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






Subject: State of Utah Comments on Supplement EISs for the Repository and Rail Corridor & Alignment
 LSN: Relevant - Not Privileged
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Attached please find State of Utah Comments on DOE's draft supplemental environmental impact statements for the Yucca Mountain Repository and the Nevada Rail Corridor and Alignment. Also attached are the following documents referenced as an enclosure to Utah's comments:

1. Copy of letter from Edward F. Sproat, III, Director, OCRWM to B. John Garrick, Ph.D., Chairman, NWTB, dated November 6, 2007.
2. Dairyland Power Coop. v. United States, Ct. Cl. No. 04-106 C (filed Dec. 19, 2007).
3. Salt Lake Tribune article dated October 15, 2004 ("Goshutes' waste plan hits a snag").
4. Robert Halstead, State of Nevada, testimony before the Transportation Planning Panel, NWTB (Oct. 14, 2004 meeting in Salt Lake City).

Please contact me if you have any difficulty with this transmission or if you would like a paper copy of the attachments. Also, please acknowledge receipt (via e-mail) of this transmission. Thank you.

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 0 Utah Comments on Yucca Mt SEIS.pdf 1 DOE11-6-07 resp NWTB.pdf 2 Dairyland v DOE Compel Doc Production.pdf




 3 SLTrib 2004 Oct 15.pdf 4 Halstead NTWRB.pdf

State of Utah Comments

on

Draft Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Ney County, Nevada (DOE/EIS-0250F-S1D)

and

Draft Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Ney County, Nevada – Nevada Rail Transportation Corridor (DOE/EIS-0250F-S2D)

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, Ney County, Nevada (DOE/EIS-0369D)

Issued by the U.S. Department of Energy
October 2007

Comments submitted electronically to eis_office@ymp.gov
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STATE OF UTAH COMMENTS

The following comments are provided by the State of Utah in response to the notice of comment period on the afore-referenced Draft Supplement Environmental Impact Statement for the Repository ("SEIS"); and the Draft Supplemental Environmental Impact Statements for the Nevada Rail Transportation Corridor and Draft Environmental Impact Statement for the Rail Alignment in Nevada (collectively "SEIS Transp.") issued by the U.S. Department of Energy ("DOE") in 72 Fed. Reg. 58,071 (October 12, 2007).¹

A. Comments on the Draft Supplemental Environmental Impact Statement for the Repository

1. At this Late Date, DOE Does Not Have Detailed or Accurate Information on the Overall Concept for the Yucca Mountain Repository

a. Inaccuracies and Lack of Specificity

¹ [The Department of Energy's often-stated goal is in June 2008 to submit a license application to the Nuclear Regulatory Commission ("NRC") for authorization to construct surface facilities at the Yucca Mountain repository. To achieve that feat, DOE should have already developed detailed plans for the surface design and operations at the repository. Yet, the supplemental environmental impact statement is full of generalities, inaccuracies and, in some instances, a total lack of planning.

Congress amended the Nuclear Waste Policy Act ("NWPA") in 1987 for the purpose of directing DOE to study the Yucca Mountain site as the sole repository site for the permanent disposal of spent nuclear fuel ("SNF") and high-level nuclear waste ("HLNW"). After two decades, DOE has either not started² or is only in the early planning stages in areas such as canister design, waste acceptance criteria, transportation route selection and repository throughput.

Eighteen years after Yucca Mountain was chosen as the sole repository candidate site, DOE made a radical change to the design concept for the repository. On October 25, 2005, DOE announced it would no longer accept bare fuel assemblies; instead spent nuclear fuel would be packaged at reactor sites in DOE standardized containers (*i.e.*, transportation, aging and disposal or "TAD" canisters). Yet, the Standard Contract DOE has entered into with nuclear utilities specifies DOE accept bare fuel and not fuel packaged in TAD canisters (or for that matter packaged in dual-purpose canisters). *See* 10 C.F.R. § 961.11. DOE has made no effort to alter the requirements under the Standard Contract even though it is charging ahead with a license application centered on the TAD canister concept.

¹Comments are organized under topic headings for ease of consideration. However, issues are interrelated, and commonly impact or encompass other issues under other topic headings. Issues should not be narrowly construed or evaluated, based on topic headings.

²For example, DOE acknowledges that it has not even started to identify a national suite of rail and truck routes or to develop a transportation operations plan. SEIS at H-10.

Such a discordant approach results in an incomplete design package for the public to review and comment upon. For example, details of DOE's waste acceptance criteria won't be known until DOE submits its license application to the NRC. DOE simplistically assumes SNF and HLNW, at the time of shipment, will meet repository disposal and acceptance criteria. SEIS at 2-42.

Details of DOE's intended use of storage pads at the repository (referred to in the SEIS as "aging pads") won't be known until DOE submits a thermal performance analysis for the repository to the NRC. The final capacity of the storage pads won't be known until post-closure approval by NRC and details of the final TAD canister design won't be known until the TAD canister vendors submit applications to the NRC for certificates of compliance. In response to questions by the Nuclear Waste Technical Review Board, DOE said it is waiting for its "design [to] mature[] with respect to the throughput capability of the facilities, the TAD thermal capabilities as identified by the vendors, emplacement strategies during preclosure . . . and the characteristics of the waste stream" before it decides whether the capacity of the aging pads should be 21,000 MTU (metric tons of uranium) or half that capacity.³

If DOE expects to submit its license application to the NRC in the next six months, these design criteria should be far enough along to allow DOE to write an SEIS that contains specific details rather than mere generalities.]

b. Actions Outside the Scope of DOE's Authority

2 [Not only has DOE failed to focus in the SEIS on specific details for a statutorily authorized 70,000 MTU capacity repository, but it has also analyzed unauthorized activities, as illustrated by the following statement in the SEIS:

[G]iven the uncertainties inherent at this time in estimating the amount of spent nuclear fuel and high-level radioactive waste that would result from full or partial implementation of GNEP, this Repository SEIS analyzes the transportation and disposal of about 130,000 MTHM of commercial spent nuclear fuel, 2,500 MTHM of DOE spent nuclear fuel and about 35,780 canisters of high-level radioactive waste (Inventory Module 1).

SEIS at 1-19; *see also* § 8.1.2.1. DOE views such an analysis as "reasonable foreseeable." However, DOE fails to take into account the reality of Congress passing changes to the NWPA to accomplish that desired disposal capacity at Yucca Mountain.

DOE is engaged in litigation in the U.S. Court of Federal Claims with various nuclear utilities who have sued DOE over its failure to meet the NWPA imposed deadline that DOE begin to collect SNF at reactor sites by January 31, 1998. *See* 42 U.S.C. § 10222(a)(5)(B). There is the potential that DOE will expedite commercial SNF shipments to the repository as a litigation strategy

³*See* Letter from Edward F. Sproat, III, Director, Office of Civilian Radioactive Waste Management to B. John Garrick, Ph.D., Chairman, Nuclear Waste Technical Review Board ("NWTRB"), dated November 6, 2007 (hereafter "DOE Letter to NWTRB")(copy attached).

to settle these lawsuits.⁴ Such expedited shipments would appear to violate NWPA's ban on using the repository as an interim storage site. As the NRC recently concluded in its denial of Nevada's petition for rule-making: storage at the repository is permissible only to the extent it is integral to repository operations (*i.e.*, waste handling and disposal). 72 Fed. Reg. 60,288-90 (October 24, 2007).

In sum, DOE should have centered its efforts in the SEIS on informing the public how it has developed a coherent and integrated plan for the authorized geologic disposal of SNF and HLNW and what impacts and other NEPA considerations flow from the proposed action, as authorized by law. This it has failed to do.]

2. Fuel Receipt and Acceptance at the Repository and Aging Pads

a. TAD Canisters

3 [DOE expects that 90% of the commercial SNF received for disposal at Yucca Mountain will be in TAD canisters and 10% will be in dual purpose canisters.⁵ See SEIS at 2-3 and § 2.1.1. The SEIS, however, fails to discuss how DOE will successfully implement its new TAD approach to managing commercial SNF. For example, what is the basis for DOE's assumption that most commercial SNF will be in TAD canisters? As DOE has yet to choose a standard canister, how can it rely on its 90% TAD receipt assumption? Does DOE expect utilities, who already have SNF stored in dry casks and dual purpose canisters, to repackage it into TAD canisters before DOE will find the fuel acceptable for collection? If so, what is the basis for this assumption? Will DOE provide incentives for utilities to repackage their SNF from dual purpose canisters into TAD canisters?

DOE's updated cask shipment data, Table G-10, lists the number of casks containing uncanistered SNF, TAD canisters and "other canisters." Nowhere is there a specific description of "other canisters." Elsewhere, DOE says: "Shipment of the remaining 10 percent of the commercial spent nuclear fuel would be in rail casks that contained other types of canisters such as dual-purpose canisters or as uncanistered spent nuclear fuel in truck casks." SEIS at S-42. Does this mean that the term "other canisters" in Table G-10 is limited to dual purpose canisters?

In addition, DOE's comments in the SEIS contrast with other DOE statements as to whether DOE will accept commercial SNF in dual purpose canisters. When referring to **dual**

⁴The U.S. Court of Federal Claims recently reviewed a motion to compel production of documents relating to interim storage of SNF and expedited SNF acceptance at the repository. Dairyland Power Cooperative v. United States, No. 04-106 C (filed December 19, 2007) at 11-12 (listing five documents subject to the motion, as described on the Government's privilege log, including memoranda between high-ranking DOE officials and the Executive Branch discussing expedited waste acceptance at Yucca Mountain and interim storage)(copy attached).

⁵DOE's anticipated goal is that 90% of the commercial SNF would be packaged at reactors sites in TAD canisters. DOE also conducted a sensitivity analysis where 75% of commercial SNF would be packaged in TAD canisters. SEIS at 2-9 and A-2 to A-5.

purpose canisters (“DPCs”) in its letter to the NWTRB, DOE qualified its statements with “should DOE accept them [DPCs]” (referring to approximately 2500 ‘spots’ on the aging pads for TAD or dual purpose canisters and no direct disposal of dual purpose canisters). DOE Letter to NWTRB at 8, 9. Referring to use of dual purpose canisters at the proposed Private Fuel Storage LLC (PFS) storage facility, Gary Lanthrum, director of the DOE’s transportation program, said DOE was only obligated to take bare fuel packaged in welded canisters; that the SNF stored at PFS in dual purpose canisters (specifically, HI-STORM 100, Rev. 0) was not acceptable for disposal at Yucca Mountain; and that the SNF would have to be repackaged, if feasible, at PFS, or sent back to the reactor-owner for repackaging.⁶

The final EIS should openly and adequately address whether DOE will accept fuel in dual purpose canisters; whether it will only accept fuel that is currently loaded into dual purpose canisters and require further loadings to be in TAD canisters; and what cumulative impacts these DOE decisions will have on the future storage and transportation of commercial spent nuclear fuel.

Finally, if DOE’s use of TAD canisters will require DOE to amend the Standard Contract (or obtain congressional approval) then DOE should follow the Academy of Science’s recommendation and make other changes too (*see* following discussion). SEIS at H-32.]

b. Shipment of Aged Fuel

4 [Under the Standard Contract, priority for shipment of fuel to the repository is based on “oldest fuel first.” However, the oldest fuel will not necessarily be fuel that is shipped to the repository because each utility chooses which fuel to ship. SEIS at H-33. The State endorses the Academy of Sciences recommendation to DOE:

DOE should negotiate with commercial spent fuel owners to ship older fuel first to a federal repository or [authorized] federal interim storage, except in cases (if any) where spent fuel storage risks at specific plants dictate the need for more immediate shipments of younger fuel. Should these negotiations prove to be ineffective, Congress should consider legislative remedies. . . .

SEIS at H-32. Under this approach, not only will the public along the transportation route be at less risk of radiological exposure than under the current regime but also DOE would have a better idea of how to handle thermal management at the repository. Moreover, there would be a diminished need to employ “aging” pads – a concept that is on a shaky legal footing.]

⁶See Goshutes’ waste plan hits a snag (Salt Lake Tribune, The (UT), October 15, 2004) http://docs.newsbank.com/openurl?ctx_ver=z39.88-2004&rft_id=info:sid/iw.newsbank.com:AWNB:SLTB&rft_val_format=info:ofi/fmt:kev:mtx:ctx&rft_dat=105D96787772D74E&svc_dat=InfoWeb:aggregated3&req_dat=104CE1A14E0599B8 (copy attached); and Testimony of Robert Halstead, State of Nevada, before the NWTRB, Transportation Planning Panel, at the October 14, 2004 meeting held in Salt Lake City, Utah, Tr. at 433-37 (copy attached).

c. Need for Aging Pads

5 [DOE says it needs to use aging pads as part of its thermal management strategy because there are few constraints on the thermal limits of commercial SNF that DOE must accept from utilities. The fuel must have been out of the reactor for at least 5 years and meet the thermal limits imposed on an NRC certified shipping cask and TAD, dual purpose or other canister. See DOE Letter to NWTRB at 4. These thermal constraints on fuel shipments would hold whether fuel is packaged in TAD canisters, dual purpose canisters or bare fuel casks. In all cases, there is uncertainty as to the upper thermal basis and specific thermal power of fuel DOE would receive from utilities. Id.

The SEIS should discuss the reasonably foreseeable possibility of changing the requirement that DOE accept any fuel that a utility chooses to ship. If DOE were to accept less radioactive and thermally cooler fuel, its thermal management strategies would be predictable and simplified and the need for aging pads would be virtually eliminated.

Even if DOE proceeds with its action as planned, there is no discussion on the need for aging pads with a total storage capacity of 21,000 MTU (space for 2,500 casks). DOE's targeted fuel receipt at Yucca Mountain, after ramping up for the first four years, will be 3,000 MTU per year for about 26 years.⁷ It is difficult to imagine with this throughput, that DOE will need the capacity to store one third of the repository's legally authorized commercial SNF disposal capacity on aging pads. DOE should provide a more reasoned discussion on the need for and authority to employ aging pads at the geologic repository operations area.]

3. DOE Has Not Conducted an Adequate Accident Analysis of the Casks and Canisters

a. Need for Full Scale Testing

6 [To validate DOE's assessment of transportation impacts, the transportation casks, the TAD canister, and any dual-purpose casks should undergo full-scale testing prior to the initiation of DOE's shipping campaign. On February 22, 2007 the Nuclear Regulatory Commission authorized a high-speed crash test of a rail shipping cask under the Package Performance Study.⁸ To validate the credibility of the study, NRC or DOE should take the following actions:

- Perform Full scale testing of each type of shipping cask and canister (TAD and dual-purpose).
- Test the casks to failure.
- Develop test protocols that bound accident, sabotage and terrorist attack scenarios.

⁷See e.g., DOE Target Fuel Acceptance Rate of commercial SNF (Analysis of the Total System Life Cycle Cost of the Civilian Radioactive Waste Management Program, May 2001, DOE/RW-0533). For the first four years, fuel receipt will ramp up each year from 400 MTU, to 600 MTU, to 1,200 MTU, to 2,000 MTU and, finally, in year 5 and beyond, to 3,000 MTU. Id.

⁸See <http://www.nrc.gov/reading-rm/doc-collections/news/2004/04-056.html>.

- Conduct random full scale tests throughout the Yucca Mountain shipping campaign.
- Use mock fuel rods to evaluate the impact on spent nuclear fuel rods that are deteriorating or have been in use for specified periods of time.]

b. No Dynamic Accident Analysis

7 [DOE should conduct a dynamic accident analysis. A comprehensive assessment of the environmental impacts of the TAD canisters, the shipping casks, and the aging casks cannot be made without actual stress/stain failure data for high load, instantaneous, three dimensional dynamic impacts. Without such data there are too many uncertainties in the applicable static test data for that data to be reliable. Uncertainties arise from the residual stresses, high strain rates, large strain gradients in the failure area and from the cask welding and fabrication process.]

c. Aircraft Crash into Storage Casks Should Not Be Excluded from the Analysis

8 [DOE assumes the specifications for the storage (aging) overpacks would allow them to withstand the crash of an F-15 fighter aircraft with an impact speed of 150 meters per second. SEIS at E-11, E-12 and E-30. The State begs to differ. Using DOE-STD 3014-96, the State of Utah has modeled and analyzed the impact of an F-16 fighter jet into a Holtec HI-STORM 100, Rev. 0, overpack, stored on a 3 foot thick concrete pad.

The State's analysis is relevant to an aircraft crash into overpacks stored on the proposed aging pads at the repository. Unfortunately, the State is prohibited from releasing the report because it submitted the analysis to the NRC in the Private Fuel Storage LLC ISFSI licensing proceeding, Docket No. 72-22, and NRC classified it as safeguards information. Utah urges DOE to obtain a copy of Utah's modeling and analysis from the NRC. After reviewing Utah's analysis, DOE should find that it cannot exclude the overpacks from the aircraft crash frequency evaluation.]

4. The Transportation Routes Shown in the SEIS Are Unrealistic

DOE's proposed action now consists of a "mostly rail" option. Spent nuclear fuel and high-level radioactive waste would be transported across the nation from 76 sites to the repository, primarily by train, on routes represented on Figure 2-11. SEIS at 2-42. In addition, DOE has analyzed the radiological impacts of transporting SNF and HLNW to the repository based on "representative unconstrained" transportation routes. See SEIS Chapter 6 (*in general*) and Figs. 6-1 (Caliente rail corridor) and 6-2 (Mina rail corridor).

9 [The way in which DOE has presented routing information is misleading to the public along the transportation corridor routes and, in particular, to government officials and emergency responders because it is not a realistic scenario of actual shipping routes. The route through Utah, for example, shows rail shipments entering Utah from Colorado on a rail line parallel to I-70, then branching north-west through Spanish Fork Canyon to Salt Lake City or heading south before reaching Salt Lake City. See e.g., Figs. 2-11, 6-1, 6-2, G-41 and S-9. A person would need to look in Appendix A to find a representative "constrained" shipping route. Figures A-1 and A-2 shows that all shipments would enter northern Utah from Wyoming, then travel through Ogden and downtown Salt Lake City. Buried in Appendix A is DOE's acknowledgment that there is a "constraint on

routing of spent nuclear fuel and high-level radioactive waste through long tunnels, such as the Moffat Tunnel west of Denver . . .” SEIS at A-5.

The central discussion of rail transportation impacts in the final EIS should present realistic and actual unconstrained shipping routes. In Utah, the mostly rail options means that all SNF and HLNW shipments will travel through the populous Wasatch front and almost all shipments will travel through the heart of downtown Salt Lake City.]

5. DOE’s Transportation Analysis is Incomplete

a. Exclusion of Shipments from 45 Separate Locations

10 [The SEIS discusses the impacts of spent nuclear fuel and high-level waste shipments from 72 commercial sites and four DOE sites. SEIS at 6-11. But the SEIS acknowledges that spent fuel is currently stored at 121 sites. SEIS at 1-1, fn 1. Apparently, waste at some 45 sites will first be shipped to one of the four DOE sites, where the waste will then be shipped to Yucca Mountain. Id. If the waste is sent to either the Idaho Engineering Laboratory or to the DOE Hanford, Washington site, then a high proportion of all shipments will travel through Utah twice: once on the way to the DOE Idaho and Washington sites and a second time when the waste is shipped from those sites to Yucca Mountain.

Shipments of waste to DOE sites are incidental to the disposal of SNF and HLNW at Yucca Mountain. Therefore, the final EIS analysis should include shipping routes and modes of shipments, as well as a break down of the risks and consequences of waste shipments from 45 separate locations to each of the four DOE sites.]

b. Exclusion of Low-Level and Hazardous Waste Shipments

11 [The waste generated from operations at the Yucca Mountain, Nevada, repository is a connected action to the geologic disposal of SNF and HLNW. As such, it should be (but is not) part of DOE’s NEPA analysis for the repository.

DOE estimates repository operations will generate 74,000 cubic meters of low-level radioactive waste, including liquid waste. SEIS at 4-88. According to DOE, the low-level waste will be disposed in a “DOE low-level waste disposal site, a site in an Agreement State, or in an NRC-licensed site.” SEIS at 2-31. Notably, the State of Nevada is a member of the Rocky Mountain Compact and sends its low-level radioactive waste to the Northwest Compact site at Hanford, Washington.

Nowhere in the SEIS does DOE address whether the Compact places constraints on DOE’s low-level waste disposal options. DOE should address this issue in the final EIS, as well as evaluate the risks and potential impacts from transporting low-level waste to an appropriate disposal facility. Also, approximately 8,900 cubic meters of hazardous waste will be generated at the repository. SEIS at 4-88. In the final EIS, DOE should similarly account for the risks from transporting hazardous waste to disposal facilities.]

6. Emergency Planning

12 [DOE expects states, Indian tribes and local governments to have primary responsibility in responding to accidents, sabotage or other incidents involving DOE spent nuclear fuel or high-level nuclear waste shipments. SEIS at H-16. Section 180(c) of NWPA requires DOE to provide technical assistance and funding for emergency response training. However, shipments to Yucca Mountain will impose a much larger financial and resource burden than emergency response training. States, Indian tribes and local governments must equip their responders and health care facilities. Furthermore, states, Indian tribes and local governments will incur costs to monitor, inspect, and escort waste shipments to minimize impacts to the public and the environment and to ensure that appropriate personnel are prepared to act.]

13 [The thousands of shipments to Yucca Mountain will also degrade local infrastructure that is vital to communities. The infrastructure must be maintained, repaired, or replaced. DOE optimistically says states, Indian tribes and local governments are "persons" under the Price-Anderson Act and "could be entitled to indemnification for legal liability, which would include all reasonable additional costs of responding to a nuclear incident or authorized precautionary evacuation." SEIS at H-21 (*emphasis added*). States, Indian tribes, and local governments should not be forced to seek judicial relief for reimbursement under the Price-Anderson Act for costs from an incident caused by DOE or its contractors. DOE must be responsible for all reasonable costs incidental to shipments of spent fuel or high-level waste to Yucca Mountain. Moreover, DOE must also be responsible for the costs related to a shipping incident or other impacts from operations at the Yucca Mountain repository.]

7. High Explosives and Safety

14 [DOE will be conducting subsurface excavation activities for the underground repository while it is operating the surface facilities at the geologic operation area (GROA). DOE will use high explosives, stored on-site, for tunnel blasting and road construction. SEIS at 2-22, 2-40, 4-17 and 4-115. Consequently, GROA operations may include storage, handling and repackaging of SNF and HLNW in proximity to the use and storage of high explosives.

The SEIS should contain an analysis of the risks of storing and handling explosives when spent nuclear fuel and high-level radioactive waste are onsite. It should also address whether the use of underground explosives impact the active faults in the area.]

8. Socioeconomic Issues

15 [The SEIS does not adequately address the socioeconomic impacts on the region from constructing and operating the Yucca Mountain repository.

a. Employment Impacts

Currently, the Rocky Mountain region is the fastest growing region in the nation, experiencing a growth rate in 2005 of 5.2 percent. *2007 Economic Report to the Governor, State of Utah*

at 77. In 2006, Utah experienced a 5.2 percent job growth, with 18.1 percent growth in the construction sector. *Id.* at 55. The Utah unemployment rate averaged 3.3 percent in 2006. *Utah Economic Report* at 57. The State of Utah is already concerned that its 3.3 percent unemployment rate will be incapable of supplying Utah's economy with an adequate labor force (*id.*) and questions whether the Yucca Mountain project will substantially impact Utah's labor force.

DOE plans to initiate construction of the Yucca Mountain repository in 2012. In 2014, DOE estimates it would employ 2,590 workers, peaking at 2,690 employees in 2019. SEIS at 4-42 to 43. In planning for a construction worker housing camp (*see* SEIS at 2-39), DOE expects that many of the construction employees will come from outside Nye and Clark counties, Nevada. DOE has not adequately analyzed the effect on the regional labor pool from the workforce needed for the Yucca Mountain Project. The final EIS must evaluate the regional impacts on economic development and growth from the construction and operation of the Yucca Mountain repository.]

b. Energy Demands

16 [“[E]nergy is a critical component in sustaining Utah’s vibrant economic growth and preserving our unparalleled quality of life,” said Utah Governor, Jon M. Huntsman, Jr.⁹ The construction and operation of the repository could use up to 790,000 megawatts hours of electricity annually. SEIS at 4-84. Yet, the SEIS fails to discuss impacts on regional areas or neighboring states from energy use at the Yucca Mountain geologic repository.

Nevada Power and Valley Electric, which both supply power to the Nevada Test Site, will provide electrical power to Yucca Mountain. In 2005, Nevada Power purchased 61 percent of its power; Valley Electric also purchased power. SEIS at 3-81, 82. The Nevada Public Utilities Commission projects that if Nevada Power does not secure additional generation facilities, it could have a power shortfall of 4,000 megawatts by 2020. *Nevada’s Electricity Future: A Portfolio-Focused Approach* (2007) at 3. Nevertheless, DOE assumes that Nevada Power and Valley Electric will continue to meet the electrical demands of its customers, including DOE. In addition, the SEIS for the rail corridor notes that the Lincoln County Power District No. 1, which supplies power to Lincoln County residents, “plans to increase long-term supply by buying into the planned coal-fired Intermountain Power Project [IPP] plant in Delta, Utah.” SEIS Transp. at 3-313. If DOE plans to purchase power from Lincoln County Power, it should understand that IPP has abandoned its plans to build a third coal-fired power plant unit.

DOE does not explain its basis for assuming customer electrical demands will be met. This raises a number of unanswered questions. For example, do the *Integrated Resource Plans* for Nevada Power and Valley Electric account for the projected power usage at Yucca Mountain?¹⁰ Will these utilities continue to purchase electrical power to meet customer demand? How will the availability of electrical power impact economic development projects in Utah and other neighboring states?

⁹See <http://energy.utah.gov/energy/>.

¹⁰*Cf* Pacific Corp. estimate that it will require an additional 2,113 megawatts by 2014. *Form 10 K, MidAmerica Energy Holding Company*, filed March 1, 2007, at 10.

What affect will the additional electrical demands for the Yucca Mountain repository have on the regional inventory of greenhouse gas emissions?

During construction of Yucca Mountain, DOE estimates annual use of diesel fuel and gasoline at 1.5 million gallons and 47,000 gallons, respectively. SEIS 4-84. The SEIS does not address the volume of carbon emissions from the use of fossil fuel and the potential impacts on Nevada and neighboring states in their attempt to reduce regional greenhouse gas emissions in the next decade and beyond. Nor does it address the impact DOE's fuel usage will have on regional fuel stockpiles or fuel prices.]

c. Water Availability and Water Supply

17 [DOE requires 430 acre-feet of water annually, primarily for its repository construction activities, but the Nevada State Engineer has denied DOE's water rights application for this appropriation. SEIS at 11-7. DOE acknowledges that its peak water requirements would draw down the aquifer during the first two years of construction. SEIS at S-24, S-26. Moreover, groundwater in the downgradient Amargosa Desert area is over appropriated but DOE concludes, because actual recent withdrawals have averaged half the total appropriations, the Yucca Mountain project there will create little, if any, environmental impacts. Id. at S-26.]

DOE has chosen the Yucca Mountain site, in part, because it is in an arid environment. SEIS at S-7. But a desert environment also has negative consequences, such as an inadequate and unpredictable supply of water. DOE has not discussed any alternative plans to obtain water for construction and operation of the surface facilities and underground repository should the supply of groundwater prove inadequate or unavailable. The final EIS should address this issue.

The SEIS refers to the Southern Nevada Water Authority as the wholesale provider for southern Nevada's regional water needs. SEIS at 3-80. There is passing reference that Southern Nevada Authority is developing other sources of water from the Colorado River and elsewhere in Nevada. Id. However, DOE fails to discuss Southern Nevada Authority's controversial plan to acquire groundwater from an interstate aquifer, underlying Snake Valley in western Utah and eastern Nevada, and pipe it to southern Nevada.¹¹ While DOE says that groundwater is the only source of available water for the repository (id.), there is a finite amount of water to satisfy Nevada's ever-growing needs. Any water used for the repository must come out of this finite pool. Therefore, the SEIS should discuss southern Nevada's acquisition of water from the Snake Valley aquifer.]

d. Use and Consumption of Raw Materials and Supplies

18 [DOE estimates construction of the Yucca Mountain repository would require 320,000 cubic meters of concrete and 130,000 metric tons of cement. SEIS at 4-85. DOE claims the concrete demand is less than one percent of that used in Nevada. DOE also says: "Cement would be purchased through regional markets and shipped to the site." SEIS at 4-85. Again, DOE presumes that the regional cement suppliers would have the ability to meet demand.]

¹¹ See <http://www.waterrights.utah.gov/meetinfo/m031505/default.htm>

23

[DOE also foresees no difficulty in procuring adequate supplies of stainless steel, nickel based alloy, carbon steel, and titanium¹² to manufacture over:

- 11,200 waste packages (outer shell of nickel based alloy and inner shell of stainless steel);
- 7,400 TAD stainless steel canisters;
- 11,200 nickel based alloy and stainless steel emplacement pallets;
- 11,500 titanium drip shields;
- 2,500 aging overpacks (carbon steel and concrete);
- 10 shielded stainless steel transfer casks; and
- 109 stainless or carbon steel shipping casks (79 rail and 30 truck).

See SEIS at 4-95 to 104. DOE fails to meet the requirement of NEPA because it does not discuss the regional or national economic impacts from the material and supplies needed and consumed at the Yucca Mountain repository.]

B. Comments on the Draft Supplement Environmental Impact Statement for the Nevada Rail Transportation Corridor and the Draft Environmental Impact Statement for the Nevada Rail Alignment (Caliente and Mina Routes).

The draft supplemental environmental impact statement for the transportation corridor describes air quality; employment; and occupational, public health and safety *regions of influence* for the Caliente rail alignment to include only Lincoln, Nye, and Esmerelda Counties in Nevada. SEIS Transp. at 3-3 to 4. [The Dixie National Forest and two Utah counties (Iron and Washington) abut Lincoln County, Nevada, and the town of Modena, Utah, is less than 35 miles east of Caliente. Given that air contaminants will not stop at the Nevada-Utah state line, DOE must also address air quality impacts in Utah.] 19

20 [The transportation SEIS should also assess any employment and economic development impacts on Washington and Iron Counties in Utah.] Furthermore, [DOE should evaluate public health, safety, and infrastructure impacts along Utah highways and in Utah communities where workers or goods and materials related to rail construction may travel.¹³ In particular, DOE must, at least, assess the impacts on Utah State Road-56 to Modena and the surrounding communities.] 21

22 [DOE plans to withdraw water for rail construction from aquifers below the location of the rail line. SEIS Transp. at 3-3. The Death Valley region, including Yucca Mountain, is in the Basin and Range physiographic province. Moreover, distinct hydrogeologic boundaries for the aquifer at

¹²DOE makes the offhand assumption that, when the time comes, there will be a sufficient supply of titanium needed for a vital component of the repository, the drip shields. DOE makes this assumption even though the quantity of titanium it needs would currently amount to 22 percent of the nation's annual titanium import or production. See SEIS at 4-104 to 105 and Table 4-36.

¹³ E.g., The nearest active ballast quarry is located in Milford, Utah. SEIS Transp. at 3-314.

Yucca Mountain cannot be identified and the boundaries are up to 500 kilometers away.¹⁴ Several Utah aquifers, also in the Basin and Range province, are less than 500 kilometers from Yucca Mountain. Accordingly, DOE must assess the impact to regional aquifers and how DOE's draw down of groundwater may impact aquifers in Utah.]

Thank you for the opportunity to comment. If you have any questions, please contact:

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¹⁴See e.g., *Regional Groundwater Modeling of the Yucca Mountain Site Using Analytic Elements*, M. Bakker, E.I. Anderson, T.N. Olsthoorn, and O.D.L. Strack, *Journal of Hydrology*, Volume 226, Issues 3-4, December 31, 1999.



Department of Energy
Washington, DC 20585

QA: N/A

November 6, 2007

B. John Garrick, Ph.D.
Chairman
Nuclear Waste Technical Review Board
2300 Clarendon Boulevard, Suite 1300
Arlington, VA 22201-3367

Dear Dr. Garrick:

Thank you for your April 19, 2007, letter providing the Nuclear Waste Technical Review Board's (Board) views on the Office of Civilian Radioactive Waste Management (OCRWM) Program, as presented to the Board at its January 24, 2007, meeting in Las Vegas, Nevada. As always, I appreciate the opportunity to interact with the Board.

The Program remains on track to complete the key milestones and meet its strategic objectives, as I outlined in my presentation.

In your letter, the Board raised some additional questions and asked for clarification of some of our plans. The enclosure to this letter provides detailed responses to the Board's inquiries.

If you have any questions concerning this letter, please contact Claudia M. Newbury at (702) 794-1361.

Sincerely,

A handwritten signature in black ink, appearing to read "E. F. Sproat, III".

Edward F. Sproat, III, Director
Office of Civilian Radioactive
Waste Management

Enclosure



**Response to Nuclear Waste Technical Review Board Comments from
January 24, 2007, Board Meeting**

1) The Nuclear Waste Technical Review Board (Board) noted that it was “interested in obtaining information on how the design will conform to preclosure safety requirements (i.e., the event sequences that require analysis and the implications for dose from those events).” The following discussion provides information on level of design detail and implementation of the Preclosure Safety Analysis (PCSA).

The U.S. Department of Energy (Department) is developing the design for its License Application (LA) to the level of detail necessary to assure the availability of structures, systems and components (SSCs) as modeled in the PCSA. The level of design information will conform to the U.S. Nuclear Regulatory Commission (NRC) staff guidance including HLWRS-ISG-02 PCSA – Level of Information and Reliability Estimation. This approach will include a greater level of design detail for Important to Safety (ITS)/Important to Waste Isolation (ITWI) components than there will be for Non-ITS/Non-ITWI components. For example, Piping and Instrumentation Diagrams, Ventilation and Instrumentation Diagrams, electrical single line diagrams, and logic diagrams for ITS/ITWI SSCs will include sufficient component information to allow modeling for reliability assessment. Another example is that structural design for the Canister Receipt and Closure Facility (CRCF), the Receipt Facility (RF), and Wet Handling Facility (WHF) will include design details such as lumped mass, multi-stick model with soil springs; peak accelerations at mass nodes; typical thicknesses and rebar patterns for shear walls, floor and roof slabs; typical details for penetrations; foundation (basemat) thickness and rebar patterns; assessment of building stability for sliding and overturning effects; and sizing of principal structural steel members. The results of the analyses will be included in the LA submittal scheduled for June 30, 2008. Schematics with sufficient mechanical handling equipment component detail to support reliability assessment of speed control, brakes, travel limits, and the ability to hold load on loss of power will be included. The PCSA will include reliability assessment, including human reliability, for such items as ITS Heating, Ventilation and Air Conditioning (HVAC), ITS electrical power, WHF pool and support systems, and movable shield doors in addition to the mechanical handling equipment. Design calculations and drawings will be sufficient to allow the NRC to verify that the PCSA is adequate.

10 CFR 63.111(c) requires performance of a PCSA of the geologic repository operations area. The PCSA calculations and analyses are developed, reviewed, and approved in accordance with the overall design control and configuration management procedures. Coordination and integration between the PCSA analysts and design engineering is accomplished as an integral part of daily routine activities similar to the interface between the separate engineering disciplines within an engineering, project and construction organization.

The PCSA process is iterative and includes analysis of evolving design information, site characteristics, and operational features to evaluate the potential hazards, potential event sequences, and calculate the radiological consequences for operations of the geologic repository operations area. As the design and the PCSA progress, there is continuous feedback from PCSA analysts to designers regarding the safety functions of SSCs and target reliabilities being modeled in the PCSA. PCSA analyses are revised, as necessary, to maintain consistency with repository design. When the LA is submitted, the design and PCSA will be based on the same design information.

Interface activities are coordinated to ensure the design of the repository is consistent with the PCSA. This includes inputs from designers that are necessary to perform the preclosure safety calculations and analyses. The products developed by design engineering (e.g., project design criteria, system description documents, and drawings) and by the PCSA analysts (e.g., radiological hazards analyses and event sequence categorization) are closely coordinated between the respective organizations, and are subjected to procedurally required interface and interdisciplinary review before their issue.

The technical interface requirements between PCSA and design engineering are formally documented in the Preclosure Nuclear Safety Design Bases. This quality-affecting document provides the classification of systems, structures, and components ITS or not important to safety along with the associated safety function based on the results of completed event sequence analysis for each nuclear structure, and for subsurface areas and intra-site operations.

Overview of PCSA Process

In the PCSA required by 10 CFR 63.21(c)(5) and 10 CFR 63.112, an assessment of the safety of the geologic repository operations area is made and the ITS SSCs that are required to ensure that the credited safety functions can meet the performance objectives of 10 CFR 63.111 are identified. The four major portions of the analysis are (1) initiating events identification and event sequence development, (2) event sequence analysis and categorization, (3) radiological consequence, and (4) identification of SSCs ITS and specification of the nuclear safety design bases and procedural safety controls. The nuclear safety design bases for ITS SSCs and the procedural safety controls provide means to (1) prevent or reduce the likelihood of event sequences and (2) mitigate or reduce the consequences of event sequences.

Initiating events are considered only if they are reasonable (i.e., based on the characteristics of the geologic setting and human environment, and consistent with precedents adopted for nuclear facilities with comparable or higher risks to workers and the public (10 CFR 63.102(f)).

Initiating Events Identification and Event Sequence Development

To assess potential external and internal hazards, PCSA evaluates the site and uses descriptions of the repository facilities (surface and subsurface), SSCs, operational process activities, and characteristics of the waste stream to identify applicable hazards that may result in reasonable, credible, initiating events to be considered in further analyses. Examples of the internal hazard categories analyzed include, but are not limited to, collisions, drops, system failures (e.g., HVAC), floods, and fires. Master logic diagrams and process flow diagrams are being used to identify internal hazards and initiating events. Examples of external hazard categories analyzed include, but are not limited to, natural phenomena such as tornadoes and seismic events, and human activity such as aircraft crashes that could impart sufficient energy to be hazardous to a waste form.

Event Sequence Identification and Categorization

Potential event sequences are developed by safety analysis and evaluated based on the identification of credible potential external and internal initiating events. The event sequence analyses process quantifies (determines the overall probability or frequency) the sequences of events that lead to a potential radiological release or criticality. Event sequences are categorized in accordance with definitions of Category 1 and Category 2 event sequences in 10 CFR 63.2. Event sequences that have less than one chance in 10,000 of occurring during the preclosure period are screened out and categorized as beyond Category 2 event sequences.

Radiological Consequence Analyses

Analyses of radiological consequences of potential radionuclide releases and direct exposures from normal operations of repository surface and subsurface facilities, Category 1 event sequences, and Category 2 event sequences are performed as required by 10 CFR 63.111(c). Radiological consequences are calculated for workers and members of the public during normal operations and are added to the radiological consequences from the Category 1 event sequences to demonstrate compliance with 10 CFR 63.111(a) and (b).

For Category 2 event sequences, offsite public radiological consequences are evaluated for each Category 2 event sequence, individually. No worker radiological consequences are required to be calculated for Category 2 event sequences to demonstrate compliance with 10 CFR 63.111(b)(2).

Identification of SSCs ITS and Specification of the Nuclear Safety Design Bases and Procedural Safety Controls

The SSCs that perform safety functions credited in event sequence analyses and radiological consequence analyses are classified as ITS. The credited safety functions are documented in preclosure nuclear safety design bases.

For certain ITS SSCs, the PCSA specifies required reliability values for equipment or operator performance (or both) to ensure that event sequences involving those SSCs are prevented, the likelihood of occurrence is reduced, or the consequences are mitigated. The reliability specified by PCSA analyses is an engineering design requirement that is included in the preclosure nuclear safety design bases.

SSCs credited with preventing or ensuring that an event sequence is beyond a Category 2 event sequence are also identified as ITS with specific safety function design requirements.

2) The Board stated that improvements should be made in the thermal management strategy that forms the basis for integrating waste management activities and requested clarification of how the Initial Handling Facility (IHF) fits into the Department's thermal-management strategy and the role of the IHF in general. The following discussion provides additional information on the thermal management strategy and the role of the IHF.

With the change to the primarily canister-based approach relying on the use of Transport, Aging and Disposal (TAD) canisters, the Department plans on receiving up to 90% of the Commercial Spent Nuclear Fuel (CSNF) in TAD canisters loaded by the utilities. The Standard Contract (10 CFR Part 961) requires that the CSNF assemblies be a minimum of five years time out of reactor for classification as Standard Fuel; however, the Standard Contract does not impose any thermal limit on the CSNF to be accepted by Office of Civilian of Civilian Radioactive Waste Management (OCRWM). Selection of the CSNF assemblies to be delivered rests with the utilities.

Further, the Department's draft performance-based specification for the TAD canisters imposes temperature limits for protection of cladding at the utility sites, during transportation, and for the preclosure and postclosure periods at the repository. The performance-based specification imposes heat flux vs. canister-wall temperature limitations for the TAD canister at the time of emplacement. Other than these temperature limits, the thermal limits on CSNF that the Department must accept from the utilities are the NRC-approved individual assembly and total canister thermal limits from 10 CFR Part 71 Certificates of Compliance (CofC) for the TAD-based transportation systems (consisting of a TAD canister and its transportation overpack) that are determined by the TAD vendors.

Accordingly, with no set upper thermal basis and a lack of certainty of the specific thermal power of the TAD canisters, the Department is developing a thermal management strategy. It includes establishing thermal limits for handling of the TAD canisters and includes considerations for the design to allow for flexibility in the handling of the TAD waste stream to achieve thermal emplacement requirements.

There are several operational approaches, as part of the thermal management strategy, that are being planned for use at the repository. They include:

- Establishing a broad envelope for the emplacement process, that satisfies the TSPA constraints
- Allowing for the aging of TAD canisters to allow decay heat of the TAD canisters to achieve the thermal limits for emplacement
- Using low thermal power naval Spent Nuclear Fuel (SNF) and U.S. Department of Energy (DOE) High-Level Waste (HLW)/ SNF codisposal packages to blend the average thermal power in the emplacement drift to meet emplacement constraints
- Accounting for the decay of waste from its date of actual emplacement and the effects of ventilation during the preclosure period

As part of this strategy, the capability of the surface facilities is considered with respect to:

- Designing facilities that can meet potential thermal limits for receipt and handling of the TAD canister
- Accepting CSNF to meet DOE receipt rates
- Evaluating the capabilities of the facilities for the rates associated with closure of the waste package and subsequent emplacement in the proper thermal arrangement
- Evaluating the size of the aging facilities with respect to various waste streams

Each of the facilities has specific roles in the thermal strategy with respect to receipt of the TAD canisters, performing waste package closure, transporting TAD canisters to the aging facilities, and then returning them for handling and emplacement.

The JHF, in particular, receives and places the naval SNF canister into a waste package with subsequent closure, and has the capability to handle and close waste packages containing HLW, thus reducing the complexity of the Canister Receipt and Closure Facility. Waste packages are then placed into the transport and emplacement vehicle for emplacement in accordance with the thermal limits.

A thermal management study, using the above concepts to establish appropriate thermal emplacement limits, is currently underway to demonstrate the viability of a range of waste streams to meet the receipt and emplacement thermal limits for the repository.

A preliminary evaluation of proposed site operations, with these thermal constraints, has shown that there is considerable flexibility in the thermal limits for the waste packages and the thermal line load. Accordingly, there is considerable flexibility to receive waste streams of varying thermal characteristics while still meeting the preclosure and postclosure temperature and thermal limits used in the repository design and the 100-year preclosure operations period. Similarly, the Aging Facility has been shown to be of adequate size for a range of thermal powers associated with different waste streams. Since the thermal characteristics of the as-received waste stream is uncertain, the Department plans to perform a drift-by-drift analysis of the thermal loading to demonstrate preclosure and postclosure performance based on the as-received waste once the facility begins operations. This is similar to the nuclear industry's approach to conduct a core reload analysis of a reactor following refueling.

One of the results of the adoption of the TAD canister concept for simplifying repository waste handling operations was the segregation of functions to different waste handling facilities. The WHF is designed to receive CSNF and repackage it into TAD canisters. The CRCF are designed to receive disposable canisters (TAD, DOE SNF, and HLW) and transfer them into waste packages. The RF is designed to receive TAD canisters and dual-purpose canisters (DPC) and transfer them to aging overpacks to decouple CSNF receipt from emplacement. The Initial Handling Facility is designed to receive disposable canisters (naval SNF and HLW) and transfer them into waste packages. The IHF reduces the operating load, complexity, and cost of the CRCF by processing all of the naval SNF. The IHF can process all 400 Naval Spent Nuclear Fuel Canisters in 17 years. The IHF also has the ability to process HLW canisters. There is a 300 ton crane in the IHF that is required to handle the transportation cask in which the naval SNF will be shipped. The CRCF design only requires a 200 ton crane with a lower maximum hook height than the IHF to handle the waste that it will receive, which has resulted in a less expensive and less complex design for the three CRCF. Also, since processing naval SNF in the CRCF would require removal of other waste forms from staging areas to ensure criticality safety, elimination of the naval SNF from the CRCF mitigates the resultant operational delays associated with clearing the CRCF of other waste forms prior to handling naval SNF, allowing increased throughput for the CRCF.

In the IHF, the radiation source terms from naval SNF and high-level radioactive waste are sufficiently low that mitigation is not required to meet site boundary dose limits. All other waste forms to be handled at the repository require mitigation to meet site boundary dose limits. Consequently, the IHF does not require the confinement function of the other waste handling facilities and can be constructed primarily from structural steel. This allows the IHF to be constructed considerably faster than the other waste handling facilities which are primarily built of reinforced concrete. The current schedule is for the IHF to be completed a year before CRCF 1. This period will be used to demonstrate equipment operations and refine operating procedures for cask handling, canister transfer, and waste package loading, closure and loadout. Lessons learned in the year will be applied to the other handling facilities. The IHF provides for an improved throughput of Naval SNF, while simplifying operations in the CRCF.

Therefore, throughput is improved for Naval Spent Nuclear Fuel and for waste going through the CRCF.

3) The Board requested information on experience gained from safety and facility maintenance in the Exploratory Studies Facilities (ESF) could be applied to subsurface repository design and operations. The following information may be helpful in this regard.

In the summer and fall of 2006 the Department conducted two workshops with outside experts in underground construction and environmental safety and health. A hazard analysis of current ESF operations and construction practices was also completed, and the result of these two efforts was the development of an Underground Safety and Health Requirements Document (DOE/RW-0586), issued in January 2007. This document was intended to be applied to continued site operations until construction authorization. Some specific experience gained from safety and facility maintenance in the ESF includes the following:

- Nominal excavation airflow design volumes are based on the 150 ft/min velocity established during ESF construction
- Drift orientation (azimuth 252) based on post excavation ESF information
- Measurements of steel set loads indicate no evidence of long-term time-dependent effects. The rock at the repository host horizon demonstrates a good self-supporting capacity, rock bolts with wire mesh are an adequate ground support system, and steel sets with lagging are a very conservative ground support system
- The two ground support systems, namely: the friction-type expandable rock bolts and cast-in-place concrete liner installed in the heated drift, performed very well while subjected to up to 200 degree C temperatures, supporting the use of that type of rock bolt in the ground support system proposed for emplacement drifts
- Lithophysal rock exposure in the ESF, particularly in the ECRB cross drift, revealed all the challenging rock mechanical aspects of testing the lithophysal rock, and the importance of integrating field activities such as mapping, in situ measurements, and field observations in the process of characterizing the lithophysal rock mass thermo-mechanical performance
- Use of a blowing system to deliver fresh air directly to the TBM face, so workers at the face will be in cleaner air. (An Exhaust system was used during ESF operation, intake air went to the working face through the TBM tunnel, where the airflow picked up a lot of dust in the tunnel)

- Use of 1,000-ft flexible tube segments for minimizing air leakage. (Compared with 20-ft steel duct segments used in ESF, this eliminates majority of the vent-line joints that are potential source of air leakage)
- Covered muck cars (instead of conveyer used in ESF, which was a major source of dust).

4) The Board encouraged the DOE to evaluate surface-facility designs and operational concepts for opportunities to reduce the number of times waste is handled. The Board suggested that DOE should, for example, assess the need for and, to the extent practicable, limit the size of large aging pads called for in the current surface facilities design. The current status of the repository design as modified to accommodate the TAD is described below.

The current design of the surface facilities has resulted in a significant reduction in the number of times the waste is required to be lifted and handled as compared to the previous repository design. As an example, in the former Dry Transfer Facility a loaded waste package was lifted by a crane a minimum of three times, and as many as six times, during handling. In the current design of the surface facilities, all crane lifts of a loaded waste package have been eliminated.

The current 21,000 MTHM capacity of the aging pads uses Total System Model delivery predictions that are based on a waste package thermal limit at emplacement of 11.8 kW. Evaluations are currently underway to determine the effect of increasing the thermal limit at emplacement on the postclosure analyses. If the Department chose to increase the waste package thermal limit at emplacement, more TAD canisters could be directly loaded into waste packages, thereby reducing the required capacity of the aging pads. Any such change would necessitate discussion with the NRC.

As discussed above, as part of the thermal strategy, the aging pads are a part of the overall program to handle the wide variability of the potential waste streams to be received. Evaluations of waste stream in the past with different waste package designs and thermal emplacement constraints identified that the 21,000 MTHM capacity (approximately 2500 "spots" for TAD canisters or dual-purpose canisters (should DOE accept them) may be needed to allow for thermal decay. Current evaluations suggest that the needed capacity of the aging facilities could possibly be reduced by as much as 50%, depending on the thermal characteristics of the waste stream and the emplacement strategy employed, even if emplacement of the lower thermal waste is deferred until the end of the emplacement period. Included in this consideration for this sizing is queuing of waste based on the throughput capability of the facilities. The uncertainty of the waste stream thermal characteristics and the thermal capability of the TAD canister causes the repository to retain the facilities' capacity of 21,000 MTHM as part of the current design. As the design matures, with respect to the throughput capability of the facilities, the TAD thermal capabilities as identified by the vendors, emplacement strategies during preclosure for postclosure acceptance are accepted by the NRC, and

the characteristics of the waste stream become more certain, the Department will re-evaluate the need for the capacity of the aging facilities and adjust their capacity as necessary to support operations. Aging capacity will be developed in phases.

5) While not directly discussed at the January meeting, the Board urged the DOE to evaluate the possible direct disposal of DPCs in Yucca Mountain (YM). The Board suggested that the DOE should clarify its position regarding criticality and burn-up credit as part of an assessment of the feasibility of direct disposal of DPCs. DOE's plans with respect to DPCs are described below.

Should the Department accept DPCs, the direct disposal of existing DPCs is not planned and disposal of DPCs is not included in the LA. DOE does not currently plan that DPC disposal would be included in any amendments to the LA until the DPCs have been analyzed for postclosure criticality and other considerations. Several existing DPC designs rely on internal geometry and flux traps as well as neutron absorbers. During the postclosure period, internal geometry is lost due to material degradation, therefore credit is not taken for geometric controls. Also, any neutron absorber currently in DPCs may not have the same high level of corrosion resistance as the neutron absorber being specified for the TADs (borated stainless steel). If future analyses determine that direct disposal of DPCs is feasible, then the Department could propose an amendment to the license. However, currently the plan is to cut open DPCs in the WHF and transfer the fuel assemblies from DPCs to TADs. DOE intends to include burn-up credit in its evaluation of postclosure criticality and would expect burn-up credit to be considered in any direct disposal DPC analysis performed in the future.

6) The Board also requested an explanation of the technical basis for the selection of borated stainless steel as a neutron absorber in TAD canisters. The technical basis is described below.

The Department completed a comprehensive sensitivity study as documented in the calculation, "Evaluation of Neutron Absorber Materials Used for Criticality Control in Waste Packages" (CAL-DS)-NU-000007). This calculation looked at a range of absorber specifications, concentrations and geometric arrangements. The final recommended neutron absorber material for the TAD was borated stainless steel with a boron loading of 1.16 wt % at a minimum thickness over 10,000 years of 0.6 cm. The basis for the recommendation, as taken directly from the calculation, is as follows:

- Commercial experience with fabricability, commercial availability, and neutronics experience of absorber materials containing boron is much broader than with the Ni-Gd alloy. Also, ceramic based materials (B4C) would need special cladding and welding to ensure that they remain in place over long time periods of corrosion

- There are a relatively large number of criticality benchmark experiments with boron absorber in geometries representative of the TAD than with Gd absorber
- Expected corrosion rates for the Ni-Gd alloy and the borated stainless steel using powder metallurgy are expected to be relatively similar for the in-package pH ranges expected in the repository provided with boron loading is kept a relatively low levels
- A minimum absorber plate thickness of 0.6 cm with a credited boron loading of 0.87 wt% with natural boron provides a loading curve that is nearly identical to the proxy TAD configuration loading curve. This is the minimum thickness required after being subjected to 10,000 years of corrosion
- Further, additional corrosion testing of borated stainless steel have corroborated the expected corrosion rates.

7) The Board expressed concern that, while technical interaction between DOE and the nuclear utilities is ongoing, it is not apparent to the Board that this dialogue includes all key issues warranting coordination within a successful waste management system.

The Department believes that its current level of dialogue with nuclear utilities has been both appropriate and constructive. For example, the Department's discussions with both utilities and cask vendors has led to the successful development of the Preliminary Performance Specification for the canister. The Department also has continuing interactions with utilities on numerous topics including of nuclear operations, licensing, emergency preparedness, training, and configuration management. Additionally, the Department, with the assistance of the Electric Power Research Institute and the Nuclear Energy Institute, is working with a group of utilities to obtain additional data on spent nuclear fuel characteristics that it believes will be helpful in efforts to obtain an NRC license for the construction and operation of repository at Y.M.

The Department intends to expand the ongoing dialogue with nuclear utilities on additional issues as the program progresses into the licensing phase of the repository and beyond.

8) The Board expressed concern that DOE has assigned postclosure planning responsibility to the Office of the Chief Scientist (OCS), while preclosure planning responsibility has been assigned to the Office of the Chief Engineer (OCE). The Board indicates that it has not observed a systematic or comprehensive linking of these two components or recognition by DOE of the interdependencies of important repository design and operating elements (e.g., thermal management).

The Environmental Protection Agency, in 40 CFR 197, and the NRC, in 10 CFR 63, provide different standards and expectations with regard to pre- and post-closure safety.

The Department's organizational structure is reflective of these differences in requirements and associated areas of expertise. However, the Department has long recognized that these topics are not totally divorced from each other and require close coordination of activities and clear definition of interfaces. The OCE has been given responsibility for the development and control of top-level requirements documents including management of the technical change control process. This ensures consistent assignment and integration of requirements throughout the program, establish single point accountability for managing changes within the program, and develop a clearinghouse for integration at the management level.

Currently, the interface between postclosure activities performed under the direction of the OCS by the Lead Laboratory (LL), and preclosure activities performed under direction of the OCE by Bechtel SAIC Company, LLC (BSC), is managed through several processes and management actions, including the following:

- The LL and BSC have established a formal process for information exchange. Interface Exchange Drawings (IEDs) have been issued to document and control the exchange of information across the organizational boundary between preclosure functions (e.g., repository engineering, design, operations, and preclosure safety and criticality analyses) and post-closure and scientific investigation functions (e.g., post-closure performance modeling and assessment, post-closure criticality analyses, and site-specific geotechnical, environmental, meteorological, and seismic investigations). Control of the exchange of information across this boundary is necessary to ensure compatibility between the design of systems, structures and components and interfacing processes and scientific analyses.
- An additional document that ensures consistency and integration between the LL and BSC design is the Postclosure Modeling and Analysis Design Parameter Report, which augments the IEDs by documenting a review of Analysis and Model Reports to identify parameters and constraints to design (e.g., design bases that must be met by the design). These constraints to design are included in the design requirements documents, thus assuring that postclosure modeling and performance analyses bases are being met.
- The contractors exchange review copies of in-process technical documents for inter-contractor review if there are impacts on either the content of an IED or the Post Closure Modeling and Analysis Design Parameter Report.
- A joint management review in the Technical Review and Management Board is performed by the LL and BSC on any proposed changes to the IEDs or the Post Closure Modeling and Analysis Design Parameters Report.

A regularly scheduled Subsurface Integration Meeting is hosted by BSC engineering with Department and LL attendees. The purpose of the meeting is

to provide a means to discuss specific issues that affect both preclosure and postclosure work.

The need for integration between offices is not limited to just the OCS and the OCE, particularly with regard to the Board's example of thermal management. The OCS, OCE, and Office of Waste Acceptance and Management are jointly developing the Thermal Management Strategy discussed above. An integrated team evaluated potential waste streams and associated parameters, and set bounds for the thermal envelope in the facility preclosure operations while meeting the initial conditions for the TSPA for postclosure. This was a significant integration effort that is now being implemented. Those parameters, defined in the study are being included into the control documents described above, for implementation into the ongoing design and TSPA analyses.

9) The Board suggested that DOE monitor the upcoming rulemakings by the Department of Homeland Security and Pipeline and Hazardous Materials Safety Administration and the Federal Motor Carrier Safety Administration to ensure that DOE's approach is consistent with new regulations.

Current and proposed rulemakings and legislation related to hazardous materials transportation security may impact the Department's system planning, and will be closely monitored by DOE. Accordingly, the Department will continue to closely follow developments in this area.

10) The Board discussed the importance of developing more-realistic estimates of seismic ground motion for both preclosure and postclosure periods and noted its support for scientific and engineering activities aimed at developing such realistic estimates.

During the last year work has been ongoing to refine seismic analyses. To address the evolution of the area where surface facilities will be sited, ground motions for design and preclosure safety analyses have been updated. In updating these ground motions, an alternate approach to incorporating site response has been implemented that results directly in a site-specific seismic hazard curve. In addition, reasonable limits to extreme (very low probability) ground motions at YM are directly incorporated. Limits are assessed both on the basis of geologic evidence that indicates a level of ground motion that has not been experienced at the site and on an evaluation of earthquake source parameters that are consistent with the geologic setting of the site.

Analyses and modeling of seismic consequences during the postclosure period are being updated to take into account the transportation, aging, and disposal canister concept and to evaluate performance for the period after 10,000 years. As part of this work, response to seismic loading is being assessed for additional states of degradation and failure of the engineered barrier system and for the effects of multiple seismic events.

11) The Board considers the question of ³⁶ CI measurements an outstanding issue whose resolution could greatly enhance confidence in understanding fluid flow within YM.

The CI-36 studies can be viewed as consistent in one important aspect which is that the studies conducted to date consistently indicate that fast pathways, as indicated by bomb-pulse CI-36 are either rare or non-existent. This is consistent with the way the unsaturated zone is modeled in process models and the TSPA, in which a small percentage of fast pathways are included in the models for unsaturated zone flow. Links to the completed reports on the work conducted by DOE investigators, including conflicting results and interpretations, were provided in a presentation at the January 24, 2007 Nuclear Waste Technical Review Board meeting.

12) The Board expressed concern that budget constraints in fiscal year (FY) 2007 and the elimination of funding for this purpose in OCRWM's budget request for FY 2008 will negatively affect the continuation of the Science and Technology (S&T) program.

Funding constraints will cause the Department to reduce or eliminate funding for the independent S&T program. The Department is investigating other avenues, such as the DOE Office of Science and cooperative research programs, to maintain the capability to investigate new and unproven techniques and technologies.

In the United States Court of Federal Claims

No. 04-106 C

(Filed: December 19, 2007)

DAIRYLAND POWER COOPERATIVE,

Plaintiff,

v.

THE UNITED STATES,

Defendant.

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Presidential communications
privilege; compelling document
production; RCFC 37(a)(2)

Jerry Stouck, Greenberg Traurig LLP, Washington, DC, counsel of record for Plaintiff; of counsel were *Robert Shapiro* and *Kevin Stern*, Greenberg Traurig LLP, Washington, DC.

Russell A. Shultis, Commercial Litigation Branch, Civil Division, United States Department of Justice, Washington, DC, counsel of record for Defendant, with whom were *Peter D. Keisler*, Assistant Attorney General, *Jeanne E. Davidson*, Director, and *Harold D. Lester, Jr.*, Assistant Director, United States Department of Justice, Washington, DC; of counsel was *Jane K. Taylor*, Office of General Counsel, Department of Energy, Washington, DC, *Alan J. Lo Re*, Senior Trial Counsel, and *Patrick B. Bryan*, *Joshua E. Gardner*, and *Scott C. Slater*, Trial Attorneys, United States Department of Justice, Washington, DC.

OPINION AND ORDER

DAMICH, Chief Judge.

This discovery dispute arises from one of several cases that concern the "Standard Contract"¹ between nuclear utilities and the U.S. Department of Energy ("DOE") for disposal of

¹"Standard Contract for Disposal of Spent Nuclear Fuel And/Or High-Level Radioactive Waste," published at 10 C.F.R. § 961.11. The Standard Contract served as a template for the individual contracts between the utilities and the U.S. Department of Energy. In every material

spent nuclear fuel (“SNF”) and/or high-level radioactive waste (“HLW”). Plaintiff Dairyland Power Cooperative (“Dairyland”) moves this Court, pursuant to Rule 37(a)(2) of the Rules of the Court of Federal Claims (“RCFC”), to compel Defendant United States (“the Government”) to produce in unredacted form five documents that the Government has completely redacted pursuant to the presidential communications privilege.

In addition to responding to this motion, the Government has cross-moved the Court to enter a protective order prohibiting Dairyland from seeking to compel the production of the five subject documents absent a ruling by the Court that Dairyland has met initial burdens of demonstrating a heightened need for the same documents in accordance with the U.S. Supreme Court’s decision in *Cheney v. United States District Court for the District of Columbia*, 542 U.S. 367 (2004). Although Dairyland, pursuant to an order of this Court, has filed a statement detailing its purported need for the documents, the Government argues that the statement does not meet the burden *Cheney* prescribed; therefore, the Government does not need to formally respond to Dairyland’s motion with an official, particularized assertion of the presidential communications privilege by White House officials at this time, much less produce the documents. Nevertheless, to the extent that the Court finds that Dairyland has met the standards *Cheney* articulated, the Government contends that the Court should allow White House officials to come forward with a formal invocation of the presidential communications privilege.

For the reasons stated herein, the Court holds in abeyance a full decision on Dairyland’s motion to compel production of the five subject documents. In addition, the Court ORDERS the Government to file a formal affidavit reflecting a formal White House invocation of the presidential communications privilege over the documents and to submit the documents to the Court in unredacted form for in camera review. The Government’s cross-motion for a protective order is consequently DENIED.

I. BACKGROUND

Dairyland’s motion, filed on September 18, 2007, has arisen in the context of discovery over the issue of damages for the Government’s breach of the Standard Contract. On June 29, 2007, the Court ordered the Government to produce certain documents it had withheld from Dairyland on deliberative process privilege grounds. *Dairyland Power Coop. v. United States*, 77 Fed. Cl. 330 (2007). Five of these documents, which the Government produced on July 20, 2007, were completely redacted pursuant to assertions of the presidential communications privilege.

As a result, Dairyland moved this Court to compel production of the five documents in unredacted form, arguing that the Court’s opinion on the deliberative process privilege had not carved out an exception for redactions under the presidential communications privilege. Dairyland’s Motion to Compel Production of “Presidential Communications” Documents (“Pl.’s

respect, there is no difference between the Standard Contract and Dairyland's contract.

Mot.”) at 3. In any event, Dairyland continued, the Government had failed to indicate the identity of the Government official asserting the privilege and the authority by which he or she had made the assertion. *Id.* Finally, Dairyland maintained that the Court’s opinion on the Government’s invocation of the deliberative process privilege established that Dairyland had demonstrated a sufficient need for the documents at issue to overcome the presidential communications privilege. *Id.* at 4.

During briefing for this motion and in connection with a request for an enlargement of time in which to file its response, the Government sought an order from the Court requiring Dairyland to first meet the burden, which the Government claimed *Cheney* articulated, of demonstrating a particularized need for the subject documents prior to “shifting the burden upon the White House to formally respond to Dairyland’s motion to compel.” Defendant’s Opposition to Plaintiff’s Motion to Compel Production of Documents Withheld Pursuant to the Presidential Communications Privilege, and Cross-Motion for a Protective Order (“Def.’s Resp.”) at 6. In considering the Government’s request, however, the Court adopted the procedural guidance set forth in *In re Sealed Case* (“*Sealed Case*”), 121 F.3d 729 (D.C. Cir. 1997), which held that a party seeking to overcome the presidential communications privilege must both establish that the materials sought contained important evidence and that the evidence in the materials was not available with due diligence elsewhere. Order (October 17, 2007) at 1-2 (citing *Sealed Case*, 121 F.3d at 754). The Court, then, “for the sake of clarity,” ordered Dairyland to submit “a statement of need for the documents and why the evidence in the documents [was] not available with due diligence elsewhere.” *Id.* at 2. However, the Court concluded that its decision on the Government’s invocation of the deliberative process privilege established that Dairyland had met the first of the requirements that *Sealed Case* set out, namely, the “likelihood of containing important evidence.” *Id.* According to *Sealed Case*, a “likelihood of containing important evidence” means that “the evidence sought must be directly relevant to issues that are expected to be central to the trial.” *Sealed Case*, 121 F.3d at 754.

Pursuant to this order, Dairyland, on October 18, 2007, submitted a statement of need supporting its request for the subject documents under the *Sealed Case* criteria. Dairyland’s Statement of Need for Documents Withheld on Claims of Presidential Communications Privilege (“Dairyland’s Statement of Need”). In further briefing regarding Dairyland’s motion, however, the Government continued to argue that *Cheney* established the appropriate standard for overcoming the presidential communications privilege. *See* Def.’s Resp. at 9-15. Dairyland’s Statement of Need, the Government continued, satisfied neither the guidelines set by *Cheney* nor *Sealed Case*. *Id.* at 14-20.

The Government also argues that, to the extent the Court finds that Dairyland has met its initial burden of heightened need for the subject documents under *Cheney*, “the appropriate step would be for the Court to allow the White House, following the Court’s finding, to come forward with a formal invocation of the presidential privilege.” Def.’s Resp. at 21. Moreover, if the Court finds that the White House “has not yet properly asserted the presidential communications privilege in this instance, the White House should nonetheless be afforded the opportunity to provide a suitable affidavit after the Court’s finding of heightened necessity, that complies with

the prerequisites for a proper invocation of the privilege.” *Id.* (citations omitted).

Dairyland contends that whether the Court should require such a formal invocation is irrelevant. “If the Court agrees with Dairyland that it has already established sufficient need for the documents to overcome a presidential communications privilege claim, the only effect of providing the Government with an opportunity to provide a formal invocation would be to further delay discovery to which Dairyland has been entitled.” Dairyland’s Reply on Motion to Compel Production of Documents Withheld on Claim of Presidential Communications Privilege and Opposition to Motion for a Protective Order (“Pl.’s Reply”) at 7.

The parties completed briefing on both Dairyland’s motion to compel and the Government’s cross-motion for a protective order on November 21, 2007.

II. DISCUSSION

The Court agrees with the Government that, in the case of a discovery request aimed at the President and his close advisors, the White House need not formally invoke the presidential communications privilege until the party making the discovery request has shown a heightened need for the information sought. This is the teaching of both *Cheney* and *Sealed Case*. Therefore, the issue here is whether Dairyland’s Statement of Need established such a heightened need.

The Government urges the Court to apply a test in the *Cheney* decision (that is actually from *United States v. Nixon*), namely that Dairyland must “satisfy exacting standards of ‘(1) relevancy; (2) admissibility; and (3) specificity.’” *Cheney*, 542 U.S. at 386 (quoting *United States v. Nixon*, 418 U.S. 683, 700 (1974)). The Government seems to prefer this test to that found in *Sealed Case*, although this Court is unable to clearly discern from the Government’s briefs why this is so. The Government does not argue that *Sealed Case* was overruled by *Cheney*. Indeed, in its reply to Dairyland’s opposition to its cross-motion for a protective order, the Government cites with approval *American Historical Association v. National Archives and Records Administration* (“AHA”), 402 F.Supp.2d 171 (D.D.C. 2005), which discusses *Nixon*, *Sealed Case*, and *Cheney* as if they were all good law. Defendant’s Reply to Plaintiff’s Opposition to the Government’s Cross-Motion for a Protective Order Regarding Plaintiff’s Motion to Compel Production of Documents Withheld Pursuant to the Presidential Communications Privilege (“Def.’s Reply Concerning Cross-Mot.”) at 10 (citing *AHA*, 402 F.Supp.2d at 179, 181-84).

The Court’s order obliging Dairyland to file its Statement of Need, however, was based on *Sealed Case*, which, but for the Government’s argument in favor of the *Nixon/Cheney* test, the Court would naturally apply to determine the Statement’s sufficiency. Thus, the Court would first have determined whether Dairyland had demonstrated that materials over which the privilege was asserted likely contained evidence directly relevant to issues expected to be central to trial and then determined whether such evidence was available with due diligence elsewhere. If this Court found that Dairyland had satisfied these standards, it would have proceeded to review the documents in camera to excise non-relevant material and release the documents’ relevant contents. *Id.* at 745.

As already mentioned, this Court was unable to discern in the Government's briefs a clear argument why the *Nixon/Cheney* test should displace the *Sealed Case* test. The mere fact that *Cheney* is a U.S. Supreme Court decision that was issued later than *Sealed Case* is not enough, since the two decisions could very well be reconciled, as seems to have been done in *AHA*. Furthermore, relevance seems to be a feature of both tests. And, although specificity is not in the *Sealed Case* test, Dairyland may have satisfied this element anyway, as it seeks only five documents that are clearly described. This leaves only the admissibility prong of the *Nixon/Cheney* test in play. (The Court presumes that the Government would have no objection to adding the *Sealed Case* requirement that the plaintiff show that the information it seeks is not available elsewhere.)

A. *Cheney*

The precise holding of the *Cheney* decision is somewhat difficult to determine, and assessing the role that *Nixon* plays in the opinion complicates the inquiry. The *Cheney* case began in the U.S. District Court for the District of Columbia when two public interest organizations, the Sierra Club and Judicial Watch, filed suit, alleging that the National Energy Policy Development Group (NEPDG) had failed to comply with the procedural and disclosure requirements of the Federal Advisory Committee Act (FACA). The NEPDG was established by President George W. Bush to develop a national energy policy and was composed of high-ranking government officials, with Vice President Richard Cheney serving as chairman. FACA provides an exemption for committees composed solely of federal government officers or employees, but the plaintiffs alleged that non-federal employees had participated in meetings of the NEPDG. *See Cheney*, 542 U.S. at 372-74.

The Government argued that "to disregard the exemption and apply FACA to the NEPDG would violate principles of separation of powers and interfere with the constitutional prerogatives of the President and the Vice President." *Id.* at 375. The District Court expressed the separation of powers issue in this way:

The constitutional question suggested by this case is whether Congress can pass a law granting the public access to the deliberative process of a formally constituted group of the President's advisors when at least one of those advisors is a private individual without violating Article II. The application of FACA to this group, argue defendants, interferes with the President's constitutionally protected ability to receive confidential advice from his advisors, even when those advisors include private individuals.

Judicial Watch v. Nat'l Energy Policy Dev. Group, 219 F.Supp.2d 20, 44 (D.D.C. 2002).

The District Court deferred ruling on this issue and allowed the plaintiffs to conduct "tightly-reined" discovery to ascertain whether non-federal government employees regularly participated in the activities of the NEPDG. If they did not, then the Court could rule for the Government on statutory grounds rather than join the separation of powers issue. The District Court appreciated that the discovery itself might raise serious constitutional problems, but it felt that these could be resolved pursuant to an assertion of executive privilege and that resolving the matters raised by an

assertion of executive privilege would pose a less serious constitutional issue than the separation of powers.² See *id.* at 53-55. The Government then sought a writ of mandamus to vacate the discovery order.

The U.S. Court of Appeals for the District of Columbia Circuit dismissed the petition for a writ of mandamus. The dismissal was based on the ground that alternative avenues for relief remained available. *In re Cheney*, 334 F.3d 1096, 1103-05 (D.C. Cir. 2003). Citing *United States v. Nixon*, the D.C. Circuit held that the Government, to protect against intrusion into the President's prerogatives, must first assert the executive privilege "with particularity." *Id.* at 1104. It characterized the separation of powers argument as—at that time—"hypothetical." *Id.* at 1105. Although the District Court had called for "tightly-reined" discovery, the D.C. Circuit stated that the discovery request was overly broad, but still placed the burden of invoking the privilege and filing objections to the discovery orders with "detailed precision" on the Government. *Id.*

The U.S. Supreme Court vacated the judgment of the D.C. Circuit. The Supreme Court felt that the D.C. Circuit's reliance on *Nixon* was misplaced, because the need for information in the criminal context was weightier than in a civil context. *Cheney*, 542 U.S. at 384. Further, it noted: "A party's need for information is only one facet of the problem. An important factor weighing in the opposite direction is the burden imposed by the discovery orders." *Id.* at 385. Finally, it observed that "the narrow subpoena orders in [*Nixon*] stand on an altogether different footing from the overly broad discovery requests approved by the District Court in this case." *Id.* at 386.

In discussing *Nixon*, the Court noted that: (1) the criminal subpoenas were required to satisfy "exacting standards" of relevancy, admissibility, and specificity; (2) subpoenas were not a means of discovery; (3) the burden was on the party requesting the information; and (4) the Court in *Nixon* "addressed the issue of executive privilege only after having satisfied itself that the special prosecutor had surmounted these demanding requirements." *Id.* at 386-87. Importantly, the *Cheney*

²*Judicial Watch* stated:

[T]he breadth and scope of the constitutional issue raised by applying the requirements of FACA to advisory committees established by the President dwarfs the particular, specific questions that will be raised by a very tightly-reined discovery process. Whether revealing a particular document or piece of information will impermissibly interfere with the President's constitutional authority is a much more narrow inquiry than whether the application of all the FACA procedural requirements to the deliberative process of Presidential advisors will violate the Constitution. Rather than address this broad constitutional question in a factual vacuum, this Court will address the particular questions generated by discovery requests.

Judicial Watch, 219 F.Supp.2d at 54.

Court then went on to say: “The very specificity of the subpoena requests serves as an important safeguard against unnecessary intrusion into the operation of the Office of the President.” *Id.* at 387.

Nowhere in the opinion does the Court adopt the “exacting standards” of *Nixon* as such and apply them to the circumstances of *Cheney*. It is fair to say, however, that the thrust of the Court’s consideration of *Nixon* is that an even more exacting standard should be applied in civil discovery disputes where the scope of the discovery request is very broad.

The Supreme Court opinion dwells on the breadth of the discovery request in *Cheney*. As has already been noted, the D.C. Circuit found the discovery request to be overly broad. The *Cheney* Court was even more dramatic, characterizing the discovery requests as “ask[ing] for everything under the sky.” *Id.*³ The Court also observed that not only was the Request for Production of Documents broad, but also that the “‘First Set of Interrogatories’ are [sic] similarly unbounded in scope.” *Id.* at 388. Indeed, the breadth of the discovery requests in *Cheney* appeared to be a leitmotif of the opinion. For example: “Given the breadth of the discovery requests in this case compared to the narrow subpoena orders in [*Nixon*], our precedent provides no support for the proposition that the Executive Branch ‘shall bear the burden’ of invoking executive privilege with sufficient specificity and of making particularized objections.” *Id.* at 388 (citation omitted) (emphasis added). And: “[The discovery requests] provide respondents all the disclosure to which they would be entitled in the event they prevail on the merits, and much more besides.” *Id.* Further:

³The discovery request at issue in *Cheney* sought:

1. All documents identifying or referring to any staff, personnel, contractors, consultants or employees of the [NEPDG].
2. All documents establishing or referring to any Sub-Group [of the NEPDG].
3. All documents identifying or referring to any staff, personnel, contractors, consultants or employees of any Sub-Group.
4. All documents identifying or referring to any other persons participating in the preparation of the Report or in the activities of the [NEPDG] or any Sub-Group.
5. All documents concerning any communication relating to the activities of the [NEPDG], the activities of any Sub-Groups, or the preparation of the Report
6. All documents concerning any communication relating to the activities of the [NEPDG], the activities of Sub-Groups, or the preparation of the Report between any person ... and [a list of agencies].

Cheney, 542 U.S. at 387.

“In these circumstances, Nixon does not require the Executive Branch to bear the onus of critiquing the unacceptable discovery requests line by line.” Id. (emphasis added).

In addition to the breadth of the discovery requests, the Court found that the Government objected to the scope of the requests but was ignored. Thus, other avenues were open to the District Court short of forcing the Government to invoke executive privilege. The Court noted with approval the statement in *United States v. Poindexter*, 727 F.Supp. 1501 (D.D.C. 1989): “[I]t is undesirable as a matter of constitutional and public policy to compel the President to make his decision on privilege with respect to a large array of documents.” *Cheney*, 542 U.S. at 390 (quoting *Poindexter*, 727 F.Supp. at 1503). It observed that the *Poindexter* court “decided to narrow, on its own, the scope of the subpoenas to allow the Executive ‘to consider whether to invoke executive privilege with respect to...a possibly smaller number of documents following the narrowing of the subpoenas.’” *Id.* (quoting *Poindexter*, 727 F.Supp. at 1504).

In sum, the Court in *Cheney*: (1) did not adopt a particular test for use in civil case discovery disputes; (2) emphasized the overbreadth of the discovery requests at issue; (3) noted that the trial court did not consider the overbreadth objections of the Government; and (4) relieved the Government of the burden of asserting executive privilege with particularity before the issue of separation of powers was joined.

B. *Sun Oil*

The U.S. Court of Claims had occasion to address what it called “presidential privilege” in *Sun Oil Company v. United States*, 206 Ct. Cl. 742, 514 F.2d 1020 (1975). This decision was post-*Nixon*, but pre-*Cheney*. The case differs from *Cheney* and *Sealed Case* in that it concerned a former President (Nixon), but this issue was not the focus of the decision—the court presumed that the privilege would apply to him. Although what the opinion says may have been superseded by *Cheney*, insofar as *Cheney* is confusing about the significance of *Nixon*, *Sun Oil* presents another interpretation—and one in a civil case. (In essence, it is the *Nixon* test that the Government would have this Court apply to Dairyland’s Statement of Need.)

At issue in *Sun Oil* were four documents, which, after having been requested in discovery, were withheld by former President Nixon under a formal, but general, claim of privilege. Some thirty other documents “from the Executive Department” were provided to plaintiffs either voluntarily or by court order after in camera inspection by the trial judge. *Sun Oil*, 514 F.2d at 1021. Plaintiffs sued the United States for denying an application for the erection of an oil drilling platform on an area of the Santa Barbara channel off the coast of California that the plaintiffs had leased from the United States. *Id.* As the court put it, “[p]laintiffs seek to ascertain through the discovery process who made the decision to deny their application to proceed with [the platform], and why it was denied.” *Id.*

The court addressed former President Nixon’s argument that the plaintiffs had made “no showing of necessity sufficient to support” the discovery. *Id.* at 1022. In discussing the *Nixon* case, the Court of Claims noted that the Supreme Court had held that the claim of executive privilege was

not absolute and concluded: “We think that the same sort of balancing process would be applicable to an incumbent President’s claim of privilege in a civil case, albeit the burden on the litigant seeking discovery might be heavier.” *Id.* at 1024. The court invoked a rule that it considered to be long-established, holding that “where a demonstrated need for documents sought is clearly sufficient, on balance, to override a claim of privilege, the documents must be produced.” *Id.*

The four documents in question, as described in the general assertion of privilege, consisted of two memos between presidential aides and two from presidential aides to the President “allegedly refining still further the options believed open for ultimate presidential consideration and decision.” *Id.* at 1025. The court noted that it was “reasonably clear” that the plaintiffs had a need to show who refused the application and why it was refused. *Id.* And—important for the present controversy about the test to be applied—the court stated: “These papers might well lead to the discovery of admissible evidence and are suggestively relevant to the subject matter of this action ... and a generalized claim of privilege...cannot prevail against the plaintiffs’ need to develop the facts by resort to discovery.” *Id.* The court concluded: “[P]laintiffs have made a sufficient showing of need to overcome the presumption and to justify the in camera inspection of the four contested documents.” *Id.*

Thus, the Court of Claims overrode a generalized assertion of the presidential communications privilege for the purposes of in camera inspection of the four documents in question based on (1) the need of the plaintiff for the information, (2) the likelihood that the information would lead to admissible evidence, and (3) relevance. It is difficult, however, to see in these criteria a “heightened” *Nixon* test for civil cases, other than perhaps a heightened relevance standard.

C. *Sealed Case*

Although *Sealed Case* was a criminal case decided before *Cheney*, as *Cheney* did not overrule it nor set out a particular test for discovery disputes in civil cases, its reasoning merits examination for application in this case. In *Sealed Case*, a grand jury issued a subpoena duces tecum seeking documents pertaining to the White House Counsel’s investigation of Alphonso Michael (Mike) Espy, a former Secretary of Agriculture in the Clinton Administration, which was related to an Office of Independent Counsel investigation as to whether Secretary Espy had unlawfully accepted gifts. White House officials produced some of the documents but withheld others on the basis of the deliberative process privilege and the presidential communications privilege. After an examination of the withheld documents in camera, the U.S. District Court for the District of Columbia upheld the Government’s assertion of the privileges. *See Sealed Case*, 121 F.3d at 734-36.

The U.S. Court of Appeals for the District of Columbia Circuit vacated and remanded. The court required a showing of need in defense of the grand jury subpoena. *Sealed Case*, 121 F.3d at 753. In discussing what type of showing was necessary, the court turned to the *Nixon* decision, as *Cheney* had not been decided at the time and because *Sealed Case*, like *Nixon*, occurred in a criminal context. The D.C. Circuit puzzled over what *Nixon* required, concluding that the *Nixon* Court failed to elaborate on the demonstrated, specific need standard that it set up. *Id.* at 754. The only detailed discussion of the standard, according to the D.C. Circuit, referred to the tripartite requirement of relevancy, admissibility and specificity, which was already found in the version of Federal Rule of

Criminal Procedure 17(c) then in effect. But, as the court observed, “[i]t would be strange indeed if *Nixon* required nothing more to overcome presidential privilege than the initial showing of relevancy, admissibility and specificity necessary to satisfy Rule 17(c) in all cases, even in cases where no claim of privilege is raised.” *Id.* “If this were true,” the court concluded, “the privilege would have no practical effect.” *Id.* Thus, the D.C. Circuit in *Sealed Case* formulated a test that was purportedly *stronger* than the test set out in *Nixon* (the one the Government would have this Court employ), because the *Nixon* test seemed to be no more than the requirements of Rule 17(c).

The D.C. Circuit, therefore, established this test for judging whether sufficient need is shown: “A party seeking to overcome a claim of presidential privilege must demonstrate: first, that each discrete group of the subpoenaed materials likely contains important evidence; and, second, that this evidence is not available with due diligence elsewhere.” The court elaborated on the first component: “[T]he evidence sought must be directly relevant to issues that are expected to be central to the trial.” *Id.* at 754. Regarding the second element, the court elaborated also: “[U]navailability...reflects *Nixon*’s insistence that privileged presidential communications should not be treated as just another source of information.” *Id.* at 755.

It is noteworthy that the court did not apply this test *in addition to* the tripartite requirement of relevancy, admissibility and specificity, because the grand jury subpoena did not come within the purview of Rule 17(c), which set forth these criteria. *See id.* at 757. It is also noteworthy that, although the court felt that a grand jury subpoena needed more leeway than a criminal trial subpoena (as in *Nixon*), it applied the importance/availability test nonetheless. *See id.* at 756-57. As the discovery dispute in the case at bar more closely resembles a grand jury subpoena than a criminal trial subpoena, the D.C. Circuit’s words regarding the grand jury function are informative: “The function of the grand jury is to inquire into all information that might possibly bear on its investigation, ... [and a]s a necessary consequence of its investigatory function, the grand jury paints with a broad brush.” *Id.* at 755 (quoting *United States v. R. Enterprises, Inc.*, 498 U.S. 292, 297 (1991)). And: “Requiring grand jury subpoenas to comply with the same requirements of relevancy, admissibility, and specificity under Rule 17(c) as applies to trial subpoenas would impose an impossible burden on the grand jury.” *Id.* But one must not press this resemblance too far.

D. The Test to be Applied

After comparing *Nixon*, *Sealed Case* and *Cheney*, and examining the guidance *Sun Oil* provides, this Court concludes that the *Sealed Case* test comes closest to what the Supreme Court was concerned about in *Cheney*. The *Sealed Case* test is supposed to be stricter than the *Nixon* tripartite requirement. *See id.* at 754-55. This Court has already held that, with regard to the documents in question in this motion, Dairyland has met the normal requirements imposed on document requests in discovery in civil cases. *See Order* (October 17, 2007). The only reservation that the Court has in using the *Sealed Case* test is that *Cheney* opined that the test should be stricter in civil cases than in criminal cases and that *Sealed Case* was a criminal case. *Cheney*, however, did not say what the proper test was. In any event, the grand jury subpoena in *Sealed Case* resembles a discovery request in principle. There is no further guidance in the history of *Cheney*, since on

remand, the D.C. Circuit dismissed the case on separation of powers grounds after a hearing en banc. *In re Cheney*, 406 F.3d 723 (D.C. Cir. 2005).

This Court feels, however, that the very narrow and specific document production in this case substitutes for the elusive and “even stricter” civil test envisioned, but not articulated, by *Cheney*. In *Cheney*, the Supreme Court was concerned with the breadth of the discovery request. *Cheney*, 542 U.S. at 387. Here, Dairyland requests five specific documents that the Government has already described with some specificity and over which the Government has already claimed the presidential communications privilege. Furthermore, as this Court has already observed, even if the *Nixon/Cheney* test is the appropriate one (as the Government argues), its relevance prong and its specificity prong have been satisfied. This leaves only the admissibility prong of the *Nixon/Cheney* test. Although admissibility is not required to be addressed in Dairyland’s Statement of Need (because it is not required by the *Sealed Case* test adopted by this Court), the five documents in question appear to be admissible given the descriptions the Government has provided. As a result, it seems that the *Nixon/Cheney* test would also be satisfied.

Therefore, this Court now turns to whether Dairyland’s Statement of Need fulfills the *Sealed Case* test.

III. ANALYSIS

The five subject documents range in date from May 1995 to January 1997. Def.’s Resp. at A13-A16. According to the Government, the documents reflect communications between the President’s staff and various high-ranking DOE or other Executive Branch officials concerning then-pending legislative proposals for the development of an interim fuel storage facility for use prior to the opening of a permanent SNF repository at Yucca Mountain, Nevada. *Id.* at 3-4.

The Government’s privilege log describes the documents as follows⁴:

1. E154/HQR0290177-190 – a memorandum discussing policy options for interim radioactive waste storage;
2. E167/HQR0320199-206 – a memorandum regarding expedited spent fuel acceptance at a Yucca Mountain fuel repository;
3. E170/HQR0320221-227 – a draft memorandum discussing “options for expedited acceptance, interim storage, and compensating utilities, and presidential principles”;

⁴The Court labels the documents with the number Dairyland has given a particular document listed first and the Bates-stamp number listed second.

4. E171/HQR0320231-245 – a memorandum concerning policy options for interim radioactive waste storage;
5. E178/HQR0421452-464 – a memorandum from DOE officials to the Office of Management and Budget and the White House regarding nuclear waste litigation.

Id. at A13-A16.

A. Dairyland's Need for the Documents

In order to demonstrate its need for the subject documents, Dairyland must demonstrate that the documents likely contain important evidence and that this evidence is not available with due diligence elsewhere. *Sealed Case*, 121 F.3d at 754. The Court rules that Dairyland has met this standard.

1. The Documents' Relevance

The Court, in overruling the Government's invocation of the deliberative process privilege over the documents, has already found that the documents' descriptions indicate a high degree of potential relevance to this matter. *Dairyland Power Coop.*, 77 Fed. Cl. at 344-45. But in opposing Dairyland's attempt to overcome the presidential communications privilege, the Government still questions whether White House consideration of legislative proposals pending between 1995 and 1997 could in any way inform the Court about DOE's contractual obligations and the reasonableness of Dairyland's efforts to mitigate the Government's breach of the Standard Contract through private SNF storage efforts. *See* Def.'s Reply Concerning Cross-Mot. at 6-7. And since no other SNF plaintiff has challenged the Government's assertion of the presidential communications privilege over these documents,⁵ the Government skeptically views Dairyland's Statement of Need, given the damages many of these same plaintiffs have received. *Id.* at 6.

Other SNF plaintiffs' discovery efforts notwithstanding, the fact remains that the documents appear highly relevant to this case. The descriptions of three of the documents—E154, E170, and E171—refer to interim fuel or radioactive waste storage. And while the Government refers to document E178 as concerning nuclear waste litigation in its privilege log, a high-ranking DOE official, in the invocation of the deliberative process privilege the Court has already addressed, stated the document discussed interim fuel storage. *See* Affidavit of Ronald Milner ¶ 18-11 ("Milner Aff."). Whether Dairyland's efforts to mitigate its damages by pursuing private fuel storage were reasonable is a central point of contention in this case. These documents may, therefore, shed light on the reasonableness of these efforts. Finally, document E167 concerns

⁵The documents were also produced in redacted form in another SNF case due to an unchallenged assertion of the presidential communications privilege. *See Pac. Gas & Elec. Co. v. United States*, Case No. 04-74C (filed Jan. 22, 2004); *see also* 77 Fed. Cl. 205 (2006).

spent fuel acceptance and could illustrate Government considerations of what constituted an appropriate rate for such acceptance in the wake of the Standard Contract. *See* Def.'s Resp. at A8 (citing Defendant's Response to Utility Plaintiffs' Joint First Set of Requests for Production of Documents at 38). The Court, then, continues to believe that Dairyland has shown that these documents potentially bear a great deal of relevance to issues that trial will concern, thereby satisfying the first prong of the *Sealed Case* test.

2. Obtaining the Information in the Documents Elsewhere

The Government claims that Dairyland can obtain any information the documents might contain through other avenues in the public domain, specifically through documentation of proposed legislation. Def.'s Reply Concerning Cross-Mot. at 8. The subject documents, however, may contain statements by senior Government officials on issues specifically pertinent to this case that are not publicly available. The Court, then, agrees with Dairyland's assertion that "it is the documents themselves, authored by [G]overnment officials, rather than only the factual information in the documents, that makes them uniquely important and certainly not obtainable elsewhere." Dairyland's Statement of Need at 3.

B. Formal Invocation of the Presidential Communications Privilege

According to *Cheney*, the Executive Branch shall not bear the burden of "invoking executive privilege with sufficient specificity and of making particularized objections." *Cheney*, 542 U.S. at 388 (citation omitted). *Sealed Case* also states that the White House has no "obligation to formally invoke its privileges in advance of a motion to compel." *Sealed Case*, 121 F.3d at 741. The Government consequently argues that to the extent the Court finds that Dairyland has met its initial burden of heightened need for the subject documents, "the appropriate step would be for the Court to allow the White House, following the Court's finding, to come forward with a formal invocation of the presidential privilege." Def.'s Resp. at 21.

In this case, the Government has only claimed that the documents at issue are subject to the presidential communications privilege, but has not provided the sort of formal White House invocation that occurred in *Sealed Case*, where an affidavit from the White House Counsel stated that the President had specifically authorized him to invoke the privilege over the documents sought. *Sealed Case*, 121 F.3d at 744 n.16. The result of that case was a remand for consideration of whether to release the documents after in camera review. *Id.* at 762. While Dairyland argues that whether the Court should require such a formal invocation is irrelevant because "formal invocation of the privilege cannot diminish Dairyland's need for the documents," the fact remains that both *Cheney* and *Sealed Case* indicate that this Court could not have expected any such invocation, justifying specific objections to Dairyland's requests, prior to Dairyland's motion to compel the documents' production. Pl.'s Reply at 7; *see also* *Cheney*, 542 U.S. at 388; *Sealed Case*, 121 F.3d at 741. *Cheney* cautioned that the President's "'constitutional responsibilities and status [are] factors counseling judicial deference and restraint' in the conduct of litigation" against him. *Cheney*, 542 U.S. at 385 (citations omitted). In deference to *Cheney*, then, the Court concludes that the White House must be allowed the opportunity to submit an

affidavit formally invoking the privilege and stating the reasons for the invocation, in the context of which the Court can review the subject documents in camera to determine if the privilege actually applies here.

IV. CONCLUSION

For the foregoing reasons, the Court will not rule on Dairyland's motion to compel the subject documents' production at this time. However, the Court ORDERS the Government, on or before **January 7, 2008**, to file with this Court a suitable affidavit reflecting a formal invocation of the presidential communications privilege over the documents by appropriate White House officials. The Government should also submit the documents to the Court in unredacted form for in camera inspection, at which point the Court will determine whether the presidential communications privilege indeed protects the documents from disclosure by examining the affidavit and the arguments the parties have already presented. As there are only five documents in question, the Court believes this time period to be reasonable, if tight.

The Court DENIES the Government's cross-motion for a protective order.

s/ Edward J. Damich
EDWARD J. DAMICH
Chief Judge

Salt Lake Tribune, The (UT)

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Column: Goshutes' waste plan hits a snag

Index Terms:

Environmental Issues

Goshutes' waste plan hits a snag

Yucca Mountain may reject spent nuclear fuel from proposed Skull Valley site; Skull Valley may be stuck with N-waste

Author: Patty Henetz; The Salt Lake Tribune

Article Text:

A utility consortium planning a temporary high-level nuclear waste storage facility on the Goshute reservation in Utah's west desert is developing intricate plans for getting the waste from nuclear power facilities to the site.

But a federal Department of Energy official says a planned permanent repository at Yucca Mountain, Nev., could not accept the deadly waste, meaning that Private Fuel Storage may not be able to keep its promise that the waste would be in Utah for only a few decades.

For all the effort to relocate the nuclear waste to the Skull Valley reservation, there may not be an exit strategy.

During interviews Wednesday and Thursday, Gary Lanthrum, director of the DOE's transportation program, told The Salt Lake Tribune that federal Nuclear Regulatory Agency (NRC) rules say any radioactive waste headed for Yucca Mountain must be freshly packed by nuclear power plants before the DOE takes ownership of it.

PFS, however, plans to receive waste in welded casks because that is the way the plants store it on site, Lanthrum said. For that reason, "the current contracts for how we receive fuel makes their plan unacceptable," he said.

The revelation startled Utah officials, including Gov. Olene Walker, and led to questions Thursday about bad communication between the DOE and the NRC, which are responsible for approving both the Yucca and PFS plans while ensuring public safety.

"It would be ludicrous to make shipment to a temporary facility and then not be able to transport it again," Dianne Nielsen, executive director of Utah's Department of Environmental Quality, said in an interview. "To find there isn't even agreement between NRC and DOE is disturbing. [The casks] shouldn't move until they have the answer."

Walker, speaking Thursday to members of the federal Nuclear Waste Technical Review Board who met for two days in Salt Lake City, said the state doesn't want any nuclear waste passing through -- or staying in -- Utah.

"Once again, the citizens in Utah . . . will be asked to trust the federal government, at the same time the

government is testing the reliability of that commitment," she said.

John Parkyn, PFS chairman and CEO, told the board the radioactive waste should be handled just once at the reactor site, then shipped to the Skull Valley Goshute Reservation facility.

Because rehandling the waste poses unacceptable risk, that won't happen at the PFS site. The utilities that generated the waste would continue to own the material until the DOE takes title to it, "whenever that might be," Parkyn told the board, an advisory body Congress established to oversee Yucca Mountain planning. The board has no jurisdiction over the PFS proposal.

After his presentation, Parkyn said that the DOE "has an open invitation to join us" at the nuclear power sites when the waste is packaged in the storage casks.

"Hopefully DOE will try to meet our standards," he said, adding Lanthrum's notion that Yucca wouldn't take welded casks from PFS "is not an accurate interpretation," and that the DOE has no regulatory authority over PFS waste.

But according to Lanthrum, who testified on the DOE's nuclear waste transportation plans at the hearings, that department has no obligation to take waste from PFS, a private company.

Under federal law, the DOE is required to take waste from utilities for permanent storage at a federal repository. It will do so by delivering approved storage casks to the nuclear power plant, where utility personnel load the casks according to NRC rules. Then, the DOE will arrive with either a rail car or truck

"DOE owns [the waste] from that point on," Lanthrum said.

The law had required the DOE to open Yucca Mountain, located about 90 miles northwest of Las Vegas, by 1998. A series of lawsuits and technical troubles stalled the project, which Nevada is vehemently opposing.

Congress now is refusing to fund Yucca in its omnibus spending bill, leaving all planning in limbo and probably pushing its opening date beyond the new deadline of 2010.

Meanwhile, PFS plans to ship waste on its own to Skull Valley for open-air storage before going to a permanent repository.

Skull Valley Band of Goshutes Chairman Leon Bear in 1997 signed a lease with PFS to allow the company to store up to 44,000 tons of spent nuclear fuel on Goshute land 45 miles west of Salt Lake City. The containers would sit on concrete pads spread across 100 acres while waiting for transport.

Connie Nakahara, special assistant state attorney general working on the PFS issue, said she wasn't sure how the state could respond to Lanthrum's assertions. "We've always been concerned with PFS's lack of ability to repack fuel in case of an emergency," she said.

Nuclear regulatory officials also have rebuffed state questions about the waste packing procedure at the nuclear facilities. "Basically, NRC has said DOE will be there to pick it up," Nakahara said.

Not according to Lanthrum, who said that because the waste will be shipped and accepted at PFS in welded casks, the DOE won't take it at Yucca Mountain.

And the DOE is not willing to renegotiate its rules on this single issue, he said. Unless some other agency changes the rules, that means the material would either have to be repacked at PFS or be sent back to the nuclear plant from which it came.

Technical Review Board members asked Parkyn how closely PFS was working with the Yucca planners. Parkyn replied that PFS has "tried" to provide Yucca officials with documentation.

"I would say there is dialogue," he said. "We're not in competition with them."

In his presentation, Parkyn said PFS would ship waste only by rail, in custom-built cars, and would build a rail line on the Goshute reservation. "Putting a rail line in costs more than shipping by truck," he said. "We are not going the cheapest way."

The presentation on PFS safety and transportation plans left Nielsen fuming.

"John Parkyn put up a wonderful list of things it's going to do," she said. "But PFS has not committed to any of those as license conditions. Every time we have asked them to, they have refused."

The NRC held hearings from Aug. 9 to mid-September on the PFS license, in particular on whether to reconsider a finding that the potential of an F-16 fighter jet crash into the casks poses an unacceptable risk. Parkyn said he expected a decision on the renewable 20-year license by January and predicted PFS would begin to receive shipments in 2007.

Utah's state and federal leaders oppose the Skull Valley proposal, but have no oversight because the Goshutes are a sovereign tribe.

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UNITED STATES
NUCLEAR WASTE TECHNICAL REVIEW BOARD
TRANSPORTATION PLANNING PANEL MEETING

Thursday, October 14, 2004

Sheraton City Center Hotel
150 West 500 South
Salt Lake City, Utah 84101
(tel.) 801-401-2000
(fax) 801-534-3450

1 There are seven people signed up to speak, and as in the
2 case of yesterday, I'd like to have the speakers address the
3 Board and the audience from the front podium and I'll also
4 invoke the no more than five minute rule, as well.

5 We'll start off today with Bob Halstead and in the
6 on deck circle is Earl Easton.

7 HALSTEAD: Thank you, Mr. Chairman, for the opportunity
8 to speak to you again. I'd like to address three issues;
9 routing, systems planning for hardware design, and the issue
10 of trust.

11 Issue #1, somehow yesterday we managed to make the
12 Western Governors Association and WIEB routing process
13 confusing and complex. I'm not sure why we weren't able to
14 make it simple. It seems to us it simply involves three
15 steps.

16 The first step is for DOE to put forward base case
17 or straw man routes for each potential mode for each
18 shipping site to Yucca Mountain. That means the 77 sites,
19 72 commercial and five DOE. And, from Nevada's standpoint,
20 the representative routes that are in the Final EIS would be
21 a fine starting point for that, although many of you may be
22 surprised to find that they're hidden at the back of
23 Appendix J of the EIS and not put forward in an easily
24 accessible way, but they're actually there and that would be
25 a good starting point.

1 Secondly, the states and DOE through Western
2 Interstate Energy Board with input from tribes and local
3 governments would evaluate those routes in comparison to
4 alternatives identified by states, tribes, local
5 governments, and process using the multi-attribute utility
6 process as Dr. Garrick suggested to rank order some of the
7 criteria, using certainly Dr. Abkowitz's all-hazards
8 approach, and frankly, we have the GIS tools to do this node
9 link analysis now very rapidly. And, we would also look at
10 minimizing impacts on urban areas with this proviso, it's
11 going to be very difficult to limit impacts on urban areas,
12 particularly for rail. And, we may have to think about
13 things like convoy requirements, time of day restrictions,
14 speed limits, special escort requirements. Special
15 administrative controls may be necessary to make certain
16 urban routes acceptable. And then, based on that analysis,
17 we would hope that the Western Interstate Energy Board could
18 specify preferred routes from a regional perspective.

19 The third step would be for the Department of
20 Energy to make a commitment and follow through on that
21 commitment to specify these routes in its motor carrier
22 contracts and its rail carrier contracts, understanding that
23 some provisions for temporary and emergency deviations would
24 have to be addressed. Not a perfect process, it reflects
25 our two decades of work in this field.

1 The second issue, I'll try to be brief, but this
2 is a very important point. Dr. Arnold raised this point in
3 his questions to Mr. Parkyn and this came up in Earl
4 Easton's presentation yesterday. The bottom line is we are
5 seeing the absence of a systems planning approach to
6 hardware design, for storage, transport, and disposal. In
7 1990, the State of Nevada approached a standardized dual-
8 purpose cask, three sizes of dual-purpose cask using a
9 common design approach. In 1996, the State of Nevada
10 endorsed DOE's Multiple Purpose Canister approach. It seems
11 to have fallen by the wayside now, as Earl said, because the
12 utilities are focused on at-reactor storage and, frankly,
13 are interested in maximizing profit opportunities for
14 particular company who in some cases have organized
15 subsidiaries who provide the system designs for themselves
16 and they don't want them to be standardized.

17 That is causing a major problem for Yucca Mountain
18 which we talked about yesterday, but the issue we want to
19 talk about today is an issue that emerged yesterday when
20 Gary Lanthram and I were both being interviewed at the same
21 time by a reporter from the Deseret News and it occurred to
22 me this very simple thing had not been laid on the table.
23 And, that is that there is no hardware design exit strategy
24 for shipments from the PFS facility to Yucca Mountain. Now,
25 that has profound implications. It means that unless all

1 those standard contracts are renegotiated, that spent fuel
2 could end up having to be shipped back from PFS to the
3 originating reactors to be repackaged for shipment to Yucca
4 Mountain. It's further complicated, of course, by the
5 absence of useful waste acceptance criteria and final waste
6 emplacement package designs because of the uncertainties
7 about thermal loading at Yucca Mountain.

8 I believe that this is an area that the Board
9 should highlight. And, in my personal opinion, it's
10 probably the single most important thing that the Board
11 could redirect DOE's program regarding and that is that we
12 need to have an integrated systems approach to designing
13 this hardware. We can still do this now. Of the 100,000 to
14 120,000 metric tons of projected spent fuel from the
15 existing reactors, assuming 20 year license extensions, less
16 than 20 percent of that spent fuel has been committed to a
17 specific dry storage design. Yes, it will be expensive to
18 switch for the 20, but for the 80 percent that's yet to be
19 committed or generated, we can standardize this system.
20 It's not too late to do this. And, the longer we wait, of
21 course, the more difficult and more expensive it becomes.

22 Finally--and, I'm sorry, I'm going over, Mr.
23 Chairman--let me just briefly address a third issue and that
24 is the absence of trust, generally speaking, in government
25 organizations, of my own agency included. But,

1 specifically, the lack of trust in the Atomic Energy
2 Commission and the Department of Energy based on the weapons
3 testing program in Nevada. And, this, combined with the
4 lessons I learned working on the Crystalline Repository
5 Project when I worked for the state of Wisconsin between
6 1978 and 1988, there is a profound problem with the public
7 perception of this agency and its history. I'm not saying
8 it's fair. I'm just saying it's a real problem. In 1985, a
9 major program milestone was made in the so-called Waste
10 Commingling Report where the decision was made to give DOE
11 full jurisdiction over both the civilian waste and the
12 defense waste. I think that's an issue that the Board will
13 have to be sensitive to. That, in addition to other
14 institutional issues, there is a profound distrust of the
15 Department of Energy, whether it's deserved or not in the
16 State of Nevada and in many other states.

17 Thank you again for having this meeting in a
18 western location and thank you again for allowing me to
19 speak.

20 ABKOWITZ: Thank you, Bob.

21 Our next commenter will be Earl Easton and he will
22 be followed by Marjorie Bullcreek.

23 EASTON: Thank you. Earl Easton, U.S. Nuclear
24 Regulatory Commission. I'd like to make three comments; two
25 as a representative of the NRC and one a personal

23 [DOE also foresees no difficulty in procuring adequate supplies of stainless steel, nickel based alloy, carbon steel, and titanium¹² to manufacture over:

- 11,200 waste packages (outer shell of nickel based alloy and inner shell of stainless steel);
- 7,400 TAD stainless steel canisters;
- 11,200 nickel based alloy and stainless steel emplacement pallets;
- 11,500 titanium drip shields;
- 2,500 aging overpacks (carbon steel and concrete);
- 10 shielded stainless steel transfer casks; and
- 109 stainless or carbon steel shipping casks (79 rail and 30 truck).

See SEIS at 4-95 to 104. DOE fails to meet the requirement of NEPA because it does not discuss the regional or national economic impacts from the material and supplies needed and consumed at the Yucca Mountain repository.]

B. Comments on the Draft Supplement Environmental Impact Statement for the Nevada Rail Transportation Corridor and the Draft Environmental Impact Statement for the Nevada Rail Alignment (Caliente and Mina Routes).

The draft supplemental environmental impact statement for the transportation corridor describes air quality; employment; and occupational, public health and safety *regions of influence* for the Caliente rail alignment to include only Lincoln, Nye, and Esmerelda Counties in Nevada. SEIS Transp. at 3-3 to 4. [The Dixie National Forest and two Utah counties (Iron and Washington) abut Lincoln County, Nevada, and the town of Modena, Utah, is less than 35 miles east of Caliente. Given that air contaminants will not stop at the Nevada-Utah state line, DOE must also address air quality impacts in Utah.] 19

20 [The transportation SEIS should also assess any employment and economic development impacts on Washington and Iron Counties in Utah.] Furthermore, [DOE should evaluate public health, safety, and infrastructure impacts along Utah highways and in Utah communities where workers or goods and materials related to rail construction may travel.¹³ In particular, DOE must, at least, assess the impacts on Utah State Road-56 to Modena and the surrounding communities.] 21

22 [DOE plans to withdraw water for rail construction from aquifers below the location of the rail line. SEIS Transp. at 3-3. The Death Valley region, including Yucca Mountain, is in the Basin and Range physiographic province. Moreover, distinct hydrogeologic boundaries for the aquifer at

¹²DOE makes the offhand assumption that, when the time comes, there will be a sufficient supply of titanium needed for a vital component of the repository, the drip shields. DOE makes this assumption even though the quantity of titanium it needs would currently amount to 22 percent of the nation's annual titanium import or production. See SEIS at 4-104 to 105 and Table 4-36.

¹³ E.g., The nearest active ballast quarry is located in Milford, Utah. SEIS Transp. at 3-314.

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