

BEFORE THE  
SURFACE TRANSPORTATION BOARD

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Finance Docket No. 35106

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UNITED STATES DEPARTMENT OF ENERGY  
--RAIL CONSTRUCTION AND OPERATION--  
CALIENTE RAIL LINE IN LINCOLN, NYE,  
AND ESERALDA COUNTIES, NEVADA

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APPLICATION FOR A CERTIFICATE OF  
PUBLIC CONVENIENCE AND NECESSITY

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- Exhibit I— Secretary of Energy’s Transmittal Letter to President George W. Bush, and Secretary of Energy’s Recommendation Regarding the Suitability of the Yucca Mountain Site for a Repository Under the Nuclear Waste Policy Act of 1982
- Exhibit J— *Final Report Rail Transportation Economic Impact Evaluation & Planning, Wilber Smith and Associates 2005*
- Exhibit K— *Shared Use Option: Commercial Traffic Estimates, Ang-Olson and Gallivan 2007*
- Exhibit L— Presidential Letter to Congress
- Exhibit M— Selected Public Comments in Support of Shared Use from the 2004 Scoping Process
- Exhibit N— Notice Required Under 49 C.F.R. § 1150.9

**APPLICATION FOR A CERTIFICATE OF  
PUBLIC CONVENIENCE AND NECESSITY**

Pursuant to 49 U.S.C. § 10901 and 49 C.F.R. Part 1150, the United States Department of Energy (“DOE”) hereby applies for a Certificate of Public Convenience and Necessity to construct and operate the “Caliente Rail Line,” the proposed rail line described herein. In support of its application, DOE submits the following information, as required by 49 C.F.R. §§ 1150.2-9:

**§ 1150.2      OVERVIEW**

**§ 1150.2(a)      Brief narrative description of the proposal**

The Nuclear Waste Policy Act of 1982, as amended (“NWPA”) (42 U.S.C. 10101 et seq.) establishes a comprehensive framework for the federal government to provide for the disposal of the nation’s spent nuclear fuel and high-level radioactive waste and initiated a process to select a site for a potential geologic repository.

Pursuant to the NWPA, on February 14, 2002, the Secretary of Energy transmitted his recommendation to President George W. Bush for approval of the Yucca Mountain site in Nye County, Nevada (“Yucca Mountain site”) for development of a geologic repository. The President approved the Secretary’s recommendation of the Yucca Mountain site for development as a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste, and recommended the site to the United States Congress (“Congress”). Subsequently, Congress passed a joint resolution of the United States House of Representatives and the United States Senate designating the Yucca Mountain site for development as a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste. On July 23, 2002, the President

signed the joint resolution into law (“Yucca Mountain Development Act,” Public Law 107-200). As required by the NWPA, the DOE is preparing an application for submittal to the Nuclear Regulatory Commission (“NRC”) seeking authorization to construct the repository.

In order to fulfill its responsibilities under the NWPA, DOE will need to transport spent nuclear fuel and high-level radioactive waste from the commercial and federal nuclear facilities where these materials are located to the Yucca Mountain site. Following completion of its *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-0250), February 2002 (“Yucca Mountain FEIS”), the DOE announced its selection, both nationally and in the State of Nevada, of rail as the primary means of transporting spent nuclear fuel and high-level radioactive waste to the repository. 69 Fed. Reg. 18557 (April 8, 2004). Currently, no commercial or private rail lines in Nevada serve the repository site. In its Record of Decision issued April 8, 2004, DOE selected the Caliente Corridor for further evaluation for the construction and operation of a railroad in Nevada.

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

evaluate the potential environmental impacts of constructing and operating a railroad for shipments of spent nuclear fuel and high-level radioactive waste from an existing rail line in Nevada to a geologic repository at the Yucca Mountain site, including potential environmental impacts associated with operating the rail line along the Caliente Corridor for common carriage. The Draft Rail Alignment EIS identifies the Caliente Corridor as the preferred corridor in which to construct and operate a Nevada rail line.

The Draft Nevada Rail Corridor SEIS and the Draft Rail Alignment EIS are attached as Exhibit H of this Application. The Surface Transportation Board (“STB” or “Board”) is a cooperating agency in the development of the Draft Nevada Rail Corridor SEIS and the Draft Rail Alignment EIS and has participated in the development of these documents. For the purposes of this Application, the Draft Nevada Rail Corridor SEIS and the Draft Rail Alignment EIS are submitted in support of the Board’s fulfillment of its responsibilities under the National Environmental Policy Act (“NEPA”), as well as under the Board’s regulations (49 C.F.R. Parts 1105 and 1150).

The purpose of this application is to request a certificate of authority for the DOE to construct and operate a common carrier rail line along the Caliente Corridor. The new rail line would be approximately 300 miles long, connecting an existing rail line near Caliente, Nevada to the Yucca Mountain site. The line would permit the DOE to transport construction materials, spent nuclear fuel and high-level radioactive waste to a repository at Yucca Mountain. The rail line would also promote economic development in rural communities in Nevada along the Caliente

Corridor by making the rail line available for common carriage rail service by commercial shippers.

The rail line would extend north from Caliente, Nevada, turn in a westerly direction and head to near the northwest corner of the Nevada Test and Training Range, and then continue south-southeast towards Yucca Mountain. The estimated minimum construction period is 4 years and the current estimated cost is approximately \$2.2 billion in year 2005 dollars. The current estimated cost of construction is approximately \$2.6 billion in year 2008 dollars. The Draft Rail Corridor SEIS and Draft Rail Alignment EIS reflect the cost estimate in 2005 dollars; the Final Rail Corridor SEIS and Final Rail Alignment EIS will reflect the change in cost estimates from 2005 dollars to 2008 dollars.

**§ 1150.2(b)            Full name and address of applicant**

United States Department of Energy  
1000 Independence Avenue, S.W.  
Washington, DC 20585

**§ 1150.3            INFORMATION ABOUT THE APPLICANT**

**§ 1150.3(a)            Name, address, and phone number of representative**

Correspondence regarding this application should be sent to:

Director, Office of Civilian Radioactive Waste Management  
United States Department of Energy  
1000 Independence Avenue, S.W.  
Washington, DC 20585

Phone: 202-586-6842  
Fax: 202-586-6630



Director, Office of Logistics Management  
United States Department of Energy  
1000 Independence Avenue, S.W.  
Washington, DC 20585

Phone: 202-586-4167  
Fax: 202-586-1047

Copies of correspondence should also be sent to:

Assistant General Counsel for Civilian Nuclear Programs  
ATTN: Bradley L. Levine, GC-52  
United States Department of Energy  
1000 Independence Avenue, S.W.  
Washington, DC 20585

Phone: 202-586-5857  
Fax: 202-586-6977  
Email: Bradley.Levine@hq.doe.gov

**§ 1150.3(b) Facts showing common carrier status**

DOE's preferred alternative is for the rail line to serve public needs not only by transporting spent nuclear fuel and high-level radioactive waste to the repository, but also by making the rail line available for common carriage rail service by commercial shippers. On April 8, 2004, DOE published a Notice of Intent announcing that it would prepare an EIS for the alignment, construction, and operation of a rail line for the shipment 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. 69 Fed. Reg. 18565 (April 8, 2004). The Notice of Intent invited comments on among other things, whether DOE should allow private entities to ship commercial commodities on its rail line. In the Draft Rail Alignment EIS, DOE identified its preferred alternative would be to construct and operate a railroad along the Caliente rail

alignment and to implement the Shared-Use Option (allowing commercial shippers to use the rail line for general freight shipments).

§ 1150.3(c) **Statement indicating whether the rail line will be operated by applicant**

DOE anticipates that the rail line would be owned by the DOE and operated by a contractor to the DOE. The DOE anticipates that it would conduct a formal bidding process to award the contract for operation of the rail line.

§ 1150.3(d) **Statement whether applicant is affiliated by stock ownership or otherwise with any industry to be served by the line**

This section is not applicable to the DOE.

§ 1150.3(e) **Date and place of organization, applicable state statutes, and brief description of the nature and objectives of the organization**

The DOE was established by the Department of Energy Organization Act of 1977. The DOE's overarching mission is to advance the national, economic, and energy security of the United States; to promote scientific and technological innovation in support of that mission; and to ensure the environmental cleanup of the national nuclear weapons complex. The NWPA sets forth a comprehensive statutory framework under which the DOE exercises its responsibility for the disposal of spent nuclear fuel and high-level radioactive waste.

The Office of Civilian Radioactive Waste Management (“OCRWM”) was established by Section 304 of the NWPA. The OCRWM is headed by a Director, who is directly responsible to the

Secretary of Energy. The Director is responsible for carrying out the functions of the Secretary of Energy under the NWPA. Among these functions is the establishment of “a schedule for the siting, construction, and operation of repositories that will provide a reasonable assurance that the public and the environment will be adequately protected from the hazards posed by high-level radioactive waste and such spent nuclear fuel as may be disposed of in a repository....”

NWPA § 111(b); 42 U.S.C. § 10131.

§ 1150.3(f)(1)            **Officers, directors, and ten principal stockholders of the corporation**

This section is not applicable to the DOE.

§ 1150.3(f)(2)            **Resolution of stockholders or directors**

This section is not applicable to the DOE.

§ 1150.3(g)                **Name and address of all general partners and their respective interests**

This section is not applicable to the DOE.

§ 1150.3(h)                **Name, title, and business address of principals or trustee**

This section is not applicable to the DOE.

§ 1150.3(i)                **Details about appointment of trustee, receiver, assignee, or personal representative**

This section is not applicable to the DOE.

§ 1150.3(j) **Reference to applications within the previous three years**

The DOE has no previous filings.

§ 1150.4 **INFORMATION ABOUT THE PROPOSAL**

§ 1150.4(a) **A description of the proposal and the significant terms and conditions, including consideration (monetary or otherwise) to be paid**

The DOE proposes to construct, operate, and maintain an approximately 300-mile rail line from an existing rail line near Caliente, Nevada to the repository at the Yucca Mountain site for the shipment of spent nuclear fuel, high-level radioactive waste, and common carriage goods. DOE initially studied five potential rail corridor locations (Caliente, Valley Modified, Caliente-Chalk Mountain, Jean and Carlin) from existing rail lines in Nevada to the repository site in the Yucca Mountain FEIS. DOE has prepared a draft supplement to the Yucca Mountain FEIS, the *Draft Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada* (DOE/EIS-0250F-S1D), October 2007 (“Draft Repository SEIS”), to consider the potential environmental impacts associated with the repository design and construction and operational plans as they have evolved since issuance of the Yucca Mountain FEIS in 2002. The Draft Repository SEIS has been made available for public review and comment, and is available online at: [http://www.ocrwm.doe.gov/ym\\_repository/seis/index.shtml](http://www.ocrwm.doe.gov/ym_repository/seis/index.shtml).

Based on the information provided in the Yucca Mountain FEIS, the DOE announced its selection, both nationally and in the State of Nevada, of the mostly rail scenario as the primary

means of transporting spent nuclear fuel and high-level radioactive waste to the repository. *See 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, Nevada*, 69 Fed. Reg. 18557, 18561 (April 8, 2004). In the Record of Decision, DOE also announced its selection of the Caliente corridor for evaluating potential alignments for the construction of a rail line to the Yucca Mountain site. 69 Fed. Reg. 18557, 18562 (April 8, 2004).<sup>1</sup>

In its Draft Nevada Rail Corridor SEIS and the Draft Rail Alignment EIS DOE evaluates the potential environmental impacts of constructing and operating a railroad for shipments of spent nuclear fuel and high-level radioactive waste from an existing rail line in Nevada to a geologic repository at Yucca Mountain, as well as operating the rail line for common carriage. In the Draft Rail Alignment EIS, DOE has identified the Caliente Rail Alignment, along with the Shared-Use Option, as its preferred alternative. *See Draft Rail Alignment EIS Section 2.4 DOE Preferred Alternative* at p. 2-114.

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<sup>1</sup> During the subsequent public scoping process for the Rail Alignment EIS, DOE received comments suggesting that other rail corridors be considered, in particular, the Mina route. In the Yucca Mountain FEIS, DOE had considered but eliminated the Mina route from detailed study because a rail line within the Mina route could only connect to an existing rail line in Nevada by crossing the Walker River Paiute Reservation, and the Tribe had informed DOE that it would not allow nuclear waste to be transported across the Reservation.

Following review of the scoping comments, DOE held discussions with the Walker River Paiute Tribe and, in May 2006, the Tribal Council informed DOE that it would allow the Department to consider the potential impacts of constructing and operating a railroad to transport spent nuclear fuel and high-level radioactive waste across its reservation. After a preliminary evaluation of the feasibility of the Mina rail corridor, DOE announced its intent to expand the scope of the Rail Alignment EIS to include the Mina corridor. *See 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*, 71 Fed. Reg. 60484 (October 13, 2006). Although the expanded NEPA analysis, referred to as the Nevada Rail Corridor SEIS and the Rail Alignment EIS, evaluates the potential environmental impacts associated with the Mina rail corridor, DOE has identified the Mina alternative as nonpreferred because the Tribe has withdrawn its support for the EIS process. *See Summary to the Rail Corridor SEIS and the Rail Alignment EIS (Exhibit H) Foreword* at p. viii.

The DOE anticipates that the Final Rail Alignment EIS will be issued in June, 2008. The Final Rail Alignment EIS will assist DOE in deciding whether to construct and operate a railroad, and if so, within which corridor and alignment. The Final Rail Alignment EIS will also assist DOE in deciding whether to implement the Shared-Use Option. These decisions will not be made until DOE issues the Final Rail Alignment EIS and a record of decision.

The proposed rail line would tie into the Union Pacific mainline at, or near Caliente, Nevada. The rail line would extend north from Caliente, turn in a westerly direction and head toward the northwest corner of the Nevada Test and Training Range and then continue south-southeast towards Yucca Mountain. In addition to construction of the new rail line, temporary facilities, such as construction camps, access roads, and water wells, and permanent facilities such as a staging yard, maintenance-of-way facility, rail equipment maintenance yard, cask maintenance facility and railroad control center would be required to support the construction and operation of the rail line.

The rail line would be constructed of 136-pound, continuous-welded rail, and will be built and maintained to Class IV railroad standards. Construction activities would occur inside the 300-meter (1,000-foot)-wide construction right-of-way, except in some areas requiring deep cuts or high fills, which could extend beyond typical widths. For railroad construction DOE would construct: construction camps; the roadbed; the track; bridges, culverts, and at-grade and grade-

separated road crossings; facilities to support the railroad; signal and communications systems; and an electric power distribution system. See Draft Rail Alignment EIS at 2-39 to 2-80.

### Construction Camps

Up to 12 construction camps would be developed along the rail alignment to provide housing for construction workers and a logistical base from which to conduct construction activities. These camps would be located about every 30 miles along the alignment. It is anticipated that six camps would be operated at any one time.

### Roadbed Preparation

Construction of the roadbed would begin simultaneously at multiple locations. This activity would require clearing and grubbing, excavation, installation of drainage structures, and development and compaction of the rail roadbed. Typical heavy-duty construction equipment (e.g., front-end loaders, dozers, graders, water wagons, compactors, excavators, drill rigs, cranes, and scrapers) would be used for drilling, blasting, clearing, excavation, screening, and crushing work. To establish a stable roadbed for the track, some areas would have to be filled and others excavated, depending on terrain features.

### Track Construction

Track construction would begin at the start of the rail line near Caliente and move west and then south to Yucca Mountain. Track construction would consist of placing concrete ties, rail, and ballast on top of the roadbed. First, concrete ties would be placed on the subballast. Special rail

equipment would then be used to unload and secure 1,440-foot rail strings onto the concrete ties. Ballast unloaded from rail cars would be dumped evenly on the skeleton track and the track raised until the total depth of ballast under the ties is 12 inches. DOE would construct approximately 12 passing sidings, one approximately every 40 kilometers (25 miles). These passing sidings would be up to 1,800 to 3,700 meters (6,000 to 12,000 feet) long to accommodate a maximum train length of 1,700 meters (5,500 feet).

#### Bridge, Culvert, and Road Crossing Construction

Construction would begin during the first year on bridges, culverts, and at-grade and grade-separated road crossings. It is anticipated that most ephemeral drainages with a normal peak flow of less than 1,000 cubic feet per second would be crossed using round corrugated metal pipes or concrete box culverts. Bridges would be constructed across larger drainages. Most bridges would be made of pre-cast concrete. DOE anticipates it would construct grade-separated crossings at paved highways along the Caliente Rail Line. For crossings at unpaved roads and private crossings, DOE would install passive warning devices, such as crossbucks and stop signs.

#### Facilities

Facilities that would be constructed to support operation of the railroad include a staging yard, an interchange yard, a maintenance-of-way facility, maintenance-of-way headquarters, and a rail equipment maintenance yard.



### Signal and Communication Construction

Along the rail line, 15-foot-tall wayside signals would be installed to control train movement and warn operators of broken rails, rockslides, and certain equipment defects. At public grade crossings, public roads with substantial traffic would have active warning devices (flashers, gates, barriers). Grade crossings at roads with minimal traffic and private crossings would have passive warning devices such as crossbucks and stop signs. The communication system would use a fiber-optic communication cable, very high frequency radio, satellite radios, and possibly satellite telephones to facilitate communications between the train operator, the control center, maintenance personnel, and signal blocks. A fiber optic cable would be buried along the entire length of the rail line and communication towers would be constructed every 10 to 20 miles, depending on terrain. These radio towers would be 75- to 100-feet tall.

### Electric Power Distribution System

A distribution line for electric power would be built along the entire length of the rail line to provide power to facilities and equipment. An underground high-voltage 25-kilovolt distribution line would be placed inside a trench excavated within the rail roadbed. Power to the distribution system would be fed from about five locations where the rail alignment intersects existing high-voltage transmission lines. At these intersections, DOE would construct electric substations adjacent to the rail line and above-ground power lines to connect the distribution line to existing transmission lines. Temporary above-ground power lines may also be constructed to construction camps, facilities, and other construction locations to facilitate construction prior to installation of the below-ground power distribution system.

Approximately 96 percent of the land required for construction of the rail line is managed by the United States Bureau of Land Management (“BLM”), approximately 1 percent is privately-owned property, and the remainder is presently managed by the DOE. Prior to constructing the rail line, DOE is required to obtain a right-of-way grant from the BLM pursuant to 43 C.F.R. Part 2800. Once received, the DOE will comply with all terms and conditions associated with the BLM right-of-way grant. The DOE would also obtain access to the privately-owned property prior to construction and operation of the rail line.

As stated above, the estimated minimum construction period is 4 years and the current estimated cost is approximately \$2.2 billion in year 2005 dollars, and \$2.6 billion in 2008 dollars.

**§ 1150.4(b)                    Details about the amount of traffic and a general description of commodities**

The DOE anticipates it would use the rail line to ship approximately 9,500 casks containing spent nuclear fuel and high-level radioactive waste to the repository over an operations phase of up to 50 years. Each cask would be shipped on an individual cask car. DOE would also ship up to 29,000 railcars of non-radioactive materials, including repository construction materials, materials necessary for day-to-day operations of the rail line and the repository, and waste materials for disposal. The DOE estimates that its spent nuclear fuel and high-level radioactive waste, as well as its non-radioactive material shipments, would equal approximately 17 shipments per week during operation of the rail line. (See Table 1 below).

**Table 1.** Summary of potential train frequencies.<sup>a,b,c</sup>

Train type	Approximate peak frequency (one-way, per week)
Cask trains	8
Repository construction materials and supplies trains	7
Maintenance-of-way trains	2
<b>Total</b>	<b>17<sup>c</sup></b>

a. Source: Rail Alignment EIS Table 2-1, at page 2-8.

b. Average frequencies; actual frequencies would vary from year to year over the operating life of the railroad.

c. The equivalent of 8.5 round-trip trains going from the Staging Yard to the repository and back in 1 week.

In addition to DOE's shipments, DOE's preferred alternative is to make the rail line available for common carriage rail service by commercial shippers. Anticipated general freight shipments as a result of common carriage rail service would include stone and other nonmetallic minerals, petrochemicals, non-radioactive waste materials, or other commodities that private companies would ship or receive.

To provide for common carriage rail service, operational facilities and commercial sidings would need to be constructed to provide access for potential commercial shippers. Funding for these operational facilities and commercial sidings would be provided by the private sector, local, state, or federal government agencies. Shipments of spent nuclear fuel and high-level radioactive waste would be made by dedicated trains. Commercial railcars would be hauled by trains that are separate from trains carrying spent nuclear fuel and high-level radioactive waste, but could be hauled by trains carrying other repository related materials (for example, construction materials and fuel).

Under a DOE-funded cooperative agreement, Nye County commissioned a study of the potential economic benefits to Nye, Esmeralda, and Lincoln counties from the proposed rail line (Exhibit J—*Final Report Rail Transportation Economic Impact Evaluation & Planning*, Wilbur Smith and Associates 2005, et al.). Based on interviews with potential shippers, this report presented low-, mid-, and high-range estimates of commercial freight shipments on the rail line.

DOE conducted independent interviews with each of the potential shippers identified in the Nye County study. Through these efforts, DOE independently estimated levels of commercial freight demand. (Exhibit K—*Shared Use Option: Commercial Traffic Estimates*, Ang-Olson and Gallivan 2007, et al.).

In addition to DOE's estimated 17 train shipments per week, DOE has estimated approximately 8 train shipments per week (222 carloads) as the total commercial freight demand along the Caliente Rail Line. (See Table 2 below). This estimate is based on the Ang-Olson and Gallivan study listed above and is similar to the mid-range estimated demand scenario presented in the Nye County study (Wilbur Smith and Associates 2005, et al.).

**Table 2**—Potential commercial freight shipments – Caliente rail alignment <sup>a</sup>

Commodity	Weight (tons)		Carloads		Train Frequency
	Per week	Per year	Per week	Per year	Per week
Stone	3,580	186,000	36	1,860	Not available
Other nonmetallic minerals	10,580	550,000	106	5,500	Not available
Petrochemicals	5,770	300,000	58	3,000	Not available
Nonradioactive waste materials	1,350	70,000	13	700	Not available
Other commodities	920	48,000	9	480	Not available
<b>Totals</b>	<b>22,290</b>	<b>1,154,000</b>	<b>222</b>	<b>11,540</b>	<b>8 shipments</b>

a. Source: Ang-Olson and Gallivan 2007, all.

Most potential shippers have expressed a willingness to truck their freight shipments to or from a siding, although the maximum acceptable trucking distance varies considerably among the shippers. Some shippers would need to construct storage or loading/unloading facilities at the sidings. Potential shippers have not expressed any interest in either a long spur or a short spur/siding location that is not served by existing paved or gravel roads.

Commercial freight railcars would be set out and picked up at commercial-use sidings.

Commercial-use sidings would be constructed adjacent to passing sidings. DOE would construct passing sidings approximately every 40 kilometers (25 miles) so that trains running in opposite directions would be able to pass one another. These passing sidings would be up to 1,800 to 3,700 meters (6,000 to 12,000 feet) long to accommodate a maximum train length of 1,700 meters (5,500 feet). A commercial access siding (also known as a team track) would then be

constructed as a third track parallel to the mainline and the passing siding. Commercial-access sidings would generally be less than 300 meters (980 feet) long and would be double ended (switches at both ends). To the extent practicable and appropriate, DOE would also accommodate the construction of additional access sidings, or short-spur lines, by private shippers.

§ 1150.4(c) **Purposes of the proposal; public convenience and necessity factors supporting the proposal**

The proposed rail line is necessary and in the public interest. The DOE has four compelling purposes for seeking to construct the proposed rail line. First, the Congress, the President, and the Secretary of Energy have recognized the need to address the national interests in management of the nation's spent nuclear fuel and high-level radioactive waste. Second, there is no existing rail service to the Yucca Mountain site. The proposed rail line would enable the DOE to transport the nation's spent nuclear fuel and high-level radioactive waste safely and securely from existing rail lines to the repository at the Yucca Mountain site. Third, the rail line would enable DOE to ship construction materials for the construction of the repository to the Yucca Mountain site, which would alleviate the burden on the nation's highways for such transport. Lastly, by providing common carriage rail service, the rail line would promote economic development and services to rural areas of Nevada.

1. The need to address the national interests created by the nation's spent nuclear fuel and high-level radioactive waste

Spent nuclear fuel and high-level radioactive waste are the by-products of commercial nuclear energy production, defense plutonium production, and research and medical activities that utilize nuclear reactors or fission product nuclides. At present, more than 55,000 metric tons of spent nuclear fuel and high-level radioactive waste is stored at approximately 121 sites in 39 States. Approximately 2,000 metric tons of additional spent nuclear fuel is generated annually.

The Congress, the President and the Secretary of Energy have determined that there is a need to address the national interests associated with the nation's spent nuclear fuel and high-level radioactive waste and to dispose of it in a permanent geologic repository. These interests include national security, non-proliferation objectives, energy security, homeland security, and protection of human health and the environment.

A. The Need Recognized by Congress

In 1982, the Congress established a comprehensive framework for the federal government to provide for the disposal of the nation's spent nuclear fuel and high-level radioactive waste and initiated a process to select a site for a potential geologic repository when it passed the NWPA. Congress' findings included but were not limited to: radioactive wastes create health and environmental risks which need acceptable methods of disposal; the accumulation of radioactive wastes has created a national problem; federal efforts to deal with radioactive wastes prior to 1982 were inadequate; and the Federal Government has the responsibility to provide for the permanent disposal of high-level radioactive waste and spent nuclear fuel, but that the costs

should be the responsibility of generators and owners of such waste. See NWPA § 111(a); 42 U.S.C. § 10131(a) (2007).

With these concerns in mind, Congress stated four purposes in the NWPA: 1) to establish a schedule for siting, constructing, and operating a repository to reasonably assure that the public and environment will be protected from the risks of spent nuclear fuel and high-level radioactive waste; 2) to establish the Federal responsibility and a definite Federal policy for the disposal of such waste; 3) to define the relationship between the Federal Government and State governments with respect to such wastes; and 4) to establish a Nuclear Waste Fund, composed of payments by owners and generators of such waste, to dispose of such waste. See NWPA § 111(b); 42 U.S.C. § 10131(b) (2007).

To achieve these purposes and to administer this responsibility, Congress created the DOE's OCRWM and its Director to carry out the functions of the Secretary of Energy under the NWPA, including the purposes listed above. See NWPA § 304; 42 U.S.C. § 10224 (2007). In 1987, Congress amended the NWPA by identifying the Yucca Mountain Site in Nye County, Nevada, as the site to be studied for a potential geologic repository.

In accordance with the DOE's responsibilities under the NWPA and the National Environmental Policy Act ("NEPA"), and as part of the DOE's responsibility to characterize the Yucca Mountain site, the DOE prepared an environmental impact statement to examine the



environmental effects associated with constructing and operating a geologic repository at Yucca Mountain. *See Yucca Mountain FEIS.*

#### B. The Need for a Repository Expressed by the Secretary of Energy

On February 14, 2002, the Secretary of Energy submitted his recommendation (Exhibit I), along with a comprehensive statement of the basis for the recommendation, to the President for approval of the Yucca Mountain Site for the development of a nuclear waste repository. The Secretary's recommendation examined Yucca Mountain's scientific and technical suitability, articulated compelling national interests that require the development of a repository, and refuted arguments against locating a repository at the Yucca Mountain Site. The compelling national interests the Secretary addressed were national security, non-proliferation objectives, energy security concerns, homeland security, and national efforts to protect the environment.

##### i. A repository is important to national security

About 40 percent of the nation's fleet of principal combat vessels, including submarines and aircraft carriers are nuclear-powered. These vessels must periodically be refueled and the spent fuel removed. This spent fuel is currently stored at surface facilities under temporary arrangements. A repository is necessary to assure a permanent disposition pathway for this material and thereby enhance the certainty of future naval operational capacity.

ii. A repository is important to promote non-proliferation objectives

The end of the Cold War has brought with it the challenge of disposing of surplus weapons-grade plutonium as part of the process of decommissioning weapons the nation no longer needs. A geologic repository is an integral part of meeting this challenge. Without it, the nation's ability to meet its pledge to decommission its weapons could be at risk, thereby jeopardizing the commitment of other nations, such as Russia, to decommission their weapons.

iii. A repository is important to energy security

The nation must ensure that nuclear power, which provides approximately 20 percent of the nation's electric power, remains an important part of the nation's domestic energy production to meet our growing energy demands. Without the stabilizing effects of nuclear power, energy markets will become increasingly more exposed to price spikes and supply uncertainties, as the nation is forced to replace it with other energy sources to substitute for the almost five hours of electricity that nuclear power currently provides each day, on average, to each home, farm, factory and business in America. Nuclear power is also important to sustainable growth because it produces no controlled air pollutants, such as sulfur and particulates, or greenhouse gasses. A repository at Yucca Mountain is indispensable to the maintenance and potential growth of this environmentally efficient source of energy.

iv. A repository is important to homeland security

Spent nuclear fuel, high-level radioactive waste, and excess plutonium for which there is no complete disposal pathway without a repository are currently stored at approximately 121 sites in

39 States. More than 161 million Americans live within 75 miles of one or more of these sites. The facilities housing these materials were intended to do so on a temporary basis. They should be able to withstand current terrorist threats, but that may not remain the case in the future. These materials would be far better secured in a deep underground repository at Yucca Mountain, on federal land, far from population centers, that can withstand an attack well beyond any that is reasonably conceivable.

- v. A repository is important to the nation's efforts to protect the environment

It is past time for the Federal Government to implement an environmentally sound disposition plan for spent nuclear fuel and high-level radioactive waste from defense activities. It is also past time for the Federal Government to begin the environmentally sound disposition of commercial spent fuel, a program that was set to begin in 1998. A repository is necessary for the accomplishment of either or both of these objectives.

### C. The Need Expressed by the President of the United States

After receiving the Secretary's recommendation expressing the above listed interests on February 14, 2002, on February 15, the President, in accordance with the NWPA, approved the Secretary of Energy's recommendation of the Yucca Mountain Site for development as a geologic repository, and recommended the site to the Congress as qualified for the DOE to pursue an application for construction authorization for a repository (Exhibit L—Presidential Letter to Congress). Subsequently, Congress passed a joint resolution of the United States House of Representatives and the United States Senate designating the Yucca Mountain site for

development as a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste. On July 23, 2002, the President signed the joint resolution into law (Public Law 107-200). In his letter recommending the site to Congress the President stated:

Proceeding with the repository program is necessary to protect public safety, health, and the Nation's security because successful completion of this project would isolate in a geologic repository at a remote location highly radioactive materials now scattered throughout the Nation. In addition, the geologic repository would support our national security through disposal of nuclear waste from our defense facilities.

A deep geologic repository, such as Yucca Mountain, is important for our national security and our energy future. Nuclear energy is the second largest source of U.S. electricity generation and must remain a major component of our national energy policy in the years to come. The cost of nuclear power compares favorably with the costs of electricity generation by other sources, and nuclear power has none of the emissions associated with coal and gas power plants.

This recommendation, if it becomes effective, will permit commencement of the next rigorous stage of scientific and technical review of the repository program through formal licensing proceedings before the Nuclear Regulatory Commission. Successful completion of this program also will redeem the clear Federal legal obligation safely to dispose of commercial spent nuclear fuel that the Congress passed in 1982.

This recommendation is the culmination of two decades of intense scientific scrutiny involving application of an array of scientific and technical disciplines necessary and appropriate for this challenging undertaking. It is an undertaking that was mandated twice by the Congress when it legislated the obligations that would be redeemed by successful pursuit of the repository program. Allowing this recommendation to come into effect will enable the beginning of the next phase of intense scrutiny of the project necessary to assure the public health, safety, and security in the area of Yucca Mountain, and also to enhance the safety and security of the Nation as a whole.

Thus, Congress, the President, and the Secretary of Energy have all expressed the need to address the national interests created by the management of the nation's spent nuclear fuel and high-level radioactive waste, including national security, non-proliferation objectives, energy security, homeland security, and protection of human health and the environment.

2. The rail line would enable the DOE to safely and securely transport the nation's spent nuclear fuel and high-level radioactive waste to the proposed repository at Yucca Mountain

In the Yucca Mountain FEIS, DOE analyzed a proposed action to construct, operate, monitor, and eventually close a geologic repository at the Yucca Mountain site for the disposal of spent nuclear fuel and high-level radioactive waste. As part of that action, DOE evaluated various modes of transporting spent nuclear fuel and high level radioactive waste from commercial sites and DOE sites nationwide to the Yucca Mountain Site. The evaluation considered the modes of transportation that would be used both nationally and in Nevada.

The purpose of the evaluation was to analyze and compare the range of potential transportation impacts to human health and the environment. DOE evaluated two national transportation scenarios, referred to as the “mostly legal-weight truck scenario” and the “mostly rail scenario,” and three Nevada transportation scenarios, referred to as the “Nevada mostly legal-weight truck scenario,” the “Nevada mostly rail scenario,” and the “Nevada mostly heavy-haul truck scenario.”

Following completion of the Yucca Mountain FEIS, the DOE announced its selection, both nationally and in the State of Nevada, of rail as the primary means of transporting spent nuclear fuel and high-level radioactive waste to the repository *Record of Decision*, 69 Fed. Reg. 18557, (April 8, 2004). In making its decision to select the mostly rail scenario both nationally and in the State of Nevada, DOE carefully weighed factors including but not limited to the potential radiation exposure to workers and members of the public, impacts to the environment, the

number of rail and highway shipments needed, the proximity of commercial facilities to railheads, the State of Nevada's preferences expressed in comments to the DOE, the irreversible and irretrievable commitments of resources, and cumulative impacts from transportation activities. *Id.* at 18561.

Specifically, with respect to the impacts to human health by potential radiation exposure to workers and members of the public, it was estimated that there would be fewer non-radiological traffic fatalities under the mostly-rail scenario (3 fatalities), compared to the mostly legal-weight truck scenario (five fatalities). *Id.* at 18559. Additionally, with respect to routine (incident-free) exposures from cask loading/unloading and shipping along transportation routes, it was estimated that there would be fewer worker and general public latent cancer fatalities under the mostly rail scenario (3 worker fatalities, 1 general public fatality) than the mostly legal-weight truck scenario (12 worker fatalities, 3 general public fatalities).<sup>2</sup> *Id.*

The DOE has recently issued its Draft Repository SEIS, which supplements the Yucca Mountain FEIS. The Draft Repository SEIS provided updated estimates under the mostly rail scenario for non-radiological traffic fatalities and routine (incident-free) exposures from cask loading/unloading and shipping. These estimates in the Draft Repository SEIS, which are similar to those in the Yucca Mountain FEIS, are approximately 3 non-radiological traffic fatalities, and approximately 3 worker latent cancer fatalities and 1 general public latent cancer

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<sup>2</sup> DOE estimated that the potential health effects to the general public from a severe transportation accident were greater for the mostly rail scenario (5 latent cancer fatalities) than the mostly legal-weight truck scenario (1 latent cancer fatality) due to the greater amounts of radioactive materials that could be released from a rail cask in such an accident. However, the chances of a severe transportation accident were estimated to be extremely rare, *i.e.* about 3 chances in 10 million per year. 69 Fed. Reg. at 18559.

fatality from routine (incident-free) exposures from cask loading/unloading and shipping. *See Draft Repository SEIS* at pages 6-18 and 6-16, respectively. Estimates for the mostly legal weight truck scenario are not available in the Draft Repository SEIS because DOE only considered impacts from the mostly rail scenario following the selection of the mostly rail scenario announced in the Record of Decision.

As part of implementing the mostly rail scenario nationally and in the State of Nevada, the DOE recognized that it would need to construct a rail line to connect the repository site to an existing rail line in the State of Nevada. The proposed rail line in this application is designed to meet that need and enable the DOE to use a mostly rail scenario for transportation nationally and in the State of Nevada. Thus, based on DOE's consideration of the above factors, the proposed rail line is necessary and in the public interest to safely and securely transport the nation's spent nuclear fuel and high-level radioactive waste to the proposed repository at the Yucca Mountain site.

3. The rail line would enable DOE to ship construction materials for the construction of the repository to the Yucca Mountain site

The primary construction materials for the proposed repository at Yucca Mountain would be concrete, steel, and copper. During the construction period, the estimated use of concrete would be about 320,000 cubic meters (420,000 cubic yards). *See Draft Repository SEIS* at 4-85. The amount of cement required would be about 130,000 metric tons (about 140,000 tons). *Id.* The average yearly concrete demand for the construction period would be about 65,000 cubic meters (about 85,000 cubic yards). *Id.* DOE would also need as much as 280,000 metric tons (310,000

tons) of carbon steel for uses that would include rebar, piping, vent ducts, and track. *Id.*

Additionally, DOE would need about 670 metric tons (740 tons) of copper for uses that would include electrical cables. *Id.*

In order to transport the primary construction materials, materials necessary for day-to-day operations of the rail line and the repository, waste materials for disposal, as well as other supplies for the repository and support facilities, DOE estimates transporting up to 29,000 railcars on the proposed rail line during its operations phase. The proposed rail line is necessary and in the public interest for DOE to ship considerable quantities of construction materials and supplies to the proposed repository at Yucca Mountain.

4. Common carriage rail service would promote economic development and services to rural areas of the State of Nevada

In addition to serving DOE's need to transport spent nuclear fuel, high-level radioactive waste, and non-radioactive shipments, DOE's preferred alternative is to make the rail line available for common carriage rail service by commercial shippers. As discussed below in sections 1150.4(e) and 1150.4(g)(1), the rail line would provide service to the communities in the State of Nevada of Panaca, Caliente, Tonopah, Goldfield, and Beatty. With the exception of Caliente, the other communities do not presently have rail service.

As discussed above in section 1150.4(b), Nye County and the DOE independently conducted surveys of potential shippers in these communities and estimated the potential demand for commercial freight shipments along the proposed rail line. The DOE estimate of total



commercial freight demand, which was similar to the Nye County mid-range estimate, predicts approximately 8 commercial train shipments per week (approximately 222 carloads) along the proposed rail line.

In addition to the public benefits from shipping along the rail line, construction and operation of the rail line will provide residents in the nearby counties and communities with employment opportunities as well as a greater customer base for local businesses. DOE estimates that about 1,800 workers per year will be needed for the construction of the rail line. While this number exceeds the amount of labor available in Lincoln, Nye, and Esmeralda counties, these counties would be relied on to provide labor and services for the construction of the railroad. *Draft Rail Alignment EIS* at 2-265. The operation of the railroad would also provide employment opportunities, at facilities such as the proposed Rail Interchange yard, the proposed Operations Center, and the proposed Maintenance-of-Way facility. In addition, area businesses would benefit from the influx of workers necessary for the construction and operation of the railroad.

DOE has examined socioeconomic impacts of rail line construction and operation in depth in Chapter 4 of the Draft Rail Alignment EIS. DOE concluded that potential impacts to socioeconomics included but were not limited to:

- Population increases in all counties in the region of influence during the construction and operations phases;
- Employment increases in all counties in the region of influence during the construction and operations phases;
- Real disposable income increases in all counties in the region of influence during the construction and operations phases;
- Gross regional product increases in all counties in the region of influence during the construction and operations phases; and

- State and local government spending increases in all counties in the region of influence during the construction and operations phases.

*Draft Rail Alignment EIS* at 4-285 – 4-286. Thus, the proposed rail line is necessary and in the public interest by making common carriage rail service available to businesses, providing employment opportunities to area residents during the construction and operations phases of the rail line, and increasing the customer base of local businesses in counties in the region of influence of the proposed rail line.

§ 1150.4(d)                    **Map (Exhibit C)**

Please refer to Exhibit C for the following map:

“Area to be Served by Rail Line to Yucca Mountain”

§ 1150.4(e)                    **Counties and cities to be served and availability of other rail service; connecting railroads**

The rail line would connect to the existing Union Pacific Rail Road near Caliente, Nevada, and would traverse Lincoln, Nye, and Esmeralda counties before entering the Nevada Test Site.

With the exception of Caliente, none of the communities located on or near the line currently have rail service. The cities potentially to be served by the rail service include Panaca, Caliente, Tonopah, Goldfield, and Beatty. DOE estimates approximately 17 DOE shipments per week (spent nuclear fuel, high-level radioactive waste, non-radioactive materials) and 8 commercial shipments per week (222 carloads). Terms with Union Pacific have not been negotiated at this time.

**§ 1150.4(f)**                    **Time schedule**

DOE anticipates that it would take a minimum of 4 years to construct the railroad. Construction would begin with the construction of water wells, construction camps, and quarries.

Construction would require the procurement of concrete ties and rail for track construction, as well as steel for bridge construction. Approximately one month after beginning construction and while these previous activities would still be occurring, DOE anticipates that, subject to availability of necessary funds, construction of the rail roadbed, culverts, bridges, and grade-separated crossings would begin simultaneously at multiple points along the rail alignment. Near the start of Year 2 of construction, quarries would begin to produce ballast, and stockpiling of rails would begin. Shortly thereafter, track construction would begin and would move sequentially along the rail alignment toward the Yucca Mountain site. Construction would begin on signals and communications structures shortly after the end of Year 1.

Although DOE anticipates that construction would take a minimum of approximately 4 years, there is the possibility Congressional appropriations would not be sufficient to complete construction in 4 years and that additional time would be required. For bounding purposes, DOE has assumed in its Draft Rail Alignment EIS a construction schedule up to 10 years. The construction sequence under a 10-year schedule would be similar to the 4-year schedule, except that under the 10-year schedule, construction of the rail roadbed would occur sequentially, starting at the beginning of the rail alignment and moving toward Yucca Mountain.

§ 1150.4(g)            Construction of a new line

§ 1150.4(g)(1)        Approximate area to be served by the line

The rail line would provide new service for more than 300 miles across Nye, Esmerelda, and Lincoln counties, through rural areas of Nevada and provide service to communities including Panaca, Caliente, Tonopah, Goldfield and Beatty.

§ 1150.4(g)(2)        Existing and prospective industries in the area

Potential commercial freight shipments would include several local commodities including stone, nonmetallic minerals, petrochemicals, and non-radioactive waste materials. Businesses that were interviewed in studies to identify potential commercial use of the rail line are listed below.

**Farland Refinery Corp** is currently operating the Eagle Springs oil refinery facility, located approximately 100 miles east of Tonopah, and also has a small terminal in Tonopah where it stores petroleum-related product.

**Natural Pozzolan** is developing a facility to mine pozzolan (a cement additive) along US 93 north of Pioche.

**Wilkin Mining and Trucking** operates a concrete batch plant in Caliente and a crushing plant near Panaca. There is the potential that the firm would exploit perlite in the Panaca area and ship outgoing product by rail.

**Badger Mining** operates a facility in the Amargosa Valley (Ash Meadows), where it produces zeolite.

**Chemetall Foote** runs an operation in Silver Peak, Nevada that mines lithium carbonate.

**Cind-R-Lite** operates a cinder block mine along US 95, near the junction with Highway 373.

**D&H Mining** operates a landscape rock quarry located along the rail alignment in the Beatty Wash area.

**IMV Nevada** is operating a mine and processing facility in the Lathrop Wells/Amargosa Valley area. Its specialty product is sepiolite.

**Nevada Western Silica Corporation** owns the mining claim for a large, high grade silica deposit near Lida Junction, south of Goldfield in Esmeralda County.

**US Ecology** operates a hazardous waste treatment and disposal facility along US 95, approximately 14 miles southeast of Beatty.

§ 1150.4(g)(3)      **Crossings required of other rail lines**

The proposed rail line would not cross any existing rail lines.

§ 1150.5      OPERATIONAL DATA

An operator for the rail line has not been selected at the time of this application. Once an operator has been selected, an operating plan would be developed that includes more detailed traffic projections studies; a schedule of operations; information about the crews to be used and where employees would be obtained; the rolling stock requirements and where it would be obtained; information about the operating experience and record of the operator unless it is an operating railroad; any significant change in patterns of service; any associated discontinuance or abandonments; and expected operating economies.

General statements regarding operations of anticipated DOE and common carriage trains are listed below.

1. Operation of spent nuclear fuel and high-level radioactive waste trains on the Caliente Rail Line

Union Pacific Railroad trains carrying casks of spent nuclear fuel and high-level radioactive waste would depart the Union Pacific Railroad Mainline near Caliente and proceed along the new railroad to a Staging Yard north of Caliente (See Exhibit C). At the Staging Yard, Union Pacific Railroad locomotives would uncouple from cask cars and return to the mainline. The cask cars would be inspected in accordance with Federal Railroad Administration regulations and then coupled to Caliente Rail Line operated dedicated trains, which would consist of two or three 4,000-horsepower diesel-electric locomotives followed by a buffer car; one to five cask cars followed by another buffer car; and one escort car carrying security personnel. Trains would depart the Staging Yard and proceed along the railroad to the Rail Equipment

Maintenance Yard located at Yucca Mountain. The Rail Equipment Maintenance Yard would serve as the termination point of the railroad and the staging area for delivery of loaded cask cars to be accepted by the Yucca Mountain Repository. Casks would then be transferred to control of the geologic repository operations area for receipt inspection and acceptance.

Empty casks would be transferred back to railroad control, and before they were returned to the Staging Yard for onward shipment, could be sent to a Cask Maintenance Facility for testing, inspection, maintenance in accordance with the NRC Certificate of Compliance, minor decontamination, and routine repair of the casks.

2. Operation of trains transporting freight to support repository construction

Freight trains carrying construction and other materials, such as fuel oil and empty waste packages, would arrive in Nevada via the Union Pacific Railroad Mainline and proceed directly to the Interchange Yard. Once at the Interchange Yard, Union Pacific Railroad locomotives may uncouple from their freight cars on the interchange tracks. Caliente Rail Line locomotives would then be coupled with the freight cars to transport the materials along the rail line to the Rail Equipment Maintenance Yard at the Yucca Mountain site. The same level of security necessary for railcars carrying spent nuclear fuel or high-level radioactive waste would not be necessary for railcars carrying construction or other materials. Therefore, no escort cars would be required for trains transporting construction or other materials.

### 3. Operation of common carrier trains

The commercial trains (not including the locomotive) could consist of up to 60 cars and could be approximately 1,100 meters (3,600 feet) long. Depending on the weight of the train, three or four locomotives could be required. Commercial trains would haul a range of products to and from businesses, including stone and other nonmetallic minerals, oil and petroleum products, and waste materials. Commercial rail cars would also be hauled in trains carrying materials related to the construction (e.g. reinforcing steel, cement) and operation (e.g. waste packages, fuel oil) of the repository. The operating characteristics of these commercial trains cannot be accurately defined at this time.

## § 1150.6 FINANCIAL INFORMATION

### § 1150.6(a) Proposed financing of construction

The Nuclear Waste Fund was established by the NWPA. See 42 U.S.C. § 10222. At present the value of the Nuclear Waste Fund is approximately \$21.6 billion. See Exhibit E/F. The Nuclear Waste Fund will be used to fund the construction of the rail line, subject to yearly Congressional appropriations.

### § 1150.6(b) Balance sheet and income statement (Exhibits E-F)

Exhibit E/F provides financial information regarding the Nuclear Waste Fund, including balance sheets and income statements for DOE OCRWM for fiscal years 2005-2006 and 2006-2007.



§ 1150.6(c) Present value determination of project costs

A summary of estimated costs associated with the proposed rail construction are shown in Table 3 below. The estimate does not include costs associated with mitigation, ownership, operations, abandonment, rolling stock and casks, schedule-related costs, or Yucca Mountain Project program or nuclear material requirements.

**Table 3**—Summary of Cost Estimate - Caliente rail alignment <sup>a</sup>

Cost Component	Cost Estimate	
	2005 Dollars	2008 Dollars <sup>b</sup>
Alignment Construction including Excavation, Engineered Fill, Over/Underpass, Bridges, Drainage Structures and Water Requirements for Construction	823,798,000	972,905,438
Trackwork	478,690,000	565,332,890
Signals and Communications	193,474,000	228,492,794
Other Costs	4,965,000	5,863,665
<b>Total Alignment Construction Costs</b>	<b>1,500,927,000</b>	<b>1,772,594,787</b>
Contingency	360,221,000	425,421,001
Design & Engineering, Construction Management	132,972,000	147,306,382
Program Management	63,344,000	70,172,483
Right-of-Way (ROW) Acquisition	4,299,000	5,077,119
<b>Total Estimated Alignment Cost</b>	<b>2,061,763,000</b>	<b>2,420,571,772</b>
<i>Facilities: UP Railroad Interchange Yard; CRC Staging Yard, EOL Yard with Access Track and CMF Access Tracks, and CRC MOW Facilities</i>		
<b>Total Facilities Construction Cost</b>	<b>89,849,000</b>	<b>97,935,410</b>
Contingency and Mobilization	29,651,000	35,017,831
Development Costs (Engineering, Construction Management; Geotechnical)	7,190,000	7,965,082
Program Costs	2,696,000	2,986,629
ROW Acquisition	1,700,000	2,007,700
<b>Total Facility Cost Estimate</b>	<b>131,086,000</b>	<b>145,912,652</b>
<b>Total CRC Construction Phase Cost Estimate</b>	<b>2,192,849,000</b>	<b>2,566,484,424</b>

a. Source: Comparative Cost Estimates, Caliente Rail Corridor, Summary Report, July 03, 2007

b. 2008 dollars reflect cost escalation from 2005 cost estimates

**§ 1150.6(d)                    Projected net income, based upon traffic projections**

The DOE would not construct the rail line with a profit-making motive. The DOE's preferred alternative is for the rail line to be operated as a common carriage rail line, and DOE anticipates that commercial shippers who utilize the rail line will pay standard rates for such usage, as established by the Board. At this time DOE is not projecting net income that will result from the use of the rail line by other shippers. Traffic projections for use of the rail line by shippers other than DOE are discussed above in §§ 1150.4(b), 1150.4(g)(2) and 1150.5.

**§ 1150.7                    ENVIRONMENTAL AND ENERGY DATA**

Exhibit H consists of the Draft Nevada Rail Corridor SEIS and the Draft Rail Alignment EIS. It is available online at: [http://www.ocrwm.doe.gov/transport/draft\\_eis/index.shtml](http://www.ocrwm.doe.gov/transport/draft_eis/index.shtml).

It is also available in hard copy at the:

DOE Public Reading Room  
2341 Postal Drive  
Pahrump, Nevada 89048  
(775) 751-7480

Documents also can be ordered by calling the OCRWM toll-free information line at 1-800-225-6972.

**§ 1150.8                    ADDITIONAL SUPPORT**

Exhibit I— Secretary of Energy's Transmittal Letter to President George W. Bush, and Secretary of Energy's Recommendation Regarding the Suitability of the Yucca Mountain Site for a Repository Under the Nuclear Waste Policy Act of 1982

Exhibit J— *Rail Transportation Economic Impact Evaluation & Planning*, Wilber Smith and Associates 2005

Exhibit K— *Shared Use Option: Commercial Traffic Estimates, Ang-Olson and Gallivan 2007*

Exhibit L— Presidential Letter to Congress

Exhibit M— Selected Public Comments in Support of Shared Use from the 2004 Scoping Process

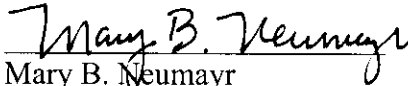
§ 1150.9 **NOTICE**

In order to provide notice under the requirements of 49 C.F.R. § 1150.10(f), DOE will publish a summary of this Application in a newspaper of general circulation in each county in which the line is located. This summary is attached to this Application as Exhibit N.

**Conclusion**

In conclusion, DOE respectfully requests that the Board grant DOE a Certificate of Public Convenience and Necessity to construct and operate the proposed Caliente Rail Line.

Respectfully submitted,

  
Mary B. Neumayr  
Deputy General Counsel  
for Environment & Nuclear Programs

**SIGNATURES, OATHS, AND CERTIFICATIONS  
OF APPLICANT'S EXECUTIVE OFFICER  
(SECTION 1150.10(c))**

BEFORE THE  
SURFACE TRANSPORTATION BOARD

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Finance Docket No. 35106

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UNITED STATES DEPARTMENT OF ENERGY

Edward F. Sproat, III, being duly sworn, deposes and says that he is Director of the Department of Energy's Office of Civilian Radioactive Waste Management, applicant herein; that he is an executive officer duly authorized to sign, to verify, and to file this Application on behalf of the United States Department of Energy; that he has written and detailed knowledge of the matters contained in this Application; and that the statements made in the Application are true and correct to the best of his knowledge and belief.

  
Edward F. Sproat, III