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Eureka County
Yucca Mountain Information Office
Telephone [redacted] **FAX** [redacted]

May 28, 2004

Ms. Robin Sweeney
EIS Document Manager
Office of National Transportation
Office of Civilian Radioactive Waste Management
U.S. Department of Energy
1551 Hillshire Drive, MS 011
Las Vegas, NV 89134

Re: Eureka County, Nevada Comments on DOE's Notice of Intent to Prepare an Environmental Impact Statement for Alignment, Construction, and Operation of a Rail Line to a Geologic Repository at Yucca Mountain, Nye County, Nevada

Dear Ms. Sweeney:

Attached please find Eureka County's comments on the above referenced Notice of Intent that was published in the Federal Register on April 8, 2004.

If you have questions regarding these comments, please contact me at [redacted] or Abigail Johnson, the county's nuclear waste advisor, at [redacted]

Sincerely,

Leonard J. Fiorenzi

Leonard J. Fiorenzi
Nuclear Waste Program Director

Attachment
cc: Nevada Agency for Nuclear Projects
Laurel Marshall, program coordinator

040774

Eureka County, Nevada Comments
On the U.S. Department of Energy's Notice of Intent
To Prepare an Environmental Impact Statement for the
Alignment, Construction, and Operation of a Rail Line to the Geologic Repository
At Yucca Mountain, Nye County, Nevada

Introduction

Eureka County, Nevada, appreciates the opportunity to provide scoping comments in response to the United States Department of Energy's ("DOE") Notice of Intent to prepare an environmental impact statement ("EIS") for the "Alignment, Construction, and Operation of a Rail Line to a Geological Repository at Yucca Mountain, Nye County, NV" ("Notice of Intent").[1]

As a general matter, Eureka County believes that its active participation under the National Environmental Policy Act ("NEPA") provides an important means of coordinating with federal, state and local agencies and with members of the public concerning the proposed action to ensure that environmental values and the effect the proposed action may have upon such environmental values are both fully expressed and meaningfully integrated with agency decision making. More specifically, Eureka County is a designated "Affected Unit of Local Government" ("AULG") under Section 116 of the Nuclear Waste Policy Act ("NWPA"), as amended. As an AULG, Eureka County's oversight responsibilities include conducting a review of and commenting upon DOE's development of environmental documents under NEPA for the Yucca Mountain Geologic Repository project ("Yucca Mountain")[2]. No less important is Eureka County's responsibility for protecting the health, safety and welfare of its citizens, a fact itself necessitating Eureka County's careful participation in these NEPA proceedings.

Eureka County is quite concerned about the transportation of Spent Nuclear Fuel ("SNF") and High-Level Radioactive Waste ("HLW") to Yucca Mountain through Nevada. Of course, the entire Yucca Mountain project is of concern. Yucca Mountain is unprecedented, controversial, and high risk.

The Notice of Intent identifies the Caliente rail corridor as the preferred corridor for the construction and operation of a rail line linking mainline rail, from a point in the vicinity of Caliente, Lincoln County, Nevada, with Yucca Mountain. The Carlin rail corridor is identified as a potential secondary corridor. The Carlin rail corridor would begin at the Union Pacific rail line in Beowawe, Eureka County, Nevada and would run through the Crescent Valley near the town of Crescent Valley, and then run southwest into Lander County near the Cortez mine. Many of the issues of concern within the context of NEPA are shared between the preferred Caliente rail corridor and the secondary Carlin rail corridor.

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[1] 69 Fed. Reg. 18565-18569 (April 8, 2004).
[2] Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, NV, as more fully described in the Final EIS (DOE/EIS 0250, February 2002).

2.1

The controversy surrounding Yucca Mountain stems, to a significant degree, from the past impacts endured by many residents of the County who were exposed to radioactive fallout resulting from nuclear weapons tests conducted at the Nevada Test Site. Now, these individuals and the communities in which they live are sensitized to potential dangers that may be associated with DOE's proposed Yucca Mountain project.

The "Proposed Action" described in the Notice of Intent deserves careful scrutiny. Eureka County's citizens expect that the environmental review under NEPA and all proceedings for approvals, licenses and other entitlements will be conducted in a manner to ensure a full, complete, and open airing of the relevant issues based on sound science in light of all available facts, consistent with public policy, with public involvement, and in accordance with applicable law. Eureka County's scoping comments are advanced to assist in the achievement of this objective.

Indeed, Eureka County has been a long time participant in the Yucca Mountain proceedings. It has participated in scoping meetings as well as the review of and the submission of comments concerning various environmental documents prepared by DOE including its Draft Environmental Impact Statement ("DEIS") and its Final Environmental Impact Statement ("FEIS") for Yucca Mountain. The County has actively sought to encourage its citizens to participate in the process. In addition, the County delivered to DOE and to the State of Nevada its Impact Assessment Report (August 2001) detailing potential impacts of constructing a rail line through Eureka County.

DOE's ROD notice in the Federal Register dated April 8, 2004, contained an inaccuracy. In recounting the history to the progression of NEPA analysis, the Notice states that, "*Transportation-Related Comments on the Final EIS:* DOE distributed about 6,200 copies of the Final EIS and has received written comments on the Final EIS from the White Pine County Nuclear Waste Project Office, White Pine County Board of County Commissioners, Board of County Commissioners Lincoln County, Board of Mineral County Commissioners, and a member of the public. Although comments were received on a variety of issues, the following summation addresses only those few comments related to the transportation of spent nuclear fuel and high-level radioactive waste to a Yucca Mountain repository."

Eureka County submitted comments to DOE on April 19, 2002. The comments addressed issues related to the transportation of spent nuclear fuel and high-level radioactive waste to a Yucca Mountain repository via the proposed Carlin rail corridor. They are posted on our website as follows:
Cover letter: http://www.yuccamountain.org/letter25.htm
Specific comments http://www.yuccamountain.org/pdf/eurekafeisltr2.pdf .

Eureka County's comments in response to the Notice of Intent follow.

040274

Project Description

A. Background

On December 29, 2003, DOE published its Notice of Preferred Nevada Rail Corridor.[3] In light of the joint resolution of the United States Senate and House of Representatives[4] signed into law by the President on July 23, 2002, designating the Yucca Mountain site for development as a geologic repository for SNF and HLW, DOE determined that it is now responsible for planning and implementing a transportation program for the shipment of such nuclear waste, should the Nuclear Regulatory Commission ("NRC") license the development and operation of Yucca Mountain. DOE considered various modes of transportation, namely, "mostly rail", "mostly legal-weight truck, and "mostly heavy truck", as those terms are defined in the FEIS. DOE's December 2003 Notice announced its preference for the "mostly rail" mode of transportation of SNF and HLW to Yucca Mountain affecting the mode of shipments to and within Nevada. The Notice also identified the Caliente rail corridor as DOE's preferred corridor for the new Nevada rail link from among five alternative rail corridors. The Carlin corridor was identified as a secondary corridor. DOE published its Record of Decision[5] in April 2004, wherein it formally identified its preference for the Caliente rail corridor to implement the "mostly rail" mode of transportation.

On December 19, 2003, DOE filed an application with the Bureau of Land Management ("BLM") requesting that BLM withdraw approximately 308,600 acres of public land (approximating the land encompassed by the Caliente rail corridor) for the evaluation of such land for the potential development of the proposed rail line, in the event NRC approves its license application for Yucca Mountain. The application requests BLM to withdraw the land for a period of twenty years or until permanent withdrawal is perfected for the Yucca Mountain project. Pursuant to its May 21, 2004 Notice of Public Meetings, Notice of Intent to Amend the Caliente Management Framework Plan, Schell Management Framework Plan, Tonopah Resource Management Plan, and the Las Vegas Resource Management Plan; Nevada[6], BLM will hold two scoping meetings concerning the proposed withdrawal and amendment of the plans and has opened a public comment period on the issues until June 30, 2004. As an alternative to the withdrawal of public lands sought by DOE, BLM will consider the grant of a linear right-of-way for the Caliente rail corridor. DOE's request that BLM withdraw this vast amount of public land for the entire width of the study corridor is premature. DOE has just begun to conduct the required environmental review of the eight alternative rail alignments within the proposed Caliente rail corridor.

DOE's Notice of Intent describes the "Proposed Action" as determining the rail alignment, and to construct and operate a rail line for shipments of SNF and HLW, and other materials from a site near Caliente, Nevada to Yucca Mountain. The Notice of Intent identifies eight alternatives for the alignment of the proposed rail line within the Caliente corridor. The proposed activities would also include the development of construction support areas, access roads, various major structures such as bridges and culverts, along with soils borrow pits and spoil stockpiles. In addition, secure rail yard facilities would be constructed at the operational interface with the proposed rail line with

[3] 68 Fed. Reg. 74951-74952 (December 29, 2003).
[4] Pub. L. 200, signed by the President July 23, 2002.
[5] 69 Fed. Reg. 18557-18565 (April 8, 2004).
[6] 69 Fed. Reg. 29323-29324 (May 21, 2004)

the mainline railroad near Caliente. As stated in DOE's Supplement Analysis (March 2004), the DOE may also employ a "rail/legal weight truck cask scenario" for an assumed six year period. Under this scenario, SNF and HLW would be shipped in legal-weight truck casks loaded on rail cars at generator sites to an intermodal station in Nevada to support the subsequent shipment of that waste by legal-weight truck to Yucca Mountain. This scenario would be in addition to the construction of a branch rail line in the Caliente corridor.

B. The description of the "Proposed Action"

DOE's evaluation of eight alternative alignments for the proposed rail line in the Caliente corridor together with the activities associated with the construction and operation of the rail line, and DOE's request that BLM withdraw public lands along its proposed rail corridor upon which to place the rail line are related actions and each should comprise a part of the Project Description in the EIS DOE intends to prepare. Eureka County's scoping comments focus on the preparation of the EIS for such a Project Description.

As a general comment, Eureka County notes that the decision to construct a rail spur within Nevada on a selected corridor may have wide ranging affects on the entire SNF and HLW transportation system, resulting in greater numbers of shipments along certain rail routes and through certain states and cities and lesser numbers of shipments through other areas. These types of system-wide differential impacts have never been adequately assessed, and the scoping process for the proposed rail spur should be able to encompass the full range of such impacts and impacted areas.

As a part of its Project Description, public participation and understanding would be greatly enhanced by inclusion of large GIS maps and aerial photographs depicting the eight alternative alignments for the Caliente rail line. GIS maps of existing land uses, water resources, cultural resources, land use plan areas, wildlife values and other potentially affected resources could then be used as overlays as an aid to discovering where the project may be expected to have impacts.

The Project Description should include a detailed description of the proposed rail construction plan and schedule, the proposed rail operations plan, and a statement of licenses, permits, certificates, and other approvals DOE will need to construct and operate the rail line..

Notice of proceedings affecting the activities described in the Project Description should be calculated to reach the greatest number of potentially interested individuals and businesses. The method employed to effect notice should take into account the rural setting in which potentially interested parties may be. Notice should be mailed directly to all property owners within 5 miles of the Caliente corridor.

Although the Caliente rail corridor has been selected by DOE for further study, there are still many uncertainties about the nature of the project. Eureka County seeks answers to the following questions in an effort to begin to clear away these lingering uncertainties.

1. Where will intermodal transfer sites be located nationally and in Nevada?

2. How many intermodal transfer sites will there be?

3. Is DOE considering an intermodal transfer site located separately from the proposed rail corridor?

4. DOE has indicated that at least at first, an intermodal transfer station may be necessary in Nevada to transfer SNF and HLW from mainline railcars to trucks pending completion of the rail line. Is Eureka County correct in expecting that the transportation EIS will fully describe and analyze this option?

5. The description of the "Proposed Action" in the Notice of Intent must clarify if and how DOE will share use of the Caliente rail line with other governmental and non-governmental entities. Will the rail line be available for use by any party other than DOE for the Yucca Mountain project?

6. Previous DOE studies have stated that use of the rail line will be shared with the Nevada Test Site. In what manner would the NTC use the rail line? The EIS should clearly delineate the intended purpose for the line and the safety implications of shipping other materials or supplies and/or hazardous materials, such as military munitions, civilian explosives, and petroleum products

7. How many rail casks and how many trains would be involved in transporting 11,000 rail cars to Yucca Mountain, including return trips? Would unloaded casks be returned to their points of origin?

8. What are the differences in terms of personnel, escorts, buffer cars, speeds, and elapsed time from origin to destination between the use of general freight trains and designated trains for hauling SNF and HLW?

9. Would there be one or more sets of tracks and sidings within the Caliente corridor?

10. Who would own the tracks, trains, rights-of-way, and rail support facilities, and who would operate them?

11. Would all of the tracks and access roads be fenced and, if so, who would own and maintain them?

12. How wide would the fenced corridors be?

13. How will consultation and coordination regarding configuration of the fences be expanded to include, in addition to other federal agencies, agricultural producers, state and local governments, and public safety officials?

14. How would the access roads be constructed and surfaced, maintained, and who would be allowed to use them?

15. If roadbed and access roads would be constructed using balanced cut and fill techniques, where would the DOE obtain the fill necessary to elevate many miles of roadbed above anticipated flood levels in Nevada's valleys and playas? Would blasting be utilized?

16. Who would be allowed to use the railroad tracks? Would the tracks be shared with public and private entities? If so, who would own the tracks (and therefore receive the revenue and assume the liability) and who would manage traffic on the tracks?

17. When and how would rail corridors be decommissioned and reclaimed, and how would plans for decommissioning be affected by shared use?

18. The FEIS says that closure of the repository could occur from 50 to 300 years after the start of emplacement. The transportation EIS must describe whether and how the rail corridors would be used after the emplacement of SNF and HLW is complete at Yucca Mountain and during the monitoring phase, up to 300 years long. Would the rail corridor continue to carry supplies and waste materials to and from the repository? Would the corridor continue to operate for the benefit of other users? Who would own, operate, and maintain the tracks and access roads at that point?

Public Scoping Meetings

DOE 's scoping meetings regarding the Notice of Intent were conducted under circumstances where there was no opportunity for participants to hear from each other and openly share ideas.. Comments were made to a court reporter outside the hearing of other participants. For the process to be truly open and effective, DOE should have provided the opportunity for the public to comment in an open forum. This is especially important during scoping when the exchange of ideas is so important in ensuring that all issues have been captured for timely consideration.

Eureka County formally requests that all comments received by DOE during the public scoping meetings be transcribed verbatim and made public immediately (preferably via a DOE web site). Furthermore, Eureka County requests that DOE publish the verbatim comment transcripts as an appendix to the Scoping Report. The EIS must contain a comment-response section that clearly articulates each comment received, together with the DOE response.

Land Use

It is important to point out that in rural Nevada, land use and livelihood are inextricably linked. With that in mind, the evaluation of land use impacts must consider the effect the rail line and its ancillary facilities and any BLM land withdrawal would have in dividing the land and existing uses. For example, the movement of vehicles, equipment, and livestock across the proposed rail corridor could be adversely impacted and even prevented by the rail line. Splitting a ranching and grazing operation, an agricultural use, or a mining operation would have significant impacts on the entire operation, not just the area within the rail line right of way. Similar impacts would be felt by other types of businesses, and also by governmental entities.

Therefore, the EIS must disclose the potential impacts of the project upon ranching, mining, agriculture, and other land uses, such as (1) the unavoidable conversion of water rights or

agricultural land to other uses, (2) the fragmentation of range or grazing allotments, (3) the damage to forage from land disturbance, introduction of invasive weeds, the increased risk of wildfire arising from construction or operational activities, or other factors, (4) restrictions on livestock movement to and from water and grazing resources, (5) the loss of water supplies, or restricted access to water supplies, (6) the loss of livestock hit by trains or other motor vehicles, and the associated public safety implications, (7) the reduced value of agricultural lands, leases, or permits, (8) the changes in the costs of agricultural production, and (9) the increase in incidents of harassment to livestock, and (10) impeding access to a mining operations through land division or conflicting surface rights . The impact analysis must address both all activities associated with the construction and operation of rail line activities and facilities, including the road bed, the rails, access roads, fences, and water well usage. The EIS should also evaluate the effect of suspended dust settling on crops, foraging vegetation and livestock (see also, Hazards Section below).

Fragmentation of grazing allotments or agricultural lands and the proximity of the rail line may not only affect land use but also may cause the reduction of property values. A reduction of property values may constitute a taking of private property rights requiring compensation under the *Constitution of the United States*.

The construction and operation of a rail line in Nevada for the shipment of SNF and HLW may also be inconsistent with a variety of existing federal, state and local land use plans. All conflicting and inconsistent uses should be described and any effects on such uses should be fully evaluated in the EIS.

For example land uses could include the following.

Grazing: Grazing is a significant use of public lands in the region. Authorization for the use of the land for grazing is obtained from the administering federal agency, largely BLM. Many ranchers and other agricultural users of the public lands have done so on the same land for extensive periods of time or even for generations. Grazing depends on free range over large areas enabling livestock to access suitable foraging vegetation and access to water. Dividing the grazing lands with a rail line would effectively throws hurdles to the free ranging of livestock and would impede or even prevent livestock from moving from one side of the track to the other.

Construction of the railroad bed, access roads, cuts, and fills would destroy forage used by cattle and other animals. For the railroad bed itself, the width of disturbance would be about 200 feet during construction and, due to possible problems with reclamation and invasion by noxious weeds, 200 feet should be considered the width of long-term disturbance. If the railroad bed right-of-way is not fenced, individual animals would hesitate or refuse to cross the tracks, and the management of livestock would be complicated by herding problems and interference with such operations as salting and facility maintenance. A reduction in available AUMs may occur reflecting the effect on management, unless special circumstances exist in a specific allotment or field. If the railroad bed right-of-way is fenced, the fencing could reduce or prevent access to important sources of stock water, which would reduce or eliminate the usefulness of a portion of an allotment. Fencing could also isolate an area of grazing land, making it unusable by the present operator, and cause additional reductions in available AUMs. Railroads typically use box culverts

to provide underpasses for movement of livestock and equipment under their tracks. Possible locations for these underpasses are highly dependent on terrain, since the required height can often be provided by natural drainage ways. However, in level terrain there may be little or no opportunity for this use of box culverts.

The EIS should also address how the proposed project will accommodate the Animal Damage Control Program, essential to predator control in the vicinity of the project.

Mining and mineral rights: The EIS must evaluate the effects of the proposed action on mining, including: (1) possible restrictions on claimants' access to their mining claims, (2) the division of mining claims, (3) the possible physical and legal barriers to the exploitation of mineral deposits, and (4) the potential benefits to mining from improved access to railroad service (should shared uses be permitted). The EIS should identify all existing and pending third party mineral rights, mining operations and appurtenant leases, patented and pending mining claims, and the potential for impacting the potential mining of valuable mineral resources. .

Agriculture: Potential impacts to various agricultural land uses are similar to those generally described for grazing. Dividing an existing agricultural operation precludes the effective use of the land due to access constraints.

Military overflights: The matter of military overflights needs to be thoroughly studied in relation to the proposed rail line. Portions of the proposed rail route lie beneath the flight paths utilized by the United States Air Force and potentially other governmental agencies as a part of military operations or exercises. While the rail line is intended to avoid the Nevada Test and Training Range, practice flights conducted in the vicinity of the Caliente rail corridor must be evaluated for the potential for an aircraft to crash into a cask in route to Yucca Mountain. The recent attention to airplane overflights during the NRC licensing proceeding for the Goshutes indicated that there are important safety issues that need to be addressed in the EIS.

Critical habitat: Critical habitat has been designated for threatened or endangered species pursuant to the Endangered Species Act ("ESA") Construction and operation of the proposed rail line within the Caliente corridor may enter upon and impact critical habitat and/or directly impact endangered or threatened species themselves. Consequently, it is necessary for DOE to conduct a formal consultation with the United Sates Fish and Wildlife Service ("USFWS") pursuant to Section 7 of the ESA to determine what, if any, conditions should be imposed as a part of the project to protect such species and their habitat.

Public Lands: Public Lands under BLM Jurisdiction: The greater portion of the preferred route would fall within public lands administered by the BLM. DOE is required to obtain a right-of-way from BLM to use such lands. BLM has suggested that the withdrawal of such lands for DOE's use may require that it amend four land management plans.

Housing

In the EIS, DOE must consider the baseline of housing resources along the route of the project and whether the construction and operation of the rail line would impact those resources. For example,

is there a potential that a large influx of workers and their families would arrive during construction and create a high demand for housing, and then, following construction workers move on and leave housing resources underutilized?

Water Resources

Water resources located within or in the vicinity of the proposed rail corridor have not been thoroughly studied. Those resources should be inventoried and mapped using GIS technology and characterized, such as surface waters, streams, ephemeral creeks, springs, wetlands, groundwater reservoirs and aquifers including their surrounding geology, water quality and depth. A GIS map of the proposed rail line (including all areas of ground disturbance) could then be laid over the water resources map to identify potential areas of impact for further study. Such maps are also quite useful to members of the public in understanding what this project means to them..

The proposed action could have significant impacts on the availability of water resources within the area of the rail corridor and for stakeholders outside the actual corridor who currently use such water resources. In this regard DOE's FEIS indicated that it may utilize local wells to supply water needed for the project. The EIS should evaluate the potential impacts of the use of such wells upon ground water resources and any consequential environmental impacts.

Activities engaged in by DOE in the course of implementing its plans for the rail line, such as construction activities, gravel mining and land disturbance, rail line operations, waste disposal, etc. could have deleterious impacts on water quality. In addition, the area proposed for the rail line includes numerous spring areas, which, if degraded in any way, could adversely impact wetland habitat, wildlife and livestock. All of these potential impacts must be thoroughly assessed in the EIS.

Potential impacts to water resources may require further study and authorization through NPDES permits, storm water pollution prevention plans, permits from the Army Corps of Engineers ("ACOE") for dredge and fill and associated water quality certification by Nevada, ESA Section 7 authorization from USFWS and right-of-way entitlements from BLM, among others.

Pollutants that are at risk of being released during construction and operation activities may include petroleum products (e.g., fuel and lubricants), coolants (e.g., antifreeze), solvents, paints, creosote or other railroad tie treatment substances, solid and sanitary waste, drilling fluids or muds, vessel rinsates, construction debris, and tires. In the event the project may employ oil-filled electrical equipment, there is the added risk that fluids may be released. Some oils in oil-filled equipment have been known to be contaminated with PCBs.

Any waste rock piles that are created by the proposed action have the potential for acid rock drainage (ARD) and associated effects on water resources. To avoid such impacts, the waste rock should be evaluated with acid-base accounting, and the acid generating potential (AGP) of waste rock should be monitored during excavation and disposal.

The EIS should also consider the possibility that ground disturbance activities may cut into shallow aquifers preventing an impacted aquifer from reaching its original destination and having environmental impacts on wildlife and livestock which depend on its availability.

Air Resources

During the construction phase of the proposed action, the combustion of diesel fuel and gasoline in haul trucks and mobile equipment (such as loaders and bulldozers), along with any combustion of propane and fuel oil, would create elevated ambient levels of carbon monoxide, particulate matter, oxides of nitrogen, and sulfur dioxide in the air. Combustion emissions from construction equipment are relatively uncontrolled at the exhaust pipe. DOE says that construction of the branch rail line could temporarily increase pollutant concentrations due to fuel use by construction equipment and fugitive dust from excavation and truck traffic. Construction of the rail line could also result in the loss of soil through wind erosion, with associated particulate air quality impacts.

The operations phase too would result in vehicle emissions from train locomotives, employees' personal vehicles, and other vehicles would constitute additional sources of air pollutants, including carbon monoxide, oxides of nitrogen, sulfur dioxide, particulate matter, and other constituents of gasoline and diesel fuel exhausts.

DOE should evaluate in the EIS whether the proposed action would diminish existing air quality, and reduce visual range by adding particulate matter and other light-scattering or light-absorbing pollutants to the air. Any such impact would also constitute an aesthetic impact.

The EIS should fully describe potential air quality impacts and their causes and address how the proposed action would be affected by the prevention of significant deterioration (PSD) requirements of the federal Clean Air Act. If the construction or expansion of a large stationary source of air pollution triggered the PSD requirements in any basin along the corridor, the proposed action could, in effect, compete with other sources for authority to discharge particulate matter or other pollutants. Such a scenario could cause problems for existing industries, complicate economic development, and potentially impact local economic stability and growth.

The proposed rail corridor lies in the particulate deposition path of many of the fallout clouds that left the NTS during atmospheric weapons and cratering nuclear explosion tests. These radioactive particles, which remain hazardous for hundreds of years, may be present in the soil and could have the potential to pose a hazard during any period of ground disturbance. The railroad work will involve the movement of massive quantities of desert soils which could result in such radioactive particles being lofted into the atmosphere. DOE must assess whether the soils within the corridor contain radioactive particles that could be released into the air with project related ground disturbance.

The EIS must fully describe and quantify projected impacts upon air quality from: (1) fugitive dust releases during construction and operations, (2) emissions from diesel and gasoline engines and other combustion related activities during construction and (3) increased risk of wildfire. The analysis must address visual range (i.e., haze) in addition to bulk emissions and concentrations of criteria pollutants.

Geology

The EIS should consider how the integrity of the rail line may be affected by various geologic conditions. Because of the large number of nuclear waste shipments proposed and the magnitude of the potential risk in the event of a rail accident, an essential element of the project must be whether nuclear waste shipments, originating at the source of generation and terminating at Yucca Mountain can be completed safely. For example, the EIS should conduct geologic surveys to determine whether any portion of the route would be subject to seismic disturbance and whether engineering innovations or alignment modifications may be employed to avoid the risk. In conjunction with potential seismic activity, geologic surveys are necessary to determine whether there are soils subject to liquefaction, characterized as expansive soils, or subject to subsidence, and how the same may be avoided. .

As discussed above, the EIS should answer whether there are soils in the rail corridor infused with radioactive particles. Sampling and testing must be conducted in all areas in which there will be ground disturbance to determine whether radioactive particles are present in the soils and whether they would present a significant risk or hazard. Disturbance of the desert soils may also suspend in the airways small particles of fungi known to be the cause of so-called Valley Fever. Adequate field testing and surveys must be done to determine whether the offending fungus is present in the soils associated with the Caliente corridor and whether it poses a risk.

Flood Plains

Commonly found in Nevada, the rail corridor would cross various flood plains. Flooding and flash floods are endemic to the rail corridor area. Therefore, an analysis of whether the integrity of the rail line or the safety of nuclear waste shipments could be compromised by a flood within the corridor; and, how the presence of the rail line in the flood plain may affect flood conditions (including 100 year flood conditions). Construction of a rail line and attendant access roads may change the boundaries of flood areas, subjecting new properties to flooding, flood damage, and higher insurance costs. The EIS must also analyze any potential for flood-related disruption or delay of SNF or HLW shipments and any resulting impacts to the transportation of SNF and HLW would occur.

Biology

The EIS must thoroughly evaluate potential impacts upon wildlife by reason of such causes as (1) conversion of wildlife habitat to other uses, (2) fragmentation of habitat, (3) damage to forage from land disturbance, introduction of weeds, increased wildfire, or other factors, (4) restrictions on wildlife movement and migration, (5) loss of water supplies, or restricted access to water supplies, (6) loss of wildlife hit by trains or other motor vehicles, and the associated public safety implications, (7) changes in value of wildlife areas for hunting and fishing, (8) changes in the costs of wildlife management, and (9) increases in harassment of wildlife. The impact analysis must address potential impacts to affected species and habitat that may arise from activities associated with both construction and operation.

Construction of the rail line will entail a substantial amount of ground disturbance over the length of the line together with its attendant access roads and structures that will provide attractive habitat for a variety of invasive species of plants. These invasives threaten to further impact land uses and wildlife habitat as they spread and invade grazing lands and native vegetation.

Noxious weeds are a major problem in Nevada and the western United States. Invasives and exotics threaten the livelihood of everyone who depends on the use of the range. They are easily spread by the wind, by livestock and other animals, by persons (such as construction workers) on foot, and by motor vehicles (such as construction vehicles) and they are difficult or impossible to control once established. Disturbed soils are especially vulnerable to colonization by noxious weeds. It is, therefore, essential that the EIS evaluate this unfortunate danger of weed vectors and infestation and thoroughly detail the measures DOE would employ to avoid the danger and to remedy infestations if they occur.

Cultural Resources

The EIS must specifically disclose anticipated impacts upon archeological and ethnographic resources that may be impacted in the construction and/or operation of the proposed rail line. The analysis must also consider potential impacts to cultural resources due to third party action made more possible by improved access to archeological and ethnographic sites as a result of project improvements such as access roads.

Throughout the Caliente rail corridor there are Native American and other historical and prehistoric sites. Only a very small fraction of the open land in the Caliente corridor has been surveyed for the presence of cultural resources. Cultural resources are likely to be impacted by ground disturbing activities. The Proposed Action would involve massive amounts of ground disturbing activities, such as ground clearing, grading, soil leveling, construction of access roads, construction of support structures, soil stockpiling and borrow pits, and other construction related disturbances. In addition, the physical presence of construction workers and construction related activity in the proximity of cultural sites may have an adverse effect on the integrity of the sites.

Rather than simply leave the cultural resource protection to the implementation of a programmatic plan, substantial on-the-ground surveys for cultural resources are essential. These surveys should be sufficient to identify cultural resource sites visible on the surface along the entire corridor. In this way, cultural resources will have a roughly equal weight in the preliminary and final design phases for the alignment of the proposed rail line, enabling planners to avoid known cultural sites in a manner integrated with the avoidance of other important resources.

The EIS should discuss the known sites and actions to be taken to avoid or reduce impacts to a less than significant level, and should prescribe, as a part of the "Proposed Action" DOE's programmatic approach to protecting and managing cultural resources discovered during construction activities to either avoid, reduce or mitigate the effects of the activities to a less than significant level.

040274

Hazards

A. Exposure to Radioactive Waste

In its analysis of the Carlin corridor in Eureka County's Impact Assessment Report, Eureka County found that if rail cars transporting SNF or HLW were delivered to Beowawe by general freight, public health would be affected by the parking of rail cars at Beowawe while trains bound for Yucca Mountain were made up. An essential part of the EIS will be DOE's risk analysis associated with the exposure to radioactive shipments of SNF and HLW as they move through Nevada over the Caliente rail corridor and over the freeways by legal-weight trucks to their destination at Yucca Mountain. The analysis should examine the alternative locations for intermodal transfer facilities and the potential exposures that may occur as the SNF and HLW materials arrive at the facilities, their management at the facilities, and as the materials leave the facility under a reasonable range of operating scenarios.

B. Wildfire

As discussed above, there is a risk that wildfires may be started from construction and/or operations activities. The EIS should include an analysis of the ways wildfires could originate from construction and operational activities and incorporate appropriate procedures to be followed during such activities to prevent such fires.

C. Sabotage or Terrorist Attack

The EIS must evaluate any potential risk that may exist to the integrity of the rail line or the shipments of SNF and HLW due to sabotage or terrorist attack. The EIS should consider appropriate security measures to avoid the risk. DOE must identify the methodology it would employ to regularly inspect the rail line facilities to ensure its integrity and safety are maintained.

D. Resuspension of Radioactive Particles

As discussed above in the Air Quality section, the Caliente rail corridor lies within areas of deposition of radioactive fallout particles from nuclear weapons testing at NTC. The EIS must assess whether radioactive particles persist in the soil and whether ground disturbing activities would pose a risk. Particles released to the air could travel for vast distances before settling again.

E. Valley Fever

The potential for exposure to the fungi responsible for inducing symptoms commonly known as Valley Fever was discussed above. Like the potential risk of exposure to radioactive particles, the fungi are present in certain soils which when disturbed release the particles to the air, where sensitive individuals could be exposed. An assessment of this potential risk needs to be evaluated in the EIS.

F. Shipment Accident

An accident involving the release of SNF and/or HLW materials could result in massive and long-lasting human and environmental damage. Even without an accident, repeated exposures to routine radiation emitted by shipping containers over long periods of time may result in negative health consequences. Great care must be taken to describe and evaluate these risks in the EIS.

Socioeconomic Impacts

Eureka County expects, as a part of the full disclosure and comprehensive review of the project in keeping with the character of the risk involved and perceived risks and stigmatizing that follows, DOE to carefully and completely study all potential impacts to the health, safety and welfare of the public. Socioeconomic impacts that result in impacts to the physical environment are required to be analyzed in the EIS. Stigma and perceived risk are real conditions influencing the decision making and eroding the peace of mind of all who are touched by these conditions. Decisions are made to avoid or to minimize exposure to the source of those conditions. Those decisions affect such things as economies, property values, tourism, and recreation.

The EIS needs to analyze the effect the proposed action will have on the socioeconomic environment such as property values, economic development, and tourism. Impacts in those areas will have dramatic impacts on the physical environment since small towns have fragile economies. If tourists stop coming to Nevada's rural state parks because of the nuclear stigma from the nuclear waste rail corridor, the local economy could be impacted. Note, for example, that the brownfields programs of the USEPA and many individual states exist largely to counteract the perceived risk of site contamination by hazardous materials which deters investment and wastes valuable resources.

At the same time, the construction and operation of the rail line may bring some economic opportunities to the region. The EIS should explore what DOE will do to ensure local and low income hiring in its contracts to combat socioeconomic impacts. The opportunity that would enable the rail line be used by commercial haulers should be fully examined. Eureka County encourages DOE to allow shared use of the rail line. The EIS should identify potential opportunities for economic development associated with the construction and operation of the rail line, facility locations, hiring needs, local jobs to be created, and other impacts as a result of the location of the facilities in or near the rail corridor.

The EIS must evaluate the projected local revenues and expenses associated with the Caliente corridor, considering both direct and indirect effects such as the fiscal impacts to local emergency response agencies, including the costs of training and maintaining their personnel.

Noise

The EIS must fully define the sources and magnitude of sound that will be generated during construction and during operation of the rail line. The EIS must examine all applicable local, state, and federal laws and regulations governing the emission of sound from a site, and the environmental impacts of the sound emissions, and alternatives and measures that can be employed to reduce such impacts consistent with any such laws or regulations. Considering noise and aesthetics, potentially significant impacts in these open and rural regions can extend far

beyond the 400 meters limit used by DOE to bound impacts on adjacent lands. For example, rural residents can hear newly constructed railroads in Wyoming and report that train noise can be heard several miles away from the rail line. Although the noise level is low, it is new noise in an area that had little experience with man-made noise in the past.

Aesthetics

The EIS should consider whether the project will have an adverse effect on aesthetics from important viewpoints and consider the feasibility of alternatives and mitigations measures to reduce the impacts to a less than significant level. As the great majority of the project would occur on public lands administered by BLM, it is appropriate that visual impacts be analyzed in accordance with BLM's procedures and standards. The potential visual impacts from sensitive viewpoints is an essential aspect of NEPA. As with sound, visual changes in an undisturbed landscape can result in impacts far beyond the minimal corridor for analyzing impacts selected by DOE. As a part of its analysis, DOE should produce computer modeled images of the virtual appearance of the project in the effected environment for comparison to existing visual conditions.

Public Resources

During construction, it is likely that the demand for local public services will increase based on the increased construction and employment activity in the area. The EIS should identify the increased demands on already limited public services such as police, fire, social services, schools, and medical facilities and evaluate actions to avoid those impacts.

Unlike urban areas, emergency access in rural Nevada, such as where much of the rail line would be, is limited, and distances are measured in hours, not minutes. DOE must explain how its access road and fencing systems would be managed, and how emergency responders would use or cross rail facilities and access roads to reach distant destinations. DOE must address emergency access for ingress and egress both during construction and operations. This examination must consider all potential emergency responders including a rail line accident, and where victims would be transported to.

It is important to note that regardless of the estimate of the likelihood of a release of radiation in the event of an accident, local governments have first responder responsibility. Nevada's rural areas have extremely limited or no capability for initial response to accidents involving SNF and HLW. Since all shipments will be funneled into Nevada, creating a higher risk for accidents, the emergency response capabilities must be described as part of the affected environment. Emergency services are an essential part of local public services and must not be overlooked, given the nature of the proposed project and the associated accident risks. Impacts to local and state first responders and public safety personnel are especially troublesome, since the proposed rail line's location in isolated sections of rural Nevada makes response to any sort of incident or accident extremely problematic and response to a nuclear incident especially difficult. A complete characterization of available emergency services, communications, and response capabilities must cover local law enforcement, fire, rescue, and emergency medical services. The EIS must provide accurate information about hospitals including capabilities for treating radiological or other emergency patients. The general statement that public services are located in communities does not provide

the necessary detail. If hospitals or other emergency services do not have the capability to treat patients injured in accidents involving SNF or HLW, this information must be disclosed in the EIS.

Impacts on the State and local resources would be extensive and of long duration. County emergency response personnel, including affected state agencies, will need additional training to deal with emergencies related to rail shipments of radioactive materials. Hospitals, both along the route and in Las Vegas (the nearest regional and full-service medical facilities), would need extensive training and equipment. Such impacts will not be one-time occurrences, but would continue for as long as the rail line (or intermodal facility) remains operational. The EIS must, therefore, examine such impacts in a longitudinal context and assess the decades-long requirements for emergency management, emergency response, and public health and safety.

Transportation of SNF and HLW through areas with limited emergency response capabilities, including much of rural Nevada, increases the risks associated with transportation incidents. Risks are higher because of the lack of initial response capability and the time delay for responding due to distance and availability of volunteer personnel. Some jurisdictions may choose not to respond to incidents involving SNF and HLW due to financial and personnel considerations. Jurisdictions with volunteer fire departments and other volunteer emergency responders may decide not to respond to incidents in which they cannot participate safely. The EIS must address these scenarios.

When Eureka County studied the impacts of the Carlin corridor on our emergency response system, it determined that it was not appropriate or practical to expect the all-volunteer fire departments and emergency medical technicians to be trained to the necessary level for responding to accidents or events involving SNF and/or HLW. Moreover, Eureka County studied the possibility of training and maintaining a regional (i.e., multi-county) emergency response and training facilities, staffed with professional personnel, funded federally but locally controlled. Eureka County believes that such an approach is feasible and cost effective. This concept would be applicable throughout the region through which the rail route passes, and should be examined in the preparation of the EIS.

Railroad-caused wildfires can be a significant impact on emergency services. In rural areas, residents are usually aware of the potential for lightening caused fires, and keep close watch during thunderstorms for possible wildfires. Railroad fires, however, can occur at anytime. Therefore, fires caused by railroads go undetected much longer than naturally caused wildfires. This can create much more difficult conditions for controlling the fires. Impacts of railroad-caused wildfires on emergency response services and rural residents should be assessed.

The EIS must disclose the quantities and fates of solid waste that would be generated under the proposed action. It must discuss the waste disposal infrastructure (i.e., landfills, transfer stations, and transportation systems) and any capacity constraints, and the impacts of the proposed action on that infrastructure.

The EIS must analyze and disclose the impacts of the proposed action on the railroad and the main improved highways. Specifically, it must consider: (1) the existing capacities of road and railroad links, in terms of both weight and traffic volume, (2) the anticipated increases in utilization of those links, in terms of weight and volume, (3) the impacts of those increases on rails, pavements,

road beds, and travel times, and (4) whether the proposed action would create a need or demand for additional improved routes.

The EIS must adequately address the impacts of the proposed actions on local government infrastructure. Typically, the local governments and residents provide (and depend upon) roads, schools, drainage, water systems, aviation facilities, medical facilities, and public safety facilities that could be affected, directly or indirectly, by the proposed action.

Environmental Justice

The DEIS must adequately analyze the project impacts with respect to the principles of environmental justice. Because of the nature of rural life, communities are dispersed, rather than concentrated. Given the limited political power of rural communities, they are often targeted for unwanted projects. The Yucca Mountain repository project is an excellent example of this type of "justice." The DOE's risk models are based on avoiding urban areas, and presume that risks from the project are acceptable and should be borne by rural people.

In considering the application of environmental justice principles, the DOE should consider the effects of past programs and policies affecting the same communities, as well as the additional impacts of the Yucca Mountain project. Rural low income populations received damaging doses of radiation from above-ground and underground nuclear weapons tests conducted by the Atomic Energy Commission. The FEIS inadequately analyzed the project impacts in relation to environmental justice. In the transportation EIS, DOE must take these disproportionately high adverse health and environmental impacts of its programs, policies, and activities into consideration in the design of the project.

Recreation

During both the construction and operations phases of the proposed rail line, the proposed action could limit public access to recreation areas currently in use by the public Alternatively, roads constructed as a part of the proposed action could provide motorized access to allow hunters and other persons to reach new areas The presence of construction equipment on roadways and the increased traffic could also be a deterrent to tourist visitation and recreation in the area. If operation of the proposed action causes a decrease in visitation to the region, recreation sites would be adversely affected to the extent they are fee-supported, or receive revenue based on visitor counts.

The EIS must analyze the anticipated impacts of the proposed action on recreation. Specifically, the EIS must consider the impacts of: (1) constructing and operating a raised railroad bed and access road through back country areas and hunting ranges, (2) constructing and operating roads connecting the rail corridor to resources such as borrow pits, (3) constructing fences, (4) restricting or improving access to the back country, (5) direct and indirect damage to recreational, historical, and natural resources, and (6) direct and indirect impacts on fish and game.

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Utilities

The EIS must survey the corridor to determine whether the proposed action would conflict with existing utility infrastructure (e.g., gas lines, water lines, utility rights-of-way --whether or not occupied-- electric lines, utility access roads, and the maintenance and use of any such utilities.) The EIS should evaluate any necessary relocations or other actions that may be needed to remove the conflict.

In addition, the EIS should consider as a part of the project whether any utilities are required to support its proposed activities (e.g., water, power, or gas) and include any such infrastructure work in its environmental review.

Alternatives

DOE must develop a new no action alternative for the Caliente Rail Corridor, rather than citing the no action alternative in the Yucca Mountain EIS. The no action alternative in the Caliente rail corridor EIS would be DOE's alternative if a rail spur were not built in Nevada.

The EIS will need to explain why it is more feasible to make the rail line longer in order to avoid the Nevada Test and Training Range. Eureka County acknowledges the need for the Air Force to avoid constraints in the prosecution of its missions. However, this should balanced with the imposition of a publicly accessible rail corridor that exposes Nevada's citizens to the risks and duration of Yucca Mountain radioactive waste transportation The Caliente/Chalk Mountain corridor is a shorter and more direct route to Yucca Mountain. It is far more secure, and should be considered in the alternatives analysis as another way to get from Caliente to Yucca Mountain because it minimizes impacts on the affected environment and the public.

The NOI misleads when it presents the scope of the "proposed action" in terms of the "mostly rail" activity identified as the preferred transportation scenario in the FEIS. The NOI makes no mention of DOE's Supplemental Analysis (SA) issued March 10, 2004 which effectively modifies the FEIS by selecting a legal-weight truck/rail intermodal scenario of transportation nationwide and in Nevada for the first 6 years and possibly longer, in addition to the construction and operation of the Caliente rail line.

The "mostly legal-weight truck" scenario described in the FEIS is the only realistic no action alternative, and it must be fully and completely analyzed in the EIS. The Council on Environmental Quality (CEQ) interprets the "no action" alternative as "the federal agency not acting at all" (i.e., in this case, not constructing a rail line or any new facilities). This means that DOE makes no selection of transportation mode or the concomitant transportation elements. This means that no intermodal shipment scenario can be considered as a no-action alternative, since to realize any of these scenarios, DOE would have to act and/or develop new facilities that do not now exist.

As part of the evaluation of alternatives and the assessment of impacts related to identified alternatives, the EIS must also thoroughly discuss options for operation and management of the proposed rail line. These include at least two major options: (1) a dedicated, single-purpose rail

line owned and operated by DOE for the sole purpose of shipping SNF and HLW to Yucca Mountain and (2) a multi-use/shared-use rail line that would be used for the movement of other cargoes in addition to shipments of SNF and HLW to Yucca Mountain. A thorough and comprehensive assessment of impacts arising from each alternative must be conducted in a fashion that allows for direct comparisons. The EIS should contain an adequate feasibility analysis documenting any identified shared use for the rail spur, identifying pros and cons of such use, and assessing cumulative impacts of multiple-use operations (i.e., increased traffic; increased risk from operations and/or from other cargoes such as toxics, explosives, and the like; etc.).

The EIS should also provide a comprehensive analysis of alternative sites for the intermodal transfer facilities for both the Caliente rail corridor and the potential additional use of the rail/legal-weight truck cask scenario.

Cumulative Effects

In the EIS, DOE must analyze any environmental effects that may arise from the project together with the impacts of other past, present, and reasonably foreseeable future projects to determine whether the impacts when taken together result in a significant adverse effect on the environment, and whether any alternative action or mitigation measure can be undertaken to avoid or reduce the cumulative impact to a less than significant level.

Areas of concern may include DOE's potential use of local ground water wells. The impacts may be cumulatively significant when considered together with existing uses and the application to use such water filed by the Southern Nevada Water Authority with the State of Nevada Water Engineer.

The cumulative radiological effects that may arise as a result of the proposed project taken together with truck shipments of radioactive materials to the Nevada Test Site, activities involving radioactive materials at the NTS, the likelihood that the Caliente rail line would also be used for shipments to NTS, risks associated with low level and supersonic overflights, the influence of Area 51 and other Nevada Test and Training Range activities, residual health effects from past nuclear weapons testing, and a current federal budget initiative to resume weapons testing in the next two years plus biological, chemical and radiation releases on NTS including potential offsite emissions to test the effects of those agents.

The EIS should also consider the cumulative air quality impacts that may result from rail line construction and operation taken together with activities at NTS, the Nevada Test and Training Range, local construction projects, risks of wildfire, or other activities within the area that may effect air quality including particulate pollution through ground disturbing activities or other means.

Cumulative impacts should also consider the promotion of invasive species by ground disturbing activities, wildfire, or otherwise. Wildfire events may be more likely because of the combined activities of various projects in fire sensitive zones.

The cumulative effects on land use need to be closely examined in the EIS. The rail corridor should be as narrow as practical to reduce cumulative impacts on the adjacent land and land uses.

Other Matters

In the Caliente Rail Draft EIS, DOE must provide a thorough and updated overview of the Price Anderson Act (PAA) liability system, other nuclear insurance programs, and their combined applicability to the Yucca Mountain transportation system. The Draft EIS should outline the major provisions of PAA and their specific application to SNF and HLW transportation accidents and incidents.

Special attention must be given to PAA coverage of DOE shipments of civilian SNF, assuming DOE takes title to the SNF when it leaves the reactor site; PAA coverage of DOE SNF and HLW shipments from DOE facilities; any PAA coverage limitations regarding DOE contractor activities; PAA coverage of accidents or incidents involving carrier or DOE contractor negligence; and PAA coverage of terrorist attacks and/or radiological sabotage. The Draft EIS should also provide an overview of non-governmental nuclear insurance pools and their applicability to the Yucca Mountain transportation system.

The Caliente Rail Draft EIS must also specifically discuss application of PAA and other nuclear insurance to SNF and HLW shipments from the 77 shipping sites to Caliente on existing railroads, and any differences in application of PAA and other nuclear insurance to SNF and HLW shipments on the proposed new rail line from Caliente to Yucca Mountain. The Draft EIS must specifically identify any DOE actions or decisions regarding the design, construction, ownership and operation of the proposed rail line that would affect or limit application of PAA.