

N-6 STATE GRAZING BOARD
HC 61, Box 70
Battle Mountain, Nevada 89820

January 8, 2008

EIS Office, U.S. Department of Energy
ATTN: M. Lee Bishop
Office of Civilian Radioactive Waste Management
1551 Hillshire Drive
Las Vegas, NV 89134

RE: N-6 State Grazing Board Comments on the Draft Environmental Impact Statement for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a Geological Repository at Yucca Mountain, Nye County, Nevada DOE / EIS-0369D

Dear Mr. Bishop:

1 [The N-6 State Grazing Board serves as a legal entity of the State of Nevada Department of Agriculture, representing those grazing interests within portions of Nye and Esmeralda Counties, organized under NRS Chapter 568 "Grazing and Ranging". The proposed Mina and Caliente Rail Corridors would result in severe impacts to the ranchers and public lands grazing operators this Board represents.] As such, the Board has prepared a list of comments to EIS-0369D (DEIS) per the National Environmental Policy Act (please see enclosed).

It should be noted that the DOE preferred alternative is listed as the Caliente Rail Corridor. The Mina Corridor is apparently no longer the preferred alternative due to the unwillingness of the Walker Lake Paiute Tribe to allow for the construction and operation of the rail. As such, the enclosed comments focus primarily on impacts associated with the Caliente Rail Corridor.

2 [In review of the DEIS, it is clear that the DOE does not fully understand the manner in which public land grazing allotments are operated. Therefore, the DOE cannot accurately describe the effects and impacts of the proposed action, nor can they identify appropriate mitigation actions. The inaccuracies and inadequacies of the DEIS must be resolved within the FEIS.]

Sincerely,



Hank Filippini, Chairman
N-6 State Grazing Board

HF:sta

Enclosure: "N-6 State Grazing Board Comments on the Draft Environmental Impact Statement for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a Geological Repository at Yucca Mountain, Nye County, Nevada DOE / EIS-0369D"

N-6 State Grazing Board Comments on the Draft Environmental Impact Statement for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a Geological Repository at Yucca Mountain, Nye County, Nevada DOE / EIS-0369D

General Concerns Regarding the Draft Rail EIS:

The N-6 State Grazing Board (hereby referred to as the Board) is a legal entity of state government that represents the public lands grazing operators within Esmeralda and Nye Counties, Nevada. As such, the Board possesses a high degree of expertise in public lands grazing within these Counties. Thereby, it is in the Board's interest to provide comment pertinent to the 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 (hereby referred to as the DEIS).

- 3 [The comments below document the deficiencies of the DEIS with regard to public lands grazing and land use. There is an added concern that the DOE's overall approach to identifying effects and impacts to public land use, particularly with regard to public land grazing, was highly insufficient. As such, the effects and impacts identified, and mostly classified as "small" were grossly underestimated. This is a direct result of an overall lack of knowledge in regards to public lands grazing, or a calculated effort to minimize the real impacts that will occur, or both.]
- 4 [The construction and operation of a new rail line across Lincoln, Nye and Esmeralda Counties will affect a multitude of grazing allotments, operators, and in some cases grazing complexes that consist of multiple grazing allotments. Impacts will be anything but "small" and will not be isolated to the 1,000-foot wide construction right-of-way or the 400-foot wide operations right-of-way as the DOE asserts and bases their analysis upon. Impacts will effect the whole of every allotment that the corridor crosses, in addition to others that are not overlapped by either of the rights-of-way.]

The construction phase of the project, anticipated to last 4-10 years, will have tremendous impacts on grazing allotments. As such, **Interim Grazing Management Plans** must be developed for every affected allotment. These plans should be developed by an interdisciplinary team including the allotment permittee in an effort to maintain a viable grazing operation, or appropriate mitigation actions, during the construction of the rail. In the same manner and for the same long-term purpose, new or revised **Allotment Management Plans** must be developed as a result of the drastic changes that will occur due to the presence and operation of the rail. The permittees must be involved in the planning and decision-making processes throughout the life of the project, including the decommissioning of the rail. Neither of these plans is discussed within the DEIS serving as an example to the above that the DOE is inept in the field of public lands grazing. Other critical omissions include the acknowledgement of private property rights as delegated by the Taylor Grazing Act, maintenance of the integrity of existing fences and infrastructure, loss or deferral of grazing rights, loss of capital by permittees, and the loss of lifestyle associated with public lands grazing.

With regard to public land use, the DEIS is inaccurate, incompetent and inadequate.]

General Comment Regarding Land Withdrawal:

- 5 [Concerns remain that the limited restrictions imposed by the current land withdrawal will be extended to include reduced public access or complete withdrawal of the land from BLM oversight. The livelihood of each permittee impacted by the Rail Corridor could be adversely affected if their ability to cross or access the proposed rail corridor was hampered or lost. In addition, permittees have invested a great deal of money in rangeland improvements, authorized by the BLM, which fall within the current land withdrawal. It is imperative that these improvements remain accessible for livestock use and regular maintenance.]

General Comment Regarding Existing Fencing:

- 6 [The issue of maintenance of existing fencing impacted by or new fencing projects associated with the railroad was not addressed in the DEIS.
- Recommendation: This issue must be clarified, and responsibilities must be clearly delineated. It is imperative that existing fences be maintained in working condition and new fencing be maintained rigorously throughout the life of the rail. Un-maintained fences can lead to increased livestock trespass and loss, or deaths resulting from the entrapment of animals between right-of-way fences. Maintenance must also extend to cattleguards, gates, and other livestock control features.]

General Comment Regarding Rail Security:

- 7 [Chapter 2, "Proposed Action and Alternatives", should include a discussion of the physical security of the rail and what the security actions the DOE intends to implement. Not discussing this critical component of the project is a serious oversight. Any restrictions placed on or around the operations right-of-way may result in profound impacts and conflicts in regards to public land-use, grazing in particular.
- Recommendation: Disclosure of these details and any anticipated restrictions is needed; otherwise, the set of land-use impacts assessed in Chapter 4 may be completely invalid. The DOE must include any restriction of aerial operations and fly-over activities by individuals, land management agencies or the USDA Animal Damage Control (ADC).]

Specific Comments:

- 8 [Section 2.2, Page 2-5. The terms "restored to natural conditions" and "as appropriate" are very ambiguous and open to interpretation. What constitutes restoration to natural conditions? It will be extremely difficult if not impossible to restore disturbed areas to a pre-disturbance condition. Who deems what is "appropriate" in terms of restoration?
- Recommendation: ALL disturbed areas must be reclaimed, including those outside of the right-of-way. For example, construction camps, well pads, exploration areas, borrow pits, quarries, access roads, etc.]
- 9 [Figure 2-3, Page 2-6. There are aspects of the schematic that are evasive, missing, or contradictory to the BMP's described in Chapter 7. These aspects are listed as follows:
- The operations right-of-way is noted to be "minimized to the extent possible." However, the installation of access roads on either side of the rail on separate raised roadbeds does not minimize the operations right-of-way; it increases it dramatically.
 - Recommendation: Within the FEIS, show a figure depicting the standard cross section of the rail and associated access roads in a cut area.

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- There is no figure that shows the standard cross section of the rail and associated access roads in a cut area. Therefore, there is no way to know if the DOE has attempted to minimize disturbance within areas requiring cut.
 - Recommendation: Use a single access road and locate it on the same raised roadbed as the rail.
- The construction right-of-way is noted to be “varied to avoid sensitive features.”
 - Recommendation: The construction right-of-way should be kept to an absolute minimum in all locations.
- Quarry sites, well pads and associated access roads will increase disturbance.
 - Recommendation: Use existing quarries where materials are present.
 - Recommendation: Use existing water sources where available, rather than drilling new wells for construction water.
 - Recommendation: Keep all new access roads to an absolute minimum.
- Existing roads are shown, and subsequent sections indicate that some will be improved and used for construction access. However, the existing roads that will be used have not been identified.
 - Recommendation: These roads should be identified so that impacts, such as those for grazing uses, can be properly assessed.
- The legend discusses areas of “potential reclamation.” This indicates a possibility that some disturbed areas will or may not be reclaimed.
 - Recommendation: It is imperative that all disturbed areas be reclaimed, including those within the operations right-of-way that are not active travel-ways. For example, the space between the access roads and the rail. If areas are not reclaimed, they will provide ideal locations for the establishment of invasive species and noxious weeds.]

10 [Section 2.2, Page 2-7. Given the extremely hot, dry and unpredictable environment and the fragility of the native species, the entire rail corridor should be considered a “sensitive area.”

- Recommendation: The project’s footprint, including construction and operations, should be minimized in all areas.]

11 [Table 2-1, Page 2-8. The potential threat posed by trains to livestock and appropriate mitigation measures will be different for each permittee and specific allotment. Effects cannot be determined without an estimated train frequency or train speed for each and every allotment. While 25 mph trains may be a small threat to livestock, 50 mph trains will be a serious threat to livestock. Do the maximum speeds for cask trains, supply trains, maintenance-of-way trains and commercial trains vary? Do these speeds differ for loaded versus unloaded trains?

- Recommendation: Include maximum train speeds within this table, as well as the estimated number of commercial trains under the shared use option and the maximum speed of such trains.
- Recommendation: Each allotment permittee should be included in the mitigation design process and should be consulted prior to approval of any mitigation action plan. The DOE should disclose the anticipated train frequencies and speeds across each allotment in order to assess the true impacts and required mitigation actions to reduce livestock versus train incidents for the economic well-being of the permittee as well as the safe operation of the rail. Mitigation actions could include a combination of fencing of the right-of-way, livestock underpasses or at-grade crossings.]

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- 12 [Table 2-2, Page 2-10. Why are there more wells anticipated than well sites? Have all well sites been identified, and have any exploratory wells been drilled to identify the well sites?
- Recommendation: Clarify above listed questions.
 - Recommendation: All well sites that have already been identified and confirmed should be shown, regardless of their location in relation to the construction right-of-way.]
- 13 [Section 2.2.2.3, Page 2-47. Access will not be improved unless rail crossings are provided in appropriate locations. Will existing roads and maintenance trails be provided with crossings at or near their current location? A fixed staff and tight budget limit the BLM's current workload. How can they be expected to effectively manage recreation along these new access roads along the significant distance presented in the proposed action? Who is responsible for managing security along the rail and access roads? What access restrictions might come due to security concerns? If access is limited due to security, then the DOE's assertion that access will be improved is absolutely false. If these roads are not managed as "public" roads, then they could be subject to closure without warning. If so, what provisions will be made to allow access by permittees and land managers?
- Recommendation: Provide at-grade crossings for all existing roads at or near their current locations.
 - Recommendation: Provide at-grade crossings for all existing two-track roads that are identified as critical to maintenance of grazing operations and/or infrastructure or land management activities.
 - Recommendation: An answer to the above question needs to be provided by DOE after consultation with the BLM and the interested party or the event promoter.
 - Recommendation: Information regarding security requirements and potential restrictions must be disclosed within the FEIS.
 - Recommendation: The DOE must disclose potential restrictions for access roads and road or trail crossings within the FEIS.
 - Recommendation: The DOE must analyze the impacts to current land-uses in the case of future restrictions on access roads and crossings and identify potential mitigation actions to limit such impacts. By excluding this analysis, the DOE is misrepresenting the true impacts.]
- 14 [Section 2.2.2.4.1, Page 2-48 and 49. This Section implies that ground water applications will be made for temporary use. However, some wells are said to remain for rail operations. What are the water requirements for rail operations, and how will filing for water rights be handled differently for these wells?
- Recommendation: Clarify the above questions.]
- 15 [Figure 2-37, Page 2-73. This figure depicts three separate raised roadbeds, one for the rail and two for the access roads. This presents several problems:
- Excessive disturbance. The best means of mitigation for natural vegetation is avoidance. This design results in excessive disturbance.
 - Barriers to livestock movement. The design results in added barriers with regard to livestock movement and, depending on cut and fill heights, could result in livestock becoming trapped between the access roads and the rail. Furthermore, it makes livestock crossings or underpasses more costly and difficult to design and construct.
 - Breach of existing fencing. If the right-of-way is not fenced, this design creates issues with existing fencing. Every time the rail crosses existing fencing, there would

need to be roadway cattleguards across the entire length of both access roads, some sort of in-rail cattleguard, and fencing between the access roads and rail. This becomes expensive but required to maintain the integrity of the fence.

- Increased construction effort & water needs. Multiple raised roadbeds will result in increased construction effort and require more water from compaction. It is more efficient and easier to construct a single-wide roadbed than three separate narrower roadbeds.

Figure 2-37 shows a typical width of 61 meters (200') from the outside toe of slope for each access road. Why then is DOE requesting a standard operations right-of-way of 122 meters (400') total width?

- Recommendation: By consolidating to a single access road and placing that road on the same raised bed as the rail, the operations corridor could be cut by 1/3 of the proposed width. This would be the absolute Best Management Practice (BMP) by minimizing disturbance to the existing environment and vegetation. This would also save money and maintenance costs associated with roadway surfacing, cattleguards, gates, etc.

Figure 2-37 does not include a typical figure for the standard cross section in a cut area. Will the access roads be separated from the rail in this instance, thereby generating more cut material and increasing construction costs, or will the roads be immediately adjacent to the rail?

- Recommendation: Show a typical cross section of the rail and associated access roads in a cut section.]

16 [Section 2.2.2.10, Page 2-80 and Table 7-1, Pages 7-4 and 7-8. The restoration program is a skeleton sketch and is woefully inadequate in detail. Chapter 7 offers little in the way of detailed information as cited in Chapter 2. Who is responsible for establishing pre-construction data collection, developing restoration plans, conducting compliance inspection during revegetation, establishing protocol for monitoring and standards for successful restoration, and determining if restoration standards are met? The DOE should not conduct these activities as they lack the expertise in these fields.

- Recommendation: The protocol for the activities listed above should be included in a comprehensive and detailed restoration plan. The process for developing such a plan should be included within the DEIS.
- Recommendation: An impartial third party consisting of an integrated restoration team with knowledge of the existing environment should conduct these activities. The team should consist of individuals with scientific or research backgrounds, land managers, land users such as permittees, and restoration professionals. The team should contain individuals with knowledge of local vegetation, restoration of said vegetation, climate, and soils. A plan and protocol for establishing such a team should be included within the DEIS.

The lack of a comprehensive and detailed restoration protocol includes the lack of a discussion regarding fencing of restoration areas on a temporary basis.

Recommendation: The DEIS should discuss restoration in more detail including how long disturbance areas under restoration will be fenced for livestock exclusion.]

17 [Section 2.2.3.2.1, Page 2-85. Weed control must occur more often than annually. What constitutes an "as needed" basis?

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- Recommendation: Provide a protocol for a long-term monitoring program and more detail on what constitutes control on an “as-needed” basis.]

18 [Section 2.2.3.2.1, Page 2-86. This section implies that the DOE does not intend to maintain the access roads once construction is complete or install bridges for access roads. Therefore, access will not be improved during flood events or in the instance that a road is damaged or washed out. As a result, access may in fact be reduced. This is in stark contrast to the assertion made in Section 2.2.2.3, Page 47 that states that roads will improve access. Also, vehicle traffic through washes that do not have culverts will lead to streambed degradation and downstream sedimentation. If DOE does not intend to maintain these roads, why must they remain in place?

- Recommendation: DOE must maintain the access roads OR provide adequate crossings in order to maintain the current level of access.
- Recommendation: If DOE does not need both roads for maintenance, and sufficient crossings are provided, then at least one road should be removed, and the area reclaimed.]

19 [Section 2.2.6, Pages 2-108 to 2-113. The shared-use option would require further land disturbance for the installation of commercial sidings. This would result in increased impacts to natural resources and livestock operations. The shared-use option will result in higher train frequencies and potentially higher speed trains. This would likely result in increased livestock loss due to commercial operations. Chapter 3 “Affected Environment” and Chapter 4 “Environmental Impacts” recognized, but did not quantify, the potential effects and impacts of the increased facilities and operations. Whose responsibility is it to assess the effects and impacts?

- Recommendation – It should be the DOE’s responsibility to identify and quantify the effects and impacts of the shared use option, as it is their preferred alternative. The effects and impacts should include those associated with land-use operations such as grazing, and impacts to natural resources such as increased land disturbance for appropriate facilities.]

20 [Section 3.2.1.1, Page 3-7. The region of influence defined is too narrow for sufficient analysis of impacts to public land grazing allotments and existing livestock operations. Entire allotments will be impacted by both the construction and operation of the rail; therefore, the entire allotment should have been analyzed for impacts. Furthermore, “...facilities outside the nominal width of the construction right-of-way...” should include all haul roads and well pads. **The inadequate region of influence results in an incomplete impact analysis.**

- Recommendation: Expand the region of influence for public land grazing allotment analysis to include the whole allotment for each allotment that will be impacted.]

21 [Figures 3-26 through 3-29, Pages 3-61 through 3-64. These figures do not show anticipated construction well locations or haul roads. Both of these features will have impacts to grazing allotments, some of which are not shown in these figures.

- Recommendation: Show all anticipated haul roads and well locations and include any impacted allotments within the impact analysis. Those allotments off the rail alignment, but with haul roads or wells within them, will experience impacts during construction of the rail.

Figures 3-27 through 3-29, Pages 3-62 through 3-64. The figure only shows those water sources or pipelines within the 1,000’ construction right-of-way. The water features shown are not accurate or complete. There are more stockwater features existing than are shown. The

figures do not show the point of use of the stockwaters. For example, the figures do not show water troughs, water hauls, reservoirs, tanks, etc. The region of influence is highly underestimated. Any stockwater within a mile of the track will be impacted since cattle tend to congregate around and travel to water, resulting in an increased probability of train/livestock collisions. Furthermore, the service area of a stockwater is commonly considered to be 4 miles. **These figures have resulted in an incomplete and inaccurate impact analysis.**

- Recommendation: Meet with the permittee for each affected allotment and identify ALL stockwater sources, pipelines and points of use.
- Recommendation: The lack of information and the inaccuracy of the information provided warrants the need for a supplement to the DEIS. Experts familiar with public land grazing operations and animal husbandry should be contracted to provide accurate information for a supplemental DEIS.

Table 3-6, Page 3-69 to 3-71. The DOE's evaluation of the impacts within the construction right-of-way does not express the degree to which allotments will be segmented nor the quality and quantity of the forage that will be disturbed.

- Recommendation: Include a footnote on the table that discloses that the area calculations do not include the quality or quantity of forage disturbed thereby not allowing for a proper estimation of deferred or lost AUMs.

Table 3-7, Pages 3-71 and 3-72. The only grazing allotment features identified within the table are the area of the allotment, the AUMs for each allotment, and the stockwater features within the region of influence. The stockwater features are inaccurate and do not include points of use, such as troughs, tanks, water hauls, or reservoirs. There are other critical features that will be impacted by the construction and operation of the rail. Two of the more critical omissions include existing fences and infrastructure, such as chutes and corrals. Access and maintenance of roads and trails essential for grazing management were also omitted from the table. By not identifying other critical allotment features, the DEIS does not accurately describe the impacts associated with the construction and operation of the Caliente Rail Corridor.

- Recommendation: Meet with each affected allotment permittee(s) and identify all critical grazing allotment features.
- Recommendation: The lack of information and the inaccuracy of the information warrants the need for a supplement to the DEIS. Experts familiar with public land grazing operations and animal husbandry should be contracted to provide adequate and accurate information for a supplemental DEIS.]

22 [**Table 4-11, Page 4-37.** This table states that all construction camps but Camp 1 will be located within the nominal width of the construction right-of-way. While these construction camps may not be located on or near private land, they will all be in close proximity to private property, such as BLM rangeland improvements. The potential for damage to private property will be increased by the concentration of activity in and around these camps. **Section 4.2.5.2.1.2, page 4-128** indicates that the construction camps will also include storage of hazardous materials and wastes. A spill could have a profound adverse effect on waters which possess private water rights. Even if a spill does not occur, the DOE states their desire to use treated wastewater effluent generated at the camps for dust control and compaction. Any failure in the "portable wastewater treatment plants" could lead to soil or water contamination. The DOE must protect the private property rights of permittees that may be affected by the construction, operation, and personnel activities

associated with these camps. Additionally, increased human and construction activity could create issues with grazing operations and livestock that are not accustomed to experiencing such disturbances. Access to forage by livestock and infrastructure by permittees may be hampered or altered.

Recommendation: The DOE should install construction fencing at the edge of the construction ROW to discourage trespassing. In addition, the DOE should locate and protect all improvements within the construction ROW.

Recommendation: The DOE should educate construction personnel about the importance of minimizing disturbance and respecting private property rights. Any acts of vandalism should be punished.

- Recommendation: The DOE should make every effort to prevent the contamination of soil and water resources throughout the construction and operation of the railroad.

Recommendation: Refine locations of construction camps with input from permittees.]

23 [Section 4.2.2.2.3.2, Page 4-44. This section states, “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 routes and acclimate to and cross the rail line in most areas.” This statement completely disregards the complexity of grazing systems and the monumental importance of livestock access to forage and water. A sudden disruption of known access routes to food and water sources will have a profound impact on livestock behavior. Animals may die from thirst before they learn these new routes. Some water sources may become heavily overused while others receive no use at all. In order to maintain a functioning grazing system, the permittee will be required to spend a great deal of time herding livestock over new routes to water sources or forage areas. This will require an investment of capital by the permittee that the DOE should be held responsible for. Once animals are taught to cross the rail, they may still prefer other grazing options due to the difficulty involved. This may result in reduced distribution of livestock throughout the allotment, which may result in a loss of grazing rights through the reduction of Animal Unit Months (AUMs).

Recommendation: The DOE must give serious consideration to the disruption caused by the construction and operation of the rail. Extensive use of sensible and practical mitigations, such as relocation of water sources and construction of livestock crossings, none of which area mentioned in the DEIS, will be required to maintain the viability of ranching operations affected by the rail. The DOE must include a description of these mitigations in the final EIS.]

24 [This section also states, “The rail-line could pose additional risk to ranching operations because livestock could be struck by passing trains. DOE or the commercial user (under the Shared-Use Option) would reimburse ranchers for such losses, as appropriate.” Section 4.2.2.3 also addresses Nevada’s status as an open-range state. What does “...as appropriate...” mean in reference to reimbursement for livestock? Does this refer to changes in market value of livestock, or indicate that under some circumstances the DOE or commercial operator may not make restitution for livestock “takings?” DOE must clarify how compensation for struck livestock will be determined. Livestock struck by the train and left on the right-of-way will draw predators. This could create a problem if animals are struck near watering sources or important bedding or feeding areas. It is very likely that animal-train collisions will be concentrated in areas where livestock must cross the rail to access these areas, which exacerbates the problem. There is also the potential for a large number of animals to be killed at the same time if a band of sheep was hit by a train while attempting to cross the rail.

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- Recommendation: The DOE must clarify how compensation for lost livestock will be determined (including calculation of dollar amount).
- Recommendation: The DOE must work with permittees to establish protocols for carcass removal and disposal.]

25 [Section 4.2.2.2.3.2, Page 4-44 and Section 4.2.2.5, Page 4-60. Calculations of the potential loss of AUMs due to the construction right-of-way were based solely on the percentage of the allotment occupied by the construction right-of-way, and the total amount of AUMs assigned to that allotment. DOE offers no mitigation for the loss of AUMs but mentions that long-term impacts to grazing allotments would be small "...because the land would be restored after the construction phase and the operations right-of-way would be smaller than the construction right-of-way." The DOE assessment of AUM impacts is completely erroneous and gives the false impression of very limited AUM loss within the affected allotments. AUMs cannot be assumed to be evenly distributed across the entire area of an allotment. Some portions of the allotment are inaccessible by livestock and in essence provide no contribution to the number of AUMs provided within the allotment as a whole. In most instances, rail alignment crosses high value forage areas located in gentler livestock-friendly terrain. Construction and operation of the rail will impact and limit the use of important water sources, alter livestock movement and distribution patterns, and provide increased disturbance. The loss of AUMs would be much greater than the figures calculated by DOE. It will be difficult to run livestock operations within a given allotment at the same time as construction is occurring, and, in some cases, it may be impossible. Construction is anticipated to take 4-10 years. If existing fences and infrastructure are not maintained while construction is on-going, then it becomes nearly impossible to continue livestock operations. The DOE does not offer to reimburse permittees for the loss of AUMs caused by the construction and operation of the railroad. It may be very difficult, and in some cases, very expensive for permittees to find alternative pasture for their livestock. The only mitigation offered by the DOE is the eventual restoration of disturbed lands outside of the operational right-of-way. Throughout the entire DEIS, the DOE underestimates the difficulty of rangeland restoration in the arid west. It will be extremely difficult and, in some cases, impossible to restore the disturbed areas to something similar to their pre-disturbance condition. It may be decades or more before the permittees will regain the lost AUMs. In some areas, these lost AUMs will never be recovered.

- Recommendation: Develop an Interim Grazing Management Plan for each allotment. The plan should describe a feasible grazing system that can be conducted in concert with construction activities. The plan should delineate responsibilities of the DOE, its contractors, BLM and the grazing permittee(s). In the case that a feasible operation cannot be run within the allotment during construction, a suitable mitigation plan should be developed for the period where grazing would be deferred. The plan should be developed with the input of the BLM, allotment permittee(s), DOE, and DOE contractors.
- Recommendation: A better estimation of lost AUMs needs to be completed. The AUMs lost or deferred due to construction will be different from those lost or deferred due to rail operations and must be calculated in a more appropriate manner. Once this is complete, a better socioeconomic impact analysis must be conducted to reflect the updated numbers.
- Recommendation: The lack of information and the inaccuracy of the information warrants the need for a supplement to the DEIS. Experts familiar with public land grazing operations, livestock operations economics and animal husbandry should be contracted to provide adequate and accurate information for a supplemental DEIS.

Another important issue that has been overlooked in the DOE's AUM calculation is the indirect impact that the long-term presence and operation of the rail will have on the grazing system within each allotment. Portions of the allotments will be isolated and difficult for livestock to access. This may result in overuse of forage in other areas of the allotment, resulting in a loss of AUMs. Water sources may be isolated or in some cases rendered unusable. This could also result in a dramatic reduction in AUMs for that allotment. In many cases, the entire allotment grazing system will need to be re-designed and re-constructed after being crossed by the railroad. In Section 8.1.1.2 (Unavoidable Adverse Impacts) the DOE acknowledges these impacts but states, "even with mitigation, some adverse impacts to the use of grazing land would be unavoidable." Some impacts will, in fact, be unavoidable, but the DOE has made no effort to mitigate *any* of the impacts to grazing associated with the rail alignment. Simple, reasonable mitigations such as the relocation of stockwaters and the provision of livestock crossings could greatly reduce the amount of adverse impacts experienced on many of the impacted allotments.

- Recommendation: The DOE must recognize the full impact that the rail will have on the impacted grazing allotments and prepare thorough mitigation accordingly. Many of the impacts to grazing allotments can be greatly reduced through the use of simple mitigation measures. The DOE should work with permittees and the BLM to develop mitigation plans for each allotment and should reimburse permittees for the loss of AUMs in the construction right-of-way.
- Recommendation: Develop a new or revised Allotment Management Plan for each affected allotment. The plan should describe a feasible grazing system that can be operated in concert with the newly installed rail and rail operations. The plan should delineate responsibilities of the DOE, BLM and the grazing permittee(s). A suitable mitigation plan should be developed in order to avoid, minimize, rectify, reduce or compensate for impacts associated with the construction, and operation of the rail with the goal of maintaining a feasible grazing enterprise in conjunction with the rail. The plan should be developed with the input of the BLM, allotment permittee(s), DOE, and DOE contractors.]

26 [Section 4.2.2.5, Page 4-61. The DOE discusses consulting with the BLM during final design to determine where right-of-way fencing would be needed. Whether or not the right-of-way is fenced has a major influence on the impacts and required mitigation actions for each allotment. To identify fencing requirements as late as the final design is a mistake. The permittee must be included in this very important decision as they will be best able to determine whether or not their livestock is at risk.

- Recommendation: The allotment permittee(s) must be consulted when making a determination on fencing of the right-of-way. To aid in making this decision, the DOE must provide anticipated train speeds and frequencies within the allotment, as well as anticipated cut and fill heights, and track and access road layout. The DOE and BLM must also discuss required mitigation measures to maintain livestock movement and distribution within the allotment.
- Recommendation: The lack of this information warrants the need for a supplemental DEIS. Without knowing whether or not the right-of-way will be fenced, there is no way to accurately assess impacts or required mitigation measures.
- Recommendation: At an absolute minimum, a protocol needs to be developed to identify areas that will require right-of-way fence. That protocol should include a consultation with

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both the permittee(s) and the BLM and include a discussion of what mitigation actions are required in addition to a fencing preference.]

27 [Table 4-60, Page 4-156. The table lumps all estimated water use into a single category. It does not identify how much water will be needed for construction and how much will be needed for operations.

- Recommendation: Show the estimated demand in terms of construction and operations.]

28 [Section 4.2.6.2.1, Page 4-161. The wells slated for abandonment could provide a wide variety of services to the surrounding areas. Wells could be developed to provide accessible water sources to compensate for the isolation of existing waters by the rail alignment. These developments could service both wildlife and livestock. In addition, unneeded wells could remain to provide emergency support in the event that a wildfire is sparked by rail operation or if water is needed for any other community support purpose.

- Recommendation: The DOE should confer with BLM, permittees, and the State Engineer to determine what options may be available for using newly developed wells as mitigation.]

29 [Section 4.2.11.2.2.1, Page 4-338. Will new installation of services, such as wireless or broadband Internet, be accessible to the public?]

30 [Section 5.2.2.2.2, Page 5-22. The assertion that "...cumulative impacts related to land use conflicts would be small" is absolutely wrong and based on incomplete and erroneous information and analyses.

Recommendation: This assessment is based on incomplete and erroneous information. A new analysis must be conducted using an appropriate region of influence and accurate descriptions of impacted features as discussed throughout these comments.]

31 [Section 6.3.8.2, Page 6-34. This section discusses the *Taylor Grazing Act, as Amended* (43 U.S.C. 315 et seq.). The section states the Act "...establishes processes by which the BLM grants and administers grazing rights. Regulations implementing the Taylor Grazing Act are codified at 43 CFR Parts 2300 and 4100 and include provisions for the agency to consider in administering grazing rights." This section mentions nothing about base property. The Taylor Grazing Act established the ownership of base property as a requirement for holding a grazing permit. Section 3 of the Act states:

Preference shall be given in the issuance of grazing permits to those within or near a district who are landowners engaged in the livestock business, bona fide occupants or settlers, or owners of water or water rights, as may be necessary to permit the proper use of lands, water, or water rights owned, occupied, or leased by them.

The Grazing Regulations interpret the Act in 43CFR §4100.0-5, which states:

Base Property means: (1) land that has the capability to produce crops or forage that can be used to support authorized livestock for a specified period of the year, or (2) water that that is suitable for consumption by livestock and is available and accessible to the authorized livestock when the public lands are used for livestock grazing.

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Therefore, any impacts to base property, either water or land, will be of increased significance and may result in a loss of grazing rights. However, the DOE does not acknowledge base property anywhere within the DEIS. **This is a critical oversight that must be resolved within the FEIS. The lack of this information has resulted in an incomplete analysis and underestimated impacts.**

- Recommendation: The DOE must conduct an impact analysis for any and all base property along the length of the rail corridor.
- Recommendation: The DOE must develop mitigation actions that avoid or minimize the impact to base property.]

32 [Table 7-1, Pages 7- 4 to 7-14. Best Management Practices (BMPs) for invasive species and noxious weeds must be implemented prior to and during construction. If measures aren't taken until after construction is complete, it will allow for the introduction and establishment of plants that are extremely difficult to eradicate, particularly as construction is anticipated to take 4-10 years. This will result in degradation of the existing environment and increased maintenance costs for the DOE.

- Recommendation: Inventory the construction corridor and all anticipated construction support areas and access roads prior to construction, and identify areas of invasive species and noxious weeds. Either treat or mark areas for avoidance in order to limit potential sources of seed and plant materials.
- Recommendation: Require steam-cleaning of all construction and exploration equipment prior to allowing equipment on-site.
- Recommendation: Maintain an active monitoring and control program for all disturbed areas, including those outside of the construction right-of-way, throughout construction in order to limit establishment of invasive species and noxious weeds.]

33 [Table 7-1, Pages 7-8 and 7-9. The BMPs cited above are all general in scope and do not convey the extreme importance to minimize disturbance to the maximum extent possible.

- Recommendation: It is imperative to delineate ALL limits of construction in the field with highly visible lath construction fencing or barriers. Mapping, and flagging alone have proven ineffective.
- Recommendation: Construction personnel who breach limits of construction should be penalized.
- Recommendation: All staging areas should be located within the construction right-of-way (Impacts have not been assessed for staging materials outside of the right-of-way and creating excessive disturbances). A minimum width rail line, operational right-of-way and construction right-of-way should be employed across the entire length of the corridor. Avoiding disturbance is the absolute best management practice available in this environment.]

34 [Table 7-1, Page 7-10. "Use treated wastewater effluent (*gray water*) produced at the camps for dust suppression and soil compaction..." Treated wastewater effluent and gray water are typically considered two different things. Does DOE intend to use wastewater effluent or gray water or both? Are mobile effluent treatment systems adequate to treat effluent to a level sufficient for use in dust control or construction?

- Recommendation: Clarify the above listed questions.
- Recommendation: DOE must comply with all Nevada Department of Environmental Protection regulations in using treated effluent and/or gray water.]

35 [Table 7-1, Pages 7-10 and 7-11. Will purchase be the only means by which the DOE "obtains" additional water rights, or will the DOE consider leasing of water rights? Have any provisions been made for the timeframe required to obtain water rights or to relocate existing waters impacted by the rail? It is imperative that stockwaters are not disrupted during construction of the rail. Both livestock and wildlife have become accustomed to using existing stockwaters, and filing for a change in the point of diversion or place of use could take several months or more to resolve.

- Recommendation: Clarify the above listed questions.
- Recommendation: Provisions must be made to prevent disruption of critical stockwater service during construction or application periods.

Table 7-1, Page 7-11. The first paragraph on page 7-11 states that the DOE would "provide alternate sources of water or relocate wells if DOE action prevents access to groundwater." The paragraph further states that changing the location of an existing water diversion would require the approval of the owner and/or water right holder and a permit from State Engineer. Section 4.2.5.2.1.7, Page 4-135 includes a short paragraph stating that the DOE would avoid springs and other surface water resources "whenever practicable." The disparity between the treatment of ground and surface water is made obvious by these statements. Grazing permittees hold water rights on many surface water resources, and they are equally as important as groundwater wells as are the associated diversion points and infrastructure. The same mitigation measures should be offered to water rights holders regardless of whether they hold surface or groundwater rights.

44 [Stockwater location have been carefully planned and developed through coordination between the BLM and permittee, and all water rights are considered private property rights under State of Nevada Water Law. Additional private property rights have been granted to allotments with water base property. All water base properties are considered to be private property under the authority of the Taylor Grazing Act. The construction of the railroad will greatly reduce the service area of many stockwater improvements. If livestock are unable or unwilling to cross the rail to access traditional water sources, new or relocated water sources must be provided to maintain livestock distribution throughout the allotment. In addition, water attracts livestock. Therefore, waters within one mile of the track should be relocated in order to limit the possibility of livestock versus train collisions. This is of benefit to both livestock and rail operators.]

35 cont. [• Recommendation: The DOE must relocate or provide alternate sources of water if surface OR groundwater resources are impacted by the construction and operation of the rail. Impacts include limiting or preventing access to watersources.]

44 cont. [• Recommendation: The DOE must recognize the private property rights associated with water base property as defined by the Taylor Grazing Act and provide appropriate mitigation actions.]

36 [Table 7-1, Page 7-14 (item 3). Without a long-term monitoring system to identify problem areas for control, there is no means to identify where treatments are needed. What do "other pest-management techniques" entail?

- Recommendation: Provide a protocol for a long-term monitoring program, including triggers for implementing treatments.
- Recommendation: Identify "other pest-management techniques" and triggers for implementing these treatments.

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- Recommendation: Use local livestock operators as a source to identify invasive species or noxious weed problem areas and the use of livestock as a potential “pest-management technique” where appropriate.]

37 [Table 7-1, Page 7-14 (item 4). There are a multitude of problems associated with the below listed statements made under this item.

- “Once construction is complete, revegetate disturbed areas within the right-of-way not required for operation of the rail...” Construction is anticipated to take 4-10 years. This provides an extremely long timeframe to allow exposure of disturbed soils. “Within the right-of-way” does not include disturbances outside of the right-of-way associated with well pads, borrow pits, new access or haul roads, and areas of water and geotechnical exploration. Will the restoration requirements issues by BLM for the right-of-way apply to these areas?
 - Recommendation: It is imperative that ALL disturbed areas be revegetated in a timely manner.
 - Recommendation: Revegetate disturbed areas or topsoil stockpiles with native or adapted species on an interim basis if no construction activities are planned to occur across a long timeframe.
- The term “...with native species...” creates some major restrictions. There is a very large amount of disturbance associated with this project. Native seed is extremely difficult to obtain and very expensive. How does DOE plan to obtain the required seed within a practical timeframe? Native species are extremely difficult to establish even under ideal conditions. Costs, effort, and time associated with rehabilitating failed reclamation areas could be extremely high.
 - Recommendation: Allow the use of adapted plant species that have been shown to establish in sites similar to those encountered along the corridor.
 - Recommendation: Work with the NRCS Plant Material Center to identify, cultivate, and provide technical assistance on effective seed and restoration techniques for native and adapted plant species.
- The suggestion to “...cover with angular rock fragments to prevent erosion...” will not limit the establishment and spread of noxious weeds or invasive species. These areas may create barriers to free movement of livestock and wildlife.
 - Recommendation: Limit the amount of rip-rap to areas that make sense, such as steep, long cut and fill slopes. Do not use rip-rap as a substitute for revegetation or as a means for wasting excess rock.
- “If weather or season precludes the prompt reestablishment of vegetation...” The entire project is in a desert area where the weather and climate are extremely variable and harsh. This may apply in cases where snow or frozen ground become an issue. What about a lack of precipitation over long time periods or extreme heat?
 - Recommendation: Provide for the use of temporary irrigation as a means to establish revegetation.]

38 [Table 7-2, Page 7-16. Overall, the mitigation listed by DOE is woefully inadequate and does not promote the continuation of viable public land grazing operations. This section omits some extremely important items that are critical to maintaining viable grazing operations on public land. These items include: preservation of existing fencing functionality; relocation of corrals and chutes within the right-of-way; relocation of any and ALL stockwaters within one mile of an unfenced rail; preservation of existing maintenance roads and trails; mitigation actions to

maintain livestock movement and distribution; and loss of capital as a result of lost or deferred AUMs due to construction and operation of the rail.

- Recommendation: Grazing permittees must be informed of all construction scheduling and activities similar to mining claimants and lessees.
- Recommendation: All mitigation actions should be listed as a means of summarizing the impacts discussed in Chapters 2, 3 and 4. In some cases, the information is contradictory. For example, Chapter 4 discusses that the BLM will identify areas where fencing is required, while Table 7-2, discusses consultation with the permittee(s) and BLM.
- Recommendation: The DOE needs to consult with permittee(s) and/or professionals who are familiar with public land grazing operations and animal husbandry in order to identify other mitigations actions listed above that are not included in this table but are essential to maintaining viable public land grazing operations.]

39 [Table 7-2, Page 7-16. This page states that the DOE will “limit fencing on public lands to those areas where safety is a concern or where it is required for the safety of livestock.” DOE adds that the location of these mitigation efforts will be determined through coordination with permittees and the BLM. This response leaves many issues unaddressed. What protocols will be set to determine whether the rail will remain fenced or unfenced? How much weight will be given to the preferences of the permittee? If the rail is fenced, what measures will DOE take to allow livestock movement across the rail? The DEIS does not include any descriptions of at-grade or underpass livestock crossings. These features will be vital to maintaining the viability of ranching operations crossed by a fenced rail. If the rail is unfenced, mitigation will be required to maintain the integrity of existing fences that are crossed. This will require either connecting pasture fences to livestock underpasses or designing and installing in-rail and roadway cattle guards.

- Recommendation: The DOE must establish clear protocols for determining the need to fence the rail ROW. The permittee should have a say in this decision after being provided with pertinent information for their particular allotment including rail bed cut and fill heights, anticipated train frequency, train speeds, provision of livestock movement structures such as at-grade crossings or underpasses. This should also include a clear definition of the width of the area to be fenced and protocols for the location and construction of livestock crossings.
- Recommendation: DOE must establish clear protocols for maintaining the integrity of existing fences in the event that the rail is not fenced. This may require designing an in-rail cattleguard system to prevent cattle movement between fenced areas.]

40 [Table 7-2, Pages 7-16 and 7-17. With regard to fencing in areas where livestock fencing is a concern, who will determine if safety of livestock is a concern? Will temporary fencing be installed during restoration to prevent grazing? Will there be any mitigation offered to permittees who lose access to areas of forage during this time?

Recommendation: A more detailed restoration plan and protocol for developing that plan must be developed as discussed. The restoration plan should discuss the use of temporary fencing for restoration.

Recommendation: Any restoration planning efforts should include grazing permittees.

- Recommendation: The DOE should be responsible for mitigating the loss of grazing rights associated with any temporary or permanent loss of forage resulting in the loss of or suspension of AUMs.]

41 [Section 8.1.1.2, Page 8-3. Does the phrase "...could limit certain other land uses..." specifically address the physical limitations discussed later in the section, or does this include potential limitations regarding security or operations of the rail? What does DOE anticipate as "...future land uses that pose a conflict"? Does this include the possible conflicts that grazing may pose to rail construction or operations? To omit potential land-use conflicts and the impacts associated with limiting current land-uses is misleading.

- Recommendation: All anticipated conflicts and restrictions to land uses must be disclosed.
Recommendation: The effects and impacts of any and all restrictions must be analyzed.]

42 [While construction and operation of the rail would, in fact, limit access to forage and water and limit free ranging of livestock, these issues can be at least partially mitigated. Why were proven and requested mitigation actions for these impacts not included within Table 7.2 that identifies potential mitigation measures?

Recommendation: The FEIS, or the mitigation plan issued as part of the Record of Decision (ROD), must include mitigation actions for livestock movement. These mitigation actions may include underpasses, at-grade crossings in addition to road crossings, etc. Design and location of such structures should be coordinated with each allotment permittee.]

43 [Section C.5.1, Page C-37. This section describes how the Caliente Rail Alignment was refined. The only mention of considering environmental or land use conflicts concerns the design of alternative segment alignments. By only using topographical features to design the majority of the Caliente Rail Alignment, the DOE has created a great deal of potential impacts that could be avoided or minimized by working with land users to make simple adjustments to the rail alignment. Many impacts to pasture design and fencing could be greatly reduced by aligning the rail with allotment or pasture boundaries where possible.

- Recommendation: Consult with permittees in each grazing allotment to determine if minor alignment adjustments would be feasible and serve to avoid or reduce impacts.]