated with repeated exposures to radioactivity and given uncertainty associated with historic dose levels to residents, White Pine County is convinced that the description of the affected environment must contain a before repository system (baseline) assessment of public health conditions. **The DEIS does not provide a baseline or "before repository" assessment of public health conditions.**
15. The DEIS should consider those environmental features which may affect safe transport of radioactive materials. Examples include weather conditions, wildlife

conflicts with vehicles, and flood prone areas, among other possibilities. **The DEIS only considers these environmental features as such may be impacted by construction and operation of the transportation system. The extent to which these environmental characteristics may impact upon safe transportation is not addressed within the DEIS.**

16. DOE is encouraged to make use of the White Pine County Economic Impact Model in preparation of the repository EIS. **DOE did not utilize the White Pine County Economic Impact Model despite said model having been given to the Department. The DEIS does not include an assessment of economic or fiscal impacts in White Pine County.**

17. The repository EIS should consider existing capabilities of local first responders in White Pine County. **The DEIS does not consider existing capabilities of emergency first responders in White Pine County.**

18. The Department of Energy should acquire and make use of each of the White Pine County sponsored technical studies, models and data sets in preparing a comprehensive description of the affected environment within White Pine County. **Despite White Pine County having responded to a DOE request for "reference materials", DOE did not apparently use this information as none of the White Pine County provided source materials are referenced in the DEIS.**

19. It is imperative that the repository EIS include an exhaustive evaluation of the environmental consequences of waste transport through White Pine County. Because of the unique attributes of the County and its communities, the analysis must be specific to these geographic areas. A generic assessment of transportation risks will not facilitate identification of specific impacts and will preclude consideration of mitigation options necessary to alleviate such effects. **The DEIS includes only a cursory assessment of transportation impacts in White Pine County. Socioeconomic, environmental, land use, etc. is not assessed. Measures to mitigate impacts of transportation through White Pine County is not included within the document.**

20. The repository EIS must consider these significant differences in risk (estimated by UNLV-TRC[6] as being significantly greater in White Pine County) and address appropriate methods for managing risks in the County to a level commensurate with other areas of the Nation. **Table J-48 of the DEIS confirms that risks of transporting waste through White Pine County are significantly greater than other routes involving Interstate highways. The DEIS does not address methods for managing transportation risks in White Pine County.**

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6 Parentela, Emelinda, et. al., Risk Analysis for Spent Nuclear Fuel Transportation Through White Pine County: Highway Routes, University of Nevada-Las Vegas, Transportation Research Center, prepared for White Pine County Nuclear Waste Project Office, UNLV/TRC/RR-95/9, November 1995.

21. The repository EIS should include assessments of transportation on property values. **The DEIS does not address the effects of transportation on property values.**
22. The EIS must include an exhaustive identification and evaluation of measures to mitigate repository system impacts. **The DEIS identifies mitigation measures for only a fraction of the impacts identified within the document. None of the mitigation measures identified is evaluated as to its technical, institutional, or economic feasibility. The DEIS contains no identifiable commitments to mitigation.**

Collectively, failure of the DEIS to address most of the issues raised by White Pine County during scoping renders the document wholly inadequate.

The National Environmental Policy Act (NEPA) requires federal agencies to consider "connected actions". Construction and operation of a repository at Yucca Mountain will result in spent nuclear fuel and high-level radioactive waste being transported through Nevada (and in all likelihood by legal-weight truck in the short-term). The prospect of transportation of spent nuclear fuel and high-level radioactive waste through the Las Vegas Valley will likely trigger a decision by the Governor of Nevada to designate alternative routes. Therefore, the FEIS must consider the impacts of State of Nevada identified alternative routes as a connected action pursuant to NEPA.

A serious omission in the DEIS is the identification and evaluation of alternatives for mitigation of impacts. White Pine County's preliminary review if the DEIS has found no obvious commitments by DOE to mitigate any impacts. The FEIS must include both the identification and evaluation of mitigation alternatives as well as commitments to feasible mitigation measures.

The description of the repository system, including transportation, is too vague to enable assessment of impacts. The degree of ambiguity and uncertainty associated with key assumptions (ie. whether or not State of Nevada will designate alternate routes) renders the analyses deficient for decision-support. DOE is encouraged to validate assumptions, reduce uncertainty, and remove as much ambiguity as possible in presenting a revised analysis of impacts in the FEIS.

Although the DEIS acknowledges that there could be impacts to Native American cultural sites along rail spur routes or at Yucca Mountain, the draft document completely ignores wider issues and impacts to Native peoples and communities. The draft includes a discussion of the Native American "perspective" on the project, but then proceeds to discount the viewpoint expressed and goes on to conclude that no significant impacts to Native Americans will occur, even though no substantive impact assessment work has been done in any of the Native communities potentially affected by the facility or by transportation routes.

Impacts on American Indian communities within the DEIS are specified in more detail

than other communities. There seems to be some bias that the only "Traditional Cultural Properties" considered are those related to American Indian Communities. This is a misconception. Traditional cultural properties could also be related to Pioneer settlements (for example the original Wagon Train route used to settle Preston and Lund or the Keystone and HiLine steam railroad corridor for the Nevada Northern Railroad). There is no assessment of the impacts of the proposed action on cultural tourism. This is a particularly important issue for White Pine County (and other areas like Death Valley National Park) where the economy is currently being re-arranged from traditional extractive industries to tourism.

It is very difficult within the DEIS to evaluate impact on communities in the major zone of influence. One is hard pressed to find any quantification of how many actual legal weight-truck haul loads could be expected through Ely on the US 93 or SR 318 scenario. The table on J-7 might indicate around 1500 shipments from the Idaho National Engineering and Environmental Laboratory 800 shipments from Hanford that might use a route through Ely as an alternate to Interstate routes, spread over a 20-year period (Table J-4). It would be useful if there was analysis of some key points like Ely (apparently a relatively low impact area with about 350 shipments of high-level radioactive waste a year, Table J-4) as opposed to perhaps high impact Mesquite with perhaps an average of 1700 shipments a year of commercial spent nuclear fuel (Figure J-10). The FEIS should identify the impacts of this increase of traffic on tourism trade. The DEIS should describe time of day, day of week and seasonal characteristics of shipping campaigns. Would there be an effort for shipments to occur during low season traffic times? The FEIS should consider the changing demographics of "snow-birds". The attitudes of snowbirds toward radioactive waste shipments should be considered within the FEIS. Would shipments be scheduled to occur during low traffic or high traffic hours, being moved at night or during the day? The effect of transport corridors be designated as "heavy-haul nuclear free" as a mitigating measure in order to alleviate concerns of motorists who wanted to avoid worst case scenario nuclear accidents should be considered within the FEIS? The extent to which such a measure might also reduce the possibility of exposure if there was a highway accident causing a loss of containment should be addressed within the FEIS?

The prevailing impression (including within the DEIS) is that significant archeological properties can be bought. Yet the cost of conducting data recovery operations is not specified within the DEIS. It appears that a majority of the significant archeological sites at the Yucca Mountain site have already been treated through data recovery. What have been the costs of this treatment? How do these costs at the sites at Yucca Mountain compare to data recovery costs at locations where highway or rail improvements may be made? The kinds of sites at Yucca Mountain may be much less expensive to conduct data recovery operations than sites in valley floors or riparian zones that tend to be more complex and therefore expensive to conduct data recovery operations. What kind of sites might be of such high value that data recovery should not be undertaken, but rather sites should be avoided by through re-routing and preserved in place. This is a particularly relevant question for a situation like Five Finger

Ridge along I-70 between Richfield and Cove Fort in Utah. This site should have (and could have) been avoided if there had not been a mentality at work in the early 1980's that all archeological sites could be "mitigated" by data recovery. Why has the DEIS not considered off-site mitigation along potential "tourist corridors" that would be alternative routes to avoid heavy haul nuclear waste shipments?

There is reference to a DOE, Advisory Council on Historic Preservation agreement in each DEIS section on cultural resources. This agreement is now several years old. There are new standards for these agreements that emphasize public involvement and alternatives to data recovery as mitigation measures. Will this agreement be modified to deal with the very different issues in treating cultural properties on linear corridors rather than in large area blocks? Will there be more emphasis on public involvement and public availability of popular and research reports emanating from mitigation?

Can the experience of transport of low-level and transuranic nuclear waste and impacts (ie. Waste Isolation Pilot Plant (WIPP) and shipments to Nevada Test Site) be used as a model for the Yucca Mountain repository? To what extent was WIPP Program Implementation Guide for transportation considered as a model for Yucca Mountain regarding mitigation within the DEIS? Was the experiences of these other shipping campaigns used as examples to assess community impacts and transport accident rates within the DEIS?

A variety of discrepancies within the DEIS text and tables and inconsistencies in data presented in the document exist. Several of the risk computations use assumptions that do not appear to be consistent with known references, and reasonable expectations. Examples of these problems with the DEIS are included within the specific comments which follow. Several of the "worst case scenarios" do not appear to be "worst case" for White Pine County. Using known intersections, traffic conditions, established weather patterns and road usage, County reviewers were able to develop several worst case scenarios that meet or easily exceed the ones listed in the DEIS. Examples of possible "worst case" scenarios which should be considered within the FEIS as a means to bound impact assessment and to identify reasonable mitigation measures include:

Accident Scenarios

1. Legal weight truck loaded with spent fuel collides with double-trailer gasoline tanker on U.S. 6 immediately south of the City of Ely water supply at Murry Springs. Both vehicles engulfed in flames. Fire of sufficient heat and duration to destroy cask seals resulting in breach of containment. Direct impacts include environmental contamination, closure of U.S. 6 and enhanced public perception of risk and related area stigmatization.

2. Legal weight or heavy-haul truck loaded with spent fuel collides with double-trailer gasoline tanker at intersection of U.S. 93 and State Route 375 near Crystal Springs in Lincoln County. Both vehicles engulfed in flames. Fire of sufficient heat and duration

to destroy cask seals resulting in breach of containment. Indirect impacts in White Pine County include reduction of vehicular traffic along U.S. 6 and U.S. 93 through the County and related reductions in visitation to Great Basin National Park and other destination locations within the County.

3. Legal weight truck loaded with spent fuel collides with double-trailer tanker on U.S. 93 thirty miles north of Ely. Both vehicles engulfed in flames. Fire of sufficient heat and duration to destroy cask seals resulting in breach of containment. Direct impacts include environmental contamination, closure of U.S. 93 and enhanced public perception of risk and related area stigmatization. Economic and fiscal consequences of road closure.

Non –Accident Scenarios

1. Nevada's Governor designates U.S. 93 south from I-80 at Wendover through Ely to U.S. 6 then south to U.S. 95 then on to the Nevada Test Site as an alternate to transportation through Las Vegas via I-15. Direct impacts include residents and visitors in the County being exposed to risk of radiological exposure. Indirect impacts include enhanced public perception of risk and related area stigmatization.

2. Nevada's Governor designates U.S. 93 south from I-80 at Wendover through Ely to U.S. 6 then south to State Highway 318 through Lund to State Highway 376 to U.S. 93 then south to I-15 to U.S. 95 north to the Nevada Test Site. Direct impacts include residents and visitors in the County being exposed to risk of radiological exposure. Indirect impacts include enhanced public perception of risk and related area stigmatization.

Repository Pre-closure/Post-closure Scenarios

1. Disruptive event (ie. volcanism, nuclear criticality) of unanticipated nature through repository horizon and of sufficient force to produce an emission plume and related deposition across White Pine County. Direct impacts include increased risk to residents and visitors of the County to exposure to radionuclides. Indirect impacts include enhanced public perception of risk and related area stigmatization.

DOE is also encouraged to give serious consideration to the scenario presented by Ms. Elizabeth Risden, a White Pine County resident, at the October 19, 1999 DEIS hearing in Ely.

Assumptions made in the DEIS, especially as such relate to cask permeability and potential for breach, seem very conservative and perhaps not well thought through. The use of conventional highway traffic data, while convenient may have limited applicability when examining scenarios within White Pine County.

Failure of the DEIS to designate a specific route, or even mode of transportation in advance of evaluation of the environmental impacts, grossly impacts the ability to prepare for and ameliorate the consequences of potential crash, or breach of containment. Here the cart is

clearly before the horse. Government agencies, even individuals cannot adequately prepare for an infinity of scenarios. The designation of modes of transportation, the material to be transported (BWR, PWR, Greater that Class C, Weapons Grade Plutonium, Special Performance Assessment-Required LLW, etc), the routes, timing, seasonal and other factors should be ostensibly determined in advance of evaluation of environmental impacts. Several things were not even considered, or were given extremely low priority in this DEIS, most noticeably the lack of assessment of socioeconomic impacts and public perception in both eventful and uneventful transport. While most considerably a statewide issue and one that will greatly impact Nye and Clark counties, White Pine County, by virtue (or lack thereof) of relative economic poverty could conceivably suffer sever economic hardships. This is especially true in worst case scenarios. The lack of consideration for these issues may stem from the lack of designated routes and modes of transportation. Nonetheless, the DEIS should address these concerns and offer mitigating proposals to offset the deleterious effects.

Understanding that the public's perception of nuclear waste as inherently dangerous rather than potentially dangerous, the DEIS should address in detail the public's concern, the potential for economic downturns, and suggest economic and social compensation for both uneventful transportation and storage scenarios as well as worst case scenarios.

The DEIS conveys preconceived notions regarding the safety and efficacy of transportation of high-level nuclear waste and their subsequent storage at the Yucca Mountain site. Recognizing that transportation of hazardous materials and especially radioactive products has an excellent track record in the United States, and moreover that many great minds have established proven protocols to handling these products, White Pine County recommends that the results of this DEIS be reviewed by an independent technical group to ensure that analyses are appropriate and that all measures to effectively manage risk have been considered. While admittedly a costly measure, because of the nature of the material involved and longevity of the impact, a second study, ordered by the Congress of the United States, by another agency or group, might well be undertaken in an effort to confirm or dispute the findings in this report. At the very least, a group of experts in the various fields associated with this report, not associated with the Department of Energy or even the NRC should be assembled and charged with the task to carefully review this document with the understanding that their comments would be accepted, utilized and indeed exercised even after the February 9, 2000 comment period expired.

White Pine County is concerned that here is no review of potential state-wide impacts, how changes in regional economic trends might impact neighboring counties, or impacts that could occur in counties along proposed transportation routes. It is not possible to suggest specific positive or negative impacts to White Pine County without initial analysis on anticipated state and regional impacts. In addition, the DEIS should include a separate review and analysis of impacts to communities along transportation routes once they have been selected. The FEIS should commit to such an analysis and the related identification of

mitigation measures.

All communities with the state could be impacted by changes in the economic picture for the entire state because of the repository. The DEIS provides no assessment of the impacts to counties and cities from losses in state-level economic and fiscal activity. The State of Nevada Nuclear Waste Project Office has demonstrated the potential for statewide tourism related economic and fiscal impacts as a result of nuclear waste being transported throughout the state and stored at Yucca Mountain. State sales and gaming tax revenues could be reduced, and this would impact state services and funds available to counties and cities for local services. It is also possible that the fact that high level nuclear waste is being transported on Nevada highways may influence motor freight routes. Communities like Ely receive a significant economic benefit from the increasing amount of truck traffic over US Highway 93 and State Route 318. If trucking firms elected to use Interstate 15 instead to avoid the routes used for high level nuclear waste, then our communities and the state as a whole would feel an economic impacts. Each of these key issues needs to be addressed in the FEIS.

Positive and negative impacts in neighboring counties including Lincoln, Nye, and Eureka Counties could indirectly impact White Pine County. Moderate increases or decreases in population and economic strength in Eureka, northern Nye, and northern Lincoln Counties could impact White Pine. These areas currently depend, at least in part, on Ely as a commercial and professional center. Decreases in their economies could reduce White Pine County's economic activity from its neighboring counties. Increases in population and activity could increase the economic activity in White Pine County. If the increases in the neighboring areas were significant enough to support development of new commercial and professional activity, it could decrease the activity now coming to White Pine County. These connected actions or impacts have not been considered within the DEIS.

It is possible that selection of transportation routes through White Pine County could result in socioeconomic impacts for White Pine County. If the presence of trucks hauling high-level nuclear waste in White Pine County required new state and/or federal employees in the area, their households would generate revenue in the community. New private sector ventures could be warranted to provide parking areas or shuttle services between parking and motels. However, the negative impacts of the presence of high-level nuclear waste could include reduced tourist traffic to White Pine County attractions, reduced customers for businesses located along the transportation routes or near the parking areas, reluctance of lenders to finance projects located within the corridor because of potential environmental hazards or increased risk perceived for the area; and regulations governing the use of areas along the transportation route could deter future land use decisions on mining, grazing, or tourism/recreation projects. The identification and analysis of impacts to the local economy in White Pine County and the City of Ely need to be included within the DEIS. Absent such analyses and identification of appropriate measures to mitigate impacts, potential effects will

go unmitigated. Such an outcome is inconsistent with the intent of NEPA. The limited discussion regarding Clark, Lincoln, Nye, Eureka, Lander, and Esmeralda Counties does not show the true picture of impacts White Pine County could expect from the development of Yucca Mountain to store high level nuclear waste.

Although White Pine County is a remote rural area, the topography, climate, population concentration, existing transportation systems and economic condition are unique and must be considered in any decision on transportation routing for hazardous materials. The absence of any data in the DEIS concerning this are is particularly disconcerting for the County's emergency first responders. Besides transportation issues, it is a fact that White Pine County is downwind of Yucca Mountain and its residents have had health problems from testing conducted at the NTS. County residents would probably prefer the no action alternative where wastes are stored at their current locations. The DEIS should consider baseline health and public perceptions of risk.

Although the DEIS considers possible exposures due to historical shipments as a component of cumulative risk, it does not appear to include collective historical and future doses resulting from weapons testing. There has been historic deposition of radionuclides in White Pine County from DOE weapons testing activities. Residents of the County face the potential for exposure to concentration of radionuclides deposited in the County (ie. while hunting on mountain tops in the area) which when combined with exposures from reasonably foreseeable events, may result in a cumulative dose. The DEIS must consider the cumulative dose to White Pine County residents from historic weapons testing as well as historic and anticipated transportation activities through the County.

Transportation routes identified by the State of Nevada and evaluated in Appendix J go through White Pine County's most populated area and county seat, Ely. Here, ninety percent of the County's population exists within a 15 mile radius of the Ely city center and proposed transportation route. The main highway to the southwest goes five miles uphill along a winding, mountainous two lane route to Murry Summit (which is 7,300 feet high) passing within yards of the main water supply for the city. For six to eight months of many years, U.S. Hwy 6 is often icy and snow covered. It is not unusual for emergency first responders to take an hour to reach an accident site on any major highway because of the distances involved. If any highway is closed there are limited alternatives for routing traffic. The resulting economic impact could be devastating. Fog and snow can and has closed the only airport. The only hospital has limited capabilities. Volunteers are relied upon for fire and EMS resources. The DEIS does not adequately address these issues. The FEIS should include an assessment of unique circumstances impacting upon effective emergency first response in White Pine County.

Studies need to be undertaken to provide accurate assessments for those who are making transportation decision concerning this area. Resources are limited and often

inadequate without adding another demand on them. Money needs to be provided to increase the capabilities to specified levels and it must be provided to maintain those levels. Communications systems, support facilities, shelters, training and equipment, as well as qualified personnel are really inadequate to handle any serious accident. If a decision is made to route radioactive wastes through the county the costs associated with providing proper health and safety response agencies must be considered. There are some problems which money cannot solve. The DEIS then, must consider a combination of mitigation and compensation if risk management through effective emergency first response is to occur.

Before any decision is made concerning routing shipments through White Pine County a thorough assessment needs to be conducted and the results conveyed to those who will make the decision. This information, if not contained within the FEIS, should be a component in a subsequent supplement to the FEIS.

Carrier and shipper responsibilities and emergency response procedures require that response entities have a response team on call 24 hours a day. Will DOE and its carriers require/request 24 hour response capabilities of local first responders? The regulations at 10 CFR, Part 73, govern special safeguards. These regulations specify that transport vehicles carry personal communications devices. The DEIS should evaluate the extent to which such devices will function in rural Nevada and the extent to which rural emergency first responders have compatible communications capabilities. Of particular concern is the extent of communication "dead spots" located in areas of high accident hazard (ie. canyons). Measures to mitigate communication deficiencies should be identified and evaluated within the DEIS (ie. repeaters).

The DEIS should recognize that communications would be helpful to situation assessment. Keeping in mind that there is a lot of highway area and distance to travel, emergency first responders would benefit from knowing what was occurring at the incident before these Emergency Response Teams from White Pine County arrive. The FEIS should consider what enhancements in local communications capabilities would be required to facilitate such communication. The FEIS needs to include more investigation, study and planning if transportation is to be safe for both the environment and the communities within White Pine County.

The DEIS does not appear to address where and how relief drivers will be stationed or where and how these drivers will stop and park their trucks for meals, vehicle maintenance, fuel, etc. In addition, the DEIS does not address the qualifications of drivers and their respective knowledge in handling vehicle breakdowns or equipment failures as a means to mitigate risk. These issues need to be addressed in the FEIS.

The DEIS does not address restrictions in hours of operations for truck shipments as a possible measure to mitigate exposure risk in communities. For example, shipments could be

restricted from passing schools at the beginning and end of each school day.

The DEIS does not consider the availability of specialized equipment which may be needed to transfer shipping casks from one vehicle to another while in transient. Delays in availability of such equipment may exacerbate exposure risks. This information must be considered in the FEIS.

The DEIS does not contain an adequate analysis of the special populations (ie. schools, hospitals, jails, prisons, churches, motels, hotels and communication stations) and strategic community facilities (ie. water supply wells and springs) which may be proximate to highway transportation routes. Potential impacts to such populations and facilities and related mitigation measures should be included in the EIS.

The DEIS mentions "uncertain" transportation-related decisions, "potential transportation impacts" and regulatory agency "attempts" to reduce potential hazards. Specific rail routes, heavy-haul routes and withdrawal lands need to be identified and analyzed as part of this EIS, not in the future. The FEIS must demonstrate how can true environmental impacts be addressed and major transportation decisions made, without this information.

Specific Comments

Page 1-1 A definition of an EIS is given here. The FEIS should also note that an EIS can and should be used to inform decision-makers of reasonable alternatives that would minimize impacts. Such alternatives could become the basis of Administrative proposals for legislation. The DEIS does not provide decision-makers with adequate information on alternatives to minimize impacts.

Page 1-1 2nd paragraph. Even if transportation-related decisions are uncertain at this time, any potential routes need to be field surveyed, local governments consulted and environmental analysis done as part of the EIS, not after the fact. For example, where does the EIS analyze potential impacts (socioeconomic, etc.) of transporting spent nuclear fuel and high-level radioactive waste on U.S. Highway 6 between U.S. Highway 93 and State Route 318 or U.S. Highway 93 between Ely and Caliente? Do mountain roads in January increase accident risks? These characteristics should have been considered as a component of the description of the affected environment.

Page 1-4 Section 1.2.1, Generation of Spent Nuclear Fuel and High-Level Radioactive Waste, Paragraph 5, Line #2 states "All of these reactors have been shut down for several years". This statement is not entirely correct. Most of these reactors have been shut down for several years, however the production of plutonium for weapons research and other research purposes have continued. In any case, it would be useful to reference how many years the reactors have been shut

down, and what storage problems and considerations were observed, perhaps in the appendices.

Page 1-6. Section 1.2.2. "Cladding, if it is not damaged or corroded, has the capability to isolate the spent nuclear fuel and delay the release of radionuclides to the environment for long periods." What is a "long period." This is not quantified.

Page 1-6. Section 1.2.2.2. How was the spent nuclear fuel from the "55 university- and government-owned test reactors" transported to Hanford and Savannah River? What was the accident record?

Page 1-6. Section 1.2.2.2 "Additional small quantities remain at other Locations." What is going to be done with these quantities? Will they be dealt with under this planned action?

Page 1-7. Section 1.2.4. Will the plutonium at the Pantex Plant, Rocky Flats Environmental Technology Site, Los Alamos and Lawrence Livermore National Laboratories be treated by this proposed action? If so why are these not included in the maps, transportation routes and analysis?

Page 1-7 Section 1.2.3, High-Level Radioactive Waste, Paragraph 2, line(s)3-4 The text here states, "Treatment ordinarily includes separation of the waste into high activity and low activity fractions, followed by vitrification of the high activity fraction". High and Low fractions are not clearly defined. It would be advantageous to list the criteria for high and low fractions in the appendices not only for storage limitations but also for transportation criteria. Furthermore, they type of canister the vitrified high fraction material is stored in should also be listed both for storage and transportation purposes as this material may present different packaging demands than fuel assemblies.

Page 1-8 The DEIS does not consider the potential for certain defense high-level radioactive wastes to have security requirements which limits pre-notification of emergency first responders about pending shipments. Measures to mitigate pre-notification restrictions should be addressed within the FEIS.

Page 1-8 This section of the DEIS should discuss repository siting activities at Lyon, Kansas including why the site was not developed and what lessons for the Yucca Mountain project can be applied.

Page 1-9 The entire first full paragraph on this page, while offering history on the determination that a miens deep geologic repository was the final conclusion as best treatment alternative, it offers information that is 20 years (plus) old. If

newer studies or reviews have been completed or if other finding support or dispute these conclusions, they should be referenced. In light of the technological advancement, should other alternatives be considered?

Page 1-11. Section 1.3.2.2 The weight of inventory of radioactive heavy metal is Specified as 70,000 MTHM but how does this convert to volume?

Page 1-11 Section 1.3.2.2 indicates that DOE used 0.5MTHM per canister for defense high-level radioactive waste. The justification given in the document is that DOE has used this value "since 1985". This is no justification at all. Rather, the FEIS should base the assumed volume of waste per canister on current characteristics of waste and canisters to be utilized. Use of the assumed 0.5 may underestimate the number of defense waste canisters which must be transported to, and disposed of within the repository. While long-term repository performance may not be affected, underestimation of canister numbers will bear upon waste handling, emplacement, retrieval and transportation facets of the repository system and impacts related thereto.

Page 1-12. Section 1.3.2.2 Do we assume that the 105,000 MTHM of waste from operating nuclear power plants through 2046 would equal 210,000 canisters of waste. Why is this not specified when the 2,500 MTHM of DOE spent nuclear fuel translates to 22,280 canisters, far more than the 0.5 MTHM proposed per canister?

Page 1-14 2nd paragraph. States that if the land to be withdrawn included land that this EIS does not consider for withdrawal, DOE would perform additional analysis as required. The EIS should consider all possible withdrawal land. The land to be withdrawn should have been determined prior to finalizing the EIS. Same comment applies to Section 11.1, Statutes and Regulations Establishing or Affecting Authority To Propose, License, and Develop a Monitored Geologic Repository Federal Land Policy and Management Act of 1976, 3rd paragraph.

Page 1-14 Section 1.4.1. Is DOE considering withdrawal of Rail and Highway Transport routes that would be constructed exclusively for transport of canisters to Yucca Mountain.

Page 1-17 Section 1.4.2 "if authorized, would be a facility for permanent disposal of 70,000 MTHM of spent nuclear fuel...". What about the 105,000 MTHM mentioned earlier? Is this action going to cause an expansion of Yucca Mountain repository? Is this EIS to cover 70,000 and 105,000 additional MTHM? Or just 70,000 MTHM? Would approval of the 70,000 MTHM repository result in a reasonably foreseeable 105,000 MTHM addition? What

are consequences of this on transport and expansion of the facility and associated risks?

Page 1-20 Section 1.4.3.3 "The views and comments of the governor and legislature of any state and of the governing bodies of affected Native American Tribes". Federal regulations nowhere define "Native American Tribes." Federal regulation deal with "recognized American Indian Tribes."

Page 1-20 Failure to provide institutional control over this sensitive and potentially dangerous material (provided governmental agencies concerned with this still exist) is poor logic. Perhaps the DOE could consider alternatives in the range between 100 and 10,000 years. Other parts of the document discuss permanent closure after 300 years. This appears inconsistent with other statements in the document.

Page 1-22 Section 1.5.1 How will American Indian Tribes affected by long distance haul routes be consulted? Other tribes and non-Indian communities outside the Yucca Mountain area itself should be consulted and may in fact be more impacted by transport than Tribes with traditional ties in the Yucca Mountain area itself.

Page 1-23 The first full paragraph here states that DOE invited affected units of local government to "prepare their own documents setting forth perspectives and views on a variety of issues of local and regional concern, which DOE agreed to incorporate be reference in the EIS." In response to this offer, White Pine County provided DOE with a complete set of technical studies and economic impact models developed for the County and asked that these be used by DOE in preparing the DEIS. The County is dismayed that not a single document provided to DOE is included in the list of references. The County must assume that DOE did not refer at all to the documentation, data and models provided in preparing the DEIS.

Page 1-24 States that the Caliente-Chalk Mountain rail line and route was added to four rail corridors and four heavy-haul routes previously identified for "potential transportation impacts." The transportation analyses described in Chapter 6 and Appendix J is insufficient for the EIS (see comments to Page 1-3).

Page 1-24 Section 1.5.2 indicates that calculations were verified independently. The FEIS should indicate the nature of the independent verification (who was involved).

Page 2-1 The second paragraph notes that the No Action Alternative is intended to serve as a baseline against which the Proposed Action can be evaluated. Because

waste managed on-site at generator locations has institutional controls, the No Action assumption of loss of institutional controls is not a true reflection of baseline conditions.

Page 2-1 It is unclear from the discussion on this page whether the Secretary of Energy's determination whether to recommend Yucca Mountain to the President will include consideration of transportation issues. The FEIS should indicate whether transportation issues will be considered as a component of the Secretary's site recommendation.

Page 2-1 The DEIS is very vague as to whether DOE will and if so, when DOE would make decisions regarding transportation modes and routes. The FEIS should clearly state if DOE intends to make transportation decisions, what decisions the Department will and will not make, and a best estimate of when transportation decisions would be made. If DOE is assuming that ant transportation decisions will be made by other parties, the nature and expected timing of such decisions should be identified.

Page 2-5 The FEIS should consider a rail to legal-weight truck alternative. Such an alternative is very plausible and could involve intermodal and routing alternatives not currently considered within the DEIS.

Page 2-47 Page 2, Paragraphs 4 and 5 of White Pine County's comments to the scope of the DEIS (1/22/95) address valid concerns that routing of waste may indeed occur through White Pine County. This occurrence should be considered and addressed by the DEIS.

Page 2-47 Section 2.1.3.3.1 should recognize and explain the role that states may play in routing. The assumption that waste will enter Nevada via Interstate 15 assumes that the State of Utah and the State of Nevada have not made alternatives routing designations. The DEIS should review the process and difficulties which may attend definition of a national system of state-accepted routes.

Page 2-58 It is not clear whether the costs shown in Table 2-5 include expenditures on the Yucca Mountain Project to date. The table should explicitly show expenditures to date and projected expenditures in the future.

Page 2-59 The No-Action Alternative should be recognized as more than simply "providing a baseline for comparison". In fact, DOE can choose the No-Action Alternative and the Secretary of Energy could do so in a subsequent Record of Decision. The DEIS must provide analytical evidence as to why whichever alternative is selected.

Page 2-80 Table 2-8. This table is unclear to the reader in that it doesn't define time parameter being measured. Does the table imply that the Maximally exposed individual receives 48 rem per year; over the course of all shipments; and so on. Units of measure should be defined over what time period, number of individuals exposed (i.e. collective dose stats) or in percentages based on shipments. The DEIS lacks sufficient information to allow the reader to deduce from either the table or appendices how these figures were arrived at. A maximally exposed individual receiving 48 rem per year (about 10 times maximum allowed under U.S. Federal Radiation Counsel Guidelines and 24 times the maximum accepted as safe practice by DOE) would have significant health risks. Even if this individual was exposed over the course of 10 years, his latent cancer probability should, on the basis of the logic in the DEIS, be about 10 times what the table predicts. The table itself should reference the appendices and how this data was developed and how those figures were arrived at, including related references.

Page 2-80 The third point on this page states, "Impacts from the transportation of spent nuclear fuel and high level radioactive waste from the commercial and DOE sites to the Yucca Mountain Site would be low for either national shipping mode." This statement is unsubstantiated in as much as the table it references is both unclear in its statistics and does not account for worst case scenarios. A better statement would be that statistical probability of impacts would be low, but actual impacts are not only unknown, but liable to random accident, man caused incidents and acts of nature. While these are addressed later in the study, they should at least be prefaced here.

Page 2-80 Section 2.4.4.1, 3rd paragraph states, "The National Transportation of spent nuclear fuel and high level radioactive waste would use existing highways and railroads and would represent a small fraction of the existing national highway and railroad traffic etc... "In as much as burden placed on the national highway system by the transportation of high level nuclear waste would be small this statement is pertinent to the study, however using accident prediction statistics would not be pertinent in as much as high level waste products, even in most minor accidents can cause tremendous traffic problems in light of the material being shipped. Consequently, a better analysis would be of known shipments of low level waste products, fuels transported to nuclear plants and studies that reflect accident rates for other hazardous materials. Studies of hazardous shipments would reflect the impact on roadways and populace where (for example) road closures over extended periods of time occurred or secondary accidents occurred as a result of higher traffic loads. While these shipments would most probably display lower accident rates compared with all

commercial freight, the costs associated with the accidents that did occur and impacts of those accidents might be significantly higher than other freight modes.

Page 3-70 Section 3.1.6.2.2. "According to Native American people, the Yucca Mountain area is part of the holy lands of the Western Shoshone, Southern Paiute, and Owens Valley Paiute and Shone peoples. Native Americans generally do not concur with the conclusions of archaeological investigators that their ancestors were highly mobile groups of aboriginal hunter-gatherers who occupied the Yucca Mountain area before Euroamericans began using the area for prospecting, surveying, and ranching." This statement is unsubstantiated, unquantified and insupportable. What are "holy lands?" How is it determined that Native Americans generally do not concur? What was the sampling design to determine this opinion. What "Native Americans" were interviewed or questioned? How were they determined to be representative? What were the specific questions asked to determine that there is a disagreement with archeological scholars? These statements are outrageous and insupportable stereotyping based on a sample of unknown representatives.

Page 3-98 Section 3.2.1.2 states, "Rail transportation routing of spent nuclear fuel and high level radioactive waste is not regulated by the U.S. Department of Transportation. The responsibility of designation of rail routing of high level waste products should be determined in advance. While this issue is addressed under the concern that at the time of writing this document no specific route or mode of transportation is recommended or assigned, of great concern is the lack of designated responsibility for routing during the shipment. If USDOT individuals are not designated as responsible, some entity must assume authority and that designee should be identified within the FEIS.

Page 3-98 The text here states "Final Transportation mode and routing decisions will be made on a site specific basis during the transportation planning process. . . " The DEIS should indicate whether local government such as White Pine County will be involved with this process. If not, then the DEIS should address routing through White Pine County.

Page 3-99 Section 3.2.2 address legal wight truck shipments on U.S. Highway 95. Does failure of the DEIS imply that legal wright shipments would not be allowed on other routes without supplemental NEPA documentation? The DEIS should indicate what, if any, supplemental NEPA documentation would be required for a route other than those assessed within the DEIS.

Page 3-99 Section 3.2.2 implies that only data for U.S. Highway 95 was used in the

analysis. If this is the case, the analysis may not accurately represent risks of shipping fuel on other Nevada highways. Nevada's highways are characterized by unique traffic patterns, load levels, seasonal environmental conditions and physiography.

Page 3-112 Section 3.2.2.1.5 Analysis of a corridor limited to only 0.2 kilometers is incredibly restrictive for an overview assessment. This results in small sample sizes and an inability to reasonably characterize the affected environment. A wider corridor or sample design based on topographical, geomorphic, and vegetative strata for the corridors would be much more in keeping with current professional practice to predict impacts to cultural resources.

Page 4-45 Section 4.1.7 does not appear to consider exposure beyond 80 kilometers. The DEIS should indicate whether exposure beyond 80 kilometers is possible and if so, to what extent. Further, this section does not appear to consider off-site exposure potential associated with volcanism. Although volcanism is a low probability event, it would have a potentially high degree of consequence. The health risk associated with a low probability volcanism event should be estimated so as to determine whether some manner of related mitigation is warranted.

Page 4-60 Paragraph 2 of Section 4.1.8 Accident Scenario Impacts, states, "The impacts to offsite individuals from repository accidents would be small etc... " This statement appears unsubstantiated in as much as no appendices are listed where the reader can obtain the underlying date used to compute dosages and confirm or dispute the conclusions. The 0.013 rem threshold seems very small as it is significantly less that background radiation levels (background radiation levels as much as 0. 15 rem, Source Book on Atomic Energy, Glasstone et al, 18.38 pp745) and would be difficult to determine or quantify. The bounded worse case scenario for the non involved worker seems extremely low at 31 rem given nature of material being handled. Perhaps the drafters of the DEIS here assume safety measures for containment that are not otherwise described within the DEIS. Again this statement should reference the data used to compute it and what bounding criteria was utilized.

Page 4-88 The analysis on Section 4.1.15.4 should have considered the economic impacts of locating one or more cask manufacturing facilities at a greenfield site in Nevada, particularly, White Pine County. Such a facility might serve to mitigate potential negative economic impacts in the area.

Page 4-98 Section 4.2 should include an estimate of the potential number of shipments which would be required to move retrieved waste. In the worst case, all

material disposed of at Yucca Mountain might have to be retrieved and transported out of the State of Nevada.

Page 5-6 The sequence of events described in the first paragraph of Section 5.2 should also include volcanism and human intrusion as initiating events.

Page 5-16 The third paragraph of this page should also consider nuclear materials brought to the surface as a result of drilling.

Page 5-38 The entire paragraph for Section 5.5.1 is vague. It doesn't reference what estimates were used to arrive at the calculation. Admittedly, carbon-14 release would in most probability be small, especially after traversing from storage facility to outside air. However, because the data points were not included, even in the appendices, the reviewer cannot ascertain how the conclusions were reached. Anytime "average values for stochastic (random) values" are used, it leads the reader to the suspicion that the values were "made up". The 14C existing in the atmosphere is being formed continually as a result of nuclear reactions between atmospheric nitrogen and neutrons from cosmic rays (DOE Radiological Handbook). At the very least, the baseline data used for this computation and the assumptions made should be listed in the appendices for confirmatory purposes.

Page 5-42 It is not clear why the DEIS assumes human intrusion at 10,000 years when peak dose is not anticipated until approximately 100,000 years. Is it not likely that the consequences of human intrusion would be substantially greater at 100,000 years?

Page 6-11 Section 6.1.2.5 The archeological impacts on the five rail corridors are essentially unassessed and unquantified. There is no information provided that would allow assessments to be made of the option to avoid outstanding significant sites rather than to damage, destroy or treat through data recovery. Sites should be characterized by type and the constraints provided for avoidance rather than damage or data recovery by rail corridor construction.

Page 6-26 The fourth paragraph of Section 6.2.4.1 appears to make some assumptions which do not concur with other data presented in this document or supposed worst case scenarios. Assuming 0.1 person rem per ?? accident, ??annual average, ??hour... this is far less than worst case scenarios for transportation, intermodal transfer, cask placement accidents etc. Worst case scenarios presented in this document call for higher dosages than that. What might be said is that experience to date reflects this to be handling accident statistics, however as quantities are increased and shipments begin, this dosage could be

higher. White Pine County does not agree with the assumption that "handling incidents involving high-level waste would be less than those involving spent nuclear fuel".

Page 6-27 The assumptions underlying this section and related table are suspect. First, the assumption appears to be that the cask cannot be breached in any way, either by heat or physical forces. While the data presented here and in the supporting texts indicate the improbability of cask breach, they cannot rule it out. Rail casks, speared by a rail during accident would cause cask breach, extreme heat might damage seats, a terrorist act could breach the container, etc. Collective doses in these scenarios would be considerably higher than the data presented here. DOE should thoroughly re-think these hypotheses and present data that includes the potential for containment breach, along with the statistical probability of such an accident occurring. Second, distances from containers either during an accident or in subsequent clean up are not presented, either here or in Appendix J. It would be possible to skew data either up or down by adjusting the distance from radiation source. In other parts of this document (6.2.4.2.3 1 6, line 4-5) the assumed distance from source is 150 Meters (about 500 feet). Here again the data presented (if I understand the writer correctly) appears to disagree with data presented later on in the document on maximum exposure risks. Without knowing how this data was calculated, we cannot confirm or dispute the findings, and on the face of it, these exposure risks, associated with an accident appear artificially low.

Page 6-29 "The Modal Study", page 6-29, Paragraph 3. The NWPO. didn't suggest alternative analyses or models and did not offer differing values for use in estimating consequences or risks of severe accidents. While the paragraph following this one leads the reader to believe that the data used in risk computation were extremely conservative, it is poor statistical research, in principle to use only one set of data points, or a single model to predict outcomes. The DOE and writers of this document should be commended on the research models done and obviously a great deal of research was done to assemble these models. It does not however relieve the DOE, the writers of this DEIS, or it's editors from the responsibility to provide other research models to determine accident scenarios or to use data sets and conditions that might otherwise offer different conclusions.

Page 6-31 Section 6.2.4.2. 1, Paragraph 2 states "The accident risk for legal-weight truck shipments dominates the total risk. . . " If this is the case and shipments through White Pine County are even a remote possibility, then detailed analysis of such shipments through White Pine County should be addressed in the DEIS.

Page 6-31 Paragraph 3, Last Line of this page states, " The maximally exposed individual, assumed to be about 360 meters (I 180 feet) from the accident would receive a dose of about 3.9 rem (table 6-1 1)". The assumption of the maximally exposed individual at nearly 1200 feet is an unrealistic assumption. Where was this derived from? Is there a national standard that references that distance as a common reference? If an average lane, on an average US Highway is 14 feet, and the average setback distance in any given municipality is about 50 feet, (I have no reference for this, but could probably produce one), then the maximally exposed individual might be an average (not including people who came in for a closer look) of 64 feet from the accident site. Assuming that the radiation dose is inversely proportional to the square of the distance from the source (Sourcebook on Atomic Energy, Glasstone 1979, pp752 footnote) it is conceivable that a maximally exposed individual might receive perhaps 800 to 1000 rem. Even a brief exposure at this distance would most probably prove fatal. Extended exposures, (greater than an hour) would certainly prove fatal. The estimates of dose do not appear realistic and could be easily exceeded.

Page 6-38 Section 6.3.1. Although proposed shipments using legal weight trucks would represent only a fraction, about 1 percent) of total truck traffic on Nevada highways, because of the nature of the material shipped, the impact on such things as socioeconomics, aesthetics and perception by the public could be significant. The relationship to regular commercial traffic is only applicable in the amount of fossil fuels burned and related impacts. Truck volume and other impact experiences fro trans port of spent fuel and other nuclear and hazardous wastes should be used to determine impacts of transportation.

Page 7-48 Section 7.3.2.5. This is inadequate treatment of the known cultural situation where expansion of facilities would be undertaken. If there are existing DOE and Commercial facilities what is known of the cultural resources in these areas and what would be the specific impacts on known cultural resources. If Scenario 1 is expansion at Yucca Mountain, what would the site-specific surface ground disturbing impacts be?

Page 8-79 Section 8.4. 1. I Inventory module I or 2 impacts, and Table 8-59. Some of the data reflected in this table does not seem to compute correctly. Specifically, a 58 percent increase in time spent shipping material reflects nearly 90 percent increase in kilometers traveled (580 million kilometers traveled vs. 1. Billion kilometers traveled) with only a 50 percent increase in fatalities (8.6 to 12.9) the fatality rate per kilometer driven actually drops in the inventory module I or 2 scenario from the proposed action (by about 20 percent). This doesn't seem logical. An argument that the kind of waste being transported is a consideration is not meritorious in as much as trucks must still travel the same

highways and therefore would incur the same risks as other commercial trucking and have roughly the same number of accidents.

Page 8-82:84 Section 8.4.1.2 and Table 8-60 are very misleading. The premise of this argument is based on original shipments of nuclear material in the United States around 1943. If truth were known, shipments of everything from heavy water to uranium 235 began in the early 1900s and occurred regularly (albeit clandestinely) in the 1930's especially around 1939 as original research that would later become the Manhattan Project began. DOE use of 1943 is arbitrary as the University of Chicago graphite reactor was first tested December 2,1942 and the Oak Ridge Reactor became operational on November 4, 1943. High energy materials, Deuterium, graphite's, U-235 Radium and other products were routinely shipped, in small quantities, cross country throughout the 1930's and 40's This is, ostensibly irrelevant to the shipment of high level nuclear waste products and spent nuclear fuel as proposed to begin in 2010. Also irrelevant are shipments made between 1943 and about 1957 when the 'Plowshare Program began because they pale in comparison to shipments since 1957 both in quantity of material and number of shipments. With the first "commercial reactor" coming online in Shippingport, PA at the end of 1957, shipments and management of high level nuclear waste of sufficient quantity became the concern we address Yucca Mountain Project. Hence, 1943 is a superfluous date. Even the shipments of high energy nuclear products since 1957 have little relevance except as statistical data that can predict 'per shipment' occurrences. To divide the total number of cancer fatalities by 100 years is rather akin to dividing all traffic fatalities by the number of years that cars have been on the road, or the incidence of atherosclerotic heart disease by the number of people that have died in the last one hundred years. Just because Oak Ridge and Hanford came online 1943 and 1944 bears little or no relevance to the prediction of LCF's related to the shipment of highly radioactive waste in 1999, 2010 or even 2047. Furthermore, using national cancer statistics as a baseline is truly a comparison between "apples and oranges". Millions of carcinogens, most of which are not radioactive are included in ACS statistics. Even comparing lung cancer with pancreatic cancers is a slippery slope. Stating that the estimated number of transportation related latent cancer fatalities would be indistinguishable from other cancer fatalities is as absurd as stating that colon cancer fatalities are virtually indistinguishable from auto accidents. The research presented here strains even the most clever of minds and gives rise to the skepticism that runs rampant in the general public about the DOE and this particular project. Even the material comparing module I and 2 vs. the proposed action are suspect. Here we have 600 percent more shipments, over 14 additional years and yet only a 17 percent increase in person-rem delivered and the subsequent LCF. The statistics

presented here (.0007 percent) of the total cancer statistics is at least deceptive and could be construed as a deceitful means to manipulate statistics to make this project appear something it is not - inherently safe and nearly insurable.

Table 8-60 uses baseline data that indicates that no fatalities have occurred to date as a result of radiological accidents related to traffic accidents. The fact that we have not had one yet bears pertinence only in indicating that this industry has had a stellar track record and proper safety measures have been employed. Not discussed is the quantity of materials shipped so far, that fact that spent nuclear fuel has far higher emission rates in curies than does un-reacted fuels, and all of the material currently stored on site will have accrued since the early 1940's but will be shipped to a single location from sites throughout the United States between 2010 and possibly as late as 2047.

The final paragraph, (page 8-84) indicates that 4.4 million people have or will die between 1943 and 2047, and that the additional 100 killed in the process of transportation of spent nuclear fuels, high level nuclear waste and other radioactive products is a terrible comparison of statistics. It bears no relevance to the problems associated with transportation issues and is illusory giving the impression that virtually no risk are associated with management of this material. There are so many things wrong with this that the DOE should remove this entire section.

Page 9-9 Section 9.2.4. " The Programmatic Agreement Between the United States Department of Energy and the Advisory Council on Historic Preservation for the Nuclear Waste Deep Geologic Repository, Yucca Mountain, Nevada." Please provide this document and the "Research Design and Data Recovery Plan for the Yucca Mountain Project- Permanent Copy" in the appendices. Do these documents adequately treat the rail and highway heavy haul routes and the Scenario 1 and 2 options discussed in the EIS. Will a new programmatic agreement be developed to deal with these dated (1998 AND 1990) documents.

Page 9-16 Not considered among the land use mitigation measures considered here is the need for additional 'safe havens' for operators of legal weight and heavy haul trucks along Nevada highways. Additional land areas, and resources, especially security resources will need to be allocated for provisions of safe havens along any and all designated routes.

Page 9-22 Section 9.3.5 "Conduct preconstruction surveys to ensure that work would not affect important archaeological resources and to determine the reclamation potential of sites." This statement should emphasize avoidance of significant sites. What is "the reclamation potential" of archeological sites?=20

Page 10-5 Section 10. 1. 2. 1 Land Use, Paragraph 1, last sentence. The text here states "Most of the land along the corridors under consideration is "government owned". White Pine County recommends that DOE use the term government-administered to describe land managed by the Bureau of Land Management.

Page 11-8 Flood Plain /Wetlands Environmental Review Requirements:
4th paragraph, 2. Any potential rail corridor or heavy-haul route needs to be considered in the EIS and a more detailed assessment done.

Page 11-10 Department of Transportation Hazardous Materials Packaging and Transportation Regulations 49 CFR:
4th paragraph. These regulations "attempt" to reduce potential hazards ..... At present, the Department of Transportation does not regulate the routing of rail shipments of radioactive materials. The EIS does not address the environmental impact of an accident using specific rail routes for radioactive materials.

Page 11-14 Executive Order 11593 is now incorporated (since 1986) as Section 110 of the National Historic Preservation Act as an Agency responsibility. References to EO 11593 are no longer appropriate as Section 110 of NHPA clarifies and mandates procedures for conformance with law.

Preliminary Draft

Review Comments to the Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain

Submitted To:
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and

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January 27, 2000

January 27, 2000

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RE: Review Comments to Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain

Dear Ms. Dixon:

On behalf of Lincoln County and the City of Caliente, Nevada, we are pleased to submit comments to the Draft Environmental Impact Statement (DEIS) for the Yucca Mountain Project. These written comments supplement verbal comments which were provided to DOE by Mr. Dan Frehner, Chairman of the Lincoln County Commission on November 9 in Caliente, and by Mr. Kevin Phillips, Mayor of the City of Caliente on November 9 in Caliente and January 11 in Las Vegas. We would ask that the verbal comments of Mr. Frehner and Mr. Phillips be incorporated by reference and made a part of these written comments.

The Board of Lincoln County Commissioners and the Caliente City Council expect DOE to give full consideration of all comments to the DEIS presented within this document. The County and City anticipate that these and other comments offered in response to the DEIS will warrant important changes to the draft document. In the event that substantive changes to the draft are necessary, the County and the City request that DOE consider reissuing the DEIS for further review and comment. Lincoln County and the City of Caliente will not hesitate to pursue all avenues afforded by federal and state law to ensure that repository impact issues important locally are fully addressed within the Final environmental impact statement and subsequent Record of Decision. The County and City will be particularly interested to see that negative aspects of the repository system are indeed identified and that the FEIS and Record of Decision

include substantive commitments to mitigation. Given that the repository and attendant transportation systems are not desired by any state in the Nation, but are being imposed on Nevada and its locales, Lincoln County and the City of Caliente believe that the FEIS and Record of Decision must include commitments by DOE to seek to compensate Nevada for the unwanted burden of hosting the Yucca Mountain project.

We trust that the comments which follow will serve to assist DOE in preparing a FEIS which is legally sufficient to satisfy the requirements of the National Environmental Policy Act and the Nuclear Waste Policy Act, as amended. Please feel free to contact us should you have any questions regarding the comments presented within this document.

Sincerely,

Dan Frehner
Board of Lincoln County Commissioners

Kevin Phillips, Mayor
City of Caliente

Cc: Governor Kenny Guinn
Senator Harry Reid
Senator Richard Bryan
Congressman Jim Gibbons
Congresswoman Shelly Berkley
Chairman, Nuclear Regulatory Commission
Administrator, U.S. Environmental Protection Agency

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1.0 INTRODUCTION

1.1 Purpose of These Comments

In submitting this document, Lincoln County and the City of Caliente are identifying and substantiating the importance of various omissions, errors, uncertainties within the Draft Environmental Impact Statement (DEIS) for the Yucca Mountain Project. With regard to omissions, the Council On Environmental Quality (CEQ) has indicated that every issue that is raised as a priority issue during scoping should be addressed in some manner in the EIS.[1] These comments include an assessment of DOE inclusion of issues raised by the County and City during scoping.

The County and City are providing these comments to assist DOE in preparing a Final Environmental Impact Statement (FEIS) which is sufficient under the National Environmental Policy Act (NEPA) to support major federal decisions regarding the Yucca Mountain project and related transportation systems. Reviewers of this document will immediately note the comprehensive nature with which the various sections to the DEIS are treated. The intent of the County and City is clear. Each intends to establish in the administrative record for the repository EIS that the jurisdictions did identify and validate the importance of the impact issues presented during scoping and not considered at all or treated in an insufficient manner in the DEIS. Given the failure of the DEIS to consider important issues, the County and City conclude that, in its current form, the DEIS is insufficient to support major federal decisions regarding the Yucca Mountain project and related transportation systems.

1.2 Status As An Affected Unit of Local Government

Lincoln County is one of ten units of local government which have been designated by the Secretary of Energy as an "affected unit of local government" pursuant to the Nuclear Waste Policy Act, as amended. The County is one of only three counties, which the Secretary of Energy voluntarily designated as affected by repository activities. What was identified in the 1986 Yucca Mountain environmental assessment remains true today: Lincoln County is likely to serve as the gateway for most shipments of high-level radioactive wastes entering Nevada and destined for storage and disposal at the Nevada Test Site. More recently, it has become evident that mutual interests of the State of Nevada and DOE to minimize risks to the health and safety of a majority of Nevada's residents and economy of southern Nevada will likely shift said risks to residents and businesses of Lincoln and other rural counties. Clear evidence of the State of Nevada's intent to cooperate with DOE to ensure that shipments of radioactive waste avoid the Las Vegas metropolitan area can be found in an August 24, 1999 letter from Nevada Governor Guinn to White Pine County Commissioner Julio Costello.[2] Such risk minimization objectives have been translated into proposed federal legislation, which has been introduced during each of the past several sessions of Congress. In response to efforts by the State of Nevada and DOE

to defer risks away from Nevada's populated areas, the Board of Lincoln County Commissioners has and will continue to respond with recommendations focused at local risk and impact minimization and benefit maximization

1.3 Activities Leading To Preparation Of This Report

Preparation of and submission by Lincoln County and the City of Caliente of this DEIS comment document does not represent an uninformed "not-in-my-backward" reaction to the Yucca Mountain project. To the contrary, this document reflects well informed and carefully considered reactions to the DEIS. The ability of the County and City to provide DOE with the quality input by which this document can be characterized is dependent upon the lengthy involvement of concerned citizens, independent local research, and prior experience with NEPA compliance activities.

1.3.1 Joint City/County Impact Alleviation Committee - For the past fourteen years, Lincoln County and the City of Caliente have conducted a joint repository oversight and impact alleviation planning program. Through a memorandum of understanding, the County and City have established the Joint City/County Impact Alleviation Committee (JCCIAC) to oversee repository oversight and independent impact assessment activities. During this period, the eight-member JCCIAC Committee has diligently sought to provide guidance to local repository programs. The Committee, representing both geographic and disciplinary diversity, has met no less than 80 times and has invested over 1,500 hours of largely volunteer time to understand the implications of the Nation's nuclear waste management program to Lincoln County.

1.3.2 Independent Research - Utilizing funding provided by the DOE, the Committee has overseen the preparation of over 50 reports documenting repository system implications for Lincoln County. Topics addressed within these studies include emergency response, ethnography, transportation routing, economic/demographic impact assessment, media amplification of risks, community development, transportation risk assessment, risk communication, tourism impact assessment, fiscal impact assessment, and risk perception, among others. The numerous studies sponsored by the County and City of Caliente have utilized teams of highly trained and competent researchers representing both academic and private entities. In addition, the State of Nevada Nuclear Waste Projects Office has conducted numerous studies, which directly or indirectly address repository implications within Lincoln County and the City of Caliente. The County and City prepared a summary compilation of all findings of the State of Nevada with regard to repository system impacts locally. The extensive information base represented by these various studies was drawn upon by the County and City in preparing previously submitted comments to the scope of

the DEIS. In response to a request from DOE following DEIS scoping, DOE and DOE consultant staff were provided with a briefing on County and City independent research and were provided copies of numerous studies as well as diskettes containing Lincoln County specific economic impact models. The County and City are disappointed that the DOE apparently did not use the information provided by them as no reference to even one of the many reports provided to the Department is included within the DEIS. DOE is encouraged to make liberal use of information provided previously by the County and City in preparing the FEIS.

1.3.3 Input to Yucca Mountain EIS Scoping Process – As noted previously, Lincoln County and the City of Caliente did, in December of 1995, provided DOE with extensive written comments to the scope of the DEIS.(3)[3] The concerns raised by the County and City in during DEIS scoping remain equally valid today. DOE was asked to consider the potential for County and City input to the scope of the repository EIS to strengthen the sufficiency of the DEIS. For reasons not explained in any detail, the DOE elected to ignore most of the comments offered by the County and City.

2.0 Failure of DOE to Address Issues Raised During Scoping

It was within DOE's discretion to conclude whether issues raised by the County and City during scoping would be addressed in the EIS by in-depth analysis or through a short explanation showing that the issue was examined, but was not considered significant for one or more reasons. As the following assessment will demonstrate, DOE largely chose not to address issues raised by the County and City. For virtually issue presented by the County and City during scoping, DOE did not provide any explanation in the DEIS as to why the matter was not considered significant. The FEIS must include an explanation as to why each un-addressed issue raised during scoping by the County and City was not evaluated in the DEIS.

2.1 Alternatives To Be Considered

The County and City recommended that definition of alternatives to be considered within the DEIS should be in part focused at aiding DOE and congressional decision-makers in evaluating comparative benefits and costs of proceeding with the waste management program now authorized by federal law. **The DEIS does not include a consistent presentation of benefits (including risk minimization) and costs of various alternatives for repository and related transportation system development and operation.**

The County and City suggested that DOE not be constrained by definition of alternatives, which fall wholly within the confines of existing law. Rather, DOE was

encouraged to consider alternatives that are outside the scope of what Congress has approved or authorized such that the EIS might serve as a the basis for framing subsequent Congressional decisions.[4] **The DEIS does not consider alternatives for waste disposal other than what has been currently authorized by the Congress. As a consequence the document is of little value in informing new legislative proposals and as such, is somewhat limited in its value as a decision-support document.**

The County and City recommended that the DEIS consider alternatives for accomplishing each major facet of the waste management system including the repository itself, rail transportation within Nevada, legal weight truck transport within Nevada, heavy-haul truck transport through Nevada, and intermodal transfer from rail to truck within Nevada. **DOE has considered alternatives for design and operation of the repository as well as various transportation modes and routes. The DEIS does not however, consider a rail to legal-weight truck alternative with intermodal operations at Caliente.** Given the excessive risk of highway accidents (ie. speed differentials), institutional barriers (state permitting), costs to improve and maintain highway infrastructure, institutional certainty, and reduced risk and cost associated with trans-national rail transport, rail to legal-weight truck makes a great deal of sense. **The FEIS must consider rail to legal-weight, with a Caliente intermodal location, as a transportation alternative.**

2.1.1 Repository Construction

In DEIS scoping comments, the County and City noted that the disposal of radioactive waste in a deep geologic repository at Yucca Mountain is characterized by both real and perceived risk. The risk of exposure to radiation from atmospheric pathways was noted an important issue to residents of Lincoln County. Volcanism and criticality control were presented as two issues which the County believes every aspect of repository development and operation must be evaluated against. The County and City recommended that the DEIS include a comparative evaluation of the extent to which alternatives for accomplishing construction, emplacement, closure, and post-closure phases of the facility achieve containment of radioisotopes during volcanic eruption and loss of criticality control. **The DEIS does not provide a comparative evaluation of the extent to which alternatives for construction, emplacement, closure and post-closure achieve containment of radioisotopes during volcanic eruption or loss of criticality control. The FEIS should include such a comparative evaluation.**

The County and City recommended that the comparative evaluation of alternatives for accomplishing deep geologic disposal should also capture the range of

uncertainty attendant to such options. In this way, the DEIS could facilitate decision-making under conditions of uncertainty. **While uncertainty is addressed to varying degrees throughout the DEIS, a summary assessment of the uncertainty associated with the various alternatives is not included within the DEIS. The FEIS should include such a summary assessment.**

The County and City recommended that the DEIS consider the risk management benefits and costs of the use of alternative repository construction materials. **The DEIS does consider alternative construction materials, however a comparison of the risk management benefits and costs is not to be found in the document.**

2.1.2 Repository Emplacement – Lincoln County and the City of Caliente encouraged DOE to consider alternatives for accomplishing the waste emplacement phase of the repository within the DEIS. The County and City noted that perhaps most important would be the evaluation of various candidate materials from which waste packages might be fabricated. Options suggested by the County and City which DOE might consider include those characterized as corrosion resistant, corrosion allowance, and moderately corrosion resistant. Each option was noted as performing differently under alternative thermal and geochemical environments. The County and City recommended that each alternative considered in the DEIS be characterized by varying contributions to risk management, cost and uncertainty. The County and City recommended that a similar evaluation be included for alternative materials for fabrication of waste package baskets. **The DEIS does consider alternative design concepts and design features intended to limit release and transport of radionuclides. The DEIS does not provide an assessment of the relative contributions to risk management, cost and uncertainty associated with each alternative considered. The information in the DEIS is therefor of limited value for decision-support.**

2.1.3 Retrievability – The County and City recommended that the DEIS evaluate various methods of ensuring that wastes can be safely and efficiently retrieved. **The DEIS does evaluate a variety of impacts associated with Retrievability. The DEIS does not however, consider transportation implications of retrieved wastes. The FEIS must consider possible transportation impacts associated with retrieved waste.**

2.1.4 Closure – The County and City recommended that the DEIS assess alternative materials which might be used to achieve closure for their relative contribution to risk management, Retrievability and cost. **The DEIS does not appear to consider the risk management, Retrievability and cost attributes of alternative materials which might be used to achieve repository closure. Absent such information, closure decisions can not**

be supported by the document.

2.1.5 Post-closure – Lincoln County and the City of Caliente noted in scoping comments that the relative contribution to risk management of various modes of warning future generations about the hazards of breaching repository containment should be considered in the DEIS. **It does not appear as though the DEIS includes an assessment of the risk management benefits of various methods to warn future generations about repository hazards.**

2.2 Rail Transportation (within Nevada)

The County and City recommended that the DEIS consider the effect that use of a proposed Yucca Mountain rail spur for LLRW shipments may have on route construction and operational economic feasibility should be considered within the DEIS. **The DEIS does not consider the implications for construction or operational feasibility of rails spurs under conditions of shared use for shipments of low-level radioactive waste.**

2.2.1 Routing – Lincoln County and the City of Caliente recommended that the DEIS consider the potential for rail-route alternatives to enhance access and mining of important mineral resources located within the study area. **The DEIS does not appear to consider (in any useful detail, if at all) the potential for rail-route alternatives to enhance access and mining of mineral resources within the study area.**

2.2.2 Construction – The County and City recommended that the repository EIS consider alternative strategies for construction of the rail spur serving Yucca Mountain. Alternatives suggested for consideration included construction standards (ie. rail strength, types of ties, maximum curve radius, maximum grade, and train speed). It was suggested that each of these alternatives should be assessed to determine their contribution to risk management and environmental impact. **The DEIS does not consider alternatives for rail strength, types of ties, maximum curve radius, maximum grade and train speed. The DEIS does not evaluate the relative contribution to risk management and environmental impact of alternatives for constructing a rail spur to serve Yucca Mountain.**

In addition, the County and City requested DOE to consider various methods for managing construction of the rail spur as a means to enhance positive and minimize negative fiscal impacts to regional economies. Alternatives suggested for consideration included using a single construction crew building the entire line over an extended period of time or multiple crews employed simultaneously to build various segments

of the spur. The County and City also requested that the DEIS consider whether union labor would be required for construction of the rail spur and the implications for such a requirement on rural resident employment opportunities. **The DEIS does not consider alternatives for staffing construction crews on the rail spur.**

2.2.3 Operation – Lincoln County and the City recommended that various options for operation of the rail spur be considered within the EIS. Operational alternatives affecting transportation safety which the County and City suggested for consideration included varying maintenance schedules and standards (ie. for roadbed, track and trains); options for coordinating train movements with Air Force overflights; train speeds; options for provision of security against sabotage or acts of terrorism; alternative locations for train maintenance and crew change facilities; the potential for and implications of allowing shared-use of the rail spur by other government agencies (ie. Air Force) and industrial users (ie. mining and energy); and options for ownership and operational management of the rail spur. It was recommended that each of these options should be evaluated against their contribution to risk management and regional economic benefit. **The DEIS does not consider operational alternatives affecting transportation safety including varying maintenance schedules and standards (ie. for roadbed, track and trains); options for coordinating train movements with Air Force overflights; train speeds; alternatives for provision of security against sabotage or acts of terrorism; alternative locations for train maintenance and crew change facilities; the potential for and implications of allowing shared-use of the rail spur by other government agencies (ie. Air Force) and industrial users (ie. mining and energy); and options for ownership and operational management of the rail spur.**

Lincoln County and the City of Caliente requested that the DEIS consider options for achievement of emergency management along the rail spur including enhanced local government response capabilities; placement of contractor response crews along the rail corridor; and provision of specialized equipment for train and shipping container handling. **The DEIS does not consider such alternatives.**

2.2.4 Decommissioning – The County and City of Caliente recommended that the DEIS consider what the disposition of the rail spur to Yucca Mountain will be following cessation of emplacement. Several alternatives were suggested by the County and City for consideration including: (1) abandon the line at the end of emplacement; (2) maintain the line during the period of monitored Retrievability (ie. 50-100 years) in case waste needs to be removed from the site; and (3) sell or deed the line to another governmental or private party following emplacement of waste. The County and City asked that consideration of these alternatives consider regional economies, impacts upon other public and private users, and barriers to effective relocation of waste from

the site in the event removal is required. **The DEIS does not consider the fate of a rail spur following cessation of emplacement.**

2.3 Legal Weights Trucks (within Nevada)

2.3.1 Routing – Because of the potential for U.S. Highway 6 and State Route 318 to be unavailable due to inclement weather, accidents, or construction, Lincoln County and the City of Caliante noted during scoping that the DEIS must consider impacts of transporting radioactive waste along U.S. Highway 93 through Lincoln County. **The DEIS does not consider transportation along U.S. Highway 93 in Lincoln County.**

2.3.2 Operation – The County and City recommended that the DEIS consider operational alternatives including escorted versus unescorted shipments; time of day travel restrictions versus unrestricted transport; and use of local versus non-local trucking firms. The first two were suggested for consideration for their contribution to risk management. The third option set was recommended for evaluation to determine regional economic benefits. **The DEIS does not consider operational alternatives for legal weight trucks as recommended by the County and City during scoping.**

Lincoln County and the City of Caliente pointed out the need for the DEIS to evaluate options for achievement of emergency management along legal weight truck routes. Alternatives suggested by the County and City for review included enhanced local government response capabilities; placement of contractor response crews along the highway corridor; and provision of specialized equipment for truck and shipping container handling. **The DEIS does not consider alternatives for ensuring that effective emergency management capabilities exist along legal weight truck routes.**

2.4 Heavy Haul Trucks (within Nevada)

2.4.1 Construction – Lincoln County and the City of Caliente noted that the DEIS should evaluate alternatives for establishing and maintaining a highway system capable of withstanding repeated heavy-haul loads. They further suggested that where new road construction is required, improved yet unpaved surfaces should be evaluated against pavement. The County and City encouraged DOE to evaluate risk management benefits associated with options for construction of dedicated travel lanes in areas of excessive grades or poor sight distance. **The DEIS does not consider paved versus unpaved roadway improvement alternatives. Evaluation of the risk management benefits potentially associated with construction of dedicated travel lanes was not addressed within the DEIS.**

2.4.2 Operations – The County and City recommended several operational alternatives for consideration within the DEIS including escorted versus unescorted shipments; time of day travel restrictions versus unrestricted transport; and use of local versus non-local trucking firms. The first two were recommended for consideration for their contribution to risk management. DOE was encouraged to evaluate the third option set to determine regional economic benefits. **The DEIS does not consider specific heavy-haul operational alternatives offered by Lincoln County and the City of Caliente during scoping.**

Lincoln County and the City of Caliente recommended that the DEIS consider options for achievement of emergency management along heavy-haul truck routes. Alternatives suggested for consideration included enhanced local government response capabilities; placement of contractor response crews along the highway corridor; and provision of specialized equipment for heavy-haul truck and shipping container handling. **The DEIS does not consider alternatives for ensuring that effective emergency management capabilities exist along heavy-haul truck routes.**

2.5 Intermodal Transfer (within Nevada)

2.5.1 Operations – Lincoln County and the City of Caliente recommended that alternatives for accomplishing operation of the intermodal facility should be evaluated for their contribution to risk management and local economic benefits. It was suggested that DOE and DOE/contractor approaches should be considered against private development and operation. The County and City requested that options for shared use of the facility by other government (ie. defense) and private industries should be assessed for their contribution to regional economic development. Alternatives for management of throughput at the facility were suggested for evaluation for their relative contributions to risk management. Of particular concern to the County and City was the potential for buildup of loaded shipping containers at the intermodal transfer site. The County and City asked that the DEIS evaluate the exposure risks associated with alternative numbers of in-transit containers resident at the site. **The DEIS does not consider any of the specific intermodal operational issues raised by Lincoln County and the City of Caliente during EIS scoping.**

The County and City asked that options for achievement of emergency management at the intermodal transfer facility be considered in the EIS. Alternatives suggested by the County and City for evaluation included enhanced local government response capabilities; placement of contractor response crews at the facility corridor; and provision of specialized equipment for heavy-haul and shipping container handling. **The DEIS does not consider alternatives for ensuring that effective emergency**

management capabilities will exist at prospective intermodal facilities.

2.5.2 Decommissioning – Lincoln County and the City of Caliente requested that the DEIS consider the disposition of the intermodal transfer facility following cessation of waste emplacement at Yucca Mountain. Several alternatives were offered by the County and City for consideration by DOE including: (1) abandon the facility at the end of emplacement; (2) maintain the facility during the period of monitored Retrievability (ie. 50-100 years) in case waste needs to be removed from the site; and (3) sell or deed the facility to another governmental or private party following emplacement of waste. The County and City requested that consideration of these alternatives evaluate impacts upon local economies, impacts upon other public and private users, and barriers to effective relocation of waste from the site in the event removal is required. **The DEIS does not consider the fate of an intermodal facility following cessation of waste emplacement at Yucca Mountain.**

2.6 Level of Analysis

In scoping comments, Lincoln County and the City of Caliente noted that NEPA requires that each alternative and subalternative considered within the DEIS be evaluated in a comparative form to enable a clear foundation for choice among the options. The extent of analysis focused to each alternative must be largely similar to that devoted to the proposed action and each subset of the proposed action. **The DEIS does not address a sufficiently broad range of implementing alternatives or subalternatives for repository and transportation nor does it offer useful comparative evaluations of the few alternatives and subalternatives considered. As a consequence, the document is of marginal value as a decision-support tool for other than a perhaps a basic decision as to whether or not to recommend the site to the President. The DEIS will not support decisions about how best to develop and operate the repository and related transportation systems in a manner which minimizes risk and impacts and maximizes local economic benefits.**

2.7 AFFECTED ENVIRONMENT

Lincoln County and the City of Caliente requested that descriptions of the affected environment within the DEIS be detailed enough to enable delineation of subarea impacts (ie. City of Caliente, Alamo, etc.). Further, the County and City asked that to the maximum extent practical, DOE rely upon baseline descriptions of the affected environment developed and/or compiled by Lincoln County and the City of Caliente. DOE was provided copies of various socioeconomic, fiscal and other studies and economic/demographic models (on diskette) to facilitate use of locally derived information. **In general, DOE elected not to use locally specific and derived information**

provided by the County and City. As is noted in other comments, the resulting description of the affected environment and impacts does not accurately reflect conditions in Lincoln County and the City of Caliente.

2.7.1 Air Quality – The County and City noted that the DEIS should include a description of ambient air quality conditions within potentially impacted basins of Lincoln County. Information regarding current air quality conditions in the County were provided to DOE during EIS scoping. **The DEIS Affected Environment section on Air Quality does not even refer to Lincoln County specifically and offers only very general observations not useful to determine impacts.**

2.7.2 Climate – The County and City noted in scoping comments that although construction and operation of repository system components within Lincoln County will not likely affect regional climate, local climatic conditions may impact upon safe operation of the repository system, particularly transportation. The County and City recommended that DEIS consider impacts of climate upon safe transport of radioactive wastes. Aspects of the climate recommended by the County and City for consideration included precipitation (particularly snow and ice), temperature (as may impact upon highway infrastructure and road surface conditions), and fog. **The DEIS section on Affected Environment offers only a modest description of the climate within Lincoln County which provides insufficient information upon which to determine potential effects of climate upon safe transportation.**

2.7.3 Hydrology – The County and City recommended that the include a description of existing wells and springs within Lincoln County hydrographic basins potentially hosting repository system construction activities, including rail or highway improvements. DOE was encouraged to include in said description depth to groundwater, flow attributes of existing springs, and existing water quality. **While the DEIS Affected Environment section does address surface and groundwater conditions along potential transportation corridors in Lincoln County, the baseline data is not sufficient to enable conclusions about impact to hydrologic resources to be derived. For example, despite a request by the County and City for said information be included in the document, the DEIS does not describe depth to groundwater, flow attributes of potentially impacted springs or existing water quality of potentially impacted water resources.**

During scoping, the County and City suggested that surface hydrology might impair safe transport and/or handling of radioactive wastes and might be significantly altered by construction activities. The County and City recommended that for all areas within

Lincoln County potentially impacted by repository system construction and operations (including transportation), mapping of surface hydrology and estimates of baseline flows should be included within the DEIS. **The DEIS section on Affected Environment does not include any description of existing surface hydrologic conditions (particularly estimates of the duration and intensity of peak flows) within Lincoln County. This is despite the fact that the DEIS does attempt to describe potential hydrologic impacts of transportation in Lincoln County (Section 6 of DEIS).**

2.7.4 Geology – In scoping comments to the EIS, Lincoln County and the City of Caliente noted that baseline geology and soil conditions could impact upon construction and operation of repository system components, including transportation infrastructure. The County and City noted for example that fault and soil features might impair facility integrity and alteration of area soils might induce or exacerbate flooding, water quality, and air quality impacts. The County and City observed that construction of a rail spur through Lincoln County would require extensive quantities of ballast and other roadbed materials. The County and City recommended that the DEIS include an inventory of potentially suitable sites to borrow materials within Lincoln County and the DEIS include geologic and soils mapping for all candidate sites and corridors potentially hosting repository system components, including transportation, within Lincoln County. It was noted in the County and City scoping comments that such inventory of soils should be completed to also facilitate preparation of plans for revegetating areas disturbed by construction activities. To facilitate DOE consideration of soil conditions, the County offered to provide DOE county-wide digital soils map coverage at 1:100,000 scale, which had been developed by the County. **The Affected Environment section of the DEIS provides no information on specific soil conditions within Lincoln County. This is despite analyses contained within Section 6 of the DEIS which attempt to describe impacts of transportation activities on soils.**

2.7.5 Flora and Fauna – Lincoln County and the City of Caliente recommended that the DEIS include an assessment of existing populations and conditions of vegetative and animal resources along alternative rail corridors. In its scoping comments, Lincoln County was particularly concerned about losses of big game habitat and impacts on hunting's contribution to the local economy. **The DEIS does evaluate vegetative and animal resources along potential transportation routes. However, the lack of detailed inventory data for key species of flora and fauna renders the document insufficient as a decision-support tool with regard to deciding between alternative transportation corridors on the basis of impacts to flora and fauna. The DEIS does not appear to consider impacts to hunter recreation days as a result of impacts to lost wildlife**

habitat.

2.7.6 Noise – The County and City recommended that the repository EIS include an assessment of background noise levels along proposed rail corridors and at locations potentially hosting other repository system components and activities (intermodal transfer, borrow sites, highway construction, heavy-haul transport). **Although the DEIS provides a generic assessment of ambient noise levels in certain Lincoln County communities, the information is not useful in deriving transportation system related impacts. For example, the DEIS contains no specific description of the variance in noise levels in Caliente associated with existing rail traffic through the community. Consequently, it is not possible to know to what extent proposed spent fuel shipments would serve to impact upon existing noise.**

2.7.7 Viewshed – Lincoln County and the City of Caliente recommended that the DEIS, to facilitate an assessment of impacts upon viewshed, include an analysis of existing visual quality within basins potentially impacted by rail construction and operation. The County and City noted that such information can be used in developing measures for mitigation of impacts to viewshed within Lincoln County. **The DEIS does assess existing visual quality along rail corridors in Lincoln County. There is however, no description of measures to mitigate visual impacts of rail corridors within Section 9.3 of the DEIS.**

2.7.8 Background Radiation – In comments to the scope of the DEIS, the County and City noted that the transportation of spent nuclear fuel and other high-level radioactive wastes through Lincoln County may increase the risks of exposure to radiation for residents and visitors to the area. Existing risks of exposure were noted as being attributable to natural and human induced background radiation. Because of the potential for cumulative exposures to heighten risks, the County and City suggested the necessity for the repository EIS to adequately assess baseline sources of radiation exposure within Lincoln County. The County and City offered evidence through County sponsored research that the potential for the cumulative effects of exposure to radiation sources could result in adverse consequences for public health and safety.[5] According to the County and City, this study provided the scientific justification for quantification of the cumulative risks of exposure to radiation associated with natural background sources, historic DOE weapons testing activities, on-going DOE activities at NTS, future low-level radioactive waste transport and disposal activities in Nevada, and future high-level waste transport and disposal activities in Nevada. The County and City noted in their scoping comments that the long-term physiological consequences associated with repeated exposures to radiation are cited in the report

as very real. **Section 3, Affected Environment, of the DEIS does not provide any description of existing background levels of radiation along proposed transportation corridors, or in the vicinity of the proposed Caliente intermodal facility, in Lincoln County. As a consequence, the assessment of radiological risk contained within Section 6 of the DEIS does not appear to consider existing background sources of exposure in determining health risks. Further, the lack of baseline information on background radiation appears to render the cumulative impacts section of the DEIS insufficient in its estimate of health risk.**

2.7.9 Paleontologic – The County and City recommended that an assessment of paleontologic resources within alternative rail corridors and at potential borrow pit sites within Lincoln County be conducted and reported on within the scope of the repository DEIS. **The DEIS does not identify potential borrow pits and therefor has not included an assessment of the paleontologic resources at such sites. Such an omission makes the document less useful as a decision-support tool, particularly in choosing among transportation corridor alternatives.**

2.7.10 Archaeologic – Lincoln County and the City of Caliente recommended that the repository EIS include field surveys of alternative rail corridors, material sites, and other areas where construction may occur to determine the location and significance of any archeological resources. **The DEIS does not identify potential borrow pits and therefor has not included an assessment of the archaeologic resources at such sites. Such an omission makes the document less useful as a decision-support tool, particularly in choosing among transportation corridor alternatives.**

2.7.11 Historic – Lincoln County and the City of Caliente recommended that the DEIS include an inventory of important historic resources within Lincoln County along transportation corridors and in the vicinity of construction material sites. **The DEIS does not identify potential construction material or man-camp sites and therefor no inventory of historic resources in the vicinity of such areas is included within the DEIS. The absence of this information makes the document less useful as a tool for discriminating among alternative transportation corridors.**

2.7.12 Socioeconomic – Lincoln County and the City of Caliente recommended that the DEIS include a comprehensive assessment of desirable and undesirable economic and fiscal consequences of repository system activities in the County and City. The County and City noted in their EIS scoping comments that a credible assessment of socioeconomic impacts would only be possible by DOE if the agency had at its disposal an accurate understanding of existing socioeconomic conditions within the County and among its communities. The County and City further suggested that such a baseline assessment of "without repository system" socioeconomic conditions should include the following factors: economy, demographics, social conditions, Native Americans, public perceptions and attitudes, community services, community infrastructure, local government finances, government structure, local politics, telecommunications, emergency management, transportation infrastructure, land use, traffic, military operations, and public health. The County and City noted that the DEIS must present a comprehensive appraisal of current and without repository future socioeconomic conditions. According to the County and City, this baseline of information could then be used to compare against projected with repository conditions to extract resultant system impacts upon the County and its communities. **Section 3, Affected Environment of the DEIS provides only a limited description of socioeconomic conditions in Lincoln County and the City of Caliente. The only desegregated description of socioeconomic conditions for Caliente concerns population. The DEIS provides no baseline description for many potentially impacted parameters including: age distribution; projected population growth without repository activities through at least 2035; baseline projected employment and incomes by economic sector through**

at least 2035; baseline projections of school enrollments by age distribution through at least 2035; baseline projections of supply and demand for public infrastructure (including water, wastewater, solid waste, electricity, recreation facilities, educational facilities, emergency first response equipment and facilities; emergency medical facilities and equipment) through at least 2035; baseline social conditions including crime, substance abuse, and demand for social programs; community cohesion; baseline projections of local government revenues and expenditures at least through 2035; baseline projections of housing availability, condition and cost through at least 2035; and baseline projections of land use through at least 2035 among other possible parameters. All of these descriptions of baseline and without repository projections of conditions should be at the Lincoln County and at the community level (ie. Caliente, Alamo, Panaca, Pioche, Hiko, Rachel). For example, baseline projections of wastewater treatment facility demand and capacity is key in Caliente as the proposed location of the intermodal facility is the current City wastewater treatment facility which would require that the City's existing wastewater treatment facilities be relocated. In addition, a recent DOE study has identified U.S. 93 (which is immediately adjacent to Pioche) as a potential corridor for legal weight truck shipments of radioactive waste.[6] The social tapestries, which characterize each community in Lincoln County, vary greatly. Religious and occupational variation contribute greatly to community social delineation. Age clusters define important social characteristics within each community. Previous studies by the State of Nevada have detailed differences in social conditions among Lincoln County communities.[7,8] Growth within Lincoln County's small communities may induce significant changes in social conditions. Ethnographic research sponsored by Lincoln County and the City of Caliente have illustrated the unique cultural dimension which characterizes the County and City. The County and City continue to believe that the EIS must a thorough description of social indicators for Lincoln County communities. Such information is not contained within the DEIS.

2.7.13 Public Perceptions and Attitudes – During scoping, Lincoln County and the City of Caliente urged the DOE to include within the DEIS consideration of public perceptions and attitudes. The County and City were concerned that legitimate and ill conceived perceptions of repository system (including transportation) risks might induce adverse consequences to local social and economic conditions. Because residents and visitors to the area face existing and will face future "without repository" hazards, it was deemed imperative that existing perceptions and attitudes be fully understood within the DEIS so as to enable complete evaluation of repository system induced changes in cognition. It was noted in scoping comments that the availability of this information would enable County, City and DOE planners to effectively plan

communication and other response strategies intended to mitigate behavioral consequences of negative perceptions of risk. The County and City offered research sponsored by Lincoln County to demonstrate that media amplification of risk may induce unanticipated responses by area residents.[9] The County and City remain concerned that such a public reaction may constrain local emergency management effectiveness. **Despite raising and substantiating public perceptions and attitudes as an important issue for consideration in the DEIS, DOE has elected to exclude assessment of the matter in the document. Section 3 of the DEIS, Affected Environment, contains no substantive assessment of public perceptions and attitudes.**

2.7.14 Community Services and Infrastructure - During scoping of the EIS, Lincoln County and the City of Caliente made clear the difficulty that small rural counties and communities have in developing and maintaining public services and facilities. Any change in population, related demands for public services and facilities and induced changes in local revenues and expenditures can pose a significant hardship on the area and its residents. The County and City urged the DOE to include in the DEIS the repository EIS and assessment of existing and future "without repository" community service and infrastructure characteristics within Lincoln County and among its various communities. The County and City noted that when included in the affected environment section of the EIS, this information will be useful for comparison with "with repository" service and facility demands to determine net impacts. **The DEIS does not provide a sufficient assessment of existing and without repository future community service and facility needs within Lincoln County and the City of Caliente. As a consequence, subsequent impact analyses are wholly inadequate as a means to discern how the repository system (including transportation) may effect the County and City.**

2.7.15 Local Politics – In scoping comments to the EIS, Lincoln County and the City of Caliente observed that the potential for development and operation of repository system components within Lincoln County had already demonstrated the ability to bear upon local politics. The County and City recommended that the DEIS include an evaluation of possible impacts upon local politics. To enable said analysis, the County and City called upon DOE to include a baseline assessment of the local political landscape within the DEIS. **The DEIS gives no consideration to the potential for the Yucca Mountain project to be disruptive to or create political divisiveness within local political institutions.**

2.7.16 Emergency Management – Lincoln County and the City of Caliente commented

during EIS scoping on the potential that the inability of local first responders to effectively manage incidents involving high-level radioactive wastes might result in significantly increased risks associated with related accidents. The County and City substantiated this possibility with reference to local assessments of local emergency response capabilities.[10,11] In addition, the County and City provided DOE with 83 possible constraints to effective local first response capabilities to accidents involving high-level radioactive wastes.[12] The County and City urged DOE to update this information and to consider it within the repository EIS. The County and City reasoned that "with repository" emergency response needs could then be compared with baseline conditions to determine improvements needed to provide adequate risk management. **The DEIS all but ignores existing emergency first response and emergency medical capabilities within Lincoln County and the City of Caliente. There is no description of existing capabilities nor any description of "with repository" requirements.**

2.7.17 Transportation Infrastructure – During EIS scoping, Lincoln County and the City of Caliente provided DOE with evidence that rail condition can affect accident rates. Reference to County and City sponsored research regular assessments of rail condition along the UP mainline[13]was provided to DOE. The County and City encouraged DOE to an assessment of pre-waste shipment track condition and use within the DEIS. **The DEIS is silent on the issue of existing rail condition and implications of rail condition for transportation safety.**

2.7.18 Public Health - Lincoln County and the City of Caliente noted in scoping comments on the EIS that one of the most important concerns of County and City residents is the protection and enhancement of resident health. The County and City noted that in order to accurately assess and monitor repository system health effects over time, it is essential that DOE develop a comprehensive baseline assessment of medical conditions within the County. This assessment, it was noted, should enable differentiation of existing and potential health effects attributable to exposure to radioisotopes associated with previous DOE activities at NTS. The County and City recommended that the results of the epidemiological assessment be included within the affected environment section of the repository EIS. **The DEIS does not address existing health conditions of residents residing within area potentially affected by the repository system, including transportation. As a consequence, there is no way to predict or monitor the significance of repository related health effects in the region.**

2.8 ENVIRONMENTAL CONSEQUENCES

2.8.1 Direct Effects – The County and City urged DOE to assess rail construction related losses in forage for livestock grazing. **While the DEIS recognizes that some forage might be lost and that livestock movements might be impeded, no estimate of lost animal unit months (AUM's) of forage is provided within the DEIS.**

2.8.2 Indirect Effects- Lincoln County and the City of Caliente encouraged DOE to consider population growth resulting from location of repository system support industries in the County and demands for public services and infrastructure by dependents of DOE or contractor employees within the County and City. **The DEIS does not consider the potential nor attempt to quantify population growth resulting from location of repository support industries in the County or related demands for public services and facilities.**

2.8.3 Cumulative Effects – In comments to the scope of the EIS, Lincoln County and the City of Caliente urged DOE to consider the cumulative effects which may result from the incremental impact of the proposed action and alternatives thereto when added to other past, present, and reasonably foreseeable future actions. Of particular concern to the County and City was the cumulative effects of exposure to various source terms for radiation within the region. As a component to their comments, the County and City referenced research they had sponsored which determined that consideration of cumulative exposures to radiation is a scientifically defensible undertaking.[14] The County and City recommended that the repository EIS consider the cumulative exposure risk associated with previous DOE weapons testing activities, on-going DOE weapons activities, on-going DOE low-level radioactive waste (LLRW) management activities, potential future LLRW management activities at NTS, potential LLRW transportation activities through Lincoln County, proposed high-level waste transport and disposal in Nevada, and natural and other human-induced sources of background radiation. **While the DEIS provides a generic assessment of cumulative risks, the analysis is not transportation corridor, county, or community specific. As a consequence, the assessment of cumulative risk is not useful in discriminating between routing alternatives. Nor does the analysis prove useful in determining where and in what manner risks might best be mitigated.**

2.8.4 Conflicts With Plans – Consistent with requirements of NEPA, the County and City recommended that the repository EIS consider how construction and operation of repository system components within Lincoln County will conflict with existing federal, state and local land use plans, policies, or controls. In particular, the County and City felt that conflicts with the Lincoln County Masterplan and the City of Caliente

Mastertplan should be evaluated. **The DEIS does not consider conflicts with plans developed by Lincoln County or the City of Caliente.**

2.8.5 Distributional Equity – In comments to the scope of the EIS, Lincoln County and the City of Caliente substantiated the propensity for Clark County and the metropolitan Las Vegas area to garner a disequitable share of economic benefits associated with activities at the Nevada Test Site. The County and City pointed out that unlike many other projects, the construction and operation of the repository system is characterized by clearly discernable risks and benefits. The County and City further noted that unlike many other industrial activities, the spatial and temporal distribution of these risks and benefits has the potential to be disequitable between places and periods of time. The County and City concluded that the distribution of risks and benefits associated with DOE activities in Nevada during the past 30 years has not been fair.

In their comments, Lincoln County and the City of Caliente worried that development and operation of the repository system within Nevada has the potential for extending and perhaps exacerbating this disequitable distribution of risks and benefits. They suggested examples of practices which DOE might adopt which can widen the risk/benefit gap including: use of union workers, most of whom reside in urban areas, provision of subsidized bussing of repository workers electing to reside in Clark County, and purchase of goods and services from vendors located in urban areas, among other possibilities. Lincoln County and the City of Caliente suggested that the repository EIS should evaluate the distributional equity implications of various options for system development and operation. The County and City recommended that the evaluation should consider the cumulative aspects of risks and benefits associated with other DOE activities likely to occur within Nevada (ie. LLRW management). They concluded that this information should be used to inform identification and analysis of alternatives for mitigating the disequitable distribution of repository system risks and benefits. **The DEIS does not consider the potential for disequitable distribution of repository system economic benefits, fiscal impacts and risk to public health and the environment among Nevada's geographic areas. As a consequence no measures to mitigate disequitable distribution of benefits and costs are identified or presented within the DEIS.**

2.8.6 Expected Effects

In comments to the scope of the EIS, Lincoln County and the City of Caliente concluded that DOE must consider the positive implications of DOE and contractor spending in Lincoln County. In addition, the County and City felt that the EIS must include a thorough analysis of the fiscal consequences of repository system

development and operation upon Lincoln County, City of Caliente, and the Lincoln County School District.

Lincoln County and the City of Caliente also provided information during scoping which demonstrated given average wind speeds in the vicinity of Yucca Mountain of 7.4 miles per hour (mph) and peak recorded gusts of 60 mph, it is possible that airborne radioisotopes could be transported to the proximity of Lincoln County communities within 1.5 to 8 hours.[15] The City and County pointed out that the short airborne emission travel time is in part why DOE has previously declared portions of Lincoln County as within the "Off-site Uncontrollable Area" (OSUA). The County and City urged DOE to assess the potential for and related impacts of off-site exposures to residents and the economy of the County. **The DEIS does not consider off-site exposure of communities within Lincoln County.**

In scoping comments, the County and City demonstrated that a transportation accident characterized by extensive media coverage might result in stigmatization of area tourist destinations. As a component to comments to the scope of the EIS, the County and City referenced County sponsored research which evaluates the consequences of the accident at Three Mile Island and applies possible outcomes to a transportation accident.[16] The County and City encouraged DOE to consider the potential for and impacts of media induced stigmatization of Lincoln County tourism assets. **The DEIS does not consider stigma or perceived risk nor impacts related thereto.**

County and City comments to the scope of the EIS pointed out that risks associated with transportation of radioactive wastes through the County and City have been an important topic of local inquiry. The City and County pointed to research they sponsored which was performed by the University of Nevada, Las Vegas Transportation Research Center to evaluate the risks of transporting waste by highway and by rail through the area.[17] The study did conclude that the total accident risk (person rem) in the County for rail and highway transport was significantly greater than that estimated for other like areas around the United States. Total risk associated with rail and highway waste transport in rural areas of the County was also found to be significantly than that estimated for other like areas across the United States. In their comments, the County and City noted that although absolute levels of risk may be considered low, this study clearly indicates that residents of Lincoln County may be exposed to significantly greater levels of risk. The County and City urged DOE to recognize that the repository EIS must consider these differences as a means to ascertain viable options for reducing risk to levels commensurate with other regions

of the United States. **The DEIS does not provide a comparative assessment of transportation risks through Nevada, or more importantly Lincoln County and other regions of the United States. As a consequence important differences between levels of risk are not revealed. Within Nevada, the DEIS does demonstrate that risks of transporting waste through rural areas is riskier than through urban areas. However, the DEIS does not provide sufficient identification and evaluation of measure to mitigate greater risk levels in rural areas.**

2.8.7 Characterization of Effects - To ensure that the repository EIS focused upon those issues posing the most threat to existing environmental conditions, the County and City recommend in comments to the scope of the DEIS that DOE seek to categorize prospective impacts as to their probability of occurrence and their degree of consequence. The County and City reasoned that this course of action would help to encourage a draft NEPA compliance document, which was most responsive to issues perceived important by stakeholders. In their comments, the County and City referenced their study of potential repository system impacts, which addressed socioeconomic effects.[18] **The DEIS does not include a categorization of impacts as to their probability of occurrence and their degree of consequence. As a result, the DEIS lends no indication as to where efforts to mitigate impacts should be initiated to afford greatest benefit.**

2.9 MITIGATION OF EFFECTS – In comments to the scope of the EIS, Lincoln County and the City of Caliente reviewed NEPA requirements for addressing mitigation. The County and City pointed out that NEPA regulations require that DOE identify and evaluate all potentially feasible options for mitigation of impacts. Mitigation measures should not be eliminated from consideration in the EIS because they are outside the jurisdiction of the lead agency or because they are not likely to be adopted or enforced by DOE. The probability of each mitigation measure being implemented must be addressed within the EIS. (40 CFR 1502.16 (h), 1502.2) Five categories of mitigation, which must be considered by the Department, include avoidance, minimization, rectification, reduction and compensation. Based upon the requirements of NEPA, Lincoln County and the City of Caliente observed in their comments to the scope of the EIS that they would consider DOE proposed mitigation measures of the following types to be insufficient:

1. "DOE will consult with..."
2. "DOE will conduct further studies..."
3. "DOE will prepare a plan to mitigate..."

4. "DOE will strive to protect the resource..."
5. "DOE will monitor the problem..."
6. "DOE will submit a recommended solution for review by..."

The County and City reminded DOE that NEPA requires that all of the specific impacts of the system (whether or not "significant") be considered, and where feasible, related mitigation measures developed. (40 CFR 1502.14(f), 1502(h), 1508.14). The County and City encouraged DOE to identify mitigation measures both by type (ie. avoidance) and by waste system component and phase. Lincoln County and the City of Caliente encouraged DOE to ensure that every effect on the existing environment have a corresponding set of mitigation options identified within the DEIS. **Contrary to NEPA, the DEIS contains several proposed mitigation measures which are simply studies or simply describes studies which will lead to identification of mitigation measures. For most impacts identified within the DEIS, but characterized by DOE as non-significant (ie. population growth in Lincoln County and City of Caliente and related growth in government expenditures), the DEIS simply does not provide any suggested mitigation measures. In completing the FEIS, DOE should evaluate all listed mitigation measures against the types listed above to discern those which are of an unacceptable form under NEPA.**

3.0 DOE PROCESS FOR NEPA COMPLIANCE

3.1 Responses to Comments to the DEIS – DOE is encouraged to meet with representatives of affected units of local government to review proposed agency responses to comments to the DEIS. Such a meeting would help to ensure that local government comments are understood by the Department and if proposed responses are responsive to the comments. DOE is encouraged to provide individual responses to all comments provided so that commentors can easily ascertain what effect, if any, their comment had on the form of the FEIS.

3.2 Record of Decision – In comments to the scope of the EIS, Lincoln County and the City of Caliente noted that it is imperative that any and all feasible mitigation measures identified during preparation of the EIS be included in the Record of Decision to be developed subsequent to completion of the EIS. The Record of Decision must include the following: statement explaining the decision; explanation of alternatives that were considered and those that are environmentally preferable; factors considered by DOE in making its decision; explanation of which mitigation measures, if any, were adopted, and if mitigation measures were not adopted, an explanation of why not; and a monitoring and enforcement program for any adopted mitigation measures. (40 CFR 1505.2) Lincoln County will take a dim view of a DOE decision to only address

mitigation apart from the Record of Decision, for example in a stand-alone mitigation plan. Lincoln County places great significance upon the institutional and legal stature of the Record of Decision. The County believes that commitments to mitigation not contained within the Record of Decision will not be commitments at all.

4.0 Relationship to DOE Proposed Revisions to 10 CFR 960

The Department of Energy proposes to revise 10 CFR 960, "Siting Guidelines for Geologic Repositories. Comments on the DOE's proposed revisions are due February 28, 2000. The proposed revision to 10 CFR 960 calls for elimination of the requirement that DOE consider environmental, socioeconomic, and transportation issues in determining the suitability of the Yucca Mountain site as a geologic repository. The proposed rule states that justification for the elimination of these criteria is found in the fact that DOE is preparing an environmental impact statement, the results therein, which would be available to the Secretary of Energy in developing and defending a site recommendation report to the President.

Lincoln County and the City of Caliente have reviewed the DEIS for Yucca Mountain and find the consideration of environmental, socioeconomic and transportation issues to be wholly insufficient to support a major federal decision such as recommending the site to the President. IF DOE is looking to the Yucca Mountain EIS to provide the Secretary of Energy with the substantive information needed to support a decision to recommend the site to the President, then significant revision to those sections of the DEIS concerning environmental, socioeconomic and transportation issues is required. IF DOE does not intend to make significant revisions to the DEIS, then proposed revisions to 10 CFR 960 that depend upon content in the DEIS which will not be available need to be reconsidered. **Lincoln County and the City of Caliente encourage DOE to strengthen environmental, socioeconomic and transportation sections of the DEIS (as indicated by other comments contained herein) or rescind the proposal to eliminate those provisions of 10 CFR 960 regarding consideration of environmental, socioeconomic and transportation issues in making a site suitability determination and in recommending the Yucca Mountain site to the President.**

5.0 Comments to Specific Section of the DEIS

5.1 Purpose and Need for Agency Action

Page 1-1 The purpose and need of the environmental impact statement described here should make explicit reference to the potential use of the document in informing the Secretary of Energy, the President and the Congress regarding the need for new legislation.

Page 1-3 Section 1.1, 2nd paragraph states, "DOE believes that the EIS provides the information necessary to make decisions regarding the basic approaches (for example, mostly rail or mostly truck shipments), as well as the choice among alternative transportation corridors. As is demonstrated throughout these comments, Lincoln County and the City of Caliente do not agree that the DEIS provides the information necessary to make transportation mode and routing decisions. Indeed, the County and City are concerned that if such decisions are based upon the information contained within the DEIS that unnecessary and unmitigated environmental, socioeconomic and public health and safety impacts will result. Further, the County and City do not believe that DOE has considered all reasonable alternatives (ie. rail to legal weight truck) and that absent such consideration, decisions may be less than optimal.

Page 1-3 Last sentence (continuing to Page 1-4) states, "... low-level radioactive wastes could require disposal in a monitored geologic repository". The DEIS does not appear to consider under what circumstances and in what quantities low-level waste would be disposed of at Yucca Mountain. The DEIS contains no assessment of the transportation requirements associated with transportation of low-level waste to the site.

Page 1-8 First sentence notes that DOE could emplace surplus weapons-useable plutonium in the repository. The DEIS does not appear to consider the unique transportation requirements with such a waste product. Issues such as pre-notification, enhanced security and enhanced risk of sabotage or terrorism and local emergency preparedness should be considered explicitly in the DEIS regarding shipments of weapons-useable plutonium.

Page 1-8 Section 1.3.1 would benefit from a discussion of previous repository siting initiatives at Lyons, Kansas. In particular, discussion of why the site did not go forward, characterization of any local issues or controversy, and lessons learned from that siting experience would improve the decision-support nature of the DEIS.

Page 1-11 The last paragraph on this page states, "DOE has used the 0.5-MTHM-per-canister approach since 1985." The fact that this is the approach that DOE has used and changing might be difficult is not a valid reason to support this key assumption. Given the highly regulated nature of the nuclear energy field, utilities, the Department of Defense and the DOE should have very good information on the precise inventory of radioactive wastes to be disposed of at Yucca Mountain. There have been numerous shipments of spent nuclear fuel and other high-level radioactive wastes in

which precise measurements of the MTHM within canisters was available. The DEIS should present evidence that the 0.5 MTHM assumption is valid. It is important to note that a minor variation in actual MTHM per canister could produce significant variances in the number of canisters needing to be shipped and subsequently disposed of. While repository performance may not vary, transportation impacts could be significantly altered. In addition, waste emplacement operations and waste retrieval could be affected by overestimating the MTHM per canister.

Page 1-17 3rd paragraph. It is not clear in reviewing the DEIS whether DOE has made a finding as to whether the repository is capable of accommodating all of the various waste volumes potentially needing disposal at the Yucca Mountain site. Can the Yucca Mountain site handle all of the waste described in this paragraph?

Page 1-23 1st full paragraph. This section implies that only Nye County responded to DOE's request for documents setting forth perspectives and views on a variety of issues of local and regional concern. In fact, in response to DOE request representatives of Lincoln County and the City of Caliente met with DOE and DOE contractor staff in Las Vegas and spent several hours presenting a variety of documents prepared by and/or for the County and City reflecting issues of local and regional concern. In addition, the County and City provided DOE and DOE contractor staff with diskettes containing economic impact models developed by the University of Nevada for Lincoln County. DOE was encouraged to utilize all of this information in preparing the DEIS. Lincoln County and the City of Caliente provided this briefing and related documents with the specific understanding that they were responding to DOE's request for perspectives and views. The County and City are very concerned that DOE has not used the variety of information provided to it as evidenced by the lack of specific references to only one document provided by the County and City (ETS 1989).

Page 1-24 Section 1.5.1.2. Here, the text notes that "...at this time, DOE regards these routes (Caliente-Chalk Mountain rail and heavy-haul truck) as non-preferred alternatives." Does this mean that other routes are preferred alternatives? Is there a preferred alternative route or mode? Is the issue of U.S. Air Force concerns the only factor in discriminating between routes and modes? If so, how does DOE intend to choose among other alternatives? Clark County, the City of Las Vegas, Nevada's Governor and Nevada's Congressional Delegation all oppose routes through the Las Vegas Valley. Why then are not the routes through the Las Vegas Valley also considered non-preferred? With regard to the phrase "at this time", what would have to change for the DOE to remove the non-preferred label for the Caliente-Chalk Mountain route? The FEIS should provide answers to each of these questions.

5.2 Proposed Action and No-Action Alternative

Page 2-1 Figure 2-1 refers to the Secretary of Energy's site recommendation report to the President. The text on this page indicates that the Proposed Alternative includes transportation of SNF and HLW to the Yucca Mountain site. The text does not indicate whether the Secretary's site recommendation report will address transportation. The DEIS should be very clear about what factors would and would not be included in the site recommendation report to the President. Without such clarification, it not possible to know what the proposed action is and what might or might not be the subject of a subsequent Record of Decision.

Page 2-1 The last sentence of the 5th paragraph on this page indicates that a great deal of additional field work, consultations and NEPA compliance activity will be required to make specific decisions regarding rail alignments, intermodal station locations within a site, etc. It is possible that such detailed studies and activities will determine that a selected mode or alternative in infeasible. These studies will need to be completed before DOE knows with certainty whether it has a route to ship waste to the site or not. Given this uncertainty, is it possible for the Secretary of Energy to proceed with a site recommendation report in advance of these more detailed studies? The DEIS needs to provide a more explicit explanation of the linkages and timing of the site recommendation report and detailed transportation siting studies and decisions.

Page 2-5 Figure 2-4. This figure should include a rail to legal-weight truck alternative.

Page 2-15 Figure 2-9. This figure portrays unrealistic schedule assumptions, which imply that repository construction may precede prior to resolution of transportation routing and modal decisions. In the worst case, transportation of waste to a repository could proceed along routes, which do not serve to minimize risk because transportation issues and related construction might not be completed in 2010. Further, this schedule does not appear to reflect the length of time that will be required to resolve the certain (given deficiencies in this DEIS) legal challenges to the sufficiency of this DEIS that will occur. Such legal challenges will likely be filed in the winter of 2000 and will probably not be resolved for 18 to 24 months. At that time DOE may be required to prepare a supplement to the EIS. Under these timeframes, the site recommendation could not be made until early 2003 (particularly given proposed revisions to 10 CFR 960, which defer to the EIS for information on environmental, socioeconomic and transportation issues). A more realistic schedule should be included within the FEIS.

Page 2-43 Section 2.1.3.2.2, 2nd paragraph. The text here should indicate whether there will be any pre-notification of shipments given to state and local authorities and whether escorts will be used with each shipment.

Page 2-43 Section 2.1.3.2.3, 2nd paragraph. Is the DEIS intended to support a DOE decision between use of dedicated versus general freight trains. Following sections of the DEIS do not appear to provide the information necessary to support such a decision. The text here should indicate whether the DEIS is intended to support a decision between dedicated trains or general freight trains.

Page 2-44 Section 2.1.3.3, 1st paragraph. The assumption regarding availability of the northern leg of the Las Vegas Beltway is potentially invalid. The DEIS should have included with and without beltway availability analysis. One must assume that the without beltway analysis would result in greater levels of transportation risk in the Las Vegas Valley. This information would appear critical to the ability of DOE to make route decisions.

Page 2-44 Nevada Transportation - Transportation is the major source of interest/concern to the people living in Lincoln County. This is due to the extreme likelihood that shipments to Yucca Mountain will pass through our county. Based upon objections expressed by Nevada leaders and actions taken related to DOE low-level waste transportation routing it is unlikely that any of the final routes, rail or highway, will go through Clark County. Likely routes whether legal weight truck, heavy-haul truck or rail will be through the rural areas of the State. The Draft EIS identifies a number of impacts resulting from transportation of nuclear material. However, there is no mention of mitigation measures that will be taken to minimize these impacts. It is essential that the EIS address mitigation plans in detail. Examples of potential mitigation measures are included in a number of the comments below.

Page 2-49 Section 2.1.3.3.2.1. This section should have included a description of the relevant FRA rail safety standards. Will the rail be built to minimum standards? Would design and construction at beyond minimum standards result in significant reductions in accident risk? Could this be a possible mitigation measure? Without discussion of the relevant standards it is not possible to discern whether above-standard design might make sense.

Page 2-50 Section 2.1.3.3.2.2. The text here would benefit from a description of the number of cars per train, which would be expected. I addition, an estimate of the

number of cars of other materials per week or per train going to the site is needed here. Absent this information, the reader has no idea of the volume of cars moving along a prospective spur.

Page 2-50 Rail Line Operations - This section discusses how the branch rail line would be operated. The discussion includes shipments by dedicated trains or in general freight. The Union Pacific Railroad has indicated that even if the spent fuel and high-level-waste casks were shipped in general freight, they would separate the cars carrying the radioactive material at a main switch yard like Salt Lake City and that they would then be brought to an intermodal transfer or switching station using dedicated locomotives. The Union Pacific has indicated that they would not tie up a general freight train while switching out the cars carrying the radioactive material. This is just one of several indicators that in conducting overall planning DOE is not adequately involving/consulting with key operational level players/stakeholders. DOE needs to consult with officials of the Union Pacific Railroad prior to identifying alternatives. We believe that the general freight alternative in the EIS is not feasible based upon our understanding of the Union Pacific Railroads views concerning radioactive waste cargo transfers.

Page 2-51 Section 2.1.3.3.3.1. The description of intermodal transfer stations should be refined to address 1) the length of siding required to accommodate waste shipments as well as other materials destined for Yucca Mountain; 2) the number of locomotives required to perform operations in the; 3) whether the types of support facilities which would be required at the site include maintenance of rail equipment; 4) the number of tractors and trailers required; 5) when and where tractor and trailer inspection would occur; 6) what, if any, emergency first response capabilities would resident at the intermodal station.

Page 2-51 Section 2.1.3.3.3.2. This section to provide an indication of maximum and minimum speeds that heavy-haul trucks will travel. The length of time to complete the trip for each route should be discussed.

Page 2-54 Apex/Dry Lake and Sloan/Jean Routes. The assumption here that the northern and southern legs of the beltway would be available is inappropriate. This highway will be owned by Clark County and will not necessarily be available for use by heavy-haul shipments. The analysis of routing through the Las Vegas Valley should be confined to existing roadways (I-15, U.S. 95 etc.).

Page 2-54 Highway Routes for Heavy-Haul Shipments - It is unacceptable to Lincoln

County that the DOE is only considering adding up to 4 feet to the existing shoulders. Some of the existing shoulders are only 2-3 feet wide which means at a maximum the shoulder would be only 7 feet wide. With the heavy-haul truck and cask being up to 10 ½ feet wide, DOE should insure that the shoulders are at least 12 feet wide so that the vehicle could be safely and completely removed from the main part of the road.

This section also discusses the routes from each of the intermodal transfer stations to Yucca Mountain. Having to modify intersections in the vicinity of Hiko, SR 375 and U.S. 6 to accommodate the 220 foot long heavy-haul trucks should be relatively easy, however, if any of the intersections at I-15, the new beltway, U.S. 93 or U.S. 95 are inadequate to handle the transporter, both in terms of weight or geometry, this could be a show stopper. DOE needs to evaluate these intersection carefully before considering them to be feasible routes.

Also, DOE needs to consult with the Nevada Department of Transportation to determine if NDOT would issue a heavy-haul permit on these routes.

Furthermore, turnouts located every 20 miles is not acceptable and would adversely impact commerce, tourism and general transportation in Lincoln County and create potentially unsafe passing conditions. This issue would be mitigated via construction of dual lanes in each direction on any highway in Lincoln County used for heavy-haul transport.

Page 2-58 Section 2.1.5. It is not clear whether Table 2-5 includes costs already incurred by DOE for the Yucca Mountain site. The text and table should so indicate. The costs already incurred should be specifically identified in the text and on the table.

Page 2-59 Section 2.2. In addition to serving as a baseline, the text here should also recognize that the No-Action Alternative is a choice that could be selected for implementation by the Secretary of Energy in a subsequent Record of Decision.

Page 2-61 Section 2.2.2.1. The text here should indicate for how long waste could be safely stored in dry-cask storage. What do the terms long-term and long periods mean? The cost and risk management benefits of on-site storage need to be introduced here and assessed in detail within the EIS. Ultimately, a simple comparison of the costs and risk management benefits of the Preferred and No-Action alternatives should be provided somewhere in the DEIS. This section should also discuss issues such as institutional control and sabotage and terrorism. Introduction of these concepts here is critical to subsequent analysis contained in latter sections to the DEIS.

Page 2-65 Section 2.2.2.2. The assumption of 10,000 years of institutional control seems inconsistent with NRC licensing guidance which encourage licensees to not assume institutional control beyond 300 years. This scenario should be revised to assume institutional control for 300 years (which is also consistent with the Preferred Alternative for Yucca Mountain).

Page 2-66 Section 2.2.2.3. The assumption of loss of institutional control after 100 years is not consistent with NRC licensing guidelines nor with assumptions associated with the Preferred Alternative (institutional controls at Yucca Mountain for 300 years). No-Action Scenario 2 should be deleted from the DEIS.

Page 2-69 Table 2-6. Comparison of Tables 2-5 and 2-6 suggests that the No-Action Alternative may be more costly to implement than the Preferred Alternative. The information in Table 2-7 suggests that the No Action Alternative is more risky than the Preferred Alternative. Collectively, these tables suggest that the Nation saves money by transferring risks from the 77 sites with waste inventories to Nevada. The savings to the Nation appears to be on the order of $23 to $28 billion. Given this magnitude of potential savings coupled with the transfer of risk to Nevada, the DEIS must discuss the issue of equity between locales where risk will be reduced and where risk will be concentrated. The concept of compensation of those areas to which risk will be concentrated by those areas in which risk will be reduced or eliminated must be

discussed within the DEIS. Conceptually, up to 100 percent of the savings between the No Action and Preferred alternatives should be considered as compensation to those areas in which risk will be concentrated.

Page 2-74 Section 2.4.1. The use of the word "small" to describe impacts is not consistent with NEPA terminology. Although DOE considers impacts to be small they may yet be significant. For example, a small absolute change might represent a 50 percent increase or decrease in given parameter. The DEIS must evaluate impacts and risks on the basis of their significance not their absolute value. Further, NEPA requires that impacts, even if "small", be mitigated.

Page 2-75 Table 2-7. This table should be revised to include a comparison of the population likely to accrue the risks associated with the No Action and Preferred alternatives. For example, what is the number of persons potentially exposed to risks associated with the No Action Alternative (ie. population near on-site storage and transportation routes). This information would be helpful in evaluating the extent to which the alternatives tend to concentrate risks among persons exposed to them. This concentration of risk is an important impact, which must be considered for mitigation or compensation.

Page 2-76 Table 2-7. Under No Action Alternative estimates of Radiological Latent Cancer Fatalities why is not a range of estimates given similar to estimates for the Preferred Alternative. Absent a range, does this imply a lack of uncertainty in the estimates under the No Action alternative, which is not available for the Preferred Alternative. The presentation of comparative data in Table 2-7 for each parameter for each alternative should be consistent.

Page 2-76 Table 2-7. As the analysis in Table 1 of these comments illustrates, the number of fatalities associated with the Proposed Action No Action alternatives. This is due to the fact that transportation is the key source of risk during the first 100 years. This analysis suggests that for at least 100 years the No Action serves to better protect public health and safety. The analysis in Table 1 also suggests that if the Preferred Action is implemented that during the first 100 years there will be a disequitable distribution of risk from existing storage sites to primarily Nevada, and in particular, communities located along transportation routes. The DEIS must consider the temporal and geographic distributions of risk associated with the Preferred and No Action alternatives. The DEIS must consider methods to mitigate risks transferred to Nevada. The DEIS must recognize that the Preferred Action does not minimize risk during the first 100 years of repository operation.

Page 2-81 2nd bullet. This finding suggests that inclusion of a rail to legal-weight truck alternative may be reasonable and may provide the best risk management/cost benefit. The FEIS must consider a rail to legal-weight truck alternative.

Page 2-81 3rd bullet. Given that the analysis of environmental impacts does not appear to aide in discriminating among transportation alternatives, it not clear on what basis DOE would make a route and mode choice. The DEIS should indicate the basis upon which transportation routing and modal choices will be made. What additional studies will be required to enable DOE to make and defend transportation decisions?

Page 2-81 Section 2.5. Lincoln County and the City of Caliente are very concerned that the DOE has apparently determined that the more than 40 studies sponsored by the County and City and provided to DOE do not "represent a substantive view" and therefore did not warrant incorporation of these views into the EIS nor inclusion of references to the studies in the document. To the contrary, the documents provided by the County and the City represented many substantive views on a wide variety of topics germane to the DEIS. DOE's failure to recognize the relevancy of these views is a foundational cause of the insufficiency of the DEIS as a NEPA compliance document.

5.3 Affected Environment

Pages 3-1 and 3-2 The listing of topics included in the description of the affected environment is not consistent with the topics assessed in the environmental consequence section. For example, under socioeconomic, housing and community services were considered as affected environment. In the environmental consequences section for Nevada transportation no estimates of the consequences to housing and community services is provided. This implies that the analysis of environmental consequences is incomplete in that it has not considered all aspects of the affected environment.

Page 3-10 Section 3.2.1. The text should make clear why an 80 km radius was selected around the Yucca Mountain site for air quality impact analysis. Given wind patterns is a consistent radius appropriate for determining potential impacts.

Page 3-12 Section 3.1.2.2. The choice of 60 meters as a maximum for wind measurements (see Figure 3-3) may not be appropriate to determine potential for dispersion under conditions of volcanism. If wind velocities at greater heights were used for atmospheric dispersion modeling, such differing heights should be identified here. This section would also benefit from a table showing dispersion times from the site to community areas off-site (in all directions). The table should indicate how long dispersion from the site would take to reach communities located in all counties surrounding Yucca Mountain.

Page 3-71 Section 3.1.7. The evaluation of impacts in Section 6 for transportation include impacts to real disposable income, gross regional product and government expenditures. In order to define magnitude of impact data for these parameters need to be included in the Affected Environment section of the DEIS.

Page 3-71 Section 3.1.7. The factors considered under socioeconomics is not adequate to enable a comprehensive assessment of impacts. At a minimum other factors needing to be included are age distribution of residents; other community services including water and waste water, solid waste, and emergency management and emergency medical services. Local government expenditures for these services needs to be considered. The baseline "without repository" projections of population, housing, employment, school enrollment, local government revenues and expenditures, and various community service capacities and demands should be at least through 2033 or better yet closure of the repository. Currently, the DEIS lacks sufficient information to enable a determination of the significance of impacts over projected without repository baseline to be determined.

Page 3-74 3rd paragraph. Text here indicates that Lincoln County had a 13 percent decline in employment between 1990 and 1995. The text should indicate what this was attributed to. This decline is inconsistent with the findings in Section 4, Environmental Consequences that a 1.9 to 5.8 percent increase in employment and population would be "within the range of historic changes in the county". Either the data in Section 3-74 in not accurate or the finding in Section 4 is inappropriate.

Page 3-76 Section 3.1.7.3. To enable a comparison with projected levels of PETT and to enable the reader to understand how past and future PETT levels were determined, the text here needs to explain how past PETT payment levels were derived, by County. The text should also identify any inconsistencies between derivation of PETT payments from one jurisdiction to another. Without such information any projection of PETT in Section is unsupported. (Section 4 does not

Table 1.
Draft Yucca Mountain Environmental Impact Statement
Comparison of Proposed Action to No Action Alternatives
Total Fatalities Per Year
(derived from data in Table 2-7 of Yucca Mtn. DEIS)

Alternative	0-24yrs.	24yr. Total	25-100yrs.	75yr. Total	100yr. Total	101-10,000yrs.	9,900yr. Total
Proposed	.75-2.69	18.70-67.13	.04-.06	3.01-4.53	21.70-71.66	5×10^{-8}-5.3×10^{-8}	5×10^{-5}-5.3×10^{-4}
No Action #1	.25	6.35	.25	19.06	25.4	.11	1,095
No Action #2	.25	6.35	.25	19.06	25.4	.33	3,300

Table Conclusions[1]

1. During the period 0-24 years Proposed Action is 3-10 times riskier that the No Action alternatives.
2. During the period 25-100 year No Action #1 is 4-6 times riskier than the Proposed Action
3. During the first 100 years Proposed Action is a little less to nearly three times riskier than No Action alternatives.
4. During the period 101 - 10,000 years No Action Alternative is 1,000 to 3,000 times riskier than the Proposed Action
5. During first 24 years of repository operation, transportation is the source of over 95 percent of all fatalities, with most being from highway accidents rather than exposure to radiation

1/ Proposed Action - disposal at Yucca Mountain
No Action Alternative #1 - on-site storage of wastes with long-term institutional controls
No Action Alternative #2 - on-site storage of wastes without long-term institutional controls

provide any estimates of PETT payments and this is a deficiency in the DEIS.)

Page 3-77 Table 3-26. Because the text on Page 3-73 indicates that the population of Lincoln County will increase 2 to 4 percent per year during the next decade, an explanation is needed as to why school enrollments in Lincoln County are projected to decline between 1997 and 2001. These two trends appear inconsistent, unless there are extenuating factors (ie. aging of the population, reduced birth rates, etc.). Because Section 3 includes school enrollment, Section 4 should include a projection of school-age children resulting from population growth. In addition, Section 4 should consider the need for additional school facilities to accommodate enrollment growth.

Page 3-78 Table 3-27. The year 2000 population forecasts for Lincoln County are not consistent with those of the Nevada State Demographer (4,410).

Page 3-78 Health Care. The description of hospitals should indicate whether these facilities are currently capable of handling patients contaminated by radiation. In the case of the Grover C. Dils Medical Center in Caliente, that facility is currently not capable of effectively handling a patient contaminated with radiation.

Page 3-78 Law Enforcement. The description of law enforcement should indicate whether each police or sheriff department is currently trained and equipped to respond to emergencies involving radiation hazards. The Lincoln County Sheriff Department is not currently trained or equipped to respond to such a hazard.

Page 3-78 The description of fire protection and emergency management should indicate whether each department and/or jurisdiction is currently trained and equipped to respond to emergencies involving radiation hazards. None of the volunteer fire departments or emergency medical service providers in Lincoln are currently trained or equipped to respond to such a hazard.

Page 3-98 Section 3.2.1.1. The last sentence of this section indicates that population densities were derived to estimate health risks. The methodology used to estimate potentially impacted population as described on Page J-40 has resulted in an underestimation of population in rural areas such as Lincoln County. This results from the fact that population densities used were derived from Census Block data. In Lincoln County Census areas are very large relative to total population within the area. Most persons residing in the Census areas reside near to transportation infrastructure. As a result, it is necessary to adjust population densities prior to multiplying each by the 1.6 kilometer region of influence. Research completed by the University of Nevada, Las

Vegas, Transportation Research Center has documented the need to make such an adjustment in population density.[19]

Page 3-98 Section 3.2.1.1. The second paragraph of this section indicates that final transportation mode and routing decisions will be made on a site-specific basis during the transportation planning process, following a decision to build a repository at Yucca Mountain. This statement implies that the Secretary of Energy's site recommendation to the President will be made prior to resolution of site-specific mode and routing decisions. This would seem contradictory to the guidance contained within existing 10 CFR 960 and inconsistent with the proposed revisions to 10 CFR 960, which infer the availability of EIS-based transportation information for use, by the Secretary in preparing a site recommendation to the President. In the event that site-specific transportation decisions are deferred until after a decision to build Yucca Mountain is made, such transportation decisions may not be made until 2005, the year DOE anticipates receiving a construction authorization (see Figure 2-9). Such a schedule will provide DOE with just five-years to complete necessary field studies and surveys, complete environmental documentation, complete necessary final designs, construct necessary rail and/or highway infrastructure and provide necessary training and equipment to emergency first responders along selected routes. Lincoln County and the City of Caliente do not agree with a DOE decision to defer making site-specific transportation decisions until after a decision to build Yucca Mountain is made. The County and City recommend that the DEIS include a phased schedule for making site-specific transportation decisions which begins now so as to avoid decision-making under the pressure of unnecessarily tight time constraints. Further, the County and City do not agree with the apparent DOE assumption that if a repository site is approved for construction that transportation issues will be resolved and that a satisfactory transportation route and mode will be available to serve the site. Rather, the DEIS should include a schedule and approach to making transportation decisions which will enable minimization of related risks. The current approach described (or inferred) within the DEIS does not support risk minimization.

Page 3-101 Table 3-33. This table does not appear to reflect Bureau of Indian Affairs lands that would be crossed in the vicinity of U.S. 95 north of Las Vegas.

Page 3-107 Section 3.2.1.4. This section should include reference to the Southwest Willow Flycatcher (Empidonax trallii extimus) which was listed by the U.S. Fish and Wildlife Service as endangered in February 1995. Habitat for this species may be found proximate to the Caliente, Caliente-Chalk Mountain, Carlin, Jean and Valley Modified rail routes.

Page 3-113 Table 3-36. This table is misleading in that it only reflects the number of sites identified to date and does not make clear that not 100 percent of each corridor has been surveyed. The table should be revised to reflect the percent of each route surveyed to date.

Page 3-114 Section 3.2.2.1.6. The description of the affected environment with regard to socioeconomic issues is incomplete. See comments to Page 3-71, Section 3.1.7.

Page 3-115 4th paragraph. The second sentence in this paragraph appears to be incomplete.

Page 3-116 Section 3.2.2.1.8. This section needs to describe BLM designated wilderness study areas (WSA) proximate to transportation corridors. Section 4, environmental consequence needs to consider visual impacts to and from designated WSA's.

Page 3-120 3rd full paragraph. See comments to Page 3-98, Section 3.2.1.1 which describes problems with the approach used in the DEIS to derive population densities along transportation corridors.

Page 3-127 Section 3.2.2.4. See comments to Page 3-107, Section 3.2.1.4.

Page 3-129 2nd paragraph. The Caliente intermodal site is the location of the City of Caliente's wastewater treatment facility. Lands on the site are irrigated with effluent. The site is fully developed. Moist areas are likely the result of irrigation and are not springs or wetlands. This site has been previously cleared through NEPA for construction of wastewater treatment facilities using federal funding.

Page 3-130 The text here implies that heavy-haul routes are in proximate parallel location to flowing surface waters. This is not the case at all. In most cases, these routes are 800 or meters from any flowing surface water, except for the occasional spring. Additional field work and revision to this section is needed.

Page 3-133 Section 3.2.2.2.5. The fourth line of the 2nd paragraph of this section should reflect that archaeological sites are "at or near" sites. The Caliente site has been developed as the City of Caliente's wastewater treatment facility. The site has been wholly disturbed. The significance of cultural resources as an issue at this site

needs to be reconsidered within the DEIS.

Page 3-134 Section 3.2.2.2.7. 3rd paragraph. The Caliente Route is located several miles from the community of Hiko. Reference to Hiko in this paragraph should be deleted.

Page 3-142 Section 3.3.3. It appears as though the analysis of impacts to water sources for the No Action and Preferred alternatives use quite different assumptions. An appendix describing and comparing the assumptions needs to be included. For example, the Rancho Seco site is shown located on the Sacramento River watershed. However, the site is actually several miles from any river. In fact the Folsom-South Canal had to be constructed over at least 30 miles to bring water to the site. Most of the water used in the vicinity of Rancho Seco is from individual domestic wells. This analysis and assumptions appear to be highly suspect. The DEIS must be revised to explain the details of this analysis if it to be considered credible and useful for decision-support purposes.

This section of the DEIS should indicate how the analysis used here is consistent with or deviates from accepted methods used by NRC for licensing of commercial power plants. If such a methodology were used it is doubtful any such plants would have ever been licensed.

5.4 Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure

Page 4-3 1st full paragraph. The first sentence of this paragraph should end with "and Congress authorizes construction and appropriates funding to build the repository." As written, the sentence misleads the reader to believe that all that is needed is NRC approval.

Page 4-3 4th full paragraph. This section should describe what factors will be used to determine whether a 50 or 300 year performance confirmation period will be utilized. The length has implications for PETT payments and timing of possible retrieval and related transportation activities.

Page 4-4 3rd full paragraph. A fourth bullet needs to be added for Rail to Legal-Weight Truck. Such a scenario must be considered in the FEIS.

Page 4-9 Radiological Impacts to Air Quality from Construction - The DEIS

discusses the potential of radio nuclide releases of radon-222 through the ventilation system. To provide protection to the people that are down wind from the site, DOE should install adequate filters to remove the radioactive particles from any exhaust release.

Page 4-82 2nd bullet. What is the definition of unacceptable. Who will decide? Unacceptable to whom?

Page 4-88 Section 4.1.15.4. Sites for cask manufacturing should have been considered within Nevada. The FEIS should consider sites along transportation corridors in Nevada. The description of environmental setting for these facilities belongs in Section 3, Affected Environment.

5.5 Environmental Consequences of Long-Term Repository Performance

Page 5-6 Section 5.2. The postulated sequence of events does not include the potential for atmospheric releases due to volcanism, gaseous releases, and human intrusion. Other possible sequences of events relating to atmospheric pathways should be described and analyzed in the DEIS.

Page 5-16 3rd paragraph. Why did the DEIS not consider the potential for portions of the content of a waste package to be brought to the surface as a result of drilling induced human intrusion? Such an occurrence seems more plausible than release to the water table and would likely occur prior to drilling reaching the water table. In practice, a drill penetrating a cask would likely result in fatal exposure to the drill crew at the surface and drilling would likely not proceed to the water table.

Page 5-49 Section 5.10. Table 5-19 should also show LCF's during the year of projected peak dose, which is expected to be some time after 10,000 years.

5.6 Environmental Impacts of Transportation

Page 6-37 Socioeconomic Section - This section only seems to include the positive aspects of socioeconomic impacts but should also include the impacts to the quality of life in these rural communities as a result of the proposed action, in particular, heavy-haul transport of the large nuclear fuel shipping casks having to go through populated areas in Lincoln County.

Page 6-37 Noise Section - This section identifies that, "The region of influence

considered in the analysis included inhabited commercial and residential areas where noise from construction and noise from trucks or trains would have the potential to exceed 45dBA." Then on Page 6-97, in the section related to noise, the DEIS identifies that the 45dBA could occur at a distance of about 2100 feet. That's almost half a mile, and there are certainly residential areas within a half a mile of the identified heavy-haul routes. It would seem that the impact to residences might not be as casual as the DEIS implies if one were living within 50 feet from the highway and this noise level occurs 4-5 times each day during the week for years. DOE needs to evaluate what can be done to mitigate noise levels that exceed what is considered safe limits. This may include constructing sound deadening walls between the road and residences.

Page 6-57 Socioeconomic Section - In the discussion of the socioeconomic impacts associated with construction of the branch line in the Caliente corridor, the Draft EIS identifies that the annual average number of construction workers to be 500 to 560 and that there would be 5 construction camps. It would seem that some of the camps will be in the vicinity of the rural communities in Nevada and could have a significant economic impact on the community, in terms of setting up the camps, during construction and when the construction work is completed. We feel that this impact needs to be addressed in the socioeconomic section and how these impacts could be mitigated needs to be included. Some of the measures taken would be to provide temporary living facilities and classrooms, if many of the workers plan to stay in the community for the construction period and have school age children.

Page. 6-57 Table 6-20 identifies impacts to workers from industrial hazards during construction and operation. In rural Nevada, access to emergency medical care is limited and challenging. These communities need financial assistance from DOE to be able to have the appropriate facilities and personnel to provide proper medical help for ill or injured workers and their families.

Page 6-84 Impacts of Nevada Heavy-Haul Truck Transportation Implementing Alternatives - In this section DOE evaluates the impacts in Nevada for each heavy-haul and associated intermodal transfer station. The evaluation addresses 1) upgrading highways to accommodate frequent heavy-haul truck shipments, 2) constructing and operating an intermodal transfer station, and 3) making heavy-haul truck shipments. It appears that this subject is being addressed in a partial vacuum. Before you can perform a thorough and worthwhile evaluation, you need to consult on a serious basis with the Nevada Department of Transportation to get a realistic evaluation of what it would take to obtain permits in order to conduct heavy-haul shipments. The State of Nevada has the authority to grant or withhold heavy-haul permits. As this is a very long term, high intensity shipping campaign of a hazardous material, you need to determine specifically what it would take to get the necessary state heavy-haul permits before you even consider whether these routes are feasible and what the impacts will be. DOE should consult with the State of Nevada Department of Transportation before considering heavy-haul transport of the spent nuclear fuel and high level waste as a viable option. The explanation in the DEIS of what it will take to operate heavy-haul trucks on the Nevada highways is grossly simplified. DOE may well be required to construct by-passes around rural communities and four lane highways on the U.S. highways and not just pull-outs periodically. This could well end up costing as much or more than constructing a branch rail line and could have more impact on rural communities.

Page 6-94 Cultural Resources Section - The Draft EIS discusses the impacts of heavy-haul of the large rail casks. The DEIS identifies that no additional direct or indirect impacts would be likely to historic sites from operations of heavy-haul trucks along any of the routes. Older historic buildings close to the highway could be adversely impacted. Especially when you consider there may be 4-5 heavy-haul trucks/day going through these rural communities every weekday for at least 24 years. This may also require building heavy-haul by-passes around some communities.

Page 6-95 Occupational and Public Health and Safety Section - The Draft EIS discusses traffic fatalities along the heavy-haul routes. What about traffic related injuries? Injuries should also be addressed. The potential increase in accidents where there are large, slow moving truck convoys along two lane highways where people are used to traveling at high rates of speed needs to be carefully considered.

Page 6-96 Socioeconomic Section discusses the impacts of heavy-haul of the large rail casks - This section fails to address potential impacts to the quality of life of residents living along highways in the rural communities resulting from 4-5 of these large trucks, along with their remaining convoy, traveling communities every week day for 24 years. This area needs to be addressed by DOE. One method to mitigate this impact would be to construct heavy haul by-passes around these communities working with each community as to where by-pass should be located.

Page 6-97 In the Section regarding noise from heavy-haul trucks, you identify that under certain conditions, the noise level would be 45 dBA at about 2100 feet from the road (that's almost a half mile). There are residences much closer to the highway than that. What would the noise level be 30-50 feet from the highway Also, what would be the vibration levels in the buildings? This could be very disturbing people living or working along the route. In addition, at least one of the intermodal transfer sites is near a residential area. Measures to be taken to reduce the noise level need to be addressed. This may include the construction of sound deadening walls between the residences and the highway.

5.7 Environmental Impacts of No-Action Alternative

Page 7-1 Section 7. Scenario 2 of the No Action Alternative should be deleted from the DEIS as it is not a reasonable alternative. See previous comments.

5.8 Cumulative Impacts

Page 8-87 Section 8.4.2.1. This section should recognize that before the Caliente Intermodal site could be used by DOE the existing City of Caliente wastewater treatment facilities would have to be relocated. A site for such relocation would need to be obtained by DOE.

5.9 Management Actions to Mitigate Potential Adverse Environmental Impacts

Page 9-1 Section 9. In general, the treatment of mitigation in the DEIS is entirely insufficient. Many impacts identified within the DEIS have no mitigation measures identified for them at all (ie. additional school enrollment in Lincoln County due to transportation activities). In preparing the FEIS, DOE needs to identify all impacts described within the DEIS and the FEIS must identify options for mitigation of all impacts.

Contrary to NEPA, the DEIS contains several proposed mitigation measures which are simply studies or simply describes studies which will lead to identification of mitigation measures. For most impacts identified within the DEIS, but characterized by DOE as non-significant (ie. population growth in Lincoln County and City of Caliente and related growth in government expenditures), the DEIS simply does not provide any suggested mitigation measures. In completing the FEIS, DOE should evaluate all listed mitigation measures against the types listed above to discern those which are of an unacceptable form under NEPA.

Page 9-19 Section 9.3.4.1. The 3rd and 4th bulleted actions are inconsistent with the recently adopted Clark County multispecies habitat conservation plan. Clearance surveys have come to be of marginal value since the disposition of collected tortoises is often euthanasia.

Page 9-21 Section 9.3.4.2. This section does not include any measures to replace vegetation or animal unit months (AUM's) of forage lost to rail spur construction.

Endnotes

1. United States, Council On Environmental Quality, "Memorandum: Scoping Guidance", April 30, 1981.

2. Governor Kenny Guinn, *Letter to Chairman Julio Costello of the White Pine County Commission Dated August 24, 1999*, State of Nevada, Office of the Governor, Carson City, Nevada.

3. Lincoln County/City of Caliente, Repository EIS Scoping Report: Issues Raised by Lincoln County and the City of Caliente Needing to be Addressed Within the Repository EIS, December 1995.

4. See 40 CFR 1502.14(c) for regulatory guidance on the relationship of NEPA compliance documents to congressional decision-making.

5. Goble, Robert, Perspectives on Risks from the Nevada Test Site: Feasibility and Methods for Assessing Cumulative Radiological Exposure Risks Associated with Department of Energy Activities at the Nevada Test Site, Center for Technology, Environment and Development of the George Perkins Marsh Institute on the Human Dimensions of Global Environmental Change, Clark University, Worcester, MA. June 1994.

6. TRW Environmental Safety Systems, Inc., Nevada Potential Repository Preliminary Transportation Strategy Study 1, Prepared for U.S. Department of Energy, Office of Civilian Radioactive Waste Management, April 1995.

7. Krannich, R. and R. Little, Baseline Community Social Profiles for Communities in Nye, Esmeralda, Lincoln and Clark Counties, (3 volume), prepared for the State of Nevada, Nuclear Waste Projects Office, 1987. See also, Krannich, R. and R. Little, Ethnographic Summary Report: Eastern Lincoln County, prepared for the State of Nevada, Nuclear Waste Projects Office, 1988. See also, Krannich, R. and R. Little, Ethnographic Summary Report: Pahranagat Valley, prepared for the State of Nevada, Nuclear Waste Projects Office, 1988. See also, Krannich, R. and R. Little, 1988 Rural Community Surveys: updated Background Report, prepared for the State of Nevada, Nuclear Waste Projects Office, 1989. See also, Krannich, R. and R. Little, Analysis of Key Sociocultural Relationships in Seven Southern Nevada Rural Communities, prepared for the State of Nevada, Nuclear Waste Projects Office, 1989.

8. McCracken, B. Lincoln County Oral History Series, oral histories of various County residents prepared for the Lincoln County Nuclear Waste Project Office, 1990 through 1993.

9. Intertech Services Corporation, Media Amplification of Risks: Implications for Hazardous Materials Transport, prepared for Lincoln County and the City of Caliente, May 1991.

10. See Lincoln County/City of Caliente Emergency Preparedness Inventory and Analysis (1985); and Lincoln County/City of Caliente Emergency Preparedness Inventory and Analysis (1991), each prepared for Lincoln County and the City of Caliente.

11. Intertech Consultants, Radiological Emergency Response in Small Communities: A Report on Capabilities and Constraints, prepared for Lincoln County and the City of Caliente, June 1989.

12. Intertech Services Corporation, "Emergency Management Issue Ranking: Lincoln County Repository Oversight Program", technical memorandum prepared for Lincoln County and the City of Caliente in consultation with their Local Emergency Planning Committee, May 1994.

13. ETS Pacific, Inc., Pilot Study and Analysis of 46 Mile Rail Corridor in Lincoln County, Nevada, prepared for the Board of Lincoln County Commissioners, October 1986. See also ETS Pacific, Inc., Condition Update of 46 Mile Rail Corridor in Lincoln County, Nevada, prepared for the Board of Lincoln County Commissioners, June 1989.

14. Goble, Robert, Perspectives on Risks from the Nevada Test Site: Feasibility and Methods for Assessing Cumulative Radiological Exposure Risks Associated with Department of Energy Activities at the Nevada Test Site, Center for Technology, Environment and Development of the George Perkins Marsh Institute on the Human Dimensions of Global Environmental Change, Clark University, Worcester, MA. June 1994.

15. U.S. Department of Energy, Draft Environmental Assessment: Yucca Mountain Site, Nevada Research and Development Area, Nevada, Office of Civilian Radioactive Waste Management, December 1984.

16. Intertech Services Corporation, Tourism Impacts of Three Mile Island and Other Adverse Events: Implications for Lincoln County and Other Rural Counties Bisected by Radioactive Wastes Intended for Yucca Mountain, prepared for Lincoln County and the City of Caliente, August 1990.

17. Sathisan, Shasi et. al., Risk Analysis for Spent Nuclear Fuel Transportation Through Lincoln County Volume I: Rail Shipments, Volume IIA: Highway Shipments, Volume IIB: Technical Appendix, Transportation Research Center, Howard Hughes College of Engineering, University of Nevada, Las Vegas, February 1995.

18. Intertech Services Corporation, The Yucca Mountain High-Level Radioactive Waste Repository and Lincoln County: Characterization of Socioeconomic Impacts and Framework for Assessment of Effects, prepared for Lincoln County and the City of Caliente, October 1994.

19. Sathisan, Shasi et. al., Risk Analysis for Spent Nuclear Fuel Transportation Through Lincoln County Volume I: Rail Shipments, Volume IIA: Highway Shipments, Volume IIB: Technical Appendix, Transportation Research Center, Howard Hughes College of Engineering, University of Nevada, Las Vegas, February 1995.

Statement of Robert Holden, Nuclear Waste Program Director
National Congress of American Indians
Nuclear Regulatory Commission Briefing on the Department of Energy Draft Environmental Impact Statement for a Proposed High-level Nuclear Waste Repository

January 21, 2000

Thank you for the opportunity to participate in this hearing regarding the evaluation of the Department of Energy (DOE) Draft Environmental Impact Statement of the proposed high-level radioactive waste repository at Yucca Mountain. I will speak to some of the policy matters which this organization has tracked for its member tribal governments. This organization has conducted a tribal nuclear waste issues program under a cooperative agreement with the DOE Office of Civilian Radioactive Waste Management (OCRWM).

The impacts of this federal action upon indigenous peoples, lands, and resources is critical to the human rights of the people to reside in their homelands. The NCAI does not believe that the impacted tribal governments of this federal action have had an ample opportunity to analyze and respond to the full inventory of technical studies performed at Yucca Mountain. This is not to say they have not received notice of the studies and progress reports done during the site characterization. Without exception, tribal governments in the Yucca Mountain region have not had the luxury of acquiring a team of technical experts to assess the data and conclusions. The DOE is well aware of the fiscal barriers which prevents tribes from assembling a research team. The NCAI believes the DOE has a fiduciary responsibility to provide the Yucca Mountain area tribes with resources that would enable them to respond to the Draft EIS

The relationship between the federal government and tribal governments originates from treaties which were signed following the formation of the United States between these sovereigns. A guiding principle of the tribal/federal relationship is the legally enforceable trust responsibility of the United States to protect tribal self-determination, tribal lands, assets, resources and treaty rights, as well as carry out the directions of federal statutes and court cases. One of the intents of the federal guardianship is to mitigate the devastating effects of loss of lands upon which the tribal populations have lived for thousands of years. The obligations of the tribal trust doctrine are often perceived as burdensome to federal officials when embarking on federal actions which impact tribal governments and peoples. This is because of the government to government notice and consultation requirements necessary for federal guardianship can be time consuming, will cause delays in scheduling, and are added costs to the respective agency or contractor.

There are various points in the history of this country when individuals own up to misgivings and inaction of the federal government in exercising their responsibilities. For instance, the goal of Indian Reorganization Act of 1934 (IRA), 25 U.S.C. s.465, was to provide for the recovery of the Indian land base and reestablish tribal economic,

governmental and cultural life: One of the IRA's principal authors, Congressman Howard of Nebraska, noted at that time, "...[T]he land was theirs under titles guaranteed by treaties and law; and when the government of the United States set up a land policy which, in effect, became a forum of legalized misappropriation of the Indian estate, the government became morally responsible for the damage that has resulted to the Indians from its faithless guardianship."

The tribes in the Yucca Mountain region still maintain close historic and cultural ties with the land. The total ecosystem is a living entity and the spirits and beings that dwell there to this day are still meaningful to them and as real and vivid as you and I and the people in this room. Many tribal people indigenous to the Yucca Mountain region have informed DOE officials that this area has special meaning and expressed opposition to the project. One tribal chairman stated, "We have to put ... things into perspective. It is like this thing [the high-level waste proposal] that came out. They are saying,'we are not damaging that, all we are going to do is to cut down that tree.' As Indian person I feel I am important, but am I more important than that tree or is that tree more important than me. We are on this earth, we are insignificant. Indian people say, 'What's more important; the earth that we stand on, the air that we breathe, or the water that we drink?' They all have their reason to be here and that is what we have to get over to the United States Supreme Court. We are nothing, but to put it all together it forms a circle. And we all have to live together no matter what, because its our earth. These things are here, we didn't put them here, so who are we to move them. We didn't create them, but we are here to protect them."

The Draft EIS does not go far enough to address cumulative impacts which are likely results because of past present and future impacts from NTS activities. For instance, the DOE mentions a proposed federal action to return certain lands of the Timbisha Shoshone. An important factor left out regarding this return is that the land was subjected to years of radioactive fallout from the Nevada Test Site. The amount of radiation exposure experienced by the indigenous people residing in the area has not been assessed nor have any baseline health studies been conducted. The people still living in the area may have experienced significantly higher levels of exposure because of the many exposure pathways common to Native American peoples. The added impacts of long term releases from the transportation of radioactive waste and spent nuclear fuel can not be accurately calculated. The status of the Indian nation populations should give rise to a higher degree of assurance that they will be protected from increased exposures.

A joint NCI/CDC effort to assess human health impacts from bomb testing at the NTS is currently underway. The people whose homelands near the Nevada Test Site were subjected to multiple detonations of atomic weapons. This project affirms what Native American peoples in the area have known for years--that radioactive fallout caused significant negative health impacts which includes chromosomal damage, debilitating diseases, and mortality.

Utmost protective considerations must be accorded to the people indigenous to this

area. An apparent conclusion or response to the Timbisha land return issue may be that the reservation is being created well after the Yucca Mountain has begun, thereby absolving the DOE of its trust responsibility. Once again, the Timbisha Shoshone have lived there thousands of years prior to any encroachment or intrusion of federal actions.

The fact of primary habitation of indigenous peoples, whom the federal trust responsibility is to protect, is an important point in regard to the divergence of opinion of ground-water protection requirements. The DOE acknowledges that further studies of impacts are needed along transportation corridors.

The tribal peoples in the Yucca Mountain area have close historical and cultural connection with their homelands. These ties are the lynchpin of their cultural integrity and survival. The treaty rights are clear and compelling evidence that the DOE must provide tribal governments in the Yucca Mountain region with sufficient resources to secure qualified technical staff to analyze the thousands of documents generated during the life of this project If tribal decision-makers are not able to independently review and interpret the draft EIS and supporting data, the only conclusion that can be drawn is that they have been left out of the process.

Thank you for the opportunity to present these views of the National Congress of American Indians.

Nuclear Regulatory Commission Meeting
January 21, 2000

CONSOLIDATED GROUP OF TRIBES AND ORGANIZATIONS

a) Comprised of 16 tribes and one Indian organization, Western Shoshone, Southern Paiute and Owens Valley Paiutes.

b) Involved since 1987

c) Convenes meeting one-two times per year with officially appointed tribal representatives.

d) Appoints committees to respond to various tasks associated with the YMP

e) DOE has supported meetings and participation since the inception of the YMP Site Characterization Program. Joint Use Area.

f) On record as opposing the YMP, but participates because of the significance of the resources and cultural ties to the area.

g) YMP is not a barren wasteland, but our church, pharmacy, grocery store, etc.

OPPOSITION TO THE PROJECT

a) Against the grain of the culture

AIWS – SUPPORT DOCUMENT

a) Committee of 4 tribal representatives designated by the CGTO.

b) Developed February 1999

c) Cited and referenced in the DEIS – 37 times

ENVIRONMENTAL JUSTICE

a) DEIS states that no adverse impacts to any minority populations with subsistence lifestyles.
b) Throughout the life of this project, no systematic studies to evaluate subsistence lifestyles or epidemiological studies.

c) No other group of people experience Holyland violations.

d) No other group of people will be denied access to important areas and resources including sacred sites.

TRANSPORTATION

a) Las Vegas Paiute Tribe

b) Moapa Paiute Tribe

c) Timbisha Shoshone Tribe

d) Numerous other tribes in Nevada and throughout the United States will request similar consideration.

e) Study considered populations within ¼ mile of any proposed transportation corridor.

f) Route selection is left to States but assurances need to be given to tribes for involvement and notification.

g) The DEIS illustrates state and county boundaries but gives no attention to Federally Recognized Tribal Boundaries. Should be included in the DEIS.

INTERMODAL TRANSFER FACILITY

a) No systematic ethnographic studies have been conducted to evaluate the anthropological and sociological impacts to Indian people regarding cultural resources and sacred sites. Focused on archaeological impacts on "stones and bones"

b) Only desktop review was permitted. (Imagine trying to conduct a botanical study or geological modeling or maybe even s site suitability study without doing any on-site field analysis!).

c) Prior to any selection to an Intermodal Transfer Facility, a Preliminary Cultural Assessment followed by systematic ethnographic studies.

d) Prior to any ground disturbing activities, Indian monitors need to be present at all times.

DEIS GENERAL OBSERVATIONS

a) Appendix D (12-13) states that copies of the DEIS was sent to all governors of states, territories, and Indian organizations but no mention of tribal governments. Presidential Memorandum Requiring Government to Government Relations with Indian Tribes. (Shouldn't the same consideration be granted to tribes?)

b) Adverse Affects to Cultural Resources – impacts may result from workers and from construction activities. A plan for mitigation has been established to monitor those areas/sites. Note: American Indian monitors are not considered in this mitigation plan after a lengthy relationship and direct cultural ties to the area.

d) Long term commitment of Tribes and maintenance of Government to Government Relations.

e) Funding

f) No consideration to NPS Bulletins 30 & 38 Evaluation and Documentation of Historic Landscapes and Traditional Cultural Properties.

g) Emergency Response and Preparedness, i.e., equipt., staff, training

Testimony of Darrell Campbell to the Nuclear Regulatory Commission
Rockville, Maryland

January 18, 2000

Good morning Chairman Meserve and Commissioners Dicus, Diaz, McGaffigan, and Merrifield. My name is Darrell Campbell and I am Treasurer of the Prairie Island Indian Community in Minnesota.

I would like to thank you for the opportunity to be here today to speak at this meeting of the Nuclear Regulatory Commission concerning the draft Environmental Impact Statement for the proposed national nuclear waste repository at Yucca Mountain.

I am here today to tell you that we do not support the No-Action alternative, as described in the draft EIS. While we recognize that the No-Action alternative was evaluated to provide a baseline for comparison with the Proposed Action, we believe that it is necessary to point out that the No Action alternative has serious ramifications for my tribe.

My tribe lives in the shadow of a nuclear power plant and a nuclear waste storage facility 24 hours a day, seven days a week. We receive no benefit from the existence of this power plant and waste

storage facility—no tax base or even electricity, we even fund our own environmental monitoring and emergency preparedness programs. Nowhere in the United States is the problem of nuclear waste more evident than at Prairie Island. As you may be aware, there is a spent fuel storage facility at a commercial nuclear power plant just 600 yards from our homes, church and government offices, and there is no date in sight for its removal.

We didn't ask for the nuclear power plant to be built right next to our reservation. Nor did we ask for a spent fuel storage facility to be constructed and operated next to us. As you are also aware, dry cask storage is supposed to be a temporary, not a permanent, solution to the Nation's nuclear waste management problem.

We are the closest community next to a nuclear power plant and waste storage facility. We live within feet – not miles. To even suggest that the spent fuel will remain on-site, either with institutional controls or unimaginably, without controls, is not acceptable to my people.

As discussed in the draft EIS, if the spent fuel is left on-site in dry storage, eventually the radioactive materials would escape to the environment, contaminating the atmosphere, soil, surface water

and groundwater. Although there is no mention of what would happen to the people living near these sites, I assume that they would either be removed or face contamination. We have no intention of leaving our land, land that was promised to us by the United States government. Unless this waste is removed, our children, and our children's children will be forced to live with this very real health and safety threat

An analysis of Yucca Mountain must include a complete analysis of transportation issues, including routes, transportation packages, health and safety concerns, and cultural resource impacts. All jurisdictions – tribal, state and local – must be fully prepared for those shipments and be included in developing emergency preparedness plans.

Since we have lived next to a nuclear neighbor for more than 30 years, we are sensitive to the concerns of other tribes near Yucca Mountain. I want to emphasize that all tribal concerns must be addressed fully and not merely "considered."

Ultimately, we must think hard about our continued reliance on this form of energy. Yucca Mountain cannot hold all the nuclear waste that we will generate if we continue using nuclear power.

We're only prolonging the struggle of how to handle the nuclear waste that continues to pile up. And as we have learned, no one wants this in their backyard.

The No-Action alternative means the federal government will continue to deny its responsibility for the nuclear waste that sits on Prairie Island and in 71 other communities. As stated in the draft EIS, Congress has affirmed that the Federal government is responsible for the permanent disposal of spent nuclear fuel and high level radioactive waste. The safe disposal of these materials is a National responsibility and priority.

Thank you for this opportunity to brief the Nuclear Regulatory Commission on our reaction to the draft Environmental Impact Statement for Yucca Mountain. We plan to submit technical comments on the draft to the Department of Energy and would be glad to provide you copies.

SUMMARY OF STATE OF NEVADA FINDINGS WITH RESPECT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED YUCCA MOUNTAIN HIGH-LEVEL RADIOACTIVE WASTE REPOSITORY

Issue 1: The No Action Alternative

The no action alternative is unrealistic and unreasonable and does not represent a realistic representation of circumstances that would exist if DOE does not implement the preferred alternative (i.e., development of a repository at Yucca Mountain).

Issue 2: Inadequate and Inaccurate Project Description

The description of the proposed action contained in the EIS is inadequate and not reflective of the proposed project as it is currently described by DOE (facility design, thermal load scenario, etc.).

Issue 3: Proposed Action Inconsistent with the NWPA

The project described in the draft EIS may be in conflict with the Nuclear Waste Policy Act (NWPA) since it does not constitute "geologic disposal", but rather proposes an engineered storage facility constructed using a series of underground tunnels. The geologic formation that is Yucca Mountain contributes almost nothing to waste isolation; reliance is almost solely on engineered barriers.

Issue 4: Failure to Disclose Transportation Routes

The draft EIS fails to identify the specific transportation routes for spent fuel and HLW shipments from specific reactor and generator locations to Yucca Mountain despite the fact that these routes were identified as part of the analyses contained in the transportation appendix. DOE, in effect, has chosen to hide the routes and simply report the results of the analyses in a generic fashion.

Issue 5: Inadequate and Misleading Noticing of Public Hearings

The manner by which the comment period and public hearings were noticed by DOE was/is misleading and intended to suppress public participation and public comments. Notices make no reference to the specific transportation routes, the types and volumes of shipments along each route, and the impacts to specific communities along identified routes.

Issue 6: Inadequate Analysis of Rail Corridors in Nevada

The analysis of potential rail corridors in Nevada is inadequate, incomplete, arbitrary. Different corridors are evaluated at different levels of detail; specific alignments are not identified precisely enough to adequately assess impacts; and no preferred alternative is identified (that decision is left to some "future" decision point, but the information in the draft EIS "could" be used to make the decision at that time).

Issue 7: Inadequate Analysis of Highway Routes in Nevada

The evaluation of alternative highway routes is inadequate, incomplete, and relies on numerous questionable assumptions. The most likely alternative highway route (the NDOT 'B' route from I-80 to US 93 to US 6 to US 95) is not analyzed at all; the primary route (I-15 to US 95) assumes infrastructure that is not in existence (the yet-to-be-built beltway section) and ignores the current HM 164 route (I-15 connecting directly with US 95 in Las Vegas).

Issue 8: Inadequate Treatment of Heavy Haul Truck Transport in Nevada

The draft EIS fails to demonstrate the feasibility of the unprecedented large-scale, long duration heavy haul transport of SNF and HLW on public highways. It misrepresents the operational complexity of such shipments; grossly underestimates the amount and cost of infrastructure improvement required along Nevada highways; and contains an incomplete and inadequate analysis of potential HHT routes.

Issue 9: Inadequate and Inaccurate Analysis of Spent Fuel Radiological Characteristics

The draft EIS misrepresents the radiological characteristics of the spent fuel that would be transported, using reference fuel that is older, less radioactive, and less thermally hot.

Issue 10: Faulty Assessment of Routine Radiation Exposures Due to Transportation

The draft EIS grossly underestimates the routine radiation exposures along highways and rail lines. This is especially true ion Nevada with respect to heavy hauls shipments characterized by long stop-times, reduced speeds, and other local conditions.

Issue 11: Inadequate Treatment of Accidents and Terrorism/Sabotage Impacts

The draft underestimates the consequences of severe accidents and terrorism/sabotage incidents, especially with respect to heavy haul transportation.

Issue 12: Legally and Substantively Deficient Analysis of Socioeconomic Impacts

The draft EIS completely ignores potential economic impacts to Nevada's key industry - tourism. In violation of NEPA, the draft ignores a substantial body of information and research produced by the State of Nevada, independent researchers, and even DOE's own contractors clearly documenting potential negative economic impacts associated with the Yucca Mountain program and associated spent fuel and HLW transportation.

Issue 13: Inappropriate Transportation Scenarios

The transportation scenarios analyzed in the draft EIS are inappropriate and non-reflective of reasonable transportation scenarios for the project. The all truck and all rail scenarios do no reflect a reasonable and readily identifiable expectation of how waste shipments would occur. Information is available to DOE to enable a point to point, mode specific evaluation for the entire transportation system (i.e., the PIC current capabilities scenario analysis - 1996).

Issue 14: Inadequate Treatment of Cumulative Impacts

The draft EIS fails to adequately assess cumulative impacts from past, current, and future activities at the Nevada Test Site.

Issue 15: Incomplete and Inadequate Assessment of Impact to Native Americans

The analysis of impacts on Native American communities is incomplete and inadequate. The EIS fails to address any specific Native community impacts and ignores completely the likely transportation effects on communities along transportation routes (such as the Duckwater reservation along the NDOT 'B' route).

Issue 16: Procedural Deficiencies with Respect to NEPA

The draft EIS, in its totality, is procedurally deficient with respect to the letter and spirit of the National Environmental Policy Act. It is neither a project-specific EIS nor a programmatic EIS, yet it attempts to serve as the basis for both programmatic and project-specific decisions.

Affected Units of Local Government

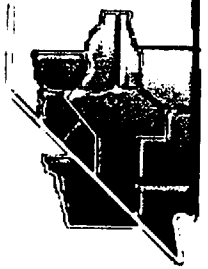
Nuclear Regulatory Commission
Presentation

January 21, 2000

Affected Units of Local Government

AULG

http://www.aulg.org



INTRODUCTION

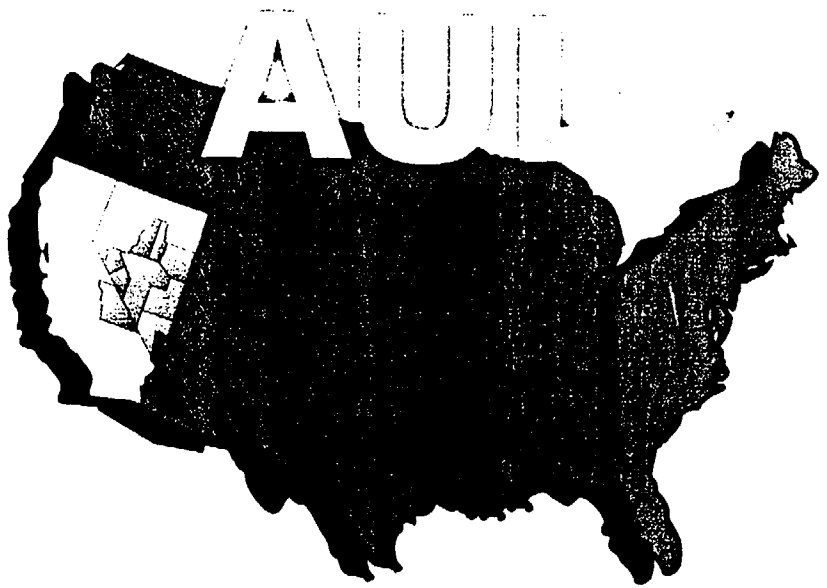
JANUARY 21, 2000
ROCKVILLE, MD

MIKE BAUGHMAN, PhD.
LINCOLN/WHITE PINE COUNTY

Affected Units of Local Government
AULG
http://www.aulg.org

INTRODUCTION - WHO WE ARE

- **AULG designated by Secretary of Energy pursuant to NWPA**
- **Collectively, AULG represent over 1.5 million people in Nevada and California**



AULG

INTRODUCTION - WHO WE ARE (cont.)

- The AULG's are in areas with multiple sources of potential radiation exposure including: historic weapons tests, current LLW disposal, and ongoing transportation of radioactive materials and wastes through the region.

- The AULGs' represent one of the fastest growing population centers in the United States.

Affected Units of Local Government
AULG
http://www.aulg.org

INTRODUCTION - ACCOMPLISHMENTS

- **Capacity building: county staff, consultants, advisory committees, data processing capabilities, tours of nuclear facilities**
- **Independent research: use of University of Nevada, Las Vegas; University of Nevada, Reno; independent consultants**
    - **Geotechnical/Geohydrology (Nye County Early Warning Drilling Program)**
    - **Risk assessment (RADTRAN evaluations of transportation risk)**
    - **Cooperative Hydrologic Studies with Inyo County**
    - **Socioeconomic impact assessment and monitoring**

INTRODUCTION - ACCOMPLISHMENTS (cont.)

- Extensive public involvement
- Provided DOE with copies of technical reports, data and computer models reflecting local conditions and concerns
- Provided DOE with extensive comments to the scope of the Draft EIS for Yucca Mountain
- Participated in public hearings providing extensive initial comments on the sufficiency of the Draft EIS for Yucca Mountain

Affected Units of Local Government

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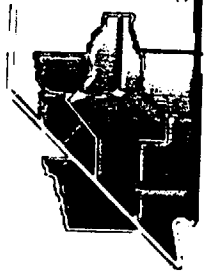

PROCEDURAL REQUIREMENTS OF NEPA FOR THE YUCCA MOUNTAIN DEIS

JANUARY 21, 2000
ROCKVILLE, MD

REX MASSEY, CHURCHILL/LANDER COUNTY

Alliance of Units of Local Government
AULG
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PROCEDURAL REQUIREMENTS - DEIS

- **Sec 407(c)(1) states:**
  - ***Any such environmental impact statement shall, to the extent practicable, be adopted by the Nuclear Regulatory Commission, in accordance with section 1056.3 of title 40, Code of Federal Regulations, in connection with the issuance by the Nuclear Regulatory Commission of a construction authorization and license for such a repository or monitored retrievable storage facility.***
- **Sec 407(c)(1) states:**
  - **NRC must comply with the Council on Environmental Quality (CEQ) regulations for implementing procedural provisions of the National Environmental Policy Act [40CFR1506.3] for adoption.**

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PROCEDURAL REQUIREMENTS - DEIS

- **CEQ REGULATIONS FOR IMPLEMENTING NEPA ALLOW AN AGENCY TO ADOPT AN EIS IF:**
  - **The proposed action for which the EIS was adopted is substantially the same.**
  - **NEPA requirements, comments and suggestions are addressed.**
  - **The EIS contains adequate information to support the agency's decision.**
  - **NRC must in it own judgment determine whether the EIS is sufficient and adequate for adoption.**
- **It brings into question NRC's role with respect to the Yucca Mountain Project EIS. Clearly, NEPA and NWPAA contemplate an active role in its preparation.**

PROCEDURAL REQUIREMENTS - DEIS

- **PRIMARY AREAS OF CONCERN:**
  - **Inability to Determine Potential Impacts associated with Long-term Repository Performance**
  - **Incomplete Proposed Action and Alternatives**
  - **Cumulative Impacts Analysis**
  - **Selection of Preferred Alternatives for Repository Design and Mode of Transportation**
  - **DEIS does not Adequately address Transportation and Socioeconomic Impacts.**
  - **Failure to Adequately Consult with Federal, State and Local Agencies and Governments**

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PROCEDURAL REQUIREMENTS - DEIS

- **INABILITY TO DETERMINE POTENTIAL IMPACTS ASSOCIATED WITH LONG-TERM REPOSITORY PERFORMANCE**
  - **Proposed Action- To construct, operate, monitor, and close a geologic repository.**
  - **Performance assessment is critical to the impact analysis for the proposed and cumulative impacts.**
  - **With current performance assessment limitations, the impact analysis in Chapter 5 and Chapter 8 appears questionable.**
  - **As a result, a decision to recommend the Yucca Mountain site for geologic disposal cannot be supported at this time.**

PROCEDURAL REQUIREMENTS - DEIS

- **INABILITY TO DETERMINE POTENTIAL IMPACTS ASSOCIATED WITH LONG-TERM REPOSITORY PERFORMANCE (CONT.)**
  - **Regions of influence are too restrictive and do not include potentially affected areas.**
  - **DEIS methodologies are too restrictive, unable to identify most indirect impacts**
  - **The cumulative analysis does not consider the collective impact of all actions.**

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PROCEDURAL REQUIREMENTS - DEIS

- **INABILITY TO DETERMINE POTENTIAL IMPACTS ASSOCIATED WITH LONG-TERM REPOSITORY PERFORMANCE.**
  - **Recommendations:**
    - **Prepare a Worst Case Scenario for gaps in relevant information or scientific uncertainty.**
    - **Reissue the draft EIS or prepare a supplement. 40 CFR 1502.22(a) -Essential information, if it is obtainable, must be included in the EIS.**
    - **Methods, models, and data used in the evaluation should be accepted, defensible, and accurate.**

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PROCEDURAL REQUIREMENTS - DEIS

- **INCOMPLETE PROPOSED ACTION AND ALTERNATIVES**

  - **Final repository design is not known (thermal scenarios).**
  - **It is not known whether the proposed action or action alternatives are capable of being implemented.**
  - **The DEIS uses unproven "conceptual designs" to evaluate a possible range of impacts.**
  - **In the DEIS, "boundary analysis" is used as a substitute for an incomplete proposed action.**

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PROCEDURAL REQUIREMENTS - DEIS

- **INCOMPLETE PROPOSED ACTION AND ALTERNATIVES**
  - **40CFR1508.23 Proposal- "Proposal" exists at that stage in the development of an action when an agency subject to the Act has a goal and is actively preparing to make a decision on one or more alternative means of accomplishing that goal and the effects can be meaningfully evaluated.**
  - **DEIS fails to include a mitigated action proposal.**
  - **The No-Action Alternative is not credible; the no-action construct is not similar to the proposed action and it does not contain a reasonable set of assumptions and scenarios.**

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PROCEDURAL REQUIREMENTS - DEIS

- **INCOMPLETE PROPOSED ACTION AND ALTERNATIVES**
  - **Recommendations:**
    - **Performance assessment models must be strengthen and a near final design selected for the FEIS.**
    - **A total radiological inventory scenario should be evaluated as an action proposal.**
    - **Additional waste volumes (105,000 mthm inventory modules I and II) should be included as the part of the proposed action.**

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PROCEDURAL REQUIREMENTS - DEIS

- **CUMULATIVE IMPACTS**
  - **DOE is obligated to consider all past, present and reasonably foreseeable actions.**
  - **The approach in the DEIS does not consider the collective impact of all actions.**
  - **40CFR1508.7 …Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.**

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PROCEDURAL REQUIREMENTS - DEIS

- **SELECTION OF PREFERRED ALTERNATIVES**
  - **40CFR1502.14 (e)-requires an agency to identify a preferred alternative or alternatives.**
  - **Two potentially important choices for preferred alternatives include:**
    - **Transportation Mode**
    - **Repository Design**

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PROCEDURAL REQUIREMENTS - DEIS

- **DEIS DOES NOT ADEQUATELY ADDRESS TRANSPORTATION AND SOCIOECONOMIC IMPACTS**
  - **DEIS uses outdated demographic and census data.**
  - **DEIS does not evaluate or address route specific impact; instead it relies upon "compliance with DOE regulations" to fulfill NEPA requirements.**
  - **DEIS methodologies are too restrictive, unable to identify most indirect impacts.**

PROCEDURAL REQUIREMENTS - DEIS

- **FAILURE TO ADEQUATELY CONSULT WITH FEDERAL, STATE AND LOCAL AGENCIES AND GOVERNMENTS**

  - **DOE did not conduct effective consultations with federal agencies having significant and/or statutory roles in the implementation of the NWPA.**
  - **DOE did not address the concerns of state and local governments and agencies.**
  - **DOE did not include data and information collected by local governments for use in DEIS**

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PROCEDURAL REQUIREMENTS - DEIS

- **FAILURE TO ADEQUATELY CONSULT WITH FEDERAL, STATE AND LOCAL AGENCIES AND GOVERNMENTS**
  - **Recommendations**

    - **DOE should engage in meaningful consultation with BLM, DOT, EPA and actively pursue comment on DEIS**
    - **DOE should conduct meaningful consultation with AULG; use recent data collected by AULG; or where DOE disagrees with AULG identify AULG position/perspective as opposing technical viewpoint.**

GEOTECHNICAL CONCERNS WITH THE YUCCA MOUNTAIN DEIS

JANUARY 21, 2000
ROCKVILLE, MD

LES BRADSHAW, NYE COUNTY

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GEOTECHNICAL - DEIS TECHNICAL CONCERNS

- **Cumulative Impacts on Water Resources**
- **Waterborne Radiological Consequences**
- **Well Concentration of Chemically Toxic Constituents**
- **Uncertainty**

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GEOTECHNICAL - DEIS TECHNICAL CONCERNS

- **CUMULATIVE IMPACTS ON WATER RESOURCES**
  - **Reduced region of influence limits analysis and ignores documented impacts that are occurring over a broader region. (Inconsistent with 40 CFR 1508.25)**
  - **Approach is inconsistent with EIS findings that proposed action could potentially affect water supply in Death Valley.**
  - **Region of influence cannot be smaller than the region over which impacts occur.**
  - **DEIS Methodology unable to identify previously documented impacts, especially those identified in the Special Nevada Report**

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GEOTECHNICAL - DEIS TECHNICAL CONCERNS

- **CUMULATIVE IMPACTS ANALYSIS FAILS TO ADEQUATELY CONSIDER:**
  - **Cumulative direct and indirect impacts of the total radiologic burden that will be imposed;**
  - **Cumulative impacts of federal land withdrawals on water resource availability;**
  - **Cumulative impacts of federal policies regarding nuclear weapons testing, waste disposal, and environmental protection;**
  - **Water resource use and management practices on both private and federal lands.**

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GEOTECHNICAL - DEIS TECHNICAL CONCERNS

- **WATERBORNE RADIOLOGIC CONSEQUENCES**
  - **DEIS (and the TSPA/VA) does not contain sufficient information to verify the accuracy of the numbers presented in the DEIS.**
  - **DEIS does not explain why long-lived radionuclides Americium 243, Cesium 135, Curium 245 and 246, Nickel 59, Plutonium 240, Neptunium 239, Uranium 233, 235, 236, and 238 were excluded from analysis.**
  - **Because of lack of information, the calculations presented in the DEIS cannot be verified.**

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GEOTECHNICAL - DEIS TECHNICAL CONCERNS

- **WELL CONCENTRATION OF CHEMICALLY TOXIC CONSTITUENTS**
  - **DEIS does not account for all sources of chemically toxic constituents in groundwater, including documented background conditions (e.g., barium, manganese), and contributions from the Nevada Test Site.**
  - **Using "series of simple calculations" rather than appropriate tools (ie. chemical models) fails to account for multiple contaminant sources, different receiving waters, geochemical variations along flow path, and contribution of non-radiologic constituents from decay.**

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GEOTECHNICAL - DEIS TECHNICAL CONCERNS

- **WELL CONCENTRATION OF CHEMICALLY TOXIC CONSTITUENTS (CONT.)**
  - **Assumptions regarding removal of technitium through precipitation, dilution with uncontaminated recharge over the NTS, and aquifer mixing during transport result in diluted dose, and are not conservative, as stated in the DEIS.**
  - **Incorrect release limits are used for some radiological and chemical constituents, incorrect source terms are used for others, and incorrect dilution factors are applied that result in flawed risk calculations.**

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GEOTECHNICAL - DEIS TECHNICAL CONCERNS

- **UNCERTAINTY**
  - **Human Health Assessment assumptions regarding population are not valid, and introduces high level of uncertainty.**
  - **National Research Council (1995) recommendation regarding "societal conditions" taken out of context.**
  - **DEIS misuses NRC (1995) as basis to ignore current population levels and short term future growth (50 years), which is very predictable.**
  - **DEIS concludes that population in 10,000 years will be the same as in 1990. Information is misleading, arbitrary, and not based on sound science.**

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GEOTECHNICAL - DEIS TECHNICAL CONCERNS

- **RECOMMENDATIONS**
  - **DOE should revise Cumulative Impact Analysis to include previously documented impacts and currently proposed federal and private actions.**
  - **Include rationale for assumptions, data selection, and methods used in analyses.**
  - **Delete DEIS tables and discussion regarding population-based impacts**
  - **Add discussion "Uncertainty Associated with Currently Available Data;" this DEIS section only addresses plans to collect data.**

TRANSPORTATION CONCERNS WITH THE YUCCA MOUNTAIN DEIS

JANUARY 21, 2000
ROCKVILLE, MD

DENNIS BECHTEL, CLARK COUNTY

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TRANSPORTATION

- **SIGNIFICANCE OF NUCLEAR WASTE TRANSPORTATION ISSUES**
  - **Nuclear waste transportation is a major element of the Yucca Mountain Program and requires comprehensive analysis in the DEIS**
  - **Nuclear waste destined for Yucca Mountain will be transported through 43 states and potentially impact millions of people**
  - **The possible risks associated with the transportation of nuclear waste will be of the most concern to the public**
  - **Risk associated with the transport of nuclear waste can result in a multitude of potential impacts**

TRANSPORTATION

- **MAJOR TRANSPORTATION CONCERNS IN THE DEIS:**

  - **Too narrowly defines the role of the DEIS in considering transportation impacts**
  - **Fails to analyze transportation issues traditionally evaluated in an EIS**
  - **Inaccurately and incompletely assesses a host of risk issues associated with the transportation of the waste**
  - **Fails to comparatively analyze routes and modes (e.g., truck versus rail alternatives)**
  - **Does not address the cumulative impacts of other nuclear waste destined for the Nevada Test Site**

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TRANSPORTATION

- **IMPACT TOO NARROWLY DEFINED IN THE DEIS**

  - **The purpose of an EIS is to provide a basis to assess impact and determine potential mitigation requirements**
  - **By choosing to adopt a narrow definition of impact in the DEIS DOE ensured that no impacts are identified**
  - **The DEIS fails to provide specific information to define impact and enable mitigation requirements to be negotiated**

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TRANSPORTATION

- **THE DEIS DOES NOT EVALUATE TRANSPORTATION IMPACTS**

  - **Needs an "Implementing Alternative" to analyze issues such a s route, mode, etc. to test the system and determine potential impacts**
  - **Does not address transportation issues traditionally evaluated in an EIS (e.g., congestion, infrastructure, accident rates)**
  - **Avoids discussion of the construction, operation, and maintenance of the transportation system**
  - **Doesn't discuss schedule particularly when transportation system issues will be considered and resolved**

TRANSPORTATION

- **INACCURATE AND INCOMPLETE ASSESSMENT OF THE RISK INVOLVED IN TRANSPORTING THE NUCLEAR WASTE**
  - **The DEIS fails to address how human health risk will enter into decision-making and the uncertainties of the risk**
  - **The analysis of transportation risks does not include performance data for the casks, trucks (or rail) used to implement the proposed action**
  - **Inaccurate demographics used to evaluate risk**
  - **Fails to address the impact of human and institutional factors on risk**
  - **Avoids consideration of other "risks" by which the public makes decisions (e.g., economy, property values, quality of life)**

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TRANSPORTATION

- **FAILS TO CONDUCT A COMPARATIVE ANALYSIS AMONG ROUTES AND MODES (E.G., TRUCK VERSUS RAIL ALTERNATIVES)**

  - **Fails to address the complex problems associated with the transportation of the waste nationally**
  - **Fails to describe a process by which an implementing alternative could be selected**
  - **DOE assumes a "single-route" strategy for national transportation and does not compare mode alternatives**
  - **Does not provide a thorough description of intermodal handling operations**
  - **The DEIS does not evaluate a full range of modal alternatives**

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TRANSPORTATION

• DEIS TRANSPORTATION RECOMMENDATIONS

- **The DEIS needs an "Implementing Alternative" to analyze a whole range of issues associated with the transportation of the waste**
- **A comparative analysis of the Nevada mode and routing alternatives is needed in the DEIS**
- **The DEIS must reevaluate the health risk to the public by using more accurate local demographics**
- **The DEIS needs to include an evaluation of other "risks" by which the public makes decisions (e.g., economy, property values, quality of life)**

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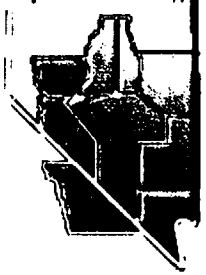

SUMMARY CONCLUSIONS/RECOMMENDATIONS

JANUARY 21, 2000
ROCKVILLE, MD

MIKE BAUGHMAN, PhD.
LINCOLN/WHITE PINE COUNTY

SUMMARY CONCLUSIONS & RECOMMENDATIONS

- **NRC comments to the DEIS should seek to encourage DOE to prepare a Final EIS which is responsive to concerns of AULG's and can support major federal decisions.**
- **NRC should encourage DOE to make better use of locally provided information in producing a Final EIS which more accurately reflects local conditions and concerns.**
- **NRC should encourage DOE to identify preferred modes and routes of transportation through Nevada within the Final EIS so that comparatively significant risks to public health and safety can be effectively mitigated through the NEPA/NRC licensing process.**

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SUMMARY CONCLUSIONS & RECOMMENDATIONS (cont.)

- **NRC should encourage DOE to reduce uncertainties within the Draft Yucca Mountain Environmental Impact Statement.**
- **NRC should encourage DOE to address mitigation/compensation of impacts within the Final EIS in a comprehensive fashion.**
- **NRC should encourage DOE to meet with affected units of local government to review comments to the DEIS and discuss proposed responses thereto.**

JAN 28 2000