

Challenges of Including the Mina Route in the Nevada Rail Alignment Environmental Impact Statement

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ABSTRACT

The Department of Energy's Office of Civilian Radioactive Waste Management is developing the Yucca Mountain repository for the disposition of spent nuclear fuel (SNF) and high level radioactive waste (HLW). Part of that development is the transportation infrastructure needed to ship SNF & HLW from 77 sites around the country to the repository. A Record of Decision was issued in 2004 to use mostly rail as the mode of transport both nationally, and in the State of Nevada. No rail access exists to the Yucca Mountain site, so a Rail Alignment Environmental Impact Statement (RA-EIS) is being prepared to address the impacts associated with connecting existing track in Nevada to Yucca Mountain. Late in the preparation of the Draft RA-EIS, an option to consider an additional alignment alternative was introduced. This paper describes the consideration given to the new alternative and describes how it is being incorporated into the RA-EIS.

INTRODUCTION

In April 2004, the Department of Energy (DOE) selected the "mostly rail" mode for transporting SNF & HLW, both nationally, and in the State of Nevada. This was announced in a Record of Decision¹ based on the analyses in the Yucca Mountain Final Environmental Impact Statement² (YMFEIS). In that same decision, the Department selected the Caliente corridor to study potential rail alignments connecting the repository to the existing mainline railroad track in

¹ "Record of Decision on Mode of Transportation and Nevada Rail Corridor for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, NV," April 8, 2004, 69 FR 18557.

² "Final Environmental Impact Statement for a Geologic Repository for the Disposal of spent Nuclear Fuel and high-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada", DOE/EIS-0250F, February 2002.

the State. The alignment study would be performed in a Rail Alignment Environmental Impact Statement³ (RAEIS) that would tier⁴ from the YMFEIS.

BACKGROUND

In developing the YMFEIS, DOE initially considered 13 potential rail routes before narrowing to the five alternatives⁵ that were analyzed in the EIS. All of the potential routes were screened for reasonableness using a range of criteria that included:

- minimizing land use conflicts,
- maximizing the use of favorable topography,
- maximizing the use of Federal land,
- avoidance of land Federally withdrawn from public use,
- direct access to a major regional carrier, and
- conditions allowing design in accordance with accepted rail engineering practices.

The screening process eliminated 8 routes from detailed study, primarily for land use conflicts. One particular route from the northwest, called the Mina route, was promising because of its relative short length and terrain that simplified design in accordance with accepted rail engineering practices. However, the

³ "Notice of Intent to Prepare an Environmental Impact Statement for the Alignment, Construction, and Operation of a Rail Line to a Geologic Repository at Yucca Mountain, Nye County, NV," April 8, 2004, 69 FR 18565.

⁴ See, Council on Environmental Quality, Regulations for Implementing the National Environmental Policy Act, 40 CFR 1508.28, :

Sec. 1508.28 Tiering.

"Tiering" refers to the coverage of general matters in broader environmental impact statements (such as national program or policy statements) with subsequent narrower statements or environmental analyses (such as regional or basin-wide program statements or ultimately site-specific statements) incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared. Tiering is appropriate when the sequence of statements or analyses is:

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(b) From an environmental impact statement on a specific action at an early stage (such as need and site selection) to a supplement (which is preferred) or a subsequent statement or analysis at a later stage (such as environmental mitigation). Tiering in such cases is appropriate when it helps the lead agency to focus on the issues which are ripe for decision and exclude from consideration issues already decided or not yet ripe.

⁵ Caliente Rail Corridor, Carlin Rail Corridor, Caliente-Chalk Mountain Rail Corridor, Jean Rail Corridor, and Valley Modified Rail Corridor,.

route was eliminated from detailed evaluation because of a letter⁶ received from the Walker River Paiute Tribal Council in 1991. That letter clearly stated the Tribe's objections to nuclear waste coming across their reservation. The reservation was an unavoidable part of the Mina route. Further, under Department of Interior, Bureau of Indian Affairs' regulations⁷, the Tribe's objection would prevent DOE from obtaining the necessary right-of-way across the reservation. Subsequently, DOE dropped the Mina route from further consideration. Figure 1 illustrates the location of the Mina route in comparison to the five corridors that were studied in the YMFEIS.

ADDRESSING A CHANGED CIRCUMSTANCE

When scoping meetings were held for the RAEIS, the Department asked for feedback on several specific topics. One topic was whether any alignments not considered in the YMFEIS should be considered. On April 8, 2004, the Mineral County Nevada Board of Commissioners passed a resolution⁸ supporting the study of the Mina route since it passes through Mineral County. During the 2004 scoping of the RAEIS, the Mineral County Board of Commissioners provided a scoping comment suggesting that DOE consider the Mina route in addition to the Caliente corridor. And in May 2006, DOE received a letter⁹ from the Walker River Paiute Tribal Council expressing its willingness to have a route though the reservation included for study in the RAEIS. The Tribe made no commitment to accept construction or operation of such a rail line on its reservation, but was interested in learning about the safety of rail operations on their lands that would be addressed in the RAEIS if the Mina route were included in the study.

Following receipt of this letter, DOE was faced with a number of questions and decisions regarding the implementation of the National Environmental Policy Act¹⁰ (NEPA) requirements and development of the RAEIS.

1. Should DOE consider including the Mina route as an alternative to Caliente in the RAEIS?

⁶ Letter from Anita Collins, Chairman, Walker River Paiute Tribe, to Admiral James D. Watkins, Secretary of Energy, December 6, 1991.

⁷ 25 CFR 169

⁸ Letter from Mineral County to Dr. Margaret S. Y. Chu, OCRWM Director, April 8, 2004

⁹ Letter from Genia Williams, Chairman, Walker River Paiute Tribe, to Gary Lanthrum, Director of the Office of National Transportation Program, May 4, 2006.

¹⁰ 42 USC 4371 et seq.



Fig. 1 Map of Nevada showing rail corridors and Mina route

By the time it received the Tribe's letter in May 2006, DOE had completed much of the draft RAEIS analyzing alternative alignments along the Caliente corridor. Considerable effort had been put into conceptual rail line designs along multiple alignment options to understand the impacts associated with each alternative. Meetings were held with local landowners and land users to identify land use conflicts to consider as alternatives were evaluated.

DOE had to weigh several factors. Adding the Mina route to this analysis would take time and resources and push the RAEIS schedule back nine months to a year. In developing an EIS, NEPA implementing guidance¹¹ requires an agency to rigorously explore and objectively evaluate a range of reasonable alternatives to implementing a proposed action. However, having finalized the Record of Decision selecting Caliente and at that time meeting this requirement, NEPA did not require DOE to go back and add the Mina route as an alternative in the RAEIS.¹² Furthermore, the Tribe's letter did not remove the existing land use conflict, but only suggested that it might, at some time in the future, be resolved.

Taking all of these issues into consideration, DOE considered one of the basic tenants of NEPA. A key purpose of NEPA is to ensure decision makers have data on a range of alternatives to allow them to make informed decisions.¹³ The Mina route approaches Yucca Mountain from the northwest. The other alternatives that were originally considered in the YMFEIS approached Yucca Mountain from the southwest, southeast, or from the northeast. Adding Mina to the review process would clearly broaden the range of alternatives for consideration under NEPA. The Mina route also has a number of terrain features that differentiate it from other corridors and would contribute to making an informed decision on whether, and where, to proceed with development of rail access to Yucca Mountain. After weighing these considerations, DOE decided to prepare a feasibility analysis of the Mina route.

2. Based on available information, was the Mina route feasible?

It had been over ten years since the Mina route had been dropped from consideration. At the time the May 2006 letter was received from the Tribe inviting environmental reviews of the route, the current feasibility of Mina was not adequately understood. For this reason DOE conducted a feasibility study¹⁴

¹¹ Council on Environmental Quality memorandum to agencies, March 16, 1981, 46 FR 18026. see response to question 1a.

¹² See note 11, response to question 10a, after 30 days following issuance of a Record of Decision, the agency is able to begin implementing its proposed actions to include limiting the choice of reasonable alternatives.

¹³ Note 11.

¹⁴ "Mina Route Feasibility Study", October 26, 2006.

of the Mina route. The study involved literature reviews, limited field studies, and preliminary design analyses that covered land use and route alignment design. The study broadly evaluated biological, cultural, archeological, and historical elements of the proposed Mina route. Potentially impacted federal and private lands were also evaluated. This analysis was completed in August of 2006, and it showed Mina to be feasible.

3. With scoping completed for Caliente, how was DOE going to obtain scoping comments from the public relative to the inclusion of the Mina route as an alternative in the RAEIS.

Having decided to include the potentially feasible Mina route, the next challenge for DOE was to create opportunities to involve the public in establishing the scope of analyses to be undertaken regarding this route. To accomplish this, an Amended Notice of Intent¹⁵ to expand the scope of the RAEIS was issued. Although a 30 day comment period is required by DOE's regulations for implementing NEPA,¹⁶ a 45-day comment period was provided. Multiple scoping meetings, also not required¹⁷, were set for Washington, DC and six locations in Nevada. The meetings in Nevada specifically included locations within the counties where actual rail construction would occur if the Mina route were selected. In response to a request from the State of Nevada, the comment period was extended to 60 days and a seventh scoping meeting in Reno, Nevada, was added¹⁸.

4. With the decision to include the Mina route in the RAEIS, and the involvement of the public covered, what NEPA process was DOE going to follow to expand the scope of the RAEIS?

The Record of Decision for the YMFEIS selected the Caliente corridor for further analysis and study to identify a specific alignment, along that corridor, for the

¹⁵ "Amended Notice of Intent to Expand the Scope of the Environmental Impact Statement for the Alignment, Construction, and Operation of a Rail Line to a Geologic Repository at Yucca Mountain, Nye County, NV," October 13, 2006, 71 FR 60484.

¹⁶ 10 CFR 1021.311(c).

¹⁷ DOE's NEPA implementing regulations require one scoping meeting, 10 CFR 1021.311(d). Multiple scoping meetings had already been held on the RAEIS in May 2004, see, "Notice of Intent to Prepare an Environmental Impact Statement for the Alignment, Construction, and Operation of a Rail Line to a Geologic Repository at Yucca Mountain, Nye County, NV," April 8, 2004, 69 FR 18565.

¹⁸ "Extension of Public Comment Period and Additional Public Meeting for 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, NV," November 9, 2006, 71 FR 65786.

construction and operation of the rail line. The RAEIS would “tier” from that decision, and analyze alternative alignments along the Caliente corridor.

But having completed this decision selecting Caliente, how should the new Mina alternative route be introduced?

One option was to just delay the completion of the draft RAEIS and add the Mina route and its associated alternative alignments to the comparative analyses being done for Caliente. Although perhaps the simplest approach, it left a gap between the YMFEIS and the tiering to the RAEIS.

To fill this gap the obvious course of action was to supplement the rail corridor analysis of the YMFEIS to include Mina among the alternatives considered. But the test for whether a supplement was required as laid out in Council on Environmental Quality (CEQ) regulation 1502.9¹⁹ is:

(c) Agencies:

1. Shall prepare supplements to either draft or final environmental impact statements if:
 - (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or
 - (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

DOE was not making any change to its proposed action, and the potential feasibility of Mina route did not qualify as, “significant new circumstances or information relevant to environmental concerns.”

Nonetheless, the CEQ guidance directs that all reasonable alternatives be considered, and DOE had worked hard over many years to see that that occurred. So DOE decided that the need to do a supplement fell under a further section in the CEQ regulations that specified:

1502.9 (c) Agencies:

2. May also prepare supplements when the agency determines that the purposes of the Act will be furthered by doing so.

¹⁹ 40 CFR 1502.9

and concluded that completing a supplement to include the Mina route would indeed further the purposes of the Act. (the Act referred to is NEPA)

Having established the feasibility of the Mina route, and several potential alignments within the route, it was designated as a corridor. Now the expanded EIS will begin with a supplement to the YMFEIS that will present information and data regarding the Mina corridor at the same level of detail that was used in the comparison of the 5 corridors in the YMFEIS. As a result, the title was changed to the Supplemental Yucca Mountain Rail Corridor and Rail Alignment EIS, (DOE/EIS-0250F-S2 and DOE/EIS-0369). After the supplement section, the RAEIS will complete the necessary analysis and comparison of various alignments along both the Caliente corridor and the Mina route. After this RAEIS is finalized, a Record of Decision is expected that will either select one of those alignments for the construction and operation of the rail line, or the no action alternative.

MERGING THE OBJECTIVES OF THE NEVADA RAIL PROJECT WITH NEPA

The project to site, construct, and operate this rail line in Nevada is a critical element in establishing the capability to transport spent nuclear fuel and high level radioactive waste from 72 locations around the country to the Yucca Mountain Repository. It involves infrastructure development that will take 4 or more years to complete and cost more than a billion dollars. Under NEPA, the selection of the rail alignment is a major federal action that will have significant environmental consequences²⁰. This means that an EIS is required to support an alignment decision, and DOE is committed to making the alignment selection decision in a manner that meets both the letter and intent of NEPA.

DOE was able to identify a large range of possible alternative routes to the repository from the existing main line railroads. All reasonable alternative routes were evaluated in the YMFEIS before selecting the Caliente corridor. Although NEPA does not require an agency to revisit a final decision, once the circumstances affecting the feasibility of the Mina route changed, its consideration became important to DOE. This was because it now represented a potentially reasonable alternative to the Caliente corridor and DOE has been committed to making a final decision on alignment selection after considering the full range of reasonable alternatives. It did not matter that introducing Mina into the analysis at this time was not required by NEPA.

²⁰ See 40 CFR 1508.18 and 1508.27

Further, DOE recognizes the importance of maintaining the confidence of the public in its decision making processes. The construction and operation of the rail line will have numerous impacts and the involvement of the public in understanding the scope of those potential impacts is a necessary element in this process. For this reason, DOE wanted to assure that the public had a full opportunity to participate in the scoping of the proposal to include the Mina route. It was important to have a full range of public input in the NEPA analysis to preclude any major gaps in the consideration of alternatives. The scoping process DOE followed went beyond the requirements of NEPA with numerous scoping meetings and a comment period of 60 days.

Following completion of the scoping process, DOE is proceeding with the development of an EIS that both supplements the YMFEIS by adding the Mina corridor, and, as appropriate evaluates alternative alignments along both the Caliente corridor and the Mina corridor. Based on the eventual final RAEIS, DOE intends to select an alignment connecting the existing main line rail through Nevada to the Yucca Mountain Repository.

CONCLUSION

CEQ guidance directs agencies developing EIS's to include, "all reasonable alternatives."²¹ This requirement is fulfilled if all alternatives known before the record of decision were considered. Although the CEQ regulations specify circumstances where a final EIS must be supplemented, the identification of an alternative unavailable for consideration before the record of decision does not give rise to the need for a supplement. There simply is no requirement to reanalyze and reconsider a decision, once made, simply because more alternatives are subsequently identified.

But because of the programmatic importance of assuring that all reasonable alternatives are considered in the selection of a rail alignment in Nevada, DOE exercised its discretion to not only add the Mina route, but also supplement the YMFEIS. This decision will result in schedule delay and increased NEPA review costs. DOE considers the delay and costs worth the ability to consider the alignments along the Mina route with those long the Caliente corridor. Having followed this course of action, DOE is confident that the alignment ultimately selected will be supported by a record of full public involvement, be supported by a full consideration of alternatives, and be the alignment that best meets the program's stated purpose and need.

²¹ See note 11