

We must acknowledge and confirm these periods of unavailability before granting you an extension. To request this extension or to confirm our acknowledgement of any system unavailability, you may contact either (1) the persons listed elsewhere in this notice under **FOR FURTHER INFORMATION CONTACT** (see VII. Agency Contacts) or (2) the e-GRANTS help desk at 1-888-336-8930.

You may access the electronic grant application for the Training Program—CFDA 84.103A at: <http://e-grants.ed.gov>.

V. Application Review Information

1. *Selection Criteria:* The selection criteria for this program competition are in 34 CFR Part 642.31 and the application package.

Note: For the FY 2004 competition, the Secretary has identified need for training projects through the selection of five absolute priorities. Therefore, the Secretary will consider that an applicant has satisfied the “need” criterion listed in 34 CFR 642.31(f) by applying for a grant under one of these priorities, and applicants do not have to address this criterion. The application package contains instructions on addressing the selection criteria.

2. *Review and Selection Process:* Within the specific absolute priority for which a grant is requested, the Secretary will select an application for funding in rank-order based on the application’s total score for the selection criteria and the applicant’s prior experience, pursuant to 34 CFR 642.30–646.32. Within each absolute priority, if there are applications with the same total scores, the Secretary will select for funding the applicant that has the greatest capacity to provide training in all regions of the Nation in order to assure accessibility to prospective training participants.

VI. Award Administration Information

1. *Award Notices:* If your application is successful, we notify your U.S. Representative and U.S. Senators and send you a Grant Award Notification (GAN). We may also notify you informally.

If your application is not evaluated or not selected for funding, we notify you.

2. *Administrative and National Policy Requirements:* We identify administrative and national policy requirements in the application package and reference these and other requirements in the *Applicable Regulations* section of this notice.

We reference the regulations outlining the terms and conditions of an award in the *Applicable Regulations* section of this notice and include these and other specific conditions in the GAN. The

GAN also incorporates your approved application as part of your binding commitments under the grant.

3. *Reporting:* At the end of your project period, you must submit a final performance report, including financial information, as directed by the Secretary. If you receive a multi-year award, you must provide an annual performance report that provides the most current performance and financial expenditure information as specified by the Secretary in 34 CFR 75.118.

4. *Performance Measures:* The success of the Training Program will be measured by its cost-effectiveness, based on the percentage of TRIO personnel receiving training each year and by the percentage of those receiving training who rate the training as highly useful. All grantees will be expected to submit an annual performance report documenting their success in training TRIO personnel, including the average cost per trainee and the trainees’ evaluations of the effectiveness of the training provided.

VII. Agency Contacts

FOR FURTHER INFORMATION CONTACT: Patricia S. Lucas or Virginia A. Mason, U.S. Department of Education, 1990 K Street, NW., suite 7000, Washington, DC 20006–8510. Telephone: (202) 502–7600 or by e-mail: TRIO@ed.gov

If you use a telecommunications device for the deaf (TDD), you may call the Federal Information Relay Service (FIRS) at 1–800–877–8339.

Individuals with disabilities may obtain this document in an alternative format (e.g., Braille, large print, audiotape, or computer diskette) on request to one of the program contact persons listed in this section.

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To use PDF you must have Adobe Acrobat Reader, which is available free at this site. If you have questions about using PDF, call the U.S. Government Printing Office (GPO), toll free, at 1–888–293–6498; or in the Washington, DC area at (202) 512–1530.

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Dated: April 5, 2004.

Sally L. Stroup,

Assistant Secretary for Postsecondary Education.

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DEPARTMENT OF ENERGY

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

AGENCY: Office of Civilian Radioactive Waste Management, U.S. Department of Energy.

ACTION: Record of decision.

SUMMARY: On July 23, 2002, the President signed into law (Pub. L. 107–200) a joint resolution of the U.S. House of Representatives and the U.S. Senate designating the Yucca Mountain site in Nye County, Nevada, for development as a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste. In the event the Nuclear Regulatory Commission (NRC) authorizes construction of the repository and receipt and possession of spent nuclear fuel and high-level radioactive waste at Yucca Mountain, the Department of Energy (Department or DOE) would be responsible for transporting these materials to the Yucca Mountain Repository as part of its obligations under the Nuclear Waste Policy Act (NWPA). Pursuant to the NWPA and the National Environmental Policy Act (NEPA), DOE issued 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” (DOE/EIS–0250F, February 2002) (Final EIS). That document analyzed the environmental impacts of the proposed action of constructing, operating and monitoring, and eventually closing a geologic repository for the disposal of 70,000 metric tons of heavy metal (MTHM) of spent nuclear fuel and high-level radioactive waste at Yucca Mountain, as well as of transporting spent nuclear fuel and high-level radioactive waste from commercial and DOE sites to the Yucca Mountain site.

In preparing the Final EIS, DOE initiated public scoping in 1995, and subsequently issued for public comment a Draft EIS in 1999 and a Supplement to the Draft EIS in 2000. During the 199–day public comment period on the Draft EIS, DOE held public hearings in 21

locations across the country, 10 of which were held throughout the State of Nevada. An additional hearing was convened in Las Vegas for members of Native American Tribes in the region. During the 56-day public comment period on the Supplement to the Draft EIS, DOE held three public hearings in Nevada. The Department received more than 13,000 comments on the Draft EIS and the Supplement to the Draft EIS; about 3,600 of these comments addressed transportation related matters.

DOE is now in the process of preparing an application to the Nuclear Regulatory Commission (NRC) seeking authorization to construct the repository. In addition, in order to be in a position to transport waste to the repository should the NRC approve construction and waste receipt, DOE must proceed with certain decisions relating to the transportation of this material. In particular, the Department has decided to select the mostly rail scenario analyzed in the Final EIS as the transportation mode both on a national basis and in the State of Nevada. Under the mostly rail scenario, the Department would rely on a combination of rail, truck and possibly barge to transport to the repository site at Yucca Mountain up to 70,000 MTHM of spent nuclear fuel and high-level radioactive waste, with most of the spent nuclear fuel and high-level radioactive waste being transported by rail. This will ultimately require construction of a rail line in Nevada to the repository. In addition, the Department has decided to select the Caliente rail corridor¹ in which to examine potential alignments within which to construct that rail line. Should the Department select an alignment within that corridor, it will obtain all necessary regulatory approvals before beginning construction.

ADDRESSES: Copies of the Final EIS and this Record of Decision may be obtained by calling or mailing a request to: Ms. Robin Sweeney, Office of National Transportation, Office of Civilian Radioactive Waste Management, U.S. Department of Energy, 1551 Hillshire Drive, M/S 011, Las Vegas, NV 89134, Telephone 1-800-967-3477. The Final EIS, including the Readers Guide and Summary, is available via the Internet at http://www.ocrwm.doe.gov/documents/feis_a/index.htm. This Record of Decision is available at <http://www.ocrwm.doe.gov> under "What's

¹ A corridor is a strip of land, approximately 0.25 miles (400 meters) wide, that encompasses one of several possible routes through which DOE could build a rail line. An alignment is the specific location of a rail line in a corridor.

New". Questions regarding the Final EIS or this Record of Decision can be submitted by calling or mailing them to Ms. Robin Sweeney at the above phone number or address.

FOR FURTHER INFORMATION CONTACT: For general information regarding the DOE National Environmental Policy Act (NEPA) process contact: Ms. Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance (EH-42), U.S. Department of Energy, 1000 Independence Ave., SW., Washington, DC 20585, Telephone 202-586-4600, or leave a message at 1-800-472-2756.

SUPPLEMENTARY INFORMATION:

Transportation-Related Decisions

The analyses in the Final EIS provide the bases for the following three decisions under NEPA related to the establishment of a transportation program under which the Department would transport spent nuclear fuel and high-level radioactive waste to a repository at Yucca Mountain:

1. Outside Nevada, the selection of a national mode of transportation scenario (mostly rail or mostly legal-weight truck),
2. In Nevada, the selection among transportation mode scenarios (mostly rail, mostly legal-weight truck, or mostly heavy-haul truck with an associated intermodal transfer station), and
3. In Nevada, if the mostly rail scenario or mostly heavy-haul truck scenario were selected, the selection among rail corridor implementing alternatives, or heavy-haul truck route implementing alternatives with use of an associated intermodal transfer station.

See Figure 2-5 on page 2-7 of the Final EIS for a graphical depiction of the different transportation scenarios and implementing alternatives.

Part I. Record of Decision for Mode of Transportation

Proposed Action and Transportation Mode Scenarios Considered in the Final EIS

The Final EIS examines a Proposed Action under which DOE would ship spent nuclear fuel and high-level radioactive waste from 72 commercial and 5 DOE sites² to the Yucca Mountain

² Fifty-four additional sites (primarily domestic research reactors) were expected to ship spent nuclear fuel to two DOE sites prior to disposal at the repository. DOE plans to consolidate these materials at the two DOE sites are independent of the decisions relating to a repository at Yucca Mountain. Shipments from these sites to DOE sites were analyzed in the "Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Environmental Impact

Repository. The Final EIS considers the potential environmental impacts of transporting spent nuclear fuel and high-level radioactive waste to the repository under a variety of modes, including legal-weight truck, rail, heavy-haul truck, and possibly barge. The Final EIS also considers the environmental impacts of two No-Action Alternatives, one under which spent nuclear fuel and high-level radioactive waste would remain at the 72 commercial and five DOE sites under institutional control for at least 10,000 years, and one under which these materials would remain at the 77 sites in perpetuity, but under institutional control for only 100 years.

At the outset, we note that over the past 30 years, more than 2,700 shipments of spent nuclear fuel have been completed, none of which has resulted in an identified injury caused by the release of radioactive material. That basic fact provides important context for our decisionmaking today.

The Final EIS examines various national transportation scenarios and Nevada transportation implementing alternatives to reflect the range of potential environmental impacts that could occur. Two national transportation scenarios, referred to as the "mostly legal-weight truck" scenario and the "mostly rail" scenario, and three Nevada scenarios, referred to as the legal-weight truck scenario, the rail scenario, and the heavy-haul truck scenario, were evaluated. The three broad scenarios discussed below represent the combinations of the scenarios and implementing alternatives as analyzed in the Final EIS.

Statement" (PEIS) (DOE/EIS-0202-F; April 1995), and associated Records of Decision (June 1, 1995; 60 FR 28680 and March 8, 1996; 61 FR 9441). The direct impacts of this consolidation are not included in the analysis of the alternatives analyzed in the Final EIS for the repository, because they would occur whether or not DOE proceeds with the repository at Yucca Mountain. Since the PEIS was published, three research reactors have closed. As provided for in the Record of Decision (ROD) for the PEIS, spent nuclear fuel from one reactor was sent to the Savannah River Site and fuel from another reactor was sent to the Idaho National Engineering and Environmental Laboratory (INEEL). Fuel from the third reactor, which the ROD for the PEIS anticipated would be consolidated at INEEL, was sent on an interim basis to the United States Geological Survey (USGS) site in Lakewood, Colorado (which also was one of the fifty-four sites analyzed in the PEIS). It is still ultimately expected to be consolidated at INEEL as provided in the ROD for the PEIS, whence it will be shipped to the repository. The fuel that went to USGS is within the amounts analyzed by the PEIS as going from USGS to INEEL. Moreover, since the change in interim storage plans does not affect the shipment of fuel to Yucca Mountain, it does not affect the transportation analysis in the Final EIS for the repository.

Mostly Rail to the Yucca Mountain Repository—Preferred Mode of Transportation

Under the preferred mode of transportation as analyzed in the Final EIS (the mostly rail scenario), DOE would ship most of the spent nuclear fuel and high-level radioactive waste from the 77 sites to the Yucca Mountain Repository by rail. DOE would construct a rail line in one of five rail corridors considered in the Final EIS to connect the repository at Yucca Mountain to an existing main rail line in Nevada.

Under the mostly rail scenario analyzed in the Final EIS, radioactive materials from certain commercial nuclear sites that do not have the capability to load rail-shipping casks would be shipped by legal-weight truck to the repository. For other commercial sites that have the capability to load rail shipping casks, but do not have rail access, materials would be shipped either by heavy-haul truck or possibly barge to a nearby railhead outside Nevada for shipment by rail to the repository at Yucca Mountain.

Under the mostly rail alternative, about 9,000 to 10,000 train shipments (assuming one cask per train³) of spent nuclear fuel and high-level radioactive waste would travel on the nation's rail network over the anticipated 24-year period (DOE's current plan calls for three casks per train shipment, about 3,000 to 3,300 total shipments). In addition, there would be about 1,000 legal-weight truck shipments from commercial sites that do not have the capability to load rail-shipping casks to the repository at Yucca Mountain.

Mostly Rail to Nevada With Transfer to Heavy-Haul Truck for Shipment to the Repository

Under this scenario as analyzed in the Final EIS, DOE would ship most spent nuclear fuel and high-level radioactive waste from the 77 sites to Nevada by rail. Rail shipments would terminate in Nevada at an intermodal transfer station where shipping casks would be transferred from rail cars to heavy-haul trucks for shipment to the Yucca Mountain Repository. DOE would construct an intermodal transfer station at one of three locations analyzed in the Final EIS. One of the five heavy-haul routes analyzed in the Final EIS would be upgraded to improve transportation operations, reduce traffic congestion,

and enable year-round shipments to the repository.

Under this scenario, radioactive materials from certain commercial nuclear sites that do not have the capability to load rail-shipping casks would be shipped by legal-weight truck directly to the repository.

Under this alternative, about 9,000 to 10,000 train shipments (assuming one cask per train) of spent nuclear fuel and high-level radioactive waste would travel on the nation's rail network to Nevada over the 24-year period. There also would be about 9,000 to 10,000 heavy-haul truck shipments in Nevada from the intermodal transfer station to the repository. In addition, there would be about 1,000 legal-weight truck shipments from commercial sites that do not have the capability to load rail-shipping casks to the repository at Yucca Mountain.

Mostly Legal-Weight Truck to the Yucca Mountain Repository

Under the mostly legal-weight truck scenario, as analyzed in the Final EIS, DOE would ship most spent nuclear fuel and high-level radioactive waste from the 77 sites to the repository by legal-weight truck. About 53,000 legal-weight trucks carrying these materials would travel primarily on the nation's interstate highway system during the 24-year period. About 300 shipments of naval spent nuclear fuel would travel from the Idaho National Engineering and Environmental Laboratory to Nevada by rail, where the rail casks would be transferred to heavy-haul trucks for shipment to the repository.

Environmentally Preferable Transportation Mode Alternative

In making this determination, DOE considered human health and environmental impacts that could occur from shipping spent nuclear fuel and high-level radioactive waste from the 77 sites to the repository at Yucca Mountain. DOE also considered the human health and environmental impacts that could occur from the construction of a rail line and from any upgrades to existing highways (the heavy-haul truck routes) in Nevada.

The Final EIS indicates that some potential non-radiological fatalities could occur as a result of traffic accidents during the transportation of spent nuclear fuel and high-level radioactive waste to the repository at Yucca Mountain. The Final EIS indicates that the highest number of potential traffic fatalities (about five) could occur under the mostly legal-weight truck scenario, whereas the mostly rail scenario could result in

about three potential traffic fatalities during the 24-year period of shipping spent nuclear fuel and high-level radioactive waste to the repository at Yucca Mountain.

The Final EIS also considers the potential health effects that could result from radiation exposure to workers during shipping and from cask loading and unloading, and to the general population along the transportation routes to the repository. Under the mostly legal-weight truck scenario, the Final EIS indicates that about 12 worker and three general public latent cancer fatalities could occur from routine (incident-free) exposures during the 24-year period of shipping spent nuclear fuel and high-level radioactive waste to the repository. Under the mostly rail scenario, about three worker and one general public latent cancer fatalities could occur during the 24-year period. The radiation dose to any one individual would be extremely small.

DOE also estimated the potential health effects to the general public that could result from a severe transportation accident during shipments to the repository (referred to in the Final EIS as a maximum reasonably foreseeable accident). The probability that this accident could occur is extremely unlikely—about three chances in 10 million per year. If such an accident were to occur in an urban population setting, less than one latent cancer fatality could be expected under the mostly legal-weight truck scenario, whereas about five latent cancer fatalities could be expected under the mostly rail scenario, primarily because of the greater amounts of radioactive materials that could be released from a rail cask in such an accident.

In Nevada, construction of a rail line, regardless of the rail corridor selected, would involve the disturbance of land (and associated impacts, although low, to natural resources such as biological and cultural resources) in amounts greater than those associated with any heavy-haul truck alternative. For example, construction of a rail line in the shortest rail corridor (Valley Modified) would result in the disturbance of about 1,240 acres; rail line construction in the longest corridor (Carlin) would disturb about 4,900 acres. Construction of an intermodal transfer station and the upgrade of the longest heavy-haul route would result in the disturbance of about 1,000 acres. Furthermore, the construction of any rail line would involve various land use conflicts that, for the most part, would not occur with the limited construction required to improve any of the heavy-haul truck routes. No land disturbances

³ The final EIS stated that DOE anticipated as many as 5 casks per train. However, DOE conservatively estimated 1 cask per train for analytical purposes to ensure that it considered routine and accident transportation risks that could result from a larger number of train shipments (9,000 to 10,000).

would occur under the legal-weight truck alternative.

The Department also evaluated the risk of sabotage, including terrorism. For reasons the NRC has carefully explained, this analysis is most likely not required by NEPA.⁴ It is not possible to predict whether such acts would occur and, if they did, the nature of such acts. Moreover, such analysis does not advance the public participation purpose of NEPA, since there are serious limits on what information can responsibly be disseminated on these issues without risking disclosure of information that might be used in planning or carrying out such an act.⁵ Nevertheless, the Final EIS includes the consequences of a potentially successful attempt on a cask during shipment via rail or legal-weight truck. In both instances, a successful attack would result in the release of contaminants into the environment. The consequences estimated for a rail shipment would be less than those estimated for a legal-weight truck shipment, mostly because the thicker shield wall of the heavier rail cask would tend to mitigate the effects of the sabotage event when compared to the lighter, legal-weight truck transportation cask.

None of the three transportation scenarios analyzed in the Final EIS is clearly environmentally preferable. Each would result in some impact to the environment, and public health and safety, although all impacts would be small. For example, transporting by either rail or heavy-haul truck in Nevada would result in some land disturbance, although the impacts would be greater for rail because more land would be disturbed during the construction of a rail line than during the upgrading of existing highways to accommodate heavy-haul trucks. Radiation exposure to workers and the public from either routine rail or truck shipments to the repository at Yucca Mountain would be very small, and the differences among the different modes of transportation also would be very small. Similarly, accident risks under each alternative would be very small, and associated differences among alternatives also very small. The Department does not consider the differences among modes to be

sufficiently distinct to make any of them clearly environmentally preferable.

Although the potential impacts of any of the transportation alternatives would be small, they would be greater than the transportation-related impacts of the No-Action Alternatives. Overall however, as analyzed in the Final EIS, the impacts of proceeding with construction and operation of a repository at Yucca Mountain, including transportation, would cause relatively small public health impacts through the period 10,000 years after repository closure and would cause fewer public health impacts than the No-Action Alternative. For the No-Action Alternative with institutional controls for 10,000 years, the potential long-term environmental impacts also would be small, but significantly greater than the proposed action because the potential for nonradiological fatalities to workers under this alternative is significantly greater. Additional information may be found on pages S-82 through S-88 and Chapters 2 and 7 of the Final EIS. The cost of this No-Action Alternative is also significantly greater than that of the proposed action (\$42.7 billion to \$57.3 billion (in 2001 dollars) for the proposed action versus \$167 billion to \$184 billion for the first 300 years of institutional control and \$519 million to \$572 million per year thereafter). Additionally, the public health and safety impacts of the No-Action Alternative without effective institutional control are significantly greater than the proposed action. Likewise, in the long run, securing these materials by consolidating them and disposing of them in a secure, remote location, better protects against terrorist attack than leaving them at 72 commercial and 5 DOE sites in 35 states within 75 miles of more than 161 million Americans.⁶ Moreover, for the reasons expressed by the Secretary and the President in their site recommendations and by the Congress in passing the joint resolution, it is in the national interest to move forward with this project.

In any event, in the Yucca Mountain Development Act, Pub. L. 107-200, Congress directed DOE to proceed with the development of a license application for a repository for the disposal of spent nuclear fuel and high-level radioactive waste. DOE believes that this statute and the NWPA make it incumbent on DOE

to proceed with appropriate transportation planning so the Department will be in a position to fulfill its responsibility under the NWPA to begin disposal of this material promptly, should the NRC grant the necessary authorizations for it to do so.

Transportation-Related Comments on the Final EIS

DOE distributed about 6,200 copies of the Final EIS and has received written comments on the Final EIS from the White Pine County Nuclear Waste Project Office, White Pine County Board of County Commissioners, Board of County Commissioners Lincoln County, Board of Mineral County Commissioners, and a member of the public. Although comments were received on a variety of issues, the following summation addresses only those few comments related to the transportation of spent nuclear fuel and high-level radioactive waste to a Yucca Mountain repository.

Commenters stated that DOE should develop specific transportation-related mitigation measures, and encouraged DOE to do so in a cooperative manner. Commenters also stated that additional, more detailed and community-specific transportation analyses are needed for purposes of mitigation planning, as well as to support DOE in its transportation decisionmaking, such as the decision on the mode of transportation. Commenters also encouraged DOE to develop plans for transportation, such as route selection for shipments of spent nuclear fuel and high-level radioactive waste, and emergency planning and response. Commenters also requested clarification of the roles of the NRC and DOE's transportation services contractors, and whether counties are eligible for technical assistance and funding under Section 180(c) of the Nuclear Waste Policy Act (NWPA).

As discussed below in Use of All Practicable Means to Avoid or Minimize Harm (Parts I and II), DOE has already adopted measures to avoid or minimize environmental harm that could result from the transportation of spent nuclear fuel and high-level radioactive waste. Additional potential mitigation measures associated with the construction of a rail line will be identified during preparation of an environmental impact statement that considers alternative alignments within the Caliente corridor for construction of the rail line (see PART II of this ROD). DOE also will consult with states, Native American tribes, local governments, utilities, the transportation industry and other interested parties in a cooperative

⁴ See *Duke Cogema Stone & Webster*, 56 N.R.C. 335 (2002); *Private Fuel Storage, L.L.C.*, 56 N.R.C. 340 (2002); *Duke Energy Corp.*, 56 N.R.C. 358 (2002); *Dominion Nuclear Connecticut, Inc.*, 56 N.R.C. 367 (2002); *Pacific Gas & Electric Company*, 57 N.R.C. 1 (2003); and *Pacific Gas & Electric Company*, 58 N.R.C. 185 (2003), appeal docketed, No. 03-74628 (9th Cir. Dec. 12, 2003).

⁵ See materials cited in footnote 4

⁶ As explained in footnote 2, some additional materials are currently stored at 50 additional sites (54 at the time of site recommendation), consisting primarily of research reactors, in four additional states, but DOE plans to consolidate these materials at two DOE sites for reasons unrelated to its repository plans.

manner to refine the transportation system as it is developed. Furthermore, DOE must comply with the transportation-related provisions of the NWPA. Spent nuclear fuel and high-level radioactive waste will be shipped to Yucca Mountain in casks that have been certified by the NRC (Section 180(a)). Prior to these shipments, DOE will comply with the regulations of the NRC regarding advanced notification of state and local governments (Section 180(b)).

Transportation Mode Decision

Under the NWPA, the Department is responsible for planning that will allow for the transportation of spent nuclear fuel and high-level radioactive waste in the event the NRC authorizes receipt and possession of these materials at Yucca Mountain. Accordingly, as the next step in fulfilling that responsibility, the Department is issuing this Record of Decision to select a transportation mode. The Department has decided to select the preferred mode of transportation analyzed in the Final EIS, the mostly rail scenario, both on a national basis and in the State of Nevada. Under this decision, the Department would rely on a combination of rail, truck and possibly barge to transport to the repository up to 70,000 MTHM of spent nuclear fuel and high-level radioactive waste. Most of the spent nuclear fuel and high-level radioactive waste would be transported by rail. The Department would use truck transport where necessary, depending on certain factors such as the timing of the completion of the rail line proposed to be constructed in Nevada. This could include building an intermodal capability at a rail line in Nevada to take legal-weight truck casks from rail cars and transport them the rest of the way to the repository via highway, should the rail system be unavailable at the time of the opening of the repository⁷. In addition, since some commercial utilities are not able to accommodate rail casks, they would ship by legal-weight truck to the repository. Additionally, the Department would use heavy-haul truck and possibly barge as needed to ship spent nuclear fuel from commercial nuclear sites to nearby railheads outside Nevada for shipment to the repository.

⁷ In March 2004, DOE issued a Supplement Analysis and determined, in accordance with 10 CFR 1021.314, that this rail/legal-weight truck scenario would not constitute a substantial change to the proposal previously analyzed in the Final EIS or significant new circumstances or information relevant to environmental concerns, as discussed in 40 CFR 1502.9(c)(1).

Basis for Transportation Mode Decision

As we explain below, the Department has concluded that it should use mostly rail nationwide and in Nevada based, in large part, on the analyses of the Final EIS. The Department also considered the preferences for rail transportation expressed by the State of Nevada and other factors described below.

The analyses in the Final EIS demonstrate that the potential radiation doses to workers and the general public from rail, truck or barge transportation would be very small, and that the differences in resulting potential impacts from such exposures among the different modes of transportation also would be very small. Nevertheless, using mostly rail tends to minimize the potential environmental impacts that could occur. The decision to rely primarily on the nation's rail system to ship these materials would result in fewer shipments than would occur if legal-weight trucks were the primary mode of transportation. This in turn would result in fewer trucks on public highways. The lower number of rail shipments as compared to truck shipments is estimated to result in fewer potential traffic fatalities and, under routine conditions, slightly fewer latent cancer fatalities to workers and the general public relative to mostly legal-weight truck shipments.

In reaching its decision, DOE also considered the number of commercial nuclear sites having, or expected to have, the capability to handle rail casks, the distances to suitable railheads near the commercial nuclear sites, and historical experience using rail to ship spent nuclear fuel and other large reactor-related components. The Department found that the preponderance of commercial sites have the capability and experience to ship to nearby railheads.

The Department also considered preferences expressed by the State of Nevada in its comments on the Draft EIS. In these comments, the state indicated that DOE should plan its transportation system to maximize the use of rail.

The Department also considered irreversible and irretrievable commitments of resources and cumulative impacts in making its decision. There would be an irreversible and irretrievable commitment of resources, such as land, electric power, fossil fuels and construction materials, associated with the construction of a rail line in Nevada, although this commitment of resources would not significantly diminish these resources, either nationwide or in Nevada. DOE

also recognizes that for all alternatives involving transportation of spent nuclear fuel and high-level radioactive waste, there could be cumulative impacts from past, present and reasonably foreseeable future activities involving transportation of other radioactive materials. Based on the analyses in the Final EIS, DOE does not expect that any cumulative impacts would be significant over the duration of shipping spent nuclear fuel and high-level radioactive waste to the repository.

Based on these various considerations, DOE concludes that shipping by mostly rail, both nationally and in the State of Nevada, would be preferable to shipping by mostly truck or using heavy-haul trucks in Nevada.

Use of All Practicable Means To Avoid or Minimize Harm—Transportation Mode

The shipment of spent nuclear fuel and radioactive waste is highly regulated and subject to the utmost scrutiny. DOE carefully follows the Department of Transportation (DOT) and NRC transportation rules now and will follow or exceed any others that may be established in the future whether by the Congress or by DOT or NRC. DOE also will consult with states, Native American tribes, local governments, utilities, the transportation industry and other interested parties in a cooperative manner to refine the transportation system as it is developed.

Measures DOE will implement to avoid or minimize harm include the following⁸: prior to the shipment of spent nuclear fuel, the shipper or carrier must select routes and prepare a written plan listing origin and destination of the shipment, scheduled route, all planned stops, estimated time of departure and arrival, and emergency telephone numbers; advance notice must be provided to State and local governments prior to shipping irradiated reactor fuel through their states; anyone involved in the preparation or transport of radioactive materials will be required to have proper training; carriers must be provided with shipping papers containing emergency information, including contacts and telephone numbers, readily available during transport for inspection by appropriate officials; clearly identifiable markings, labels, and placards of hazardous contents must be provided; and all spent nuclear fuel and high-level

⁸ Application of these measures to national security activities may, in some respects, be subject to section 7 of the Nuclear Waste Policy Act, 42 U.S.C. section 10106.

radioactive waste shipments would be in the most rugged casks (Type B, which range from small containers of sealed radioactive sources to heavily shielded steel casks that sometimes weigh as much as 150 tons).

The NRC has promulgated rules (10 CFR 73.37) and interim compensatory measures (March 4, 2002; 67 FR 9792) specifically aimed at protecting the public from harm that could result from sabotage of spent nuclear fuel casks. These security rules are designed to minimize the possibility of sabotage and facilitate recovery of spent nuclear fuel shipments that could come under the control of unauthorized persons. The use of armed escorts for all shipments; safeguarding the detailed shipping schedule information, monitoring of shipments through satellite tracking and a communication center with 24-hour staffing; and coordinating logistics with state and local law enforcement agencies all contribute to shipment security. Additionally, the cask safety features that provide containment, shielding, and thermal protection provide protection against sabotage. The Department and other agencies continue to examine the protections built into their physical security and safeguards systems for transportation shipments.

DOE is now developing its transportation security plan and its design basis threat for transportation. The transportation security plan will be developed in cooperation with other Federal agencies, including the NRC, DOT, and the Department of Homeland Security. The Office of Civilian Radioactive Waste Management is exploring the use of armed Federal agents as escorts for all shipments and other operational techniques employed by the National Nuclear Security Administration's Office of Secure Transportation as well as the design of special security cars for rail transport, to further mitigate the potential threat of a terrorist act. In addition to its domestic efforts, the Department is a member of the International Working Group on Sabotage of Transport and Storage Casks, which is investigating the consequences of a potential act of sabotage and is exploring opportunities to enhance the physical protection of casks. As a result of the above efforts, DOE will modify its methods and systems as appropriate between now and the time shipments start.

In compliance with section 180(c) of the NWSA, DOE will provide technical assistance and funds to states for training public safety officials of appropriate units of local government and Native American tribes through whose jurisdictions the Department

plans to ship spent nuclear fuel and high-level radioactive waste. The training of public safety officials will cover procedures required for safe routine transportation of these materials and for dealing with emergency response situations.

Pursuant to the NWSA, spent nuclear fuel and high-level radioactive waste will be transported in casks certified by the NRC. The NRC regulates and certifies the design, manufacture, testing and use of these casks. Additionally, the NWSA requires that DOE comply with NRC regulations regarding advance notification of State and local governments prior to transportation of spent nuclear fuel or high-level radioactive waste.

At this stage in the decision-making, the Department believes it has incorporated all practicable mitigation measures. The Department will continue to identify and evaluate potential mitigation measures as the transportation system develops and as a result of the lessons learned from the shipping of spent nuclear fuel and high-level radioactive waste.

Part II. Record of Decision for Nevada Rail Corridor

Background

As noted above, the mostly rail scenario assumes that DOE will ultimately construct a rail line in Nevada to ship spent nuclear fuel and high-level radioactive waste to the repository. To implement that scenario, DOE therefore needs to select among alternative rail corridors within which to study possible alignments in which it will pursue construction of a rail line that would connect the repository at Yucca Mountain to an existing main rail line in Nevada in the event the NRC authorizes construction of a repository at Yucca Mountain. In the Final EIS, DOE analyzed five potential rail corridors—Caliente, Carlin, Caliente-Chalk Mountain, Jean and Valley Modified—for this potential rail line. Additional descriptive information, including variations associated with each corridor, may be found in section 2.1.3.3 and Appendix J, section J.3.1.2, of the Final EIS. The Final EIS did not specify a corridor preference, but in December 2003, DOE announced its preference for the Caliente corridor (*Notice of Preferred Nevada Rail Corridor*; 68 FR 74951; December 29, 2003).

Proposed Action and Nevada Rail Corridors Considered in the Final EIS

A. Caliente Rail Corridor—Preferred Alternative

The Caliente corridor originates at an existing siding to the mainline railroad near Caliente, Nevada. The corridor extends in a westerly direction to the northwest corner of the Nevada Test and Training Range (previously known as Nellis Air Force Range), before turning south-southeast to the repository at Yucca Mountain. The corridor ranges between 318 miles (512 kilometers) and 344 miles (553 kilometers), depending on the variations to the corridor considered in the Final EIS. Construction of a rail line within the Caliente corridor would take about 46 months. The total life-cycle cost for construction and operation of the rail line is estimated to be \$880 million (2001 dollars).

B. Carlin Rail Corridor

The Carlin corridor originates at the mainline railroad near Beowawe in north central Nevada. The Carlin and Caliente corridors converge near the northwest boundary of the Nevada Test and Training Range. Past this point, they are identical. The Carlin corridor ranges between 319 miles (513 kilometers) and 338 miles (544 kilometers) long, depending on the variations to the corridor. Construction of a rail line within the Carlin corridor would take about 46 months. The total life-cycle cost for construction and operation of the rail line is estimated to be \$821 million (2001 dollars).

C. Caliente-Chalk Mountain Rail Corridor

The Caliente-Chalk Mountain corridor is identical to the Caliente corridor until it approaches the northern boundary of the Nevada Test and Training Range. At that point the Caliente-Chalk Mountain corridor turns south through the Nevada Test and Training Range and the Nevada Test Site to the Yucca Mountain site. Depending on the variations, the corridor is between 214 miles (344 kilometers) and 242 miles (382 kilometers) long from the tie-in at the mainline near Caliente to the Yucca Mountain site. Construction of a rail line within the Caliente-Chalk Mountain corridor would take about 43 months. The total life-cycle cost for construction and operation of the rail line is estimated to be \$622 million (2001 dollars). The Department designated the Caliente-Chalk Mountain alternative as non-preferred in the Final EIS due to national security concerns raised by the U.S. Air Force.

D. Jean Rail Corridor

The Jean corridor originates at the existing mainline railroad near Jean, Nevada. The corridor ranges between 112 miles (181 kilometers) and 127 miles (204 kilometers) long from the tie-in with the mainline to the Yucca Mountain site. Construction of a rail line within the Jean corridor would take about 43 months. The total life-cycle cost for construction and operation of the rail line is estimated to be \$462 million (2001 dollars).

E. Valley Modified Rail Corridor

The Valley Modified corridor originates at an existing rail siding off the mainline railroad northeast of Las Vegas. Depending on the variations, the corridor is between 98 miles (157 kilometers) and 101 miles (163 kilometers) long from the tie-in with the mainline to the Yucca Mountain site. Construction of a rail line within the Valley Modified corridor would take about 40 months. The total life-cycle cost for construction and operation of the rail line is estimated to be \$283 million (2001 dollars).

Environmentally Preferable Rail Corridor Alternative

DOE considered human health and environmental impacts that could occur from the construction of a rail line, as well as from shipping spent nuclear fuel and high-level radioactive waste in Nevada.

Construction of a rail line, regardless of the rail corridor selected, would involve the disturbance of land and associated impacts, although low, to natural resources such as biological and cultural resources. For example, construction of a rail line in the Valley Modified corridor (shortest) would result in the disturbance of about 1,240 acres; rail line construction in the Carlin corridor (longest) would disturb about 4,900 acres.

Construction of any rail line in Nevada also would conflict with existing land uses. Depending on the variations considered, privately-owned lands occur on less than one percent of the lands analyzed under the Caliente (ranges from 222 to 618 acres), Caliente-Chalk Mountain (ranges from 198 to 272 acres) and Valley Modified (ranges from 0 to 44 acres) corridors, but up to about five and seven percent of the lands analyzed under the Jean (ranges from 32 to 865 acres) and Carlin (ranges from 1,804 to 3,756 acres) corridors, respectively. The Caliente and Carlin corridors cross Timbisha-Shoshone trust lands, and a relatively short distance on the Nevada Test and Training Range,

although variations are available that would avoid these lands. The Caliente corridor crosses two wilderness study areas, and the Valley Modified corridor passes through the Desert National Wildlife Range, although variations may be available to avoid these lands. The Caliente-Chalk Mountain corridor crosses land dedicated to testing and training activities of the U.S. Air Force and Department of Defense on the Nevada Test and Training Range; no variations are available that would avoid the Range under this corridor alternative.

Under any rail corridor alternative, water would be used for compaction of the rail bed and dust suppression, and by workers during construction. Water consumption would vary, primarily because of the length of the corridor, ranging from 320 acre-feet for the Valley Modified corridor to 710 acre-feet for the Caliente corridor.

During the 24-year shipping period, assuming standard nationwide rail routing practices, the incident-free (routine) collective dose to members of the public from the transportation of spent nuclear fuel and high-level radioactive waste by rail would result in less than one latent cancer fatality regardless of which corridor is selected. The difference in impacts among the corridors is minimal. Similarly, less than one latent cancer fatality would occur in the exposed worker population, and that is not affected by the Nevada corridor selection.

DOE also estimated the potential health effects to the general public that could result from a severe transportation accident during shipments to the repository (referred to in the Final EIS as a maximum reasonably foreseeable accident). If such an accident were to occur in a rural population setting, the collective radiological dose to members of the public would result in less than one latent cancer fatality. The probability that this accident could occur is extremely unlikely—about 2 chances in 1 million per year.

The environmental impacts identified in the Final EIS do not provide a clear basis for discriminating among alternative rail corridors in Nevada. Each of these alternatives would result in some impact to the environment and public health and safety. Construction of a rail line within any rail corridor would involve certain land use conflicts, and land disturbance with attendant impacts (although small, the impacts tend to increase with increasing corridor length). Radiation exposure to workers and the public in Nevada would be small, and the differences

among the rail corridor alternatives also would be very small.

For these reasons, DOE does not consider the differences among the corridor alternatives to be sufficient to make any of them clearly environmentally preferable.

Finally, although the potential impacts of any of the five potential rail corridors would be small, they would be greater than the potential transportation-related impacts of the No-Action Alternatives. Nevertheless, as explained above, the impacts of proceeding with construction and operation of a repository at Yucca Mountain, including transportation, are relatively small and less than either of the No-Action Alternative scenarios. Part I (of this ROD) provides further comparison of the proposed action and the No-Action Alternative scenarios. In any event, given DOE's responsibilities under the Yucca Mountain Development Act and the NWPA, DOE believes it is obligated to proceed with appropriate transportation planning, including, given its selection of the mostly rail scenario in Nevada, the selection of a corridor in which to study possible alignments for the Nevada rail line, in preference to either No-Action Alternative scenario.

Comments on Preferred Rail Corridor

DOE noticed its preference for the Caliente corridor in the **Federal Register** (December 29, 2003; 68 FR 74951). The Carlin corridor was identified as a secondary preference. The Department has received comments on the preference announcement. Concerns expressed in these comments included the need for a comprehensive programmatic EIS covering all aspects of nuclear waste transportation to Yucca Mountain, avoidance of all major population centers with transportation routes, and provision of documentation supporting the preference decision. Other comments addressed the need for adequate opportunities for public participation and comment on the corridor preference announcement, including a request for cooperating agency status for any future rail alignment EIS. Selection of a corridor preference prior to having a mode of transportation decision was raised as a concern. In addition, there was confusion regarding the designation of the Carlin corridor as a secondary preference and its relationship to the upcoming rail alignment EIS process. Furthermore, commenters indicated that a rail line in the Caliente corridor would have significant negative impacts on cultural, socioeconomic, and wildlife resources, as well as a massive modern

sculpture project. Others raised the potential for impacts to ranchers living in proximity to the proposed Caliente corridor, including questions regarding the design and operation of a rail line and the nature of measures that could mitigate resulting adverse impacts. Finally, several commenters thanked DOE for announcing its corridor preference, recognizing the challenges and opportunities and associated need to coordinate closely as DOE proceeds with transportation planning.

Comments calling for DOE to prepare a programmatic transportation EIS and the need to avoid all major Nevada population centers with transportation routes were addressed in the response to comments in the Final EIS. DOE believes a programmatic EIS to be unnecessary as its Final EIS provides the environmental impact information necessary to make certain broad transportation-related decisions (as described above in Transportation-Related Decisions).

With regard to avoiding population centers, the analyses of the Final EIS illustrate that potential public health and safety impacts would be so low for individuals who lived and worked along any route that individual impacts would not be discernible, even if the corresponding doses could be measured.

Although some commenters stated that DOE's intent in identifying the Carlin corridor as a secondary preference was unclear, the decision to select the Caliente corridor also represents DOE's intent to no longer consider the Carlin corridor for development of a rail line. This decision and the basis for not selecting the Carlin corridor are discussed below in Rail Corridor Decision and Basis for Rail Corridor Decision.

The remaining concerns and issues regarding potential environmental impacts associated with the development of a rail line, potential mitigation measures, and opportunities for public involvement and project participation will be addressed during the future preparation of a rail alignment EIS. As part of developing this documentation, DOE will identify and adopt measures to avoid or minimize environmental harm that could result from the construction and operation of a rail line within the Caliente corridor.

Rail Corridor Decision

In Part I of this Record of Decision, the Department selected, both on a national basis and in the State of Nevada, the mostly rail scenario. That decision is premised on the assumption that DOE will ultimately construct a rail

line to connect the repository site to an existing rail line in the State of Nevada. To that end, the Department has decided to select the preferred rail corridor alternative, the Caliente corridor, in which to evaluate alignments for a rail line.

Basis for Rail Corridor Decision

The Department decided to evaluate alignments within the Caliente corridor for possible construction of a rail line based, in large part, on the analyses of the Final EIS. The Department, however, also considered other factors discussed below, such as potential for construction delay, direct and indirect costs of each alternative, and comments received from the public.

The Department considered irreversible and irretrievable commitments of resources and cumulative impacts in making its decision. There would be an irreversible and irretrievable commitment of resources, such as electric power, fossil fuels, construction materials, and water associated with the construction of a rail line in Nevada, although this commitment of resources would not significantly diminish the resources in question in Nevada. DOE recognizes that for all rail corridors there could be cumulative impacts from past, present and reasonably foreseeable future activities.

The Department considered potential land use conflicts and their potential to affect adversely construction of a rail line, as analyzed in the Final EIS in making this decision. If the Department were to select the Valley Modified rail corridor there may be conflicts with the Desert National Wildlife Range and local community plans for development in the greater Las Vegas metropolitan area. If the Department were to select the Caliente-Chalk Mountain corridor there would be conflicts with U.S. Air Force and Department of Defense testing and training activities directly related to national security interests on the Nevada Test and Training Range. If the Department were to select the Jean corridor it may require crossing relatively greater amounts of private land, and would pose greater potential land use conflicts because of its proximity to the greater Las Vegas metropolitan area. If the Department were to select the Carlin corridor it would also require crossing relatively greater amounts of private land. Moreover, little infrastructure, such as roads and electric power, is available over long segments, which would tend to make logistics during construction as well as emergency response capabilities more challenging. Overall, the Caliente

rail corridor appears to have the fewest land use or other conflicts that could lead to substantial delays in acquiring the necessary land and rights-of-way, or in beginning construction.

DOE also considered concerns expressed by the public in Nevada. In these comments, the public stated that DOE should avoid rail corridors in the Las Vegas Valley.

The Department also considered the direct costs of constructing and operating a rail line, and the indirect costs resulting from potential delays in the availability of the rail line. The Jean and Valley Modified corridors are the shortest and have the lowest estimated construction costs. The Carlin and Caliente corridors are the longest and on the basis of construction cost alone would be more expensive to develop. However, delays in the construction of the rail line because of land use or other conflicts and the resulting inability to accept large amounts of spent nuclear fuel and high-level radioactive waste transported by a railroad to the repository in a timely manner could add to both the liability costs for delayed acceptance of commercial spent nuclear fuel and the costs of continued storage of DOE wastes.

Based on all of the above, DOE concludes that the Caliente corridor is preferable to the other corridors it evaluated as a potential corridor in which to construct a rail line. Therefore, DOE has decided to select the Caliente corridor as the one within which to evaluate possible alignments for the rail line connecting the repository to an existing main rail line in Nevada.

Use of All Practicable Means To Avoid or Minimize Harm—Rail Corridor

In the Final EIS, DOE identified transportation-related measures that would be implemented, and other measures that would require further consideration and refinement before adoption to avoid or minimize environmental harm. As described in Part I, this decision adopts all practicable measures to avoid or minimize adverse environmental impact that could result from the transportation of spent nuclear fuel and high-level radioactive wastes to a repository at Yucca Mountain appropriate at this stage of decision-making. Construction of a rail line will be consistent with applicable Federal, state and Native American tribal requirements. In addition to these measures, other potential mitigation measures associated with the construction of a rail line will be identified and evaluated during preparation of future NEPA documentation.

Issued in Washington, DC April 2, 2004.

Margaret S. Y. Chu,

Director, Office of Civilian Radioactive Waste Management.

[FR Doc. 04-7949 Filed 4-7-04; 8:45 am]

BILLING CODE 6450-01-P

DEPARTMENT OF ENERGY

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

AGENCY: U.S. Department of Energy.

ACTION: Notice of intent.

SUMMARY: The U.S. Department of Energy (DOE or the Department) announces its intent to prepare an environmental impact statement (EIS) under the National Environmental Policy Act (NEPA) for the alignment, construction, and operation of a rail line for shipments of spent nuclear fuel, high-level radioactive waste, and other materials from a site near Caliente, Lincoln County, Nevada, to a geologic repository at Yucca Mountain, Nye County, Nevada. On April 2, 2004, the Department signed a Record of Decision announcing its selection, both nationally and in the State of Nevada, of the mostly rail scenario analyzed in 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" (DOE/EIS-0250F, February 2002) (Repository Final EIS). This decision will ultimately require the construction of a rail line to connect the repository site at Yucca Mountain to an existing rail line in the State of Nevada for the shipment of spent nuclear fuel and high-level radioactive waste, in the event that the Nuclear Regulatory Commission authorizes construction of the repository and receipt and possession of these materials at Yucca Mountain. To that end, the Department also decided to select the Caliente rail corridor¹ in which to examine possible alignments for construction of a rail line that would connect the repository at Yucca Mountain to an existing main rail line in Nevada. DOE is now announcing its intent to prepare this Rail Alignment EIS to assist in selecting this alignment. The EIS also would consider the

potential construction and operation of a rail-to-truck intermodal transfer facility, proposed to be located at the confluence of an existing mainline railroad and a highway, to support legal-weight truck transportation until the rail system is fully operational.

DATES: The Department invites and encourages comments on the scope of the EIS (hereafter referred to as the Rail Alignment EIS) to ensure that all relevant environmental issues and reasonable alternatives are addressed. Public scoping meetings are discussed below in the **SUPPLEMENTARY INFORMATION** section. DOE will consider all comments received during the 45-day public scoping period, which starts with the publication of this Notice of Intent and ends May 24, 2004. Comments received after the close of the public scoping period will be considered to the extent practicable.

ADDRESSES: Written comments on the scope of this Rail Alignment EIS, questions concerning the proposed action and alternatives, requests for maps that illustrate the Caliente corridor and alternatives, or requests for additional information on the Rail Alignment EIS or transportation planning in general should be directed to: Ms. Robin Sweeney, EIS Document Manager, Office of National Transportation, Office of Civilian Radioactive Waste Management, U.S. Department of Energy, 1551 Hillshire Drive, M/S 011, Las Vegas, NV 89134, Telephone 1-800-967-3477, or via the Internet at <http://www.ocrwm.doe.gov> under "What's New."

FOR FURTHER INFORMATION CONTACT: For general information regarding the DOE NEPA process contact: Ms. Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance (EH-42), U.S. Department of Energy, 1000 Independence Ave., SW., Washington, DC 20585, Telephone 202-586-4600, or leave a message at 1-800-472-2756.

SUPPLEMENTARY INFORMATION:

Background

On July 23, 2002, the President signed into law (Pub. L. 107-200) a joint resolution of the U.S. House of Representatives and the U.S. Senate designating the Yucca Mountain site in Nye County, Nevada, for development as a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste. Subsequently, the Department issued a Record of Decision (April 2, 2004) to announce its selection, both nationally and in the State of Nevada, of the mostly rail scenario analyzed in the Repository Final EIS as the mode of transportation

of spent nuclear fuel and high-level radioactive waste to the repository. Under the mostly rail scenario, the Department would rely on a combination of rail, truck and possibly barge to transport to the repository site at Yucca Mountain up to 70,000 metric tons of heavy metal (MTHM) of spent nuclear fuel and high-level radioactive waste. Most of the spent nuclear fuel and high-level radioactive waste, however, would be transported by rail.

The Department's decision to select the mostly rail scenario in Nevada will ultimately require the construction of a rail line to connect the repository site at Yucca Mountain to an existing rail line in the State of Nevada for the shipment of spent nuclear fuel and high-level radioactive waste in the event that the Nuclear Regulatory Commission authorizes construction of the repository and receipt and possession of these materials at Yucca Mountain. To that end, in the same Record of Decision, the Department also decided to select the Caliente rail corridor to study possible alignments for this rail line.

In the Repository Final EIS, DOE defined a rail corridor as a 0.25 miles (400-meter) wide strip of land that encompasses one of several possible alignments or specific locations within which DOE could build a rail line. The Caliente rail corridor was described as originating at an existing siding to the mainline railroad near Caliente, Nevada, and extending in a westerly direction to the northwest corner of the Nevada Test and Training Range, before turning south-southeast to the repository at Yucca Mountain.

In the Repository Final EIS, DOE also identified eight variations along the Caliente corridor that may minimize or avoid environmental impacts and/or mitigate construction complexities. Variations were defined as a strip of land 0.25 miles (400-meters) wide that describes a different route, from one point along the corridor to another point on the corridor. Thus, the Caliente corridor ranges between 318 miles (512 kilometers) and 344 miles (553 kilometers) in length, depending on the variations considered. In the Repository Final EIS, DOE did not identify variations for about 55 percent of the length of the corridor (hereafter these areas are referred to as "common segments").

DOE proposes to consider the common segments and the eight variations as preliminary alternatives to be evaluated in the Rail Alignment EIS. These alternatives are described in the *Preliminary Alternatives* section. In addition, DOE will consider other potential variations outside of the 0.25

¹ A corridor is a strip of land 0.25 miles (400 meters) wide that encompasses one of several possible routes through which DOE could build a rail line. An alignment is the specific location of a rail line in a corridor.