

Talking points for Scoping Comments on the Supplemental to the Final EIS for Yucca Mountain

From the Nevada Nuclear Waste Task Force - www.nvantinuclear.org ;

Summary

The Supplemental EIS should include, in addition to topics listed in the Notice:

- Discussion of the Multipurpose container (MPC) proposal and why it was abandoned in 1995
- Detailed information on DOE's proposed transport, aging, and disposal canisters (TADs) design, including information about the materials that the canisters will be made of
- Quality assurance procedures for all TAD operations from fabrication through disposal.
- Security and risk analysis (generic and locally specific) of the transport of TADs
- Specifics of at-reactor operations involving TADs, including receipt of TADs, spent fuel loading into TADs, drying and decontamination, lid welding, loading into overpacks, drying and decontamination, on-site transport and long- and short-term storage, etc. Analysis of the completeness and reliability of spent fuel records at reactors.
- Description of retrieval and storage plans, including annual schedules for TAD and truck shipments from each reactor (waste acceptance schedule), and handling of spent fuel in dry storage at reactors
- Procedures for identifying, handling, and packaging damaged spent fuel.
- Detailed description of the design and operation of the repository surface facility and underground emplacement. This must include a one million year total system performance assessment (TSPA) for the repository, including individual barrier analysis and each barrier's contribution to performance.
- Security and risk analysis of surface facilities at Yucca Mountain, such as the spent fuel pool that is once again part of the proposed surface design
- List of all applicable federal, state, local and tribal laws and regulations.

More detailed talking points:

Insufficient Information in the Federal Register Notice

- DOE's proposal is a major change from the Yucca Mountain EIS, affecting waste packaging at reactors, waste transport, and design at the Yucca Mountain site. Yet, the description of the proposed action in the Federal Register notice lacks sufficient detail to enable the public to adequately assess the full scope of the proposed changes. In particular, the Federal Register notice should include more detail on the design of the canisters and on the proposed design of the surface facility at Yucca Mountain.

In addition to the issues raised in the Federal Register notice, the Supplemental EIS for the Yucca Mountain must include:

- **History of "Multipurpose" Canister Proposals:** The concept of "multipurpose" transport and disposal canisters is not a new idea, and goes back to the late 1970s. DOE proposed a similar plan to its current "TAD" plan in 1992 and subsequently abandoned the idea in 1995. A detailed history of these proposals, and an analysis of the reasons why they were rejected at that time, must be part of the Supplemental EIS.
- **Detailed information on the TAD design:** Without more detail on the design that DOE is specifically proposing for the TADs, it is difficult to making useful scoping comments. DOE should provide diagrams and detailed descriptions of the TADs in the Supplemental EIS. What is the status of the proposed TAD design?

Are these TADs licensed by the NRC? Of what material is the TAS canister made? What is the “corrosion-resistant” metal with which the overpacks will be made?

- **Quality Assurance Measures for TADs:** What will be the quality assurance procedures for all TAD operations from fabrication through disposal? Serious allegations have been raised by Oscar Shirani, formerly a senior lead quality assurance (QA) inspector for Commonwealth Edison/Exelon, about the structural integrity of Holtec dual purpose storage/transport containers. Shirani’s quality assurance team found 9 major violations, including regulatory code violations, weld flaws, design flaws, and manufacturing flaws, affecting Holtec casks at the U.S. Tool and Die factory in Pittsburgh, Pennsylvania subcontracted to construct them. Shirani’s allegations of QA violations call into question the structural integrity of the Holtec shipping containers, especially under transport accident conditions. An investigation by the NRC’s Office of Inspector General concluded that Shirani’s allegations were “substantiated.” How is DOE, which would be responsible for oversight and quality assurance of the TADs, going to ensure that quality assurance standards are consistently met to ensure worker and public health and safety?
- **Security and Risk Analysis of Storing and Shipping TAD Canisters:** The TADs do not shield workers or the public from radiation and will require overpacks for at-reactor storage, transport, and at-Yucca storage in order to provide radiation protection. What are DOE’s procedures for ensuring that the correct overpacks will be available when fuel is transferred into TADs? Will each reactor Safety Analysis Report need to be amended to cover these operations? TADs are also not protected in any way from a terrorist attack. Two recent Ninth Circuit court decisions rejected claims by the Nuclear Regulatory Commission (*San Luis Obispo Mothers for Peace, et al. v. U.S. Nuclear Regulatory Commission*) and the DOE (*Tri-Valley CAREs et al. v. Department of Energy et al.*) that the National Environmental Policy Act (NEPA) does not require consideration of the environmental effects of potential terrorist attacks. DOE must provide a full analysis of all impacts on public health and safety arising from a terrorist attack or accident at the reactor sites, in transit, and at Yucca Mountain.
- **Impact Analysis of at-reactor operations and at DOE facilities:** DOE’s proposal to repackage spent fuel in TADs at reactor and DOE sites is a massive undertaking that will require worker training, special equipment, and security measures that do not currently exist. For example, how will the waste be loaded and unloaded at sites that do not have cranes of sufficient lifting capacity? DOE must detail the necessary training, equipment, and security measures that its proposal will require.
- **Description of retrieval and storage plans:** DOE must include a waste acceptance schedule that provides annual schedules for TAD and truck shipments from each reactor. DOE must analyze the impact on worker health and safety, public health and safety, and environmental contamination of packaging spent fuel in TADs at all 77 sites across the country where spent fuel is currently stored. This analysis should include the receipt of TADs, spent fuel loading into TADs, drying and decontamination, lid welding, loading TADs into overpacks, drying and decontamination, on-site transport, and long- and short-term storage, as well as all other aspects of this proposal. The impacts of incompleteness or inaccurate spent fuel records at reactors must also be analyzed. What is DOE’s plan for addressing poor or incomplete records? What is DOE’s plan for handling spent fuel in dry storage at reactors if it is to be transferred to a TAD?
- **Procedures for identifying, handling, and packaging damaged spent fuel:** DOE must detail and analyze its procedures for identifying, handling and packaging damaged spent fuel. Is the spent fuel at shutdown reactors that no longer have spent fuel pools or hot cells, such as Big Rock Point in northern Michigan, considered part of the 10% of the waste that would be repackaged at Yucca Mountain? What other kinds of fuel would not be eligible for TADs? DOE must analyze all impacts on the worker and public health and on environment arising from permanently sealing spent fuel in TADs if there were a problem with the canister or the fuel inside. What are the plans for addressing such problems?
- **Impacts analysis of the proposed repository surface facility redesign:** DOE must provide a map and detailed information about the design and operation of the repository surface facility under the proposed TAD

scheme. DOE must also analyze the environmental impacts of the design and operation of the proposal, such as water demand at the site on the state of Nevada, as well as any other impacted states.

- **Impacts analysis of TAD Emplacement in Tunnels:** DOE must provide detailed information about the design and operation of the underground emplacement under the proposed TAD scheme. As part of its analysis, DOE must prepare a one million year total system performance assessment (TSPA) for the repository under this proposed scheme, including individual barrier analysis and each barrier's contribution to performance. DOE must also analyze the health risk of exposure to mixed radioactive and hazardous or toxic materials expected to be released from the repository. DOE must analyze the impacts on worker health and safety in the context of (a) building tunnels after TADs have already begun to be put into Yucca Mountain, and (b) installing the drip shields after 50 years. Does DOE have a comprehensive plan for a ventilation system that would cool the waste and contain the radioactivity, while simultaneously removing dust and radioactivity in construction areas? Does DOE currently have the technology for installing drip shields remotely after 50 years? What is the plan if there is a problem with the equipment? How soon would rock fall begin to be a major problem within the tunnels? Could rock fall complicate drip shield emplacement? Could drip shield emplacement worsen rock fall? Could falling rocks dent or puncture drip shields, causing a funneling effect that concentrates dripping water on the waste burial container below, thus proving counterproductive and hastening and worsening corrosion and radioactivity releases?
- **Security Analysis of Surface Facilities at Yucca Mountain:** Since at least 10% of the waste will not be packaged in TADs at reactors, a spent fuel pool (described as a "wet handling facility" in the Federal Register notice) is presumably once again part of the design of the surface facilities at the Yucca Mountain site. DOE must provide an analysis of all impacts on public health and the environment from a terrorist attack on the spent fuel pool at Yucca Mountain. What are the security and accident measures planned for the fuel pool? What mitigation measures will be put in place to prevent a zirconium cladding fire that could release large amounts of radioactivity into the environment from the pool in the case of accident or attack? Will the pool be placed under a containment structure? What precautions against the drop of heavy loads (such as fully loaded waste casks) into the pool, which could cause water to drain from the pool and consequent fire? What are the risks of accidental or intentional military airplane crashes into the pool from the nearby Nellis Training Range?
- **Operational impacts of retrieving the waste:** DOE must analyze whether the new scheme is amenable to waste retrievability from the repository, which is required for at least 50 years after first emplacement by NRC regulations.
- **List of all applicable federal, state and local laws and regulations** that are applicable to DOE's proposal.

Miscellaneous

- All of the reference documents for the Yucca Supplemental EIS should be available online at the time of publishing the Draft document.
- The proposed "aging pads" are actually monitored retrievable storage facilities and should be labeled as such. It should be acknowledged that MRSs are not legal at the Yucca Mountain site.

Alternatives

- DOE must choose the "No Action Alternative" to terminate work at Yucca Mountain. Despite the overwhelming evidence that Yucca Mountain cannot meet public health and safety standards, DOE continues to waste taxpayer money coming up with various schemes in futile attempts to make the site licensable. Instead, DOE must acknowledge that the site is unsuitable for a repository and inform Congress and the Nevada governor and legislature of the program's termination, as required in the Nuclear Waste Policy Act [Sec. 113(c)(3)].

Talking Points for Scoping Comments on the Expansion of the EIS for a Radioactive Waste Rail Line within Nevada to Yucca Mountain/Transport Impacts

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DOE's Process Violations:

DOE should withdraw, and re-issue, these Federal Register Notices. A map of the proposed route, with details, such as transfer stations and type of transport, must be provided in the new Notice of Intent to assure the public proper notice and detailed information so they can provide full, informed, meaningful comments. The detailed maps must clearly show the proposed Mina corridor and various described alternative alignments within it, and its connection to existing mainline rail roads in north and west Nevada. The public is not familiar with this proposed corridor, as it has been little discussed in the past by DOE. How can scoping hearings happen before the publication of such detailed maps? The maps must be issued ahead of the hearings, so the fully informed public can then carefully and thoughtfully formulate comments. And given DOE's false start and lack of sufficient information, the comment period should be extended to 90 days, beginning only when the re-issued NOIs appear in the Federal Register.

Due to DOE's Yucca FEIS proposal to ship irradiated nuclear fuel and high-level radioactive waste through 45 states and the District of Columbia, TADs (so-called Transport, Aging, Disposal canisters) on the roads (on heavy haul trucks), rails, and waterways (in rail-sized casks), will impact nearly the entire country. It will take time to inform people living in other parts of the US (outside of Nevada and Washington, D.C., along targeted transport routes in those 44 other states) about what DOE is proposing, so they can submit scoping comments. For that reason, the current 45 day comment period should be extended to at least 90 days. Why not, considering that DOE itself has projected that Yucca could not be opened before 2017 at the very earliest? What's the rush on this public comment period?

In addition, DOE should hold hearings in major radioactive waste transportation crossroads, such as St. Louis and Kansas City, Missouri; Chicago, Illinois; Atlanta, Georgia; Lincoln, Nebraska; etc. In 1999 and 2000, DOE held nearly two dozen Yucca Draft EIS hearings across the country, a number of which were held in key transport-impacted communities. DOE should do likewise this time, given the major overhaul to its transport and repository plans that the TAD proposal represents.

In the Yucca Draft EIS public comment period in 1999 to 2000, around 15,000 comments were submitted, many having to do with transportation issues. That's why DOE should hold hearings along targeted transport routes both inside and outside Nevada – because the impacted public cares. Sacramento, CA and Salt Lake City, UT would be a good start – DOE's current Mina corridor proposal makes those two state capitals the west and east gateways by which high-level radioactive waste would enter Nevada by train in very large numbers.

Given the direct impacts that would hit Nevada communities never before targeted for high-level radioactive waste shipments in large numbers, hearings should also be held in Reno/Sparks, Elko, Battle Mountain, Winnemucca, Lovelock, and Yerington, Nevada.

For those towns and cities across Nevada and across the country that DOE refuses to grant in-person hearings to, satellite feeds should be established to enable radioactive waste transport corridor communities nationwide to take part in the comment period.

DOE's attempt to limit the time and information available to the public with which to file comments on these latest proposed changes to the Yucca dump design and its associated transport systems undermines genuine, meaningful public participation.

DOE Transport Proposals' Bad Substance:

[A little background: DOE's relatively recent proposal for TADs (Transport, Aging, and Disposal canisters) would contain 90% of the high-level radioactive waste bound for Yucca, and would ship it there by train. The remaining 10% of the waste would travel un-canistered, via truck. A waste storage pool at Yucca would be needed for offloading un-canistered fuel from trucks, presumably to transfer into TADs for storage or disposal at Yucca.]

Environmental justice violations by DOE's proposed "Mina rail corridor" within Nevada to Yucca must be examined: impacts on the Walker River Paiute Tribe from waste transport across its reservation; transport impacts upon a number of additional Native American communities in Nevada; and disposal impacts on the Western Shoshone at Yucca Mountain.

DOE must address the risks of shipping high-level radioactive wastes near to large quantities of military high explosives at the Hawthorne munitions depot, the largest such facility in the country. The mixing of high-level radioactive waste with high explosives, on the same rail line, in the same proximity, invites a catastrophic accident or sabotage. It makes no sense to bring high-level radioactive waste in large quantities in high frequency in close proximity with high-level military explosives in large quantities. High-level radioactive waste, when it must travel, must use dedicated trains so as to avoid accidents involving it and other hazardous materials that would only make an atomic waste accident all that much worse. DOE should assess the risk reduction of shipping high-level radioactive wastes by dedicated train, and avoiding such hazardous facilities as the Hawthorne munitions dump.

DOE should examine the potential impacts on the Yucca Mountain Project of the Walker River Paiute Tribe someday again objecting to the shipment of high-level radioactive waste upon the railway it owns upon its reservation. Would DOE have to abandon the entire Mina corridor? How much waste of money and person-hours would that represent? How long a delay in the dumpsite's opening would that cause?

DOE should examine the increased risk of using the radioactive waste railway to Yucca for shipping other hazardous, toxic, or explosive materials, and whether dedicated trains and exclusive use of the railway for radioactive waste shipping is advisable (that is, not using the railway for any other purpose, neither passenger nor cargo shipping).

Given the proposed transport of high-level radioactive waste close to Hawthorne military munitions depot and the Nellis Air Force Range, the risk of accidental or intentional (sabotage) fighter/bomber jet crashes and large explosions must be addressed.

The Union Pacific Railroad Company's past and current record of hauling radioactive materials and other hazardous, toxic chemicals must be addressed, given the safety and security implications of this unprecedented proposal.

Security Analysis of Storing and Shipping TAD Canisters: Two recent U.S. Ninth Circuit Court of Appeals decisions rejected claims by the Nuclear Regulatory Commission (San Luis Obispo Mothers for Peace, et al. v. United States Nuclear Regulatory Commission) and the DOE (Tri-Valley CAREs et al. v. Department of Energy et al.) that the National Environmental Policy Act (NEPA) does not require consideration of the environmental effects of potential terrorist attacks. DOE must provide a full analysis of all impacts on public health and safety arising from a terrorist attack during transport of radioactive wastes to Yucca.

DOE must address how it will keep records on the specific contents of each TAD – the irradiated nuclear fuel's enrichment level (how much U-235 it started with), its burn up (how long it was irradiated in the reactor), how long it's been out of the reactor (how much thermal cooling and radioactive decay has happened), and the physical integrity of the fuel itself, not only for safety and security during transport, but also once it is delivered for handling, storage, and eventual burial at Yucca Mountain itself.

The Mina Route Would Impact Nevadans and the Environment

The Mina route impacts more Nevada cities and towns than any other route DOE could have selected. It does so much more so than past proposals such as the Caliente route. The Mina route would pass by or through numerous population centers in Nevada. The route passes through rural residential areas, as well as commercial interests such as mining and agriculture. Many Nevada communities – including a number of Native American tribes – would be negatively impacted. All of these impacts must be assessed by DOE.

The Mina route hugs many rivers, thus exacerbating the risk that an accident or attack on a high-level radioactive waste shipment could destroy precious water resources. DOE must address this risk. Vast quantities of high-level radioactive wastes would travel alongside rivers on the Mina route – 250 miles of the Humboldt River, 65 miles of the Truckee River, 12 miles of the Walker River, and 2 miles of the Carson River. High-level radioactive waste's threat to surface and ground water must be addressed. Water resources are especially precious and priceless in Nevada. A single severe accident or attack could devastate Nevada's precious river resources, and DOE is proposing over 10,000 rail shipments alongside these rivers! That's a lot of rolls of the dice.

The Mina route would also cross many thousands of acres of privately owned land in Nevada, another scarce commodity in a state that is 87% federal property. The negative impacts, in terms of property value loss, and prohibition of certain activities on private landowners' own land, must be addressed.

The Mina route would also impact on several state and federal wildlife management areas, such as the Rye Patch State Recreation Area and the Fort Churchill State Historic Park. These impacts must also be addressed.

Western Nevada as major high-level radioactive waste shipping route means that Salt Lake City, UT and Sacramento, CA will consequently be slammed with large numbers of high-level radioactive waste train shipments headed for Yucca. The safety and security implications of shipping large numbers of high-level radioactive waste trains through these state capitals and large population centers must be addressed.

In addition, public scoping hearings must be held by DOE in Salt Lake City and Sacramento. The safety and security risks of shipping unprecedented large quantities of high-level radioactive waste through eight northern Nevada counties and their principle population centers in Reno/Sparks, Fernley, Silver Springs, Lovelock, Winnemucca, Battle Mountain, Carlin, Elko, Wells and Wendover must also be addressed. The waste shipments would go directly through the heart of downtown Reno.

Accidents or attacks that contaminate I-80 could cause major socio-economic disruption, in that semi-truck deliveries and personal commutes could be indefinitely blocked.

Alternatives: "Just Say No" to Radioactive Waste Transport to Yucca Mountain

Yucca is geologically unsuitable for nuclear waste burial. It is also Western Shoshone Indian land by the Treaty of Ruby Valley of 1863, and that Tribe doesn't want radioactive waste dumped there. Radioactive waste should not be shipped to and dumped at Yucca. Therefore we oppose any rail route to Yucca. Yucca represents the worst of all possible worlds: a geologically unsuitable site (earthquake and volcanic zone, leaky, above a drinking water supply), located so far West that high-level radioactive waste shipments would have to sometimes travel many thousands of miles to dump wastes there. 45 states plus the District of Columbia are targeted for Yucca bound road, rail, and waterway shipments to Yucca. 75% of reactors are east of the Mississippi River, so the Yucca proposal greatly exacerbates waste transport risks, given the very long distances required to move Eastern wastes to the proposed Western dumpsite. The Yucca Mountain dump and its associated waste transportation scheme is a dangerous scheme that should be abandoned once and for all. DOE should explain why such transport risks make any sense when the ultimate destination – Yucca Mountain – is geologically unsuitable and guaranteed to leak radioactivity massively over time into the drinking water supply below.