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**Comments on the Draft EIS
For the NRC Public Hearing, August 21, 2000**

The draft Environmental Impact Statement (DEIS) contains a series of appendices. Appendices are used as supporting documentation for a main report that provide the foundation on which the validity of a proposal is based. This DEIS contains Appendix F which includes "Initial Screening" forms that are intended to support the proposal to place the nuclear waste on the Skull Valley Band of the Goshute Reservation.

Exhibit F.3 is the Goshute Initial Screening form and it contains false information, as follows:

1. The form states that the proposed site is at least 2 miles (and 5 miles) from a capable fault, when in fact, the NRC's own supporting documents show that the proposed site is located only 0.5 miles from one capable fault and 1.2 miles from another (the East and West faults, respectively).
2. The form has a section on "Public Acceptance" in which it states the area is "free of pro-active anti-nuclear referenda." The definition of referendum is "A note sent by a diplomatic agent to his or her own government requesting information" (Webster's dictionary). The validity of this form is wholly negated by the referenda established by law by Utah Governor Leavitt and the Utah Legislature. The fact that the highly organized pro-active anti-nuclear organization in Utah for over 20 years, Downwinders, is ignored only further invalidates this form and this proposal.
3. There are 37 other sites that completed the Initial Screening form. There is a lot of data in those forms that has not been quantified. Many of the forms answered "unknown" to sometimes all of the questions on the form, such as Hanford, which we all know is not true. In reducing the data to a quantifiable format, I found that up to 84% of the responses were "unknown." That kind of data, or lack of data, is not meaningful or useful for any selection process.

Finally, the form for a site on the Mescalero Reservation in New Mexico states that the "reason for rejection" is the presence of a capable fault on-site. That is precisely why this proposal must be rejected. The data does not support the proposed alternative but rather shows that the No Action Alternative is the only reasonable option.

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In the big scheme of things, the current practices of dealing with nuclear waste exemplifies supreme waste. Nuclear fuel rods have a productive life at nuclear power plants of only 18 to 24 months. Then they are unusable and much more radioactive than un-spent fuel rods. The far-reaching and multi-faceted impacts of these wasteful practices dwarf global warming.

But aside from that big picture, the preferred alternative presented in the draft Environmental Impact Statement (DEIS) is based on often faulty data and deceptive information. It violates the NRC's own protocol for preparing EIS's, NUREG-1555, and fails to meet the purported objectives of the NRC's Scoping Report of September 1998. Specific violations of these documents are the DEIS's failure to do the following:

1. "Stand on its own as an analytical document that fully informs decision makers and the public of the environmental effects of the proposed action." For example:
 - a. It fails to fully and correctly identify the most obvious seismic features and associated hazards, and it fails to accurately and fully characterize the hydrologic setting and water resources.
2. It is not complete and it refers to other documents for discussion of "salient" elements that characterize Skull Valley and the proposed waste site.
 - a. For example, the DEIS's discussion of findings from the subsurface exploration are incomplete and nearly impossible to interpret without reviewing other supporting documents that are not publicly available, such as the Safety Analysis Report..
 - b. Once these documents are reviewed, it is revealed that the DEIS is incomplete and its conclusions are based on erroneous and selective data.
3. It fails to emphasize issues that are significant and instead over-emphasize issues that are not significant." For example:
 - a. Seismic characteristics in Skull Valley are de-emphasized and deferred to the upcoming Safety Evaluation Report. It is absolutely irresponsible that the DEIS provide data in other supporting documents showing that the proposed location is 0.5 miles from one capable fault and 1.2 miles from another. Also, the proposed site is located about 5 miles from a modern epicenter, and there are 5 other modern epicenters in Skull Valley.
 - b. Contradictory statements are made, such as "wetlands are uncommon in Skull Valley," yet wetlands constitute 10% of that valley and those 48,000 acres have been designated by the BLM as an "Area of Critical Environmental Concern." 10% is significant in this state, and cannot be de-emphasized or mis-characterized..

4. The DEIS clearly ignores the warnings from Utah's top officials in the 1998 scoping process. These warnings included:
- a. Thorough research of Skull Valley's water resources and water laws, made by the Director Utah's Department of Natural Resources.
 - b. A BLM official advised that impacts to the wild horse population be evaluated and mitigated. Instead, the DEIS states that the wild horses will have to characterize their patterns. Is the BLM really accepting that, especially when they expend resources managing and protecting the wild horse herd which grows 25% annually?

The benefits of this proposal are promised to a very few select groups, and all who are involved in force-fitting this proposal must develop alternative strategies. The NRC must approve only the No Action Alternative.

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Comments on the Draft EIS for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah, June 2000

by Robin Jenkins, Scientist

August 21, 2000

According to the NRC's NUREG-1555 for preparing an EIS (pages 3 and 4):

- The EIS must "stand on its own as an analytical document that fully informs decision makers and the public of the environmental effects of the proposed action..."
- the EIS must emphasize issues that are significant.
- the EIS must be written in plain language.
- The EIS cannot refer to other documents for essential (salient) information.
- The DEIS must be complete.

The following comments are based on a thorough review the NUREG-1555, the DEIS and supporting reports (SAR, etc.). This review provides evidence that demonstrates the DEIS's violates the NUREG-1555 requirements and cannot be approved, and that the preferred alternative is not the most feasible, reasonable, efficient or safe alternative.

General Comments

This DEIS contains inaccurate, erroneous and incomplete data and information, and it bases conclusions and support for the proposal on that faulty data. This DEIS also forms conclusions that are antithetic to the data. However, this DEIS does provide sufficient data to document that the No Action Alternative is the preferred and recommended alternative because it is the most technically feasible, cost-effective and safe alternative for storing the referenced spent nuclear fuel rods. The NRC must therefore approve only the No Action Alternative and cease pursuit of finalizing the EIS, or finalize it and approve only the No Action Alternative.

This DEIS fails to fairly and truthfully evaluate the alternatives. It presents data showing that the No Action Alternative is the most logical, then presents a preferred alternative that is documented to have the most impact and with very little economic benefit for Utah as a whole. The DEIS preferred alternative is the highest risk alternative and is therefore irrational because it proposes the transport of a never-tested unprecedented volume of highly radioactive waste cross-country for at least 20 years, to be stored beneath restricted airspace for active military testing, by a limited liability corporation with no assets and no financial responsibility. The proposed alternative is certain to cause the most impact and ranks the least in offering significant economic benefit for Utah.

The waste is proposed to be stored above-ground and unanchored on concrete pads that would be situated between two nearby capable faults.

The DEIS contains false screening information in its Initial Screening form (Appendix F, Exhibit F.3) that cannot be used to support or approve the proposed project. The form falsely states that the proposed storage site is greater than 2 miles from a capable fault, when in fact, as stated above, the site is only 0.5 and 1.2 miles from two capable faults. The form also states that this "is an area free of pro-active anti-nuclear referenda", when in fact Utah Governor Mike Leavitt signed an Executive Order to oppose the proposal, and re-structured state government to oppose this proposal. Governor Leavitt's order meets the definition of "referendum." Moreover, this statement on the Initial Screening form is false because it fails to acknowledge Downwinders, a highly organized pro-active anti-nuclear organization that has produced abundant referenda and has maintained a strong pro-active anti-nuclear presence in Utah for over 20 years.

The potential economic benefits to the Skull Valley area are so small and insignificant, yet the DEIS wrongly uses these items of insignificance to promote the preferred alternative. This violates NUREG-1555 by not only failing to emphasize significant issues, it falsely over-emphasizes non-significant issues.

The SAR (page 2.5-5) is the only place I could find that mentions fire suppression: "It is anticipated that surface storage tanks would be erected for potable water, emergency fire water..." What are the provisions for fire suppression and how effective are they expected to be? The close proximity of the 1000-gallon diesel fuel tank to the cannister transfer building and storage pads raises concerns that fire suppression is not adequately addressed. The DEIS only states that fuel spills will be managed under RCRA requirements. RCRA (DEQ/DSHW) does not routinely manage petroleum spills. Is anyone prepared to deal with this? Does this give any assurance of safety in placing and managing the diesel tank?

What are the provisions for emergency response? Tooele County Fire Department is volunteer, and Utah State Highway Patrol provides very few emergency responders capable of managing accidents or sabotage. The Chief of the Tooele County volunteer fire department has publicly stated that they will not provide emergency response support.

The intense opposition to this proposal by at least 90% of Utah's citizens and by Utah's highest elected officials (U.S. and state Representatives and Senators and the Governor) must be honored. The NRC's approval of this proposal will show that the NRC has knowingly accepted false information and is therefore corrupt and fraudulent, and operates outside its own and other entities' law, without due process.

Specific Comments

Executive Summary

1. Page xxx, Lines 18 and 30

Line 30 states that power plants will run out of space for on-site storage of SNF by 2010, yet line 18 states that the DOE may complete a permanent repository location by 2010 (also stated on page 1-7, lines 11 and 12). There is significant cost and inherent risk in transporting SNF these great distances, then transporting again to a permanent facility when a permanent facility is close at hand. Also, the DEIS contradicts itself on page xli by stating that continued on-site storage is a safe and feasible alternative for 30 more years.

2. Page xxxii, Line 28

The license is good for 20 years with renewal options. What provisions exist to ensure this site does not become a permanent facility? What provisions are there for financial responsibility?

3. Page xxxvi, Line 45

The argument for increased economic benefits based on employment opportunities is weak. The 225 jobs are only for the 19-month construction phase (phase 1); only 43 long-term jobs are expected for operating the facility (page Ixii). The DEIS contradicts itself by stating the economic benefit realized by the small numbers of jobs is itself "small."

4. Page xli, Lines 26 through 49

It is stated that SNF can be stored on-site (at the reactors) without significant environmental impact for at least 30 years. This therefore documents that the No Action Alternative is the most technically feasible, cost-effective and safe option for storing spent nuclear fuel rods. The NRC must therefore approve only the No Action Alternative.

5. Page Ii, Groundwater

The statement that there will be little to no impact to local groundwater resources is not supported by correct or adequate data, such as adequate pump drawdown test data from the appropriate production zone. The DEIS repeatedly contradicts itself by stating impacts due to pumping are unknown until pump tests are conducted, then also stating impacts to existing water resources are expected to be low.

6. Page Iiv, Wildlife

This DEIS fails to address impacts to wild horses, as promised in Appendix F, Response to public comments. The BLM expends tremendous effort supporting and protecting the wild horses, which number over 500 in the Skull Valley area alone. In addition, the DEIS states on page 3-25, lines 1 through 4, show that impact to the wild horse herds is imminent. Moreover, the BLM specifically requested in the 1998 scoping process that wild horses be addressed.

7. Page Iv, Wetlands

This DEIS does not address impacts to the wetlands along Skull Valley Road that may be caused by increased road traffic and heavy haulers, especially under Alternative 3 (building an ITF and using Skunk Valley Road for hauling). Chapter 3 (page 3-26) of this DEIS discusses the value of these important natural resources, but then fails to adequately discuss the impacts caused by inevitable heavy use of this road.

8. Page Iv, Economic Benefits

This is one of many places in the DEIS that touts the benefit to the Goshute tribe, but gives no dollar amount, while amounts to other entities are clearly specified. This calls into question the real economic benefits to other than a small few.

9. Page Ixi, Summary Table

This table, as well as other similar discussions throughout the document (e.g., page 4-3), indicate that impact to Skull Valley Road will be moderate to large, yet there are no provisions in the document for road maintenance and repairs. Moreover, additional road impacts caused by water and other materials haulage over the proposed long-term operation of the facility are not addressed. The fact that water availability from on-site sources is questionable, and the fact that purchasing water from a local water right holder is not legal or feasible, the large amounts of needed water will most probably need to be trucked in. Therefore, Skull Valley Road will be disproportionately over-taxed to satisfy the large volumes of needed water.

10. Page Ixix, Radiological Accidents During Transportation

Transportation of this magnitude has never been tested, therefore the risk evaluation in Appendix D are yield non-representative results. There is a strong inherent risk in shipping the proposed amounts of SNF cross-country for 20 years and not suffering a serious accident.

Chapter 1

11. Page 1-1

Line 37: According to NUREG-1555, Volume 1, page 1.1-2, the proposed action must describe “the site location with respect to nearby towns and natural features.” Therefore, Figure 1.2 needs to show the nearest residents and the Skull Valley Band’s village, and the text needs to specify and discuss the local populations. In addition, Low, Utah needs to be shown of these Figures because it is mentioned in the Executive Summary.

Line 48: The DEIS must be concise in describing the project in full, and properly and fully convey the extent of this operation to the public. Therefore, Line 48 should read: “...the SNF to be shipped over a 20-year period to the proposed PSFS...” Discussion of the 20-year shipment could also be placed in line 36 after “100 and 200 (canisters) annually to account for the 40,000 MTU.

12. Page 1-5, Line 43

According to the example in NUREG-1555, page 1.1-5, a more thorough discussion of full construction activities is needed. This line only mentions Phase 1 of construction. What about Phases 2 and 3? What about the duration and nature of all phases? Again, the DEIS must be concise in describing the project in full, and properly and fully convey the extent of this operation to the public.

Chapter 2

13. Page 2-26, Section 2.1.4, BMPs

Why are BMPs not discussed for the operation, but only construction? NUREG-1555, page 12 states that BMPs are “construction or maintenance practices that limit adverse impacts,” which also entail operations. This section has erroneously interpreted BMPs to apply only to construction and not operations.

BMPs should also include fire suppression, emergency response and spill prevention for both construction and operation.

In addition, this section fails to address how BMPs will be implemented to avoid and mitigate disturbance (due to construction and other traffic) to the springs located along Skull Valley Road.

Chapter 3

Generally, this chapter fails to provide sufficient detail and relevant information regarding the proposed facility. The maps are regional and need to be supplemented with more detailed maps of the area including and directly adjacent to the proposed site. The maps provided do not show salient features that are referenced in the text (Hastings Pass, test pits, soil borings, stock ponds/reservoirs, springs other than Horseshoe Springs). It is therefore impossible for a reviewer to understand the nature and characteristics of the local salient elements that are at risk of impact.

14. Page 3-3, section 3.1.2, Seismic Setting

Regarding the proposed location of the site relative to the nearest fault, Appendix F, Exhibit F.3, page F-5 (Initial Screening form) states that the proposed site is at least 2 miles from a “capable” fault. Conversely, the DEIS itself and SAR indicate that the East Fault is about 0.5 miles (0.9 km) from the proposed site and the West Fault is about 1.24 miles (2 km), coincident with figure 3.1. Although neither the SAR nor DEIS directly indicate which faults in the area are “capable” (the SAR refers readers to other reports, e.g., Geomatrix), the SAR does show that a capable fault is one with potential for a magnitude 5 (SAR page 2.6-92 “Capable Faults”). Further, the SAR states that the “mean maximum magnitudes for the East and West Faults were calculated to be M 6.5 and M 6.4,” which demonstrates that these faults are capable. Yet softly, the SAR states that the East and West Faults “are the most important structures with respect to assessment of seismic hazard” in the proposed site area. Since neither the SAR nor DEIS state clearly which faults are capable, the information provided does show that the East and West Faults are capable.

This evasion and deception are inexcusable for a DEIS and make this proposal wholly unacceptable. The context of “draft” report does not include false data or unsupportable information; a “draft” only needs adjustments on font style, punctuation and other format, not content.

15. Page 3-3, section 3.1.3, Soils

Line 42: This paragraph implies, but does not directly state that 25 test pits were dug (to an undisclosed depth) “in the immediate area of the proposed action” and that “soils were generally not identified in the remaining 22 test pits.” What then was the purpose of digging test pits if they are not used to characterize the subsurface? How deep were the test pits dug, to what depths were they evaluated, and what were results of those evaluations? The text then mentions that borings were emplaced, to unspecified depths, and that details are in the SAR. Reference to another document for basic, supporting and explanatory information is not acceptable (NUREG-1555). Incidentally, test pits are superior to borings (see below) for characterizing the subsurface, hence it is frustrating to know so many pits were dug but not characterized. This portion of the

DEIS therefore fails to meet the requirements of NUREG-1555 in providing concise, complete reports.

Line 44: The paragraph states that soils in the 3 test pits (that apparently were characterized) bear low organic content of “no more than 20% to 30%.” This cannot be true because, in fact, organic content of 20% to 30% is actually very high (e.g., peat bogs, coal seams, oil deposits), and is highly unusual for soil in Utah’s intermontane basins such as Skull Valley, unless they hit coals seam or other hydrocarbons or peat bogs. There is abundant data in State of Utah files and in technical documents that show organic content in soils throughout the state, at depths from 0 to up to 100 feet deep, ranges between 0.05% and 0.55%. Furthermore, what value is any information, correct or incorrect, that makes soil carbon content relevant to any aspect of this proposal. And furthermore, how could organic carbon content be more important than moisture content?

16. Page 3-4, Figure 3.1

This section fails to provide a figure that shows any meaningful detail such as locations of the test pits and borings, topography, faults and their type, and springs (which usually emerge along faults) in the valley and surrounding mountains. On Figure 3.1, “rail spur” in the legend needs to qualified with the word “proposed.”

Figure 3.1 shows the proposed location lying only 1 km or 0.62 miles (3270 feet) from the East Fault and about that same distance from the West Fault. These two faults converge at the both the north and south ends forming a fault block, with the proposed location situated on a crustal block that has been up-thrown along the West and East faults, which indicates a high seismic risk for the safe storage of the waste. It is only with thorough, careful review of your data in this DEIS and other hard-to-find reports that the reviewer realizes the site is situated 0.5 miles from one capable fault and 1.2 miles from another.

17. Page 3-5, Line 1

It is stated that a series of borings of un-stated depth were emplaced. Soils were described down to 9 feet deep, and that water content ranged form 9% to 50%. Because moisture generally increases with depth toward a water table, and because shallow groundwater occurs between 3 and 15 feet in most all of Utah’s intermontane valleys, the report implies that there may be 50% moisture at 9 feet deep. If so, the capillary fringe or fully saturated conditions (i.e., shallow groundwater) exist at 9 feet deep. Only after laborious review of hundreds of other pages, including the SAR, is any detail at all revealed. The SAR shows geotechnical lab data and soil boring logs indicating moisture contents over 40% at shallow depths and perched water at about 9 feet. Based on the DEIS’s own information, there is a shallow aquifer at about 9 feet. This shallow aquifer must be described and discussed. The shallow aquifer in the area of the proposed site is also confirmed by public information published by the state of Utah.

18. Page 3-6, Line 45

The statement is made that Figure 3.3 shows drainage channels and springs, yet it fails to show the “salient” features, mentioned in later sections, that are significant to this proposal. These salient features include the BLM’s Area of Critical Environmental Concern (ACEC), Indian Hickman Springs (the aqueduct that transports water from Indian Hickman Spring) and the Goshute Reservation outline. The Reservation outline would show that one of the tribe’s sources of water (Indian Hickman Creek, page 3-26, line 5), which PFS alludes to requiring for the facility, does not originate on the reservation and is therefore subject to adjudication, not indiscriminate, unquantifiable use as proposed in this DEIS.

In the 1998 scoping process, Director of Utah Department of Natural Resources Kathleen Clarke warned that the water resources must be carefully and fully explored, and that water rights cannot be indiscriminately transferred or abused.

19. Page 3-9, Line 34

The statement “there are no public or private surface water sources in Skull Valley” is deceptive because Indian Hickman Creek, discussed later on line 37, indicates this surface water is used by the Reservation. Also, during the 1998 scoping process, one Tribe member stated that the water piped from the mountain (Indian Hickman Spring?) is dirty, indicating that this water may be used for consumptive purposes. Even though the origin of this water is not in Skull Valley, it provides water to the Reservation and is therefore an important water resource. The DEIS states much later on page 3-26, line 5 that “Indian Hickman Creek is the stream nearest the proposed site” and is fed from springs (these originate of federal land, not the Reservation), and this “stream water is delivered to the irrigable lands through an existing pipeline (page 3-35, line 9). While the “source” of this surface water does not occur in “Skull Valley,” it occurs on federal land and the Skull Valley band uses this water.

Therefore, as Indian Hickman Springs and Indian Hickman Creek Canyon are very important features and water resources, they must be discussed consistently in all parts of the DEIS where water resources are discussed, not one way in the “Socio-Economic Resources, Reservation” section, another way under the “Aquatic Resource” section (page 3-26), and different ways or not at all in other parts of the document that discuss water resources.

These inconsistencies, contradictions and deceptions must be resolved before this DEIS can be approved.

20. Page 3-9, Lines 37 through 46

This is a series of disjointed, uninformative statements regarding the occurrence and proximity of

“perennial streams” and “stream channels.” Hickman Creek is the nearest “stream” to the proposed site and has “flow rates up to 3.1 cfs from April to June.” Is this a perennial stream with flow between June and April? Hickman Creek “feeds the Reservation’s water supply reservoir,” thus it is an important water resource that must be thoroughly discussed. Where are the pipeline and reservoir?

Line 42 states “the stream channel feature nearest the proposed site is ... 1500 feet to the northeast.” Is this Indian Hickman Creek? Line 45 states “the nearest perennial surface water flow...” “is 10 miles to the north.”

There must be maps showing these important “salient” features, and clearer discussion of these features and water resources.

21. Page 3-11, line 13

It is stated that during Utah’s “unusually high” precipitation, trucks driving on Skull Valley Road sank in the water-softened asphalt and overturned, and that no substantial improvements to this road have been made since those events. These statements are testimony that Skull Valley Road is not safe or suited in its current condition to support the reportedly proposed 172% increase in the road’s use, and certainly not the transportation proposed under Alternative 1 or the ITF/Alternative 3.

22. Page 3-11, line 40

“Perennial and ephemeral springs are commonly found near the toes of the alluvial aprons” appears to be taken from general literature and does not adequately characterize the nature of the local springs. Nearly all of the springs in this valley emerge and occur along faults. The statement also ignores one of the most important local features, Indian Hickman Springs, that supplies water to the Reservation from a mountainous location entirely on federal land.

23. Page 3-12, line 6

The statement implies that the test borings advanced to a depth encountered groundwater at 125 feet. This makes the section on soils (page 3-3, section 3.1.3) even more deficient because it fails to provide sufficient and meaningful detail on subsurface conditions. Why are the soils from page 3-3 not described below 9 feet? Such disjointed reporting indicates evasion of certain facts and is one of many examples of this DEIS appearing evasive and failing to meet its purported objective of being a statement of environmental impact, and fails to meet the requirements of NUREG-1555 in providing complete, concise reports written in plain language that conveys “salient” information to the public.

24. Page 3-12, line 20

The statement is made that hydraulic conductivity of the water-bearing zone was determined from a “well test on the proposed PFSF site,” yet the Executive Summary, page xxxv, line 18, states that “until test wells are drilled and their production capacity is checked” the impact on local water resources caused by drawdown is “unknown.” It is not until Chapter 4 (page 4-7) that drawdown (7000 feet radius of influence) is mentioned, and yet production capacity and other important parameters are not. Water production only in terms of what is needed is mentioned, not what the aquifer will support.

The DEIS does not identify the date or source of the well information. I searched the Utah Division of Water Rights database via the Internet throughout my review of this DEIS, and found information that differs from that shown on this figure. Specifically, well #2 has data; depth to water in well #3 is not 90 feet; depth to water in well #4 is also reported in state documents. Also, this figure of water rights shows information that is not publicly available and is not apparently reliable (e.g., “anecdotal information” regarding the Tribe’s well) without proper citation of the data’s origin. If the DEIS has information privately obtained, that information must be accurately presented.

25. Page 3-12, line 40

The statement is made that “no surface water in Skull Valley provides private or public drinking water.” This statement is evasive on water use because, although the statement correctly says “no surface water in Skull Valley,” it fails to recognize the fact that the Reservation is supplied by a surface water source (Indian Hickman Canyon, that exists due to springs located on non-reservation land). This collection of disjointed facts inappropriately strewn throughout various parts of the DEIS, when properly assembled and analyzed, negates the contention of the ability of local water resources to legally and feasibly meet the consumptive needs of the proposal. For example, the DEIS states on page 3-35, line 9, that surface water is piped from Indian Hickman Canyon (USGS, 1985 topo series) to serve the Reservation.

26. Page 3-13, Figure 3.4

This DEIS makes general statements in the Executive Summary then fails to support those statements with reliable data and facts. This figure does not identify the source or date of the information shown. This figure contains erroneous data on depth to groundwater based on easily-obtained public information as mentioned above. The text states that one of the tribe’s wells experiences an inexplicable 100-foot annual vertical gradient, which is an unusual hydrologic phenomenon that requires research and documentation in this DEIS. Which well is this, and why does it experience these unusual phenomena?

The nearest well (number 9, Skull Valley Indian Reservation) has no data, yet the document repeatedly states (e.g., Executive Summary, page-xxxv, line 18) that impacts to the nearest well are expected to be small (with a 7000-foot radius of influence?). This confident statement is not based on the available data. The data indicates that it is not possible to determine any potential impacts to groundwater resources. In addition, the fact that the DEIS estimates a very large radius of influence of 7000 feet based on questionable data indicates that local water resources are not understood and could be adversely impacted.

This is an example of the draft EIS typically and consistently being evasive and failing to meet its purported objective.

27. Page 3-14, Lines 1 and 2

The statement that “Wells are normally completed to depths of between 110 and 160 feet” is false, because the DEIS’s own data, and publically-available data, show that these depths are off by over 200 vertical feet. This kind of inaccurate and erroneous data is unacceptable for public review or NRC acceptance and approval

If the erroneous wells depths are the reason a limited pump test was undertaken at about 125 feet, then the efforts to conduct a pump test were a complete waste.

28. Page 3-14, Line 4

“Anecdotal information” indicates annual groundwater fluctuations in the Tribe’s community well of over 100 feet per year. Is this well #9 on Figure 3.4 and the closest well to the site? This is an unusual and enormous fluctuation and raises concern regarding PFS’s (or anyone’s) knowledge of local groundwater conditions and the impacts from extracting groundwater at the site for construction, operation and fire suppression. What is the depth to groundwater in this well? What is it’s capacity? What are the nature and cause of this unusual fluctuation? Is the fluctuation seasonal? How does this unusual condition effect water availability for the proposed site? How does this unusual condition effect water availability for the host tribe? How will this unusual condition be impacted by the proposal? Is this a well that PFS proposes to use to supply the proposed project?

Anecdotal information is not acceptable for an EIS. It is easy and necessary to measure these important parameters rather than report “unknown” for the key and “salient” features shown on Figure 3.4.

29. Page 3-23, Section 3.4.1.2 Wildlife

A discussion of the wild horse population is missing. Appendix F (public comments) states that

wild horses and impacts on them would be addressed in the EIS. The BLM reports that the Cedar Mountain herd of wild horses grows by 25% each year, and the BLM spends great resources in evaluating and managing the herds. Also, during the 1998 scoping process, a BLM official advised that impacts to wild horses need to be evaluated. Why are these elements not addressed?

30. Page 3-26, Line 26

The qualitative statement that "wetlands are uncommon in Skull Valley" is naive and incorrect. Wetlands comprise nearly 10% of Skull Valley ("less than 9% as stated and minimized in this DEIS), and 10% is a vitally significant percentage in the deserts of the western United States. The significance is marked by the fact that the BLM has declared this 15 mile by 5 mile area (75 square miles or 48,000 acres) an ACEC.

The reviewers understand that 10% wetlands seems insignificant with a perspective based on East Coast or Mid-West standards. Therefore this DEIS must recognize the different standards by which western water resources are measured and the restrictions on water use in U.S. west deserts. West Coast standards differ significantly from those of the East Coast and the differentiation is based on the scarcity and often unavailability of water resources in the West.

31. Page 3-35, Line 9

"Stream water is delivered to irrigable lands through an existing pipeline" must be mentioned in all parts of the report that discuss anything regarding water, including the occurrence, availability and proposed need for water resources. Does this statement mean that Indian Hickman Canyon/Creek is a water source for the Tribe or others? This DEIS must be cleaned up so that each section uniformly and consistently evaluates and discusses each water resource. For example, here on page 3-35 line 9 states that the "stream water is delivered to irrigable lands through an existing pipeline." On page 3-9, this water supposedly feeds the Reservation's water supply reservoir. Is this the same water source?

In addition, how does this water supply compare to the Tribe's dependence on well water?

32. Page 3-54, Line 46

The SAR indicates that baseline radioactivity tests have been conducted, so this DEIS needs to be updated to reflect those tests.

Chapter 4

Wetlands and springs that are located along Skull Valley Road were identified and described in

Chapter 3 (page 3-26) as important natural resources that are part of the “Potentially Affected Environment in Skull Valley, Utah,” as Chapter 3 is entitled. Yet this Chapter 4, “Environmental Consequences of Constructing and Operating the Proposed PFSF,” fails to adequately discuss the potential impacts to these wetland and spring resources. For example, on page 3-26, Line 35, it is stated that the area of springs along Skull Valley Road are designated “Area of Critical Environmental Concern” (ACEC). Since Skull Valley Road will inevitably be greatly impacted by Alternative 3 and probably by Alternative 1 also, this chapter must more accurately discuss those impacts.

Where in this chapter are attention and discussion given to impacts to the Horseshoe Springs ACEC caused by constructing and operating the proposed rail spur? Where in this chapter are attention and discussion given to impacts on the wild horse herds caused by construction and operations? Testimony in the June 1998 public hearing specifically stated that these issues need to be addressed. The BLM expends resources managing and caring for the wild horses. The herd is over 500 horses and grows 25% annually.

33. Page 4-7, Line 13

Obtaining information from private water suppliers does not necessarily guarantee or legally allow PFS to obtain the needed water from those suppliers. Each of those private water-right holders shown on page 3-13 has specific characteristics, some of which this DEIS has mis-characterized, and specific rights according to the Utah Division of Water Rights. These water rights limit use and prevents the indiscriminate use illegally claimed and bought by un-permitted parties such as PFS.

This DEIS does not specify where water will be obtained if new wells are not sufficiently productive. Although the DEIS mentions the tribe’s dependence on water resources emanating from Indian Hickman Canyon, the reviewer assumes that is a water resource and obtaining water from wells with unusual and unbelievable characteristics (such as 100 vertical feet of annual fluctuation), the DEIS must fully discuss every condition, occurrence and other aspects of water resources and how the proposed project impacts those resources.

34. Page 4-7, Line 20

This section is weak and erroneous in its characterization of groundwater occurrence, availability and potential impacts. Line 32 states that there is “some uncertainty” regarding the availability of water yet other parts of this document show that the availability and impacts are unknown.

35. Page 4-7, Section 4.2.1.3, Groundwater (during construction)

This section does not provide sufficient information to ensure that the aquifer is capable of yielding the needed 7 gpm (about 9300 gallons per day). Neither the SAR nor the DEIS provide sufficient

or adequate information to ensure that on-site wells will be capable of yielding the needed water and not cause drawdown to nearby wells. The SAR (page 2.5-5) states that “several wells on the site may be required to meet the demand.” The SAR further states that drawdown will occur near the new on-site wells, “the extent of which can not be determined” until pump tests are conducted, but that drawdown would not extend beyond the site boundary. Neither the SAR nor the DEIS succeed in concisely or accurately conveying the basic facts. The storage coefficient range presented on page 4-9 line 1 is not supported by data in any supporting reports, and is unreliable because the values range by an order of magnitude. Moreover, the target aquifer that produces water locally was not tested. Regardless of whether or not the SAR provides the actual pump test data, the DEIS should provide concise and accurate basic information to assure reviewers that the information is correct.

I fail to see any adequate supporting hydrologic data in any report for any phase of this proposal, nor do I understand how such poorly-based assumptions can be made regarding Utah’s water resources (Utah is the second driest state in the nation) without that supporting data, especially when the nearest water supply well is only 2 miles away and a proposed production well would cause a drawdown up to 1.3 miles (7000 feet) away from some arbitrary location on the proposed PFSF. This is irresponsible reporting because none of the data provided are adequate to characterize groundwater hydrology or potential impacts to groundwater resources anywhere in Skull Valley or its environs.

The DEIS reports a hydraulic conductivity (K) of 0.144 feet per day (ft/day), or 52 feet per year (ft/yr), which represents a moderately permeable aquifer. Coupled with the reported screened interval of 100 feet (page 4-7, line 45) and a low-to-moderate assumed pumping rate of 10 gallons per minute (gpm), there should be very little impact on the aquifer; which calls into question the radius of influence of 7000 feet that was derived, as indicated on page 4-7, line 41.

36. Page 4-7, Line 42

States that the nearest well is 2.5 miles from the proposed facility, yet earlier sections (page 3-12, line 46) states the nearest well is 2.0 miles away. This must be corrected and resolved because a difference of 0.5 miles (2640 feet) is significant relative to the reported radius of influence of 7000 feet for a pumping well.

37. Page 4-11, Line 42

The statement is false and is based on the incomplete, erroneous and highly questionable data on groundwater characterization: “Based on PFS’s analysis of the site groundwater conditions (see section 4.1.2.3), it is anticipated that onsite wells would be capable of supplying the” needed water for facility operations.

This DEIS must report logical facts that are supported by reasonable data.

The statement on Page 4-11, Line 42:

1. Negates the statement made on page 4-7, line 32 "...there is some uncertainty as to the availability of sufficient groundwater quantity"...to meet the proposed needs.
2. Is false because the data PFS used to derive conclusions regarding groundwater is faulty (they report incorrect well depths, questionable pump test data, and they tested an unused portion of the aquifer).

38. Page 4-11, Section 4.2.2.3, Water Use (during operation)

This section fails to clearly specify all of the water needs and aquifer capability of satisfying those needs.

Line 42 states that 10 gpm is needed for operation. That equates to 14,400 gallons per day (gpd), which is much greater than the 1500 gpd ("for workers") stated on Page 4-12, line 29. Why are 10 gpm needed if only 1500 gpd are expected to be used?

In addition, the 1500 gpd is for workers; what about additional water for other facility operations? The SAR states that water use during operation is expected to be 1800 gpd, which implies that 1500-1800 gpd is all that is needed for operations.

Line 43 refers the reader to section 4.2.1.3 (page 4-7, line 41 and beyond) for assurance that the on-site wells are capable of the necessary production. However, section 4.2.1.3 only provides assumptions based on a single observation well, and does not identify the parameter values used to calculate drawdown, specifically flow rates used in the calculations, duration of the pump test nor the flow rates the aquifer is capable of producing.

39. Page 4-12, Section 4.2.2.4, Groundwater Water (use during operation)

This section does not give any indication that the aquifer can meet the needed 10 gallon per minute (gpm) for operation based on the preliminary pump test results and for the same reasons commented above for page 4-7 (pump test evaluation).

40. Page 4-29, Line 15

This section describes the "brevity" of the construction period (which in plain language means brief, small, terse, and succinct, and a short-lived, insignificant work force). Yet this DEIS repeatedly touts the economic benefits of this proposal. In fact, this DEIS contains all the necessary data to determine that any economic benefits of any phase of this proposal are insignificant.

This violates NUREG-1555 which states that an EIS must “emphasize issues that are significant,” not emphasize issues that are not significant, and certainly not over-emphasize erroneous and faulty data, such as groundwater data, to reach a faulty and very unpopular conclusion.

41. Page 4-31, Line 44

The statement that there is potential for wear and tear on Skull Valley Road (for construction), and subsequent maintenance needs makes false the statement on page xxxviii, line 14, that says there “should be no impacts to the physical integrity of Skull Valley Road” from the ITF/Alternative 3. These statements do not make sense because the ITF alternative is certain to cause greater impacts than the brief construction period.

42. Page 4-32, Lines 26 and 27

“The effect of the proposed PFSF on the economic structure of the local area would be small” is one absolute truth in this DEIS. Any statement in the DEIS that touts the economic benefit, and uses economic benefit to weight favor for this proposal is violating NUREG-1555 not only by not emphasizing issues that are significant, but by over-emphasizing issues that are not significant. For example, this DEIS contains data that clearly shows the work force will be small and have very little positive economic benefit realized by the Goshutes by employment, housing or commerce, and may even threaten the Goshutes’ water supply.

43. Page 4-36, Line 1

The “effect of economic structure would be small” during operations is obvious since only 43 workers would be employed and very few would live in Skull Valley. In fact, the DEIS states that workers will come from up to a 90 minute commute, which does not include the Tooele County area.

Chapter 5

Some of the comments below may be addressed in a forthcoming Spill Prevention, Control and Countermeasures (SPCC) plan SPCC plan (similar to the one for the storage site), as indicated on page 5-10, line 42. The troubling element here is that reference to a SPCC plan is only made for Alternative 3, not the proposed alternative. Therefore, the following comments are presented on the premise that these comments are not adequately being addressed for the proposed alternative.

44. Page 5-8, Section 5.2.1.4, Groundwater

Line 28 erroneously states that groundwater occurs at 125 feet deep (line 28) at the proposed ITF and a fuel spill therefore would not impact groundwater. Groundwater occurs at about 20 feet below land surface at Delle (preliminary evidence from the Delle Auto Truck Stop, DERR facility #8000119). At Rowley (next to Timpie) groundwater occurs at only 3 feet to 8 feet below grade, and at land surface during different times of the year (Teddy Bear Truck Stop, DERR facility #8000006) (November 1999, DERR files). Groundwater at the proposed location of the ITF is therefore very shallow (only about 12 feet deep), not 125 feet deep as it is at the proposed facility location.

Supporting facts for the above comments are contained in DEQ/DERR case files (two are listed above) for leaking underground storage tanks (LUST). These files contain abundant information concerning the depth and quality of groundwater in the Delle to Timpie (Rowley) area. This information shows that petroleum contamination currently in the shallow groundwater at the Delle and Rowley LUST sites forms exceptionally long contaminant plumes (800 feet long), and persists in the environment for unusually long periods of time compared to most other petroleum-contaminated/LUST sites. This persistence is due to the high TDS in the groundwater which impedes natural biodegradation of petroleum fuels. A spill of more toxic and less degradable material (such as solvents) would be predictably more difficult to mitigate, and form even larger contaminant plumes than a petroleum plume. Therefore, a spill at the proposed ITF would probably contaminate groundwater and be very difficult to clean up.

NOTE: Surface spills may be managed by DEQ Division of Water Quality, although other agencies may become involved (DEQ/DERR, DEQ/DSHW/RCRA, or EPA under the Oil Pollution Act if no other state agencies will manage the problem). Some of these agencies may have resources for response actions, and may include cost-recovery.

Mitigating fire and explosion hazards due to fuel or other spills at the ITF fueling area and the proposed SNF storage location should be adequately addressed.

45. Page 5-8, Section 5.2.1.4, Groundwater, Lines 30 and 31

This section states that “spills could be mitigated through implementation of BMPs” to clean up spills “before water quality impacts occur,” yet the BMPs list that begins on page 2-26 has no provision for such actions. How can a BMP that does not exist be implemented?

46. Page 5-9, Line 23

States that “emergency response could intercept and clean up the spill, contaminated surface water, and contaminated soils to mitigate the impact.” What “emergency response” provisions do they

mean? Utah Division of Environmental Response and Remediation (DERR)? Tooele County? PFS? Emergency response is not in the BMPs-list, so who would respond?

47. Page 5-10

Line 26 states that at the ITF “A spill response action could be taken to prevent any impact to groundwater.” Again, since a spill *is* likely to impact groundwater, who is going to respond?

Line 30 states that the nature of the proposed activities is not likely to cause accidental spills, yet if the ITF is intended to be used for fueling it is likely to experience spills. What is the rationale for stating that spills will not occur? Thus, preventative and response measures are necessary.

48. Page 5-16, Section 5.4.1.3, Wetlands

Timpie Springs is a wetland, but this section states that there are no wetlands near the ITF near Timpie until Horseshoe Springs on Skull Valley Road. And based on the erroneous assumption that groundwater occurs at 125 feet near Timpie Springs, this section’s assumptions are highly debatable and must be corrected to accurately reflect the conditions.

49. Page 5-16, Lines 19 through 23

Again, the statement is made that the nearest wetland is Horseshoe Springs, when in fact it is Timpie Springs.

50. Page 5-28, Section 5.5.2.2, General Comment

The ITF and heavy haul ideas are bad ones for reasons stated above: impacts to surface water (and potential springs) and groundwater from spills at the ITF, the increased risks of transferring SNF from rail to heavy-haul trucks, increased heavy-haul traffic and resulting degradation of the springs, wildlife road-kill along the proposed Skunk Ridge rail line and Skull Valley Road, and a traffic jam on this cultural, scenic road to top it all off.

51. Page 5-31, Line 26

Mention of altering and not altering Skull Valley Road emerges in various times of this DEIS. If Skull Valley Road is to be used for transport and experience the increased traffic, this road will most certainly need to be altered, and in doing so may adversely impact the Native Hawaiian townsite of Iosepa and Horseshoe Springs.

52. Page 5-34, Line 5

This DEIS states that 225 workers will be employed for construction (and 43 permanent after

that). Does this number, 125 workers, reflect workers for the rail line construction only, and the 225 workers comprise rail line and other construction? This DEIS should identify much earlier in the document the breakdown of this proposed meager workforce.

Appendix B

1. Page B-13, Exhibit B.4

A June 24, 1999 letter from the State of Utah, Department of Community and Economic Development to Mark Delligatti (NRC) states that “consultation needs to be initiated with the Army concerning the Dugway Proving Grounds” because “the Skull Valley Road is one of two major access routes to the base.”

There is no evidence in this DEIS that the Army or Dugway Proving Ground were contacted. There are numerous opportunities and discussion in the DEIS for transportation issues. The only transportation issues discussed in this DEIS relate to the infrequent traffic caused by the few workers and residents of Dugway and Skull Valley. Nowhere in the DEIS is discussion of impacts to transportation due to military maneuvers.

The NRC needs to realize and understand that Skull Valley Road, in its present condition (even after serious subsidence and damage caused by the 1982-1983 wet years, which were not repaired, a point mentioned in the DEIS) is barely suited for the impacts it currently sustains. This road is a narrow, 2-lane road with no shoulder and steep banks on each side. There are distances of up to 2 miles between places to pull off Skull Valley Road. The pull-offs that do exist are very steep and narrow, and most require small 4-wheel drive vehicles to negotiate.

Appendix F

2. Page F-5, Exhibit F.3

The DEIS does not explain the purpose, meaning, intent or weight of this Initial Screening form. It is clearly completed by an entity that favors this proposal because it falsely slants the facts in favor of the proposal.

This form contains the following false information:

- a. The proposed site is at least 2 miles (and 5 miles) from a capable fault. The aforementioned comments show that the proposed site is located only 0.5 miles from one capable fault and 1.2 miles from another (the East and West faults, respectively). The

proposed site is located on a small block of the Earth's crust that is up-thrown along two converging normal faults, commonly known as a horst. This DEIS's own testimony and data prove the fact proximity to capable faults are false and negate any conclusions regarding seismic hazards.

- b. A 100-year flood event is inadequately characterized in the DEIS. This form cites the DOE as resource for flooding. What do they know about flooding? Flooding must be evaluated by the appropriate implementing agency.
- c. Availability of water and impact to water resources is not included in this screening form. Utah is the second driest state in the nation. Water resources are scarce and therefore strictly managed. This DEIS portrays water resources as adequate yet it admits the uncertainties, and shows no data, or erroneous data on which a water-plentiful scenario is based.
- d. "Is the area free of pro-active anti-nuclear referenda?"
This form states that this "is an area free of pro-active anti-nuclear referenda", when in fact Utah Governor Mike Leavitt signed an Executive Order to oppose the proposal, and re-structured state government to oppose this proposal. Governor Leavitt's order meets the definition of "referendum." Moreover, this statement on the Initial Screening form is false because it fails to acknowledge Downwinders, a highly organized pro-active anti-nuclear organization that has produced abundant referenda and has maintained a strong pro-active anti-nuclear presence in the in Utah for over 20 years. These facts meet the definition of referendum.

Thank you for receiving and addressing these comments,

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