

January 7, 2008

**Comments of Eureka County, Nevada
Regarding U.S. Department of Energy's
Draft Supplemental Environmental Impact Statement for the Yucca Mountain
Repository, Draft Supplemental Environmental Impact Statement for the Nevada
Rail Transportation Corridor, and
Draft Environmental Impact Statement for a Rail Alignment:**

I. INTRODUCTION AND OVERVIEW OF COMMENTS

Eureka County hereby submits its comments on the following environmental documents prepared by the U.S. Department of Energy ("DOE"):

- Draft Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada DOE/EIS-0250F-S1D (October 2007) ("Repository Draft SEIS");
- Draft Supplemental 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 – Nevada Rail Transportation Corridor DOE/EIS-0250F-S2D (October 2007) ("Corridor Draft SEIS");
- Draft Environmental Impact Statement for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a Geologic Repository at Yucca Mountain, Nye County, Nevada DOE/EIS-0369D ("Rail Alignment Draft EIS").

Eureka County has a special interest in the Carlin corridor, one of six possible rail corridors that DOE has considered building to Yucca Mountain. The Carlin corridor would originate from the Union Pacific main rail line near Beowawe in Eureka County, and travel southwest through the Crescent Valley east of the Town of Crescent Valley, and into Grass Valley in Lander County, head south through Big Smoky Valley or Monitor Valley and further south to Yucca Mountain.

We recognize, as does the Department of Energy, that the complex private/public land ownership patterns in Crescent Valley and the expanding mining exploration and development are impediments to the practical consideration of the Carlin corridor. We believe it is essential that the suite of EISs being reviewed provide an accurate assessment of impacts and alternatives. The uncertain future of the Yucca Mountain project combined with frequent changes in policy and direction, especially in the area of transportation, warrant a thorough and complete assessment of impacts for all proposed routes. Should DOE again change course regarding transportation decisions, it will be essential to start over anew, to consider new routes and transportation options. (Emphasis

added per action of the Eureka County Board of Commissioners)

Our review of the Rail Alignment Draft EIS provided us with insight as to the DOE's approach to rail line development which was useful in our review of the Carlin portions of the Corridor Draft SEIS.

We believe that the Repository Draft SEIS is premature, given the many missing pieces that still are needed for analysis, including a final and public EPA standard. Eureka County also has a direct interest in the Repository Draft SEIS because the impacts to existing rail and highway transportation from rail corridor decisions should be identified, explored and mitigated in that document.

Finally, regarding the process, the 90-day comment period was not sufficient for a comprehensive review of these three complex, confusingly presented, and internally contradictory EISs, especially over the holiday period. Given that the DOE allowed twice as long a comment period on the 1999 DEIS (180 days), it is inexplicable and unacceptable that the DOE did not provide more time for comment on three separate environmental studies.

It is imperative that DOE afford sufficient time for affected parties and the public to review the two draft EIS documents and formulate comments. Given the importance of the subject matter, the first-of-a-kind project that is being evaluated in the Draft EISs, the size and complexity of the documents, and the need to obtain and review important reference material, the comment period should be re-opened for an additional 60 days.

II. INTERESTS OF EUREKA COUNTY AND INCORPORATION OF PREVIOUS COMMENTS

Eureka County, Nevada is an "affected unit of local government" pursuant to the Nuclear Waste Policy Act as amended. Eureka County has been an active participant in the oversight program of the proposed Yucca Mountain nuclear waste repository since 1993. In that regard, the county has commented on numerous rules, regulations, proposals, policies, and plans related to the project. Eureka County's areas of concern and interest generally relate to public health and safety, and focus on rail and highway transportation, emergency management, project management, and issues related to the safety and integrity of the proposed repository to store and contain waste in the near term and into the distant future.

Eureka County is committed to active participation in the oversight of the Yucca Mountain project. Thus the County submitted comments on the 2002 draft and final Environmental Impact Statements ("EISs") for the Yucca Mountain repository, and also commented on the proposed scoping of the draft EISs for which DOE now seeks comment. The County's earlier comments are:

- Eureka County comments to DOE on the Yucca Mountain 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 (January 2000) (“Eureka County 2000 DEIS Comments”) (<http://yuccamountain.org/eis200.htm#letter>);
- Eureka County Comments to Secretary of Energy Abraham on the deficiencies in the Yucca Mountain Final EIS (April 2002) (“Eureka County 2002 FEIS Comments”)(<http://yuccamountain.org/letter25.htm>; <http://yuccamountain.org/pdf/eurekafeisltr2.pdf>);
- Eureka County Summary of DOE’s Yucca Mountain Final EIS Comment-Response Document (September, 2003) (Eureka County 2003 Comment Summary”) (http://yuccamountain.org/eis_comment04.htm) ;
- Eureka County Comments on DOE Notice of Preferred Nevada Rail Corridor (January, 2004) (<http://www.yuccamountain.org/docs/letter012804.pdf>)
- Eureka County scoping 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* (May 2004) (“Eureka County 2004 Rail Alignment Scoping Comments”) (<http://yuccamountain.org/letter30.htm>);
- Eureka County scoping comments on DOE’s *Amended Notice of Intent to Expand the Scope of the EIS for Alignment Construction and Operation of a Rail Line to a Geologic Repository at Yucca Mountain, Nye County, Nevada* (December 2006) (“Eureka County 2006 Rail Alignment Scoping Comments”); (http://yuccamountain.org/docs/eureka_mina_scoping_comments06.pdf)
- Eureka County comments on the Supplement to the Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada (December 2006) (http://yuccamountain.org/docs/eureka_seis_scoping_comments06.pdf)¹

Eureka County’s 2000 DEIS Comments and Eureka County’s 2002 FEIS Comments highlighted the deficiencies in those documents, including the absence of sufficient detail to make informed decisions about rail corridors. Our 2004 and 2006 Rail Alignment Scoping Comments encouraged the DOE to consider a number of impacts that are significant for Eureka County, including the impacts of operating the rail line on grazing allotments, the socioeconomic impacts of construction on local communities, and the health impacts of construction with respect to resuspension of radioactive dust on downwind communities and workers.

The comments that Eureka County submits today supplement its earlier comments by (a) providing further support for the DOE’s decision not to choose the Carlin Corridor as a rail transportation route; (b) identifying impacts that were not addressed in the 2002 EIS and that continue to be unaddressed in the Draft Repository SEIS, the Corridor Draft EIS,

¹ Attachment 1 provides a comprehensive list of the documents relied on in these comments which have a website link to the PDF version of the document.

and the Rail Alignment Draft EIS; and (c) identifying impacts that were inadequately discussed in the 2002 FEIS and that continue to be inadequately discussed in the Draft Repository SEIS, the Corridor Draft SEIS, and the Rail Alignment Draft EIS. Therefore, Eureka County adopts and incorporates by reference its above-listed previous comments.

III. COMMENTS ON CORRIDOR DRAFT EIS

Eureka County is concerned that many of the deficiencies it identified in its comments on the 2002 Draft EIS and Final EIS have not been corrected or addressed in the Corridor DSEIS. The DOE has not performed an adequate evaluation of many significant environmental impacts of high level nuclear waste transportation, including grazing, socioeconomic impacts, soils, and emergency response. *See* Eureka County 2000 DEIS Comments; Eureka County 2002 FEIS Comments.

A. Updated Information in the Corridor Draft SEIS Shows That Carlin Continues to be a Poor Alternative Rail Corridor.

1. Land use conflicts

In its update of environmental information about the Carlin corridor, DOE concludes that the “complex land-ownership pattern resulting from the mix of private and public lands in the corridor” remains a daunting obstacle to construction of a railroad there. Corridor Draft SEIS, Section 6. We agree. The land ownership patterns in the Crescent Valley feature checkerboard lands, alternating sections of public and private land. This is illustrated by the land ownership map provided by Eureka County Assessor Michael Mears attached to letter from Mears to Johnson, December 3, 2007, (“Mears Land Ownership Map”). *See* Attachment 2. To make matters even more complicated, the private land is subdivided into small lots and parcels, with a complex pattern of resident and non-resident ownership. Eureka County’s Assessor estimates that currently 61 percent of all assessed parcels in Eureka County are within ten miles of the Carlin corridor. The ownership patterns have become even more complex since the Yucca Mountain FEIS. Mears letter, Attachment 2.

Land use conflicts identified in the Corridor Draft SEIS include conflicts with private mining operations. Supplemental information in the Corridor Draft SEIS shows that land use conflicts with respect to mining operations are on the rise, therefore increasing the benefit to be derived from avoiding the Carlin Corridor. As DOE acknowledges, the rising price of gold and other metallic resources has caused a “resurgence in the number of mining claims.” *Id.* at 5-11. Most of the conflicts are on the Carlin corridor where known mining patents are within the proposed corridor and where there is increasing activity today. *Id.*, Section 2.6.2.1.

If anything, we believe the DOE understates the potential for land use conflicts over mineral development. While the very nature of mineral development precludes the

precise geographical identification of conflicts with future mining projects, it is possible to predict that certain areas have strong mineral potential. One of those is the Crescent Valley. While a number of exploratory activities are underway, it is reasonable to predict that significant additional mineral deposits will be discovered and developed in the vicinity of the Carlin rail corridor in Eureka County. *See* Eureka County Mineral Assessment (2007), (<http://www.yuccamountain.org/mineral/contents.htm>).

Depending on the distance between the rail spur and the deposits, a rail line in the proximity of newly discovered deposits could be a detriment to the development of newly discovered mineral resources. Potential conflicts include the intersection of rail line and haul roads, used to transport mined material in giant trucks from one side of the valley to the other for processing. The Cortez mine has expanded several times since 1999, and it is expected that the Horse Canyon project will also depend on haul roads that crisscross the Crescent Valley. *See* “Mining Discussion” map, Attachment 2.

In summary, the land use conflicts identified in the Corridor Draft EIS and other documents would make it very difficult to acquire a right-of-way along the corridor, and would also result in significant adverse impacts to private landowners and businesses. Through the corridor selection process, DOE has avoided conflicts with most known existing and potential mining operations. *Id.*, Section 2.6.2.1. DOE should continue to do so.

B. If DOE Were to Identify the Carlin Corridor as the Preferred Alternative, a More Detailed Environmental Analysis Would be Required.

As discussed above, the supplemental information analyzed in the Corridor Draft SEIS confirms the unsuitability of the Carlin Corridor as the preferred alternative for rail transport of high-level radioactive waste to Yucca Mountain. If the DOE were to alter its decision and identify the Carlin Corridor as the preferred alternative, the DOE would need to do a far more detailed analysis of the environmental impacts of the rail line.

An EIS’s discussion of alternatives “must look at every reasonable alternative, with the range dictated by the ‘nature and scope of the proposed action.’” *Idaho Conservation League*, 956 F.2d at 1519, quoting *State of California v. Block*, 690 F.2d 753, 757 (9th Cir. 1982). The EIS must provide “sufficiently detailed information” to allow agencies “to decide whether to proceed with an action in light of potential consequences. *Idaho Conservation League*, 956 F.2d at 1519-20.

DOE would also need to do a much more detailed analysis of mitigative measures. As stated in the Council on Environmental Quality’s (CEQ’s) regulations for implementation of the National Environmental Policy Act (NEPA), consideration of alternatives to the proposed action is “the heart” of an Environmental Impact Statement (EIS). 40 C.F.R. § 1502.14. *See also Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1519 (9th Cir. 1992). The alternatives that must be considered in an EIS include alternatives for mitigating the environmental impacts of the proposed action. 40 C.F.R. § 1502.14(f).

Section 1502.16 of the CEQ regulations also requires an EIS to discuss the relative costs and benefits of mitigative measures.

The following are examples of environmental impacts of use of the Carlin rail corridor and potential mitigative measures that have not been identified or analyzed in the Corridor Draft SEIS. Nor have they been identified or analyzed in the 2002 FEIS for the Yucca Mountain repository.

1. The Corridor Draft SEIS does not identify the array of new facilities that would need to be constructed along the rail line, nor does it evaluate their environmental impacts. As demonstrated in the Rail Alignment Draft EIS, construction of a rail line would require the addition of numerous facilities such as an interchange yard, staging yard, maintenance of way facilities, rail equipment and cask maintenance facilities, and a Nevada railroad control center. *Id.* at 2-5. None of these facilities were described in the 2002 FEIS. *See* Eureka County 2002 FEIS comments at 6. As the starting point for a rail line constructed in the Carlin Corridor, most, if not all, of these facilities would probably be located in Eureka County. The facilities would increase many of the impacts previously examined, including socioeconomic impacts and land use impacts.
2. Although the Rail Alignment Draft EIS contains significant increases in the estimated cost of a rail line constructed in either the Caliente or Mina Corridors, the Corridor Draft SEIS does not provide updated construction cost estimates for Carlin or any of the other corridors. Information based on current economic conditions and projections of future economic conditions would have to be provided if Carlin were selected as the preferred alternative.
3. The DOE would need to resolve conflicts between the Corridor Draft SEIS and supporting documents regarding whether or not the right-of-way will be fenced, a comment made by Eureka County to DOE in 2000. *See* Eureka County 2000 DEIS comments at 7. Most western ranching operations are based upon a combination of privately owned fee land and grazing leases on publicly owned lands. In most cases, the ranching unit depends on these grazing leases to be economically viable. Most grazing leases are held by the ranches that can access the lease as a logical part of their operation. Splitting an existing operation with a rail line that will limit access to the leased land can have significant adverse effects on the operation of the ranch. The degree of impact that splitting a ranching operation with the rail line will have will be much greater if the rail road right-of-way is fenced. However, the Corridor Draft SEIS does not provide enough information to permit a determination of which sections of the corridor in Eureka County – if any -- would be fenced.

To make matters more confusing, in the Rail Alignment Draft EIS, DOE provides conflicting statements regarding fencing. For example, DOE states that it will consult with BLM during the final design phase to determine where fencing will be required on Public Lands. *Id.* at 4-61. In the sections on impacts to big game

and wild horses and burros, however, DOE states that the rail line will not be fenced. *Id.* at 4-231 and 4-232. In the section on potential mitigation, DOE states that potential mitigation measure includes “limit fencing on public lands to those areas where safety is a concern, or where it is required for the safety of livestock” [*Id.* at 7-16], without stating who is going to determine whether the right-of-way must be fenced due to safety concerns.

4. As discussed in Eureka County’s 2000 DEIS Comments and its 2002 FEIS Comments, in the Carlin corridor it is likely that significant fill will be required to maintain the appropriate grade for the rail line as it climbs out of Crescent Valley. A typical “large fill” cross section is shown in Attachment 3 to these comments, which is a reproduction of Draft SEIS Reference Document # DIRS 182824 at page 5.² This “large fill” cross section would probably be required for many miles of the corridor in the southern end of Crescent Valley. The Corridor DSEIS fails to recognize that areas where significant fill is required create substantial barriers to movement. Large fills such as that shown in Attachment 3, located in the middle of a ranching operation, would create significant hardship on the operator -- perhaps making the difference between an economically viable operation and one that cannot survive.

DOE recognizes the potential impact of fills and cuts in its analysis of impacts for the Mina Corridor, when it states: “Because the corridor intersects grazing allotments, a rail line could create a barrier to livestock movement. Livestock could have difficulty accessing water if there was a deep cut or a high fill associated with the rail line. Ranching operations and livestock rotations could be disrupted.” Corridor Draft SEIS at 3-11. However, the recognition of this impact is not carried through to the Corridor Draft SEIS’ discussion of the impacts of a rail line in Carlin Corridor, nor does DOE make any attempt to provide information regarding the locations where significant cuts or fills occur. More troubling, in its analysis of the impacts of the Mina and Caliente alignments in the Rail Alignment Draft EIS, DOE reaches the opposite conclusion that such impacts would be insignificant, by stating that:

the presence of a rail line could require livestock on some allotments to adjust to new routes to access water and forage. Generally, livestock could learn these new routes and acclimate to, and cross the rail line in most areas.

Rail Alignment Draft EIS at 4-61.

DOE should correct this inconsistency and acknowledge the significant impacts of a rail line on livestock movement. It should also identify the exact locations where the rail line will create barriers to movement, both through the presence of

² DIRS 182824 is listed as a reference document for both the Corridor Draft SEIS and the Rail Alignment Draft EIS.

- large cuts and fills and areas where the rail line will be fenced. The analysis of impacts should then include an assessment of the impact on ranching operations and livestock rotations. Finally, the EIS should identify precise measures that DOE will take to mitigate the impacts on livestock.
5. While DOE concedes land use impacts are significant it understates them by using the amount of disturbed acreage as the primary indicator of land use impacts. *See* Corridor Draft SEIS, p. 5-7. Although the number of disturbed acres is one measure of land use impacts, it is not the only one. For linear facilities such as a rail line, an assessment of land use impacts should also include an evaluation of the impacts of bisecting current and future land uses. As discussed above, splitting a ranching operation with a rail line can have significant impacts on the entire operation, not just the area within the right-of-way. Similar impacts will be felt by other types of businesses and government operations.
 6. The rail line will bisect many local roads, causing potentially significant impacts. The ability of vehicles to cross the rail line will greatly influence the degree of impact. *See* Eureka County Impact Assessment Report at 66-68 (2001) <http://www.yuccamountain.org/impact01.htm>. The EIS should present a full discussion of rail crossings. A crossing can be either at-grade or grade separated. At-grade crossings can be either signaled or unsignaled. Grade separated crossings may be either by structures constructed over the tracks or by underpasses. Grade separated crossings will be limited to major roads. Although the length of trains will vary, the typical train will probably consist of three locomotives, a buffer car, up to 10 cask cars, another buffer car, and an escort car, and would be approximately 1,300 feet in length.
 7. Ranching operations will be the most affected by the barrier to movements created by the proposed rail lines. The EIS should discuss mitigative measures that would allow livestock and equipment to cross the rail line, such as culverts and bridges. The EIS should also evaluate the feasibility of various locations for crossings, because possible locations for grade separation are highly dependent upon terrain. For example, the height required for separation can be provided by natural drainages. Underpasses will be limited to locations where underpasses can be constructed based on the topography and the profile of the proposed rail line. The degree of impact – and the effectiveness of mitigation measures – depends on a combination of the height of proposed road crossings (either at grade or grade separated) and proposed drainage structures.
 8. Areas for the development of ballast and sub-ballast quarries, solid waste disposal facilities, construction lay-down areas, and construction staging areas are not identified. These areas are associated with land use impacts which cannot be estimated without information about the location of the support facilities.

9. Proposed rail line corridors also cross areas of potential future community growth. Although DOE identifies these areas, the DEIS does not contain an assessment of the impacts of this conflict on future community growth patterns.

The Carlin route crosses areas of potential future community growth for both Beowawe and Crescent Valley in Eureka County. Beowawe is currently bounded on the north by the Union Pacific tracks. The Carlin route and interchange facilities will prevent future growth of Beowawe to the east. The proposed route also passes just east of the community of Crescent Valley, preventing any eastward expansion of this community.

10. As previously pointed out by Eureka County, in the 2002 EIS for Yucca Mountain, DOE has not adequately addressed emergency response at the rural county first responder level for this decades-long massive shipping campaign. Eureka County 2000 DEIS Comments at 2, 2002 FEIS Comments at 9-14. The Corridor Draft SEIS does not assess the potential impact on emergency response services in Eureka County. The emergency response services would be impacted both during construction and during operations. During construction, there would be a significant increase in the demand for emergency response resulting from construction accidents and from traffic accidents related to the increased traffic associated with the large construction workforce. There is also the potential for spills of hazardous materials during construction. *See* Eureka 2002 FEIS Comments at 14.
11. As Eureka County as previously commented, construction and operation of the rail line would also increase the possibility of rangeland wildfires. Eureka 2000 DEIS comments at 14. These impacts were identified by Eureka County but have not been assessed by DOE, nor have any mitigation measures been suggested. Mitigative measures should include the development of a plan for fire prevention and suppression, developed in cooperation with appropriate local, State, and federal agencies. The plan should include procedures to restore any land affected by a construction related wild land fire. Rail equipment used during construction and operation should be adequately equipped and maintained to reduce the potential fire hazard.
12. As Eureka County has also commented previously, the use of the Carlin Corridor for rail transport of high level radioactive waste would have significant socioeconomic impacts. Eureka 2000 DEIS comments at 16-17. The Rail Alignment Draft EIS shows that the socioeconomic impacts of a rail line would be even greater than previously supposed: DOE has substantially increased the estimated workforce required to construct the proposed rail line, from 1,230 worker-years to 6,600 worker-years. *Id.*, 5-9. This is a significant increase in the number of workers required, which would have significant socioeconomic impacts not previously assessed. Yet, the Corridor Draft SEIS fails to update and adequately assess potential socioeconomic impacts to Eureka County. This deficiency must be corrected.

In this context, it is important to note that the DOE's methodology of assessing the socioeconomic impacts of the Caliente and Mina rail alignments is significantly flawed, and therefore would not be adequate for purposes of identifying or evaluating the impacts on communities in Eureka County if a rail line were constructed in the Carlin Corridor. DOE assumes that almost all of the workers would live in construction camps, commuting from permanent homes in either the Washoe County/Carson City area (Mina Corridor) or the Clark County area (Caliente and Mina Corridor). Corridor Draft SEIS at 3-41, Rail Alignment Draft EIS, 4-265 and 4-623. This is an erroneous assumption for several reasons. First, the DOE fails to recognize that significant construction projects in the metropolitan areas of Clark County and Washoe County create a demand for construction workers. Workers who currently reside and work in these metropolitan areas would have no incentive to leave jobs in their current area of residence to work at the remote location of the proposed rail line. DOE also fails to recognize that many of the skills required for construction of a rail line may not be the skills of the existing construction work force in the Washoe County/Carson City and Clark County areas. Therefore, the employment demand created by the construction of the rail line will most likely be met by workers who relocate to the area from other states, creating temporary residences in the communities along the rail line corridors.

The DOE's assumption also ignores the experience of other communities in the western U.S. with similar types of construction activities. Many construction workers for similar types of construction arrive at the job site with their own recreational vehicles ("RVs"), and expect to live in them at or near the job site. Others will want accommodations in local communities, including motel rooms and apartments. Even if space is available in construction man camps, many of the workers will chose these other housing options. Some of them will bring their families with them, increasing the temporary population increase associated with construction.

In any event, even if it were likely that workers would live in construction camps, DOE's methodology does not recognize that temporary residents do place a demand for locally provided services, whether they reside in man camps, personal RVs, or other housing in the area. The model used to predict population increases and socioeconomic impacts of the construction workforce assigns the increased population and demand for services to the permanent residence location assumed for the worker, primarily in the Washoe/Carson City or Clark County area. Rail Alignment Draft EIS at 4-271 and 4-630. These are large, growing metropolitan areas where the population increase due to the rail line construction could be absorbed. Therefore, DOE predicts little or no socioeconomic impact.

A large, temporary resident workforce would have significant socioeconomic impacts on small, rural communities in the Carlin Corridor, particularly in Crescent Valley in Eureka County where the rail line for the Carlin Corridor

would originate. The estimated population of Eureka County in 2006 is 1,460 (Nevada State Demographer's Office). The County consists of two census districts, the Eureka county census division (CCD) and the Beowawe CCD, which is primarily the community of Crescent Valley. The 2000 Census reported only 548 people, or 33% of the residents in the Beowawe CCD. The portion of the Corridor Draft SEIS devoted to "socioeconomics (Section 5.2.7) does not even mention Eureka County or Crescent Valley. As discussed above, DOE now states that significant additional facilities such as an interchange yard, maintenance of way facility, equipment maintenance facility, etc will be required. Many of these facilities would probably be located near the start of the rail line at Beowawe if a rail line were constructed in the Carlin Corridor. Construction of these facilities would also increase the impacts on Crescent Valley, since the construction of these facilities would be at a fixed location near Crescent Valley, rather than further along the rail corridor.

Finally, Congress might not appropriate sufficient funds to construct the rail line in the time frame suggested by DOE. Therefore, DOE concludes that the construction may last for up to ten years. Corridor Draft SEIS at S-36. Yet, the socioeconomic impact analysis in the Corridor Draft SEIS only assesses impacts over a five year construction period. DOE's socioeconomic assessment should include a complete assessment of construction impacts over both the preferred alternative time frame of five years and the alternative time frame of ten years. The impacts on Eureka County and Crescent Valley should be adequately assessed in any update of the Carlin Corridor.

13. While the Corridor Draft SEIS correctly notes that soil attributes of "shrink swell" and "erodes easily" are common in the Carlin Corridor (Corridor Draft SEIS at 5-18), DOE fails to acknowledge that the "erodes easily" soils would require aggressive erosion control methods. DOE acknowledges this concern but dismisses it by simply stating that erosion control and revegetation would minimize these concerns. Coping with soils that erode easily is a potentially significant impact that merits recognition. Moreover, the potentially significant impact of easily eroded soils on water quality is not addressed in Section 5.2.3.1 (entitled "Surface Water").

Similarly, DOE underestimates the difficulty posed by shrink swell soils with respect to the construction of the rail line "Shrink swell" soils are not usually suitable for compacted fill. As soil water content increases, these soils will swell, heaving upward. When the soil moisture decreases, the soil shrinks causing the ground surface to recede. Therefore, where these soils are encountered, it would be difficult to balance the cut and fill requirements of construction of the rail line in the proposed corridor. Additional borrow areas would be required, probably outside of the corridor assessed, in order to obtain sufficient quantities of fill for the roadbed. As previously noted by Eureka County, significant fill material would probably be required in Eureka County in order to maintain grade

requirements for the proposed rail line when climbing out of Crescent Valley. The impact of additional fill requirements has not been assessed by DOE.

14. The Corridor Draft SEIS does not adequately address the potential impact of construction of rail line on the spread of noxious weeds and invasive species. *See* Eureka County's 2000 DEIS Comments at 12. The discussion of noxious weeds is inadequate in several respects. First, there is no mention of noxious weeds in the section on the Carlin Corridor, despite the importance of livestock grazing to the area. The only part of the Corridor Draft SEIS that discuss noxious weeds and invasive species is the discussion of the Mina Corridor.

Moreover, the discussion of the Mina Corridor is inadequate to address the issue of noxious weeds. While DOE does acknowledge that noxious weeds may be a problem, it does not adequately address the nature or effectiveness of measures proposed for controlling them, or possible conflicts with other mitigative measures. For instance, the DOE states that "clearing vegetation and disturbing the soil could create habitat for colonization by noxious weeds and invasive species in the Mina corridor. . ." Corridor Draft SEIS at 3-26. DOE then concludes that reclamation of disturbed areas would reduce the colonization by noxious weeds. Under cumulative impacts for the Mina corridor, DOE further notes that linear disturbances, such as rail lines, may result in the spread of noxious weeds into areas where they had not previously been a problem. DOE then concludes that the "strict adherence to best management practices should reduce the potential for impacts" and that the cumulative impacts, would therefore, be small. *Id.* at 4-25.

Similarly, in the Rail Alignment Draft EIS, DOE concedes the potential for establishment of noxious weeds and invasive species along the rail alignment and adjacent areas, but concludes that the application of "best management practices" would minimize or avoid the impacts. Rail Alignment Draft EIS at 4-193. Such vague assertions are unacceptable. The use of the term "best management practices," without more information, gives no assurance that the practice will actually be implemented sufficiently to reduce the potential for the establishment of noxious weeds.

But DOE also fails to give enough information on how it will address a significant conflict between best management practices for weed control and best management practices for other construction activities. DOE acknowledges that watering of land surfaces during construction could encourage the establishment of noxious weeds, and therefore, proposes to limit watering of land surfaces "to the extent practicable" to mitigate this potential impact. Rail Alignment Draft EIS at 4-193. Not only is the phrase "to the extent practicable" unacceptably vague and non-committal, but the best management practice of avoiding watering may well conflict with other project related requirements, such as the need to apply water to soils for proper compaction and the watering of disturbed areas and haul roads for dust control. Rail Alignment Draft EIS at 7-11.

DOE does note in the section on best management practices that it will use weed-free straw and mulch for reclamation activities. Rail Alignment Draft EIS at 7-15. Since it is critical that straw or mulch used for reclamation not result in the introduction of invasive species, this requirement should be absolute, and not subject to the caveat of “to the extent practicable.” To ensure that the mitigation is followed, DOE should commit to requiring the use of **certified** weed free mulch in all reclamation contracts for the rail line construction.

IV. COMMENTS ON RAIL ALIGNMENT DRAFT EIS

A. Inadequate and Inconsistent Description of the Proposed Action

The Rail Alignment Draft EIS provides an incomplete and inconsistent description of the proposed action. The locations of quarries, staging areas, man camps, and other facilities are only shown on sketch maps, which do not show the exact location of the facility, or the existing terrain, vegetation, or other land features. There are also many inconsistencies within the description. For example, in some places DOE states that the right-of-way won't be fenced, but in other places it states that the right-of-way fencing will be determined by BLM. The “nominal width” of the operations right-of-way is stated as being 400 feet in the text (Rail Alignment Draft EIS at 2-5), but a DOE reference document indicates that the right-of-way width varies significantly, to a maximum width of 1,000 feet. Draft SEIS Reference Document # DIRS 182824. The right-of-way width in the area of a large cut would be 480 feet and in the area of a large fill would be 575 feet. *Id.*

Although in some parts of the Draft EIS the DOE recognizes that cut and fill slopes will result in disturbed areas that are wider than 400 feet, it provides no information that would allow the reader to determine where these areas are. The maps provided in the on-line map atlas are only satellite images, and do not provide contours to allow the reviewer to estimate areas where significant cuts and fills may be required.

Although the locations of bridges are provided, the location and size of culverts are not provided. Large culverts can be used as grade separated crossings. Without knowing the locations of these culverts, it is not possible to assess impacts on ranching operations or the effectiveness of mitigative measures.

B. Inadequate Discussion of Land Use Impacts

The Draft EIS concludes that the land-use impacts of the Caliente right-of-way are insignificant. *Id.*, Section 4.2.2.2. Eureka County believes that this conclusion is in error. The impacts of the Caliente right-of-way are, in fact, significant.

1. Disturbed acreage is an inadequate measure of impacts.

The Draft EIS' conclusion that land use impacts of the Caliente right-of-way are insignificant is based primarily on the amount of disturbed acreage and lost forage from the permanent right-of-way. *Id.* at 4-270. As discussed above in Section III C 3, although this is one measure of land-use impacts, it is not the only one. For linear facilities such as a rail line, an assessment of land-use impacts should also include an evaluation of the impacts of bisecting current and future land-uses. Splitting a ranching operation with a rail line can have significant impacts on the entire operation, not just the area within the right-of-way. Similar impacts will be felt by other types of businesses and government operations.

C. Inadequate Discussion of Impacts to Water Resources

The Draft EIS' discussion of groundwater impacts is limited to impacts associated with groundwater withdrawals for construction activities and from infiltration of pollutants from potential spills during construction and operation. Rail Alignment Draft EIS, Section 4.2.6.2. However, most of the rail corridors cross rugged terrain where there will be significant cuts required. These cuts could intercept groundwater flow. When shallow aquifers are intercepted by a linear cut, such as those associated with a rail line, adverse impacts can occur both down dip and up dip from the cut. The cut would allow water to drain from the aquifer, causing dewatering or lowering of the water table up dip from the cut. The recharge to the aquifer down dip from the cut would be eliminated or reduced, causing groundwater levels to decline. Lowering of the water table of the aquifer could cause serious impacts to ranching operations if there is significant decline. Many stock watering wells are pumped by windmills. The pumps used on windmills are suction pumps that can raise water to only a very limited height. Therefore, wells located where the water table is lowered significantly could become unusable. DOE has not provided sufficient information on the actual routes and the location and depth of cuts to assess these potential impacts.

D. Inadequate Discussion of Impacts to Biological Resources

DOE has significantly understated the impact to biological resources. Loss of habitat would not be limited only to the physical loss of habitat due to the construction of the rail line. The rail line passes through or adjacent to many significant biological resource areas, including critical habitat, migration corridors, etc. The construction and operation of the rail line would reduce the value of these areas, resulting in significantly greater loss in resources than just the area physically within the rail line right-of-way. The Caliente rail line would cross and be near to critical habitat for many species of wildlife. Critical habitat is absolutely necessary for wildlife. Human activity, such as the operation of a rail line, in or even near critical habitat can seriously degrade the value of that habitat for wildlife. This is especially true of linear facilities, such as a rail line, that pass through habitat areas. Without undisturbed access to critical habitat, the wildlife using that habitat may abandon large areas of year-round habitat. The *Environmental Baseline File for Biological Resources* (TRW 1999k) lists the following crucial habitats within the Caliente corridor: Bighorn Sheep Crucial Winter Habitat (Cedar Range), Mule Deer

Crucial Winter Range (Cedar Range), Quail Crucial Habitat in Meadow Valley. The Caliente corridor contains many additional biological resources within the corridor or within 5 kilometers of the corridor. Although these resources are identified in the *Environmental Baseline File*, the DOE makes no attempt to quantify the impacts of the rail line on most of these resources.

E. Inadequate Discussion of Air Resources

DOE did not address Eureka County's scoping comment concerning the resuspension of radioactive particles present in the soil during the construction of the rail line. As Eureka County pointed out, "DOE must assess whether the soils within the corridor contain radioactive particles that could be released into the air with project related ground disturbance." Eureka County Comments on Notice of Intent for Alignment of Rail at 10 (2004). Resuspension of radioactive particles could occur in significant quantities during construction. Sources would include earthwork for construction of the road bed and fugitive dust emissions from access roads and haul roads from quarries and borrow areas. The potential for fugitive dust emissions containing radioactive particles should require DOE to implement aggressive fugitive dust control measures for all potential sources of fugitive dust.

As a county downwind of the area where above and underground nuclear weapons tests were conducted, we are especially aware of the vulnerability of our population to airborne radioactive particles. This is illustrated by information and graphics on the Department of Energy's website regarding radiological exposure pathways. <http://www.doe.gov/emprograms/dose/pathways.htm>. See Attachment 4.

Longtime Eureka County residents are currently eligible for a compensation program authorized by the Radiation Exposure Compensation Act of 1990, conducted by the University of Nevada School of Medicine (<http://www.medicine.nevada.edu/community/resep>) related to cancer resulting from their exposure to fallout. See "You May Have Been At Risk for Nuclear Fallout Exposure" advertisement from Eureka Sentinel (Nov. 8, 2007), Attachment 5.

F. Inadequate Analysis Relating to Reasonable Alternatives to the Caliente Rail Corridor

The draft Rail EIS states that if the Caliente Rail Corridor is not completed, the future course is "uncertain" with regards to transportation of nuclear materials to Yucca Mountain. Eureka County believes that if the Caliente Rail Corridor fails, truck transport will become the preferred method of transportation to the repository. Yet the draft Rail Corridor/Alignment EIS contains no analysis for a mostly truck shipping scenario, which should be considered a reasonable alternative, given the cost and construction uncertainties of the Caliente Rail Corridor. DOE should be required to analyze a "mostly truck" shipping campaign as a reasonable alternative to the Caliente Rail Corridor.

G. Inadequate Discussion of Mitigative Measures

As discussed above in Section III.B, the discussion of mitigative measures is at the “heart” of an EIS. In violation of this requirement, the DOE’s discussion of mitigative measures in the Repository Draft SEIS is extremely inadequate in numerous respects.

Eureka County is concerned about the environmental impacts of transportation of high-level nuclear waste along the Caliente Corridor. If the Caliente Corridor is used, nuclear waste will be shipped by rail across the northern part of Eureka County from California. Contrary to the requirements of NEPA and CEQ implementing regulations, the DOE has never provided any detailed discussion of mitigative measures for the portion of the Nevada rail transportation route that crosses Eureka County. The only discussion of alternatives that the DOE has undertaken is an extremely general discussion in Section 9.3 of the 2002 Final EIS of mitigative measures that “DOE is required to implement, has determined to implement, or has identified for consideration.” 2002 FEIS at 9-19.

The discussion of mitigative measures in the 2002 FEIS is so vague and non-committal as to both violate NEPA and be of no use whatsoever to Eureka County in determining (a) what precise measures DOE proposes to implement, (b) whether DOE and not some other entity will implement them, or (c) whether they are effective. Mere statements of “good intentions” are not sufficient, especially where an agency expects mitigation measures to be undertaken by third parties. *Preservation Coalition, Inc. v. Pierce*, 667 F.2d 851, 860 (9th Cir. 1982). The Rail Alignment Draft EIS does not correct the problems with the 2002 FEIS. The DOE should re-issue the Rail Alignment Draft EIS and include a detailed discussion of precisely what measures the DOE proposes to take along the entire Nevada transportation corridor, including those portions that go through Eureka County.

The level of detail should be sufficient to allow a meaningful evaluation of the effectiveness of the mitigative measures. The DOE should consult, as an example of such a detailed analysis, Chapter 12 and Appendix D to the Draft EIS prepared by the Surface Transportation Board for the Powder River Basin Expansion Project in 2001.

For instance, the Rail Alignment Draft EIS provides an incomplete and inconsistent description of the proposed action. The locations of quarries, staging areas, man camps, and other facilities are only shown on sketch maps, which do not show the exact location of the facility, or the existing terrain, vegetation, or other land features. There are also many inconsistencies within the description. For example, in some places DOE states that the right-of-way won’t be fenced, in other places it states that the right-of-way fencing will be determined by BLM. The “nominal width” of the operations right-of-way is stated as being 400 feet in the text (Rail Alignment Draft EIS at 2-5), but DOE’s reference material indicates that the right-of-way width varies significantly, to a maximum width of 1,000 feet.

Moreover, to the extent that it has addressed mitigative measures for the Caliente Rail Alignment, the DOE also applies an improper standard. Instead of committing to take mitigative measures, the DOE states that it will “consider” them. Draft Rail Alignment Draft EIS at 7-1. As discussed above, an EIS’s discussion of mitigation alternatives must

amount to more than mere speculation. *Preservation Coalition, Inc.*, 667 F.2d at 860. The Rail Alignment Draft EIS also states that DOE will implement “best management practices,” which it defines as “practices, techniques, methods, processes and activities commonly accepted and used throughout the construction and railroad industries . . . and that provide an effective and practicable means of preventing or minimizing the adverse impacts of an action on human health and environment.” *Id.* The word “practicable” implies that the choice of “best management practices” will be affected by cost considerations. Yet, the EIS gives no details regarding the measures it is considering, or any information regarding its evaluation of the cost-effectiveness of those measures. By failing to provide this information, the DOE defeats any attempt by the public to understand or evaluate the nature, usefulness, or cost-effectiveness of mitigation measures.

V. COMMENTS ON REPOSITORY DRAFT SEIS

Eureka County finds the Repository Draft SEIS to be premature in the absence of the EPA standard and other components key to repository decision-making. It lacks adequate and consistent information about transportation impacts, especially regarding highway and existing rail transportation in Nevada. Impacts to communities along existing rail and highway routes vary depending on what rail line is selected in Nevada. The Repository Draft SEIS and the Corridor Draft SEIS lack this essential analysis. It also is notably deficient in the cumulative impacts analysis for reasonably foreseeable future actions, and lacks meaningful and committed mitigation.

A. Analysis for Transportation Within Nevada is Inadequate

1. Unrealistic Description of Transportation Routes

In both the sections on national transportation and Nevada transportation, the representative rail and truck routes shown in Figure 6-1 of the Repository Draft SEIS do not represent the actual routes that will probably be used to transport spent nuclear fuel and high-level waste through Eureka County under the proposed action for the Caliente Alignment. The representative routes shown in this figure do not include Interstate 80 or the Union Pacific main line railroad through northern Nevada. It is very likely that these routes would be used for most of the shipments from the west coast. *See* Eureka County Yucca Mountain Existing Transportation Corridor Impact Assessment Report (2005) (http://www.yuccamountain.org/impact_report/contents.htm)

The representative routes also do not recognize DOE’s current philosophy as expressed by DOE at the DOE Technical External Coordination (TEC) Working Group meetings in 2007 that a “Suite of Routes” would be required due to safety and security concerns. DOE has defined a “Suite of Routes” to mean “more than one route from a shipping location to the repository.” Applying the suite of routes concept to the potential routes

will result in more routes than shown on Figure 6-1. This would undoubtedly increase the number of shipments through Eureka County.

2. Analysis of Impacts from Mina Corridor to Existing Nevada Routes is Lacking

The proposed Mina rail corridor requires analysis and evaluation of a wide range of new and substantial impacts not heretofore undertaken. Impacts in the Reno-Sparks metropolitan area, surrounding counties, and northeast Nevada have elements that are similar to yet vastly different from those in Nevada's other metropolitan area of Las Vegas and Clark County. Because the proposed Mina corridor will utilize the UP east-west mainline that parallels the I-80 corridor, dramatic, new impacts to the region and stakeholder interests in northern Nevada and California will result and require serious study. For example, shipments through Eureka County would be greater for the Mina route than the Caliente route. Impacts of shipments on existing transportation routes should be addressed.

3. Legal-weight truck/rail intermodal scenario not addressed in Draft SEIS

The Repository Draft EIS makes no mention of DOE's Supplemental Analysis (SA) issued March 10, 2004 which effectively modifies the Yucca Mountain FEIS by evaluating a legal-weight truck/rail intermodal scenario of transportation Nationwide and in Nevada for the first 6 years and possibly longer. Intermodal by its very nature involves significant loading, unloading, transfer and interline transportation activities which the repository FEIS finds give rise to increased impacts and risks to the environment, worker safety and general public health and safety.

4. Incomplete Impact Analysis for Change to Overweight Trucks

In the Yucca Mountain FEIS, DOE stated that trucks carrying truck casks would be legal weight trucks. DOE now expects the trucks to be overweight. DOE originally rejected the use of overweight trucks because the overweight truck permitting system could create significant problems meeting shipping schedules. Now that DOE is planning on using overweight trucks, it should describe how it intends to overcome the permitting obstacles previously identified. DOE concludes that the impacts from overweight trucks would be similar to the impacts from the use of legal-weight trucks. No analysis is provided to justify this conclusion.

5. 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. And the

primary route (I-15 to US 95) assumes infrastructure (the I-215 beltway) that may not be useable given uncertainties over its status as part of the interstate highway system, and ignores the current HM 164 route (I-15 connecting directly with US 95 in Las Vegas).

B. Inadequate Discussion of Mitigating Measures

The DOE's discussion of mitigative measures in the Repository Draft SEIS is extremely inadequate.

1. Lack of guidance and information.

One mitigating measure that DOE cites to address transportation safety is the DOE *Radioactive Material Transportation Practices* manual (DOE M 460-2.1). This manual was originally adopted in 2002. DOE is currently revising this manual, but has not released the revised manual. Therefore, it is inappropriate to rely on the mitigative actions cited, since they will be revised in the near future. Instead, DOE should describe in the Repository Draft SEIS the exact practices that it is committed to upholding.

Similarly, Section 9.3 of the Repository Draft SEIS discusses mitigating actions for transportation impacts. For Nevada Transportation, DOE states that Chapter 7 of the Rail Alignment Draft EIS provides mitigation measures for construction of the rail line in Nevada. No "best management practices" or proposed "mitigative measures" are provided to address transportation impacts in Nevada. Thus, it is impossible to tell what the mitigation measures are.

2. Inadequate discussion of emergency response

The evaluation of emergency response does not include any assessment of the current capability of local emergency response agencies to respond to an incident involving these shipments. Particularly in rural communities such as those in Eureka County, existing emergency response capabilities consisting of volunteers would be inadequate to respond to an incident involving these shipments. Eureka County DEIS Comments at 11. The EIS also fails to discuss how the funding to address these shortfalls would be provided.

When discussing the need for training for emergency responders to respond to incidents involving these shipments, DOE states that Section 180(c) of the NWPA allows DOE to provide funding for this training. The EIS, however, states that "DOE **could** provide such training." Repository Draft SEIS at 9-7 (emphasis added). DOE should state that the NWPA requires DOE to provide such funding, and that DOE will provide the training. However, the EIS should address the likely and reasonably foreseeable possibility that Congress will not appropriate sufficient funds to provide adequate training for all responders.

The County believes that Section 180(c) of the Nuclear Waste Policy Act is ineffective both in funding and scope, to adequately train emergency responders to deal with a nuclear release. The EIS should recognize that 180(c) is not an adequate solution for training for

Nevada counties who will be affected by all shipments to Yucca Mountain, should address appropriate mitigative measures related to inadequate 180(c) funding.

C. Repository Draft SEIS is Premature.

The Repository Draft SEIS is premature in the respect that it should not have been issued before the Total System Lifecycle Cost Analysis, the second repository report, the issuance of the final EPA standard and promulgation of NRC related regulations, or the final TAD canister design.

- If the Repository Draft SEIS is used to assist in informed decision making, consider how many unknowns still remain in the Yucca Mountain project, after 30 years and 9 billion dollars.
- There is no current radiation standard to measure whether the repository can contain the waste for a to-be-determined period of time.
- There is no estimate of the Total Life Cycle Cost of the project. Many of the factors that weigh in that assessment are still to be determined.
- The second repository report will assess the viability of an unlicensed and unproven Yucca Mountain to contain waste into the distant future, when it has not been demonstrated that the first repository is licensable, safe, or institutionally possible to manage.
- There is no final Transportation, Aging and Disposal (TAD) Canister design, even though that design drives many of the impact analyses in the Draft SEIS.

An example of the premature nature of the Repository Draft SEIS is that the Total System Performance Assessment for the EIS is different from the TSPA used for licensing. In addition to raising issues related to consistency of information, it is confusing and bordering on duplicitous to have a TSPA for the EIS different from the TSPA used for the LA. One set of data and assumptions should be used for all purposes. The Final SEIS must have a TSPA that is the same as that in the license application for it to be adopted by the NRC.

The final U.S. Environmental Protection Agency (EPA) rule regarding acceptable radiation dose rates has not yet been finalized. Without any final standard, it is impossible for counties assess and verify the DOE's claims of compliance with the unpromulgated rule. The Repository Draft SEIS should incorporate the EPA's final rule regarding acceptable radiation releases from the repository. In the absence of the final EPA rule, the Draft SEIS is premature, and should be withdrawn until the EPA final rule is known and the Draft SEIS can be modified accordingly.

D. Preclosure Monitoring Period is a Moving Target

The Repository DSEIS proposes that the preclosure analytical period for monitoring be reduced to fifty years from the 300 years originally proposed in the FEIS (Table 2-1, pg.

2-12 and pg. 2-17). Such a significant change from the FEIS to the Draft SEIS in the proposed preclosure monitoring period should be clearly explained and justified.

Currently, there is limited discussion and no supporting analysis or documentation to explain or support this change in the Draft SEIS. How will the proposed Global Nuclear Energy Partnerships (GNEP) program which proposes to reduce the volume and toxicity of waste, affect the preclosure monitoring period? In recent reviews by the National Academy of Sciences and the Nuclear Waste Technical Review Board, both have noted that the time necessary to develop effective technologies to reduce the volume and toxicity of radioactive wastes is likely to be greater than 40 to 60 years. This would seem to support a longer period of preclosure monitoring.

E. Repository Closure is Foreseeable and Should Be Bounded

In contrast to DOE's approach to preclosure monitoring, DOE argues that the repository preclosure plan should not be delineated until DOE files the license amendment for closure with the NRC so that they can allow for "identification of appropriate technology, which would include technology that might not be currently available." Repository Draft SEIS at 2-41. While flexibility to incorporate new technological advancements may be appropriate, there does not appear to be methodological consistency on this issue through the various phases of the project. This lack of consistency contributes to a sense that DOE has not clearly thought through how it is going to implement the project. DOE needs to revisit its whole methodological approach to ensure methodological consistency. As currently delineated in the DSEIS, DOE appears to be rushing towards licensing without sufficient information to properly delineate how it even plans to manage the program.

F. Drip Shields Cannot Be Relied Upon for Repository Performance

The DOE in the DSEIS proposes not to install the drip shields until approximately 40 years after the emplacement of the final waste package, anticipating technological improvements to drip shields by that time. DSEIS Section 2.1.2.1 at 2-17. There are two serious flaws with what DOE proposes in the DSEIS.

First, while a case can be made that technological advancements might provide for enhanced technological solution by that time, a more appropriate and conservative solution would be to install the drip shields either prior to the emplacement of the first waste package or at a minimum as soon as the final waste package has been deposited. Installation of the drip shields prior to emplacement of the first waste package would provide necessary protection of the waste packages from dripping water and rockfalls during operations as well as the monitoring analytical period. This would provide a more appropriate level of protection for both onsite workers and the general public. If DOE chooses to defer installation of the drip shields until 40 years after the emplacement of the final waste package, it is inappropriate to incorporate them as part of DOE's assertion that the waste can be contained.

Based on DOE's current plan as outlined in the DSEIS (DSEIS at 2-41), DOE should bound its analysis of waste containment by assuming that drip shields will not be needed to contain the waste. Further, since nothing under the NWPA binds Congress to fund projects in future years, it is unrealistic to assume funding of the drip shields will occur at a time so distant into the future. Given this, the appropriate and conservative approach to protecting both onsite workers and the public would be to either install the drip shields prior to emplacement of the first waste package or abandon the use of drip shields all together and redesign the repository so that waste containment can be assured without the installation of the drip shields. Reliance on DOE's drip shield emplacement plan is not supportable in its repository performance assessment.

G. Cumulative Impacts Related To Reasonably Foreseeable Events Are Not Fully Characterized Or Bounded

The Repository Draft SEIS's cumulative impacts analysis is deficient in a number of respects. DOE posits that it is possible and necessary to see thousands of years into the future to predict the integrity of the repository, but is unwilling to use today's methodologies and resources to predict the obvious trends in population and growth in the southern Nevada area that are likely to affect the repository's proximity to population centers.

The Draft SEIS needs to incorporate the most current demographic projections available from the State of Nevada and local governments in their assessment of cumulative impacts. *See* Eureka County Socioeconomic Conditions and Trends, 2006 (<http://www.yuccamountain.org/trends06/cover.htm>)

The DSEIS description of "Reasonably Foreseeable Future Actions" seriously under estimates future growth pressures throughout southern Nevada (DSEIS 8.1.2, p 8-3). While Nevada has continued to experience the highest growth levels within the nation for over a decade, 85 percent of its land is managed by the federal government. This has repeatedly put inflationary pressures on land values and is already resulting in significant residential growth in the areas north and west of the Las Vegas Valley. Continued growth within southern Nevada is expected over the next twenty years. This will increase growth in all surrounding counties including Eureka as residents seek more affordable housing. While DOE has incorporated more up to date population numbers within the DSEIS then were utilized in the FEIS, the demographic growth is still significantly under forecast.

The Draft EIS fails to thoroughly assess cumulative impacts from other DOE activities (i.e., low-level radioactive waste, mixed LLW and hazardous waste, and transuranic waste activities at NTS; other ongoing or planned DOE programs at the NTS; past weapons testing activities at NTS; commercial/private industry activities at/near the NTS), ranching; mining; any planned highway or other infrastructure activities ongoing or planned for the area surrounding the proposed rail line; and any and all other existing or reasonably foreseeable activities that might affect or be affected by the proposed action.

VI. CONCLUSION

Eureka County agrees with the Department of Energy that the complex land use, private land ownership, and increasingly intricate mining activity in the Crescent Valley, combined with other stated concerns, make the Carlin rail corridor an unviable rail corridor alternative.

We regret the short review period for these three detailed, complex and interconnected NEPA documents including over the holiday season. A unique mammoth project of this nature requires adequate review time for NEPA documents. Given the nature of local government process and other time limitations, a 180 day review period would have been adequate.

Nevada is at the draining end of the national transportation funnel. The impacts of highway transportation in Nevada have been ignored in this review process. It is reasonably foreseeable that the State of Nevada will ultimately designate highway routes that avoid Clark County. Those routes should be analyzed in these documents.

Overall the DOE seemed to be more comfortable analyzing impacts projected to occur in the far distant future – up to a million years from now – and ignored the obvious foreseeable events such as the explosion of population in southern Nevada that will push population and impacts closer to Yucca Mountain and will increase transportation activity and impacts of all kinds throughout the State of Nevada.

The mitigation discussions are lacking in commitment and concern, and we believe reflect the DOE's lack of an overall approach to meaningful committed mitigation.

Finally, we believe that the suite of EISs are premature, in light of the lack of an EPA standard, total lifecycle cost analysis, final TAD canister design, and other interrelated factors that should be finalized before the EISs are prepared.

ATTACHMENTS

Attachment 1

Description: List of Eureka County documents referenced in these comments with website addresses:

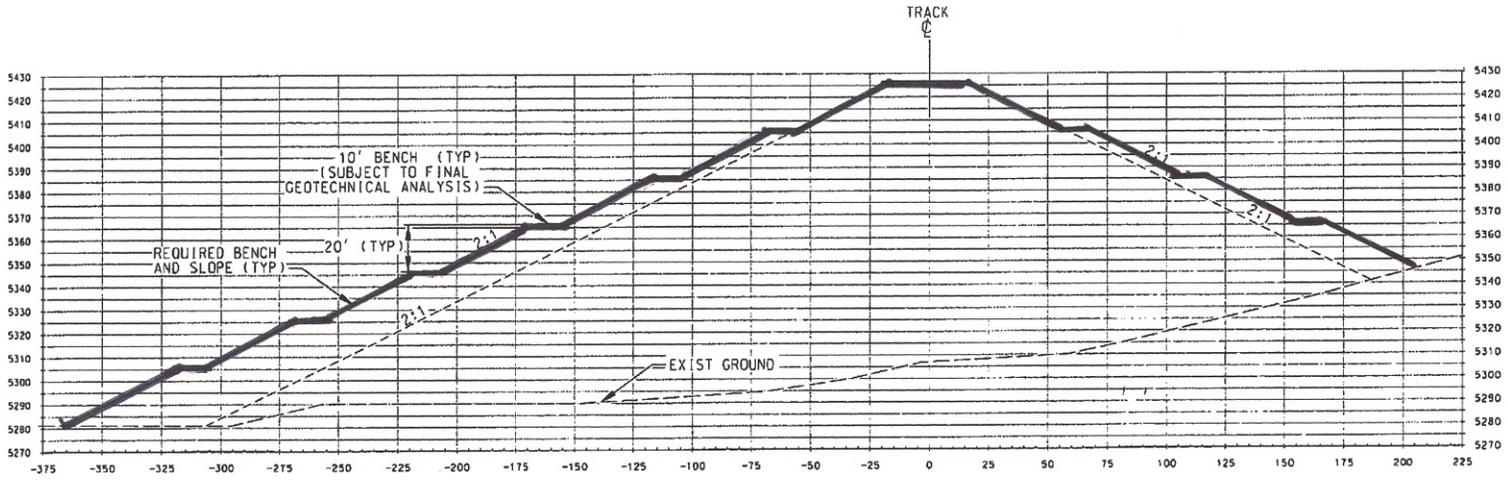
- Eureka County comments to DOE on the Yucca Mountain Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada (January 2000) (“Eureka County 2000 DEIS Comments”) (<http://www.yuccamountain.org/eis200.htm>);
- Eureka County Comments to Secretary of Energy Abraham on the deficiencies in the Yucca Mountain Final EIS (April 2002) (“Eureka County 2002 FEIS Comments”)(<http://yuccamountain.org/letter25.htm>;
<http://yuccamountain.org/pdf/eurekafeisltr2.pdf>);
- Eureka County Summary of DOE’s Yucca Mountain Final EIS Comment-Response Document (September, 2003) (“Eureka County 2003 Comment Summary”) (http://yuccamountain.org/eis_comment04.htm) ;
- Eureka County Comments on DOE Notice of Preferred Nevada Rail Corridor (January, 2004) (<http://www.yuccamountain.org/docs/letter012804.pdf>);
- Eureka County scoping 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* (May 2004) (“Eureka County 2004 Rail Alignment Scoping Comments”) (<http://yuccamountain.org/letter30.htm>);
- Eureka County scoping comments on DOE’s *Amended Notice of Intent to Expand the Scope of the EIS for Alignment Construction and Operation of a Rail Line to a Geologic Repository at Yucca Mountain, Nye County, Nevada* (December 2006) (“Eureka County 2006 Rail Alignment Scoping Comments”) (http://yuccamountain.org/docs/eureka_mina_scoping_comments06.pdf);
- Eureka County comments on the Supplement to the Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada (December 2006) (“Eureka County Repository Draft SEIS Scoping Comments”) (http://yuccamountain.org/docs/eureka_seis_scoping_comments06.pdf);
- Eureka County Impact Assessment Report (August, 2001) (<http://www.yuccamountain.org/impact01.htm>)
- Eureka County Yucca Mountain Existing Transportation Corridor Impact Assessment Report, 2005 www.yuccamountain.org/impact_report/print.htm
- Eureka County, Nevada Socioeconomic Conditions and Trends Report, 2006 (<http://www.yuccamountain.org/trends06/cover.htm>)
- Eureka County, Nevada Minerals Assessment Report, 2007, (<http://www.yuccamountain.org/mineral/contents.htm>);

Attachment 2

Letter from Eureka County Assessor Michael Mears to Abby Johnson dated December 3, 2007 including “land ownership discussion” map and “mining discussion” map. **Letter (2 page letter and two maps) is attached to these comments as a separate PDF file, named Carlin Corridor Discussion Documents.**

Attachment 3

From www.ymp.gov/transport/draft_eis/ref/182824.pdf (page 13)



TYPICAL SECTION - LARGE FILL
(SEE SHEET 3 OF 21 FOR TYPICAL TRACK DETAILS)

Attachment 4

U.S. DOE/NNSA Nevada Site Office:

<http://www.nv.doe.gov/emprograms/dose/pathways.htm>

> [Environmental Programs](#) > [Radiological Dose to the Public](#) >

Radiological Exposure Pathways

Radiological Exposure Pathways

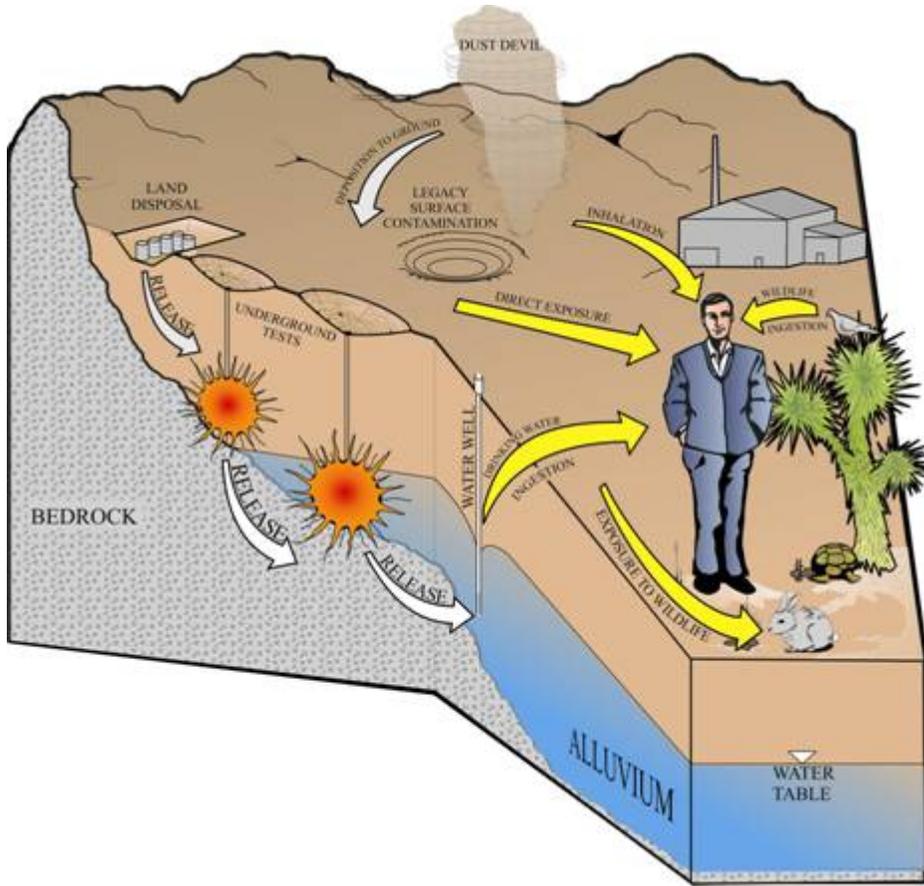
Man-made radiation from the NTS has the potential to reach the public through different pathways. Such radiation includes radioactive elements called radionuclides which emit alpha, beta, or gamma radiation, or a combination of these types of radiation. A pathway outlines the route which radionuclide contaminants may follow to reach the public.

Radionuclides may enter the local environment by air or water. People could inhale them from the air and from water vapor. People could also absorb radiation from air or water through the skin or by drinking contaminated water. Radionuclides released into the air or water can also pass through the soil, plants, or wildlife and reach people through ingestion of crops and game animals.

The three primary potential pathways of radiation exposure to the public in the dry desert environment around the NTS include:

- Air and wind transport via resuspension of surface soil contamination from historic nuclear testing sites (called legacy sites)
- Movement through groundwater from sites of underground nuclear tests or buried waste sites
- Ingestion of contaminated game animals exposed to contaminated soils and plants on the NTS

Potential Dose Pathways to the Public (see illustration below on page 28.)



Attachment 5

Advertisement from Eureka Sentinel November 8, 2007, "You May Have Been at Risk for Nuclear Fallout Exposure" by the University of Nevada School of Medicine Radiation Exposure Screening and Education Program.

Page 2 • Thursday, November 8, 2007 • THE EUREKA SENTINEL

You May Have Been at Risk for Nuclear Fallout Exposure

Residents exposed to nuclear fallout during testing from 1951-1962 at the Nevada Test Site may be eligible for no cost medical exams; \$50,000 if you lived in an eligible county; \$75,000 if you worked at the test site; and survivor benefits. Residents of Eureka, Lander, Lincoln, Nye, White Pine, and the northeast portion of Clark are at higher risk for cancer, including leukemia, multiple myeloma, lymphomas, and other primary cancers. Regular screenings are the best way to discover early cancers. To schedule an exam or for more information, please call the number below.

Call 702-992-6887

N University of Nevada
School of Medicine

Radiation Exposure Screening and Education Program
Department of Family and Community Medicine

Eureka County Assessor's Office

MICHAEL A. MEARS, ASSESSOR

EUREKA COUNTY COURTHOUSE
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P.O. BOX 88 - EUREKA, NEVADA 89316

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FAX: (775) 237-6124
WWW.CO.EUREKA.NV.US

December 3, 2007

Abby Johnson
Eureka County Nuclear Waste Advisor
P.O. Box 714
Eureka, Nevada 89316

PRIVATE LAND & MINING IMPACTS FOR PROPOSED CARLIN CORRIDOR

I wish to address potential impacts to both private land ownership and mining interests along the proposed Yucca Mountain Carlin Corridor rail route through Crescent Valley in northern Eureka County.

First of all, I would direct your attention to the enclosed map entitled Carlin Rail Corridor Private Land Discussion. This map depicts private land holdings in Crescent Valley in northern Eureka County. The private lands are further segregated by agricultural and non-agricultural interests. I have also provided a second version of the map depicting vacant land and developed land.

As the map displays, there is a great deal of private land ownership in this area. This area consists of "checkerboard lands" so every other section is public land; however, this area, as the map depicts, contains some of our most parceled lands in Eureka County. In fact, this area represents approximately 61% of the privately owned parcels in Eureka County. I would estimate that only 10% of these parcels have been developed to date, excluding agricultural development.

The Crescent Valley area is one of the more volatile areas in terms of ownership change in Eureka County. Many whole sections have been sold in this area over the past year and the potential for development is much greater now than even 5 years ago, as large sections of land are now in individual private ownership versus large corporate ownership. Also, the desire for many individuals to relocate to areas away from the urban environment gives this area additional appeal and the probability of future development.

Obviously, the potential of a rail line carrying hazardous waste could greatly decrease the value of these parcels and possibly curb the opportunity for development of this area in the future. Also, the task of acquiring such a large number of private interests to allow for the rail easement could be quite daunting. Although the area is not heavily populated at this time, there is greater potential for future population here, than in any other area in Eureka County with conditions as they currently are.

In my second point, I would like to address the potential mining operations that might be impacted should this rail corridor project come to fruition.

Currently, Cortez Gold (Barrick) conducts operations at the southern end of Crescent Valley. This is a large pit operation which resides predominantly in Lander County; however, the mining company owns several agricultural parcels in Eureka County which they utilize for dewatering efforts. The proposed rail corridor cuts right through these agricultural areas and would affect the mine's ability to continue dewatering efforts on these lands.

DEPARTMENT OF MOTOR VEHICLES

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Also to be considered is the Horse Canyon Gold Mining Expansion which I have generally located on the enclosed map: Carlin Rail Corridor Mining Discussion. This project is also expected to lie predominantly in Lander County, but the mine has purchased private properties in Eureka County associated with the project. As depicted on the map, the proposed rail corridor would pass very closely to this expansion project and could negatively affect the project. In addition, it is my understanding that the intention is to utilize the existing processing facilities at the current open pit operation for processing of the ore extracted at the Horse Canyon site. There are currently haul roads from the old Mill #1 site to the current operations that are expected to be utilized for the Horse Canyon project. The proposed rail corridor would essentially dissect these existing roads which would force the roads to either cross the rail line or require the rail line to travel above them.

With the expansion of exploration efforts, due to the rising price of gold, other areas in and around Crescent Valley are being tested for their mineral potential and it is unknown, at this point, what other effects the rail corridor might have on mining operations and expansion efforts in Crescent Valley.

In summary, it is my belief that further study of the Crescent Valley area may be necessary to measure the potential effects the proposed Carlin Rail Corridor might have on this heavily-parceled and active mining area of Eureka County. The area continues to have complex patterns of private ownership and is also an expanding area for mining operations, extraction, transportation, and exploration for gold and other minerals.



Michael A. Mears
Eureka County Assessor/GIS Coordinator

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DEPARTMENT OF MOTOR VEHICLES

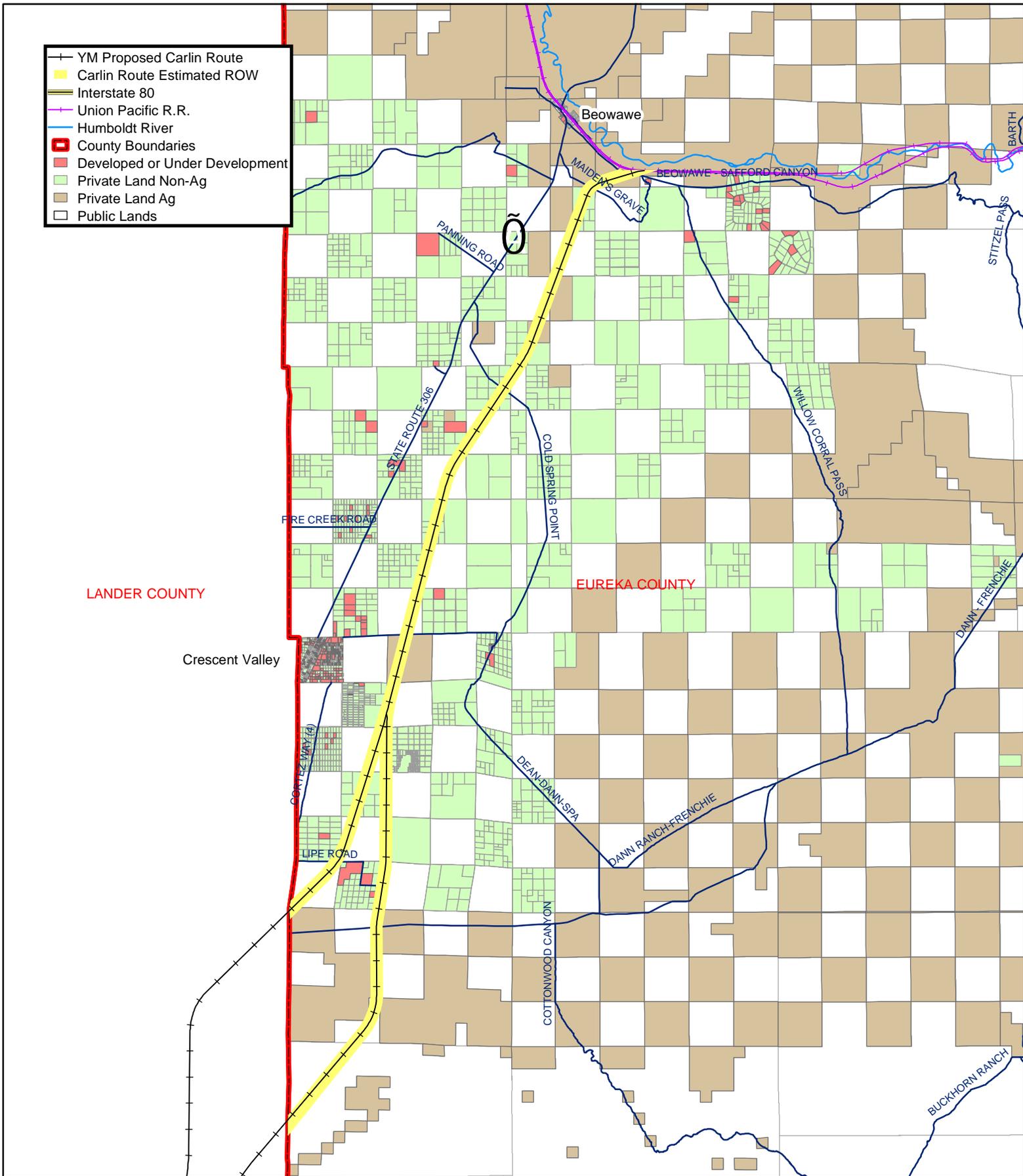
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Carlin Rail Corridor Private Land Discussion

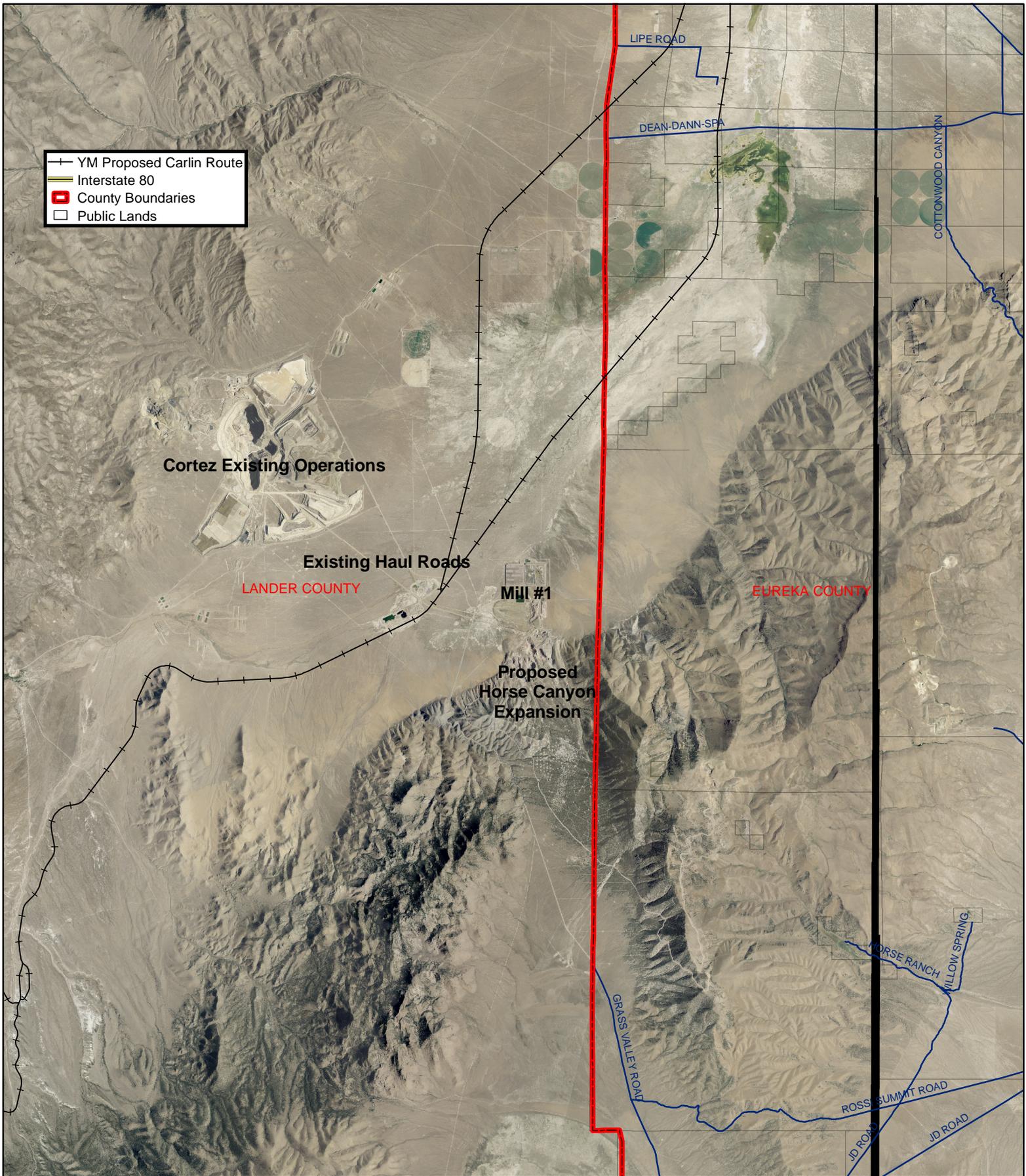
- +— YM Proposed Carlin Route
- Carlin Route Estimated ROW
- Interstate 80
- Union Pacific R.R.
- Humboldt River
- ▣ County Boundaries
- ▣ Developed or Under Development
- ▣ Private Land Non-Ag
- ▣ Private Land Ag
- ▣ Public Lands



Portion of Eureka County, Nevada



Carlin Rail Corridor Mining Discussion



Portion of Eureka County, Nevada

