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Mr. James Joyce, Document Manager
Office of Federal Disposition Options (EM-13)
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-0119

RE: *Advance Notice of Intent (ANOI) To Prepare an Environmental Impact Statement For the Disposal of Greater-Than-Class-C Low-Level Radioactive Waste*

Dear Mr. Joyce:

The following are the State of Nevada's comments¹ on the "Advance Notice of Intent to Prepare an Environmental Impact Statement for the Disposal of Greater-Than-Class-C Low-Level Radioactive Waste" that was published in the Federal Register on May 11, 2005:

Need for a Programmatic EIS

Given the complexity of issues and diversity of waste types that need to be addressed in the planned National Environmental Policy Act (NEPA) process, the development of a "Programmatic Environmental Impact Statement (PEIS)" is warranted. DOE should consider developing a PEIS to reach decisions about major issues such as single versus multiple disposal sites; selections of disposal site configuration (i.e., borehole, repository, etc), and life cycle cost estimates for long-term surveillance and maintenance of disposal sites. By developing a PEIS, DOE could address these and other critical decisions as outlined below and subsequently "tier" EISs for specific program elements from the PEIS (as "tiering" is defined in the Council of Environmental Quality (CEQ) Regulations 40CFR 1508.28).

¹ These comments were compiled with input from the Nevada Agency for Nuclear Projects (Office of the Governor) and the Nevada Division of Environmental Protection.

Identifying Disposal Site Locations & Waste Confinement Configurations

Criteria for evaluating alternative disposal site facility locations should be put forth in a subsequent Notice of Intent (NOI). Examples of selection criteria might include the distance of disposal sites to human receptors, risk and cost of transporting waste, waste packaging alternatives, etc.

Likewise, criteria should be presented in the NOI to assess alternative disposal site confinement configurations such as deep geological disposal, boreholes, and intermediate shallow land burial. Examples of selection criteria might include alternative geological formations, depth to groundwater, seismic activity, climate, flood plains, etc. The NOI should seek comments on these selection criteria, and the final criteria should be used to make programmatic decisions that would identify disposal site locations and alternative site configurations. These are key programmatic decisions that should be identified and evaluated in a Programmatic EIS.

Following the concept of “Tiering” as defined in the CEQ regulations, DOE should identify one or more disposal sites for detailed analysis in forthcoming site-specific EIS documents. Such an analysis should also propose site-specific disposal confinement configurations to maximize protection of human health and the environment.

Lifecycle Costs

A programmatic decision concerning the long-term surveillance and maintenance costs and funding sources for retaining institutional controls over radioactive waste disposal sites should also be addressed in the EIS. Specifically, the EIS should disclose the estimated lifecycle costs for maintaining a single disposal site as well as costs for maintaining multiple disposal sites. This is a significant programmatic decision given the long-term hazards to human health and the environment posed by GTCC waste. Hence, DOE should demonstrate the true long-term costs for maintaining in-perpetuity control of a single disposal site and/or multiple sites considered for GTCC wastes and potentially other “high activity” low-level wastes managed by DOE.

Waste Inventories

The referenced ANOI states that DOE plans to review its waste inventories with a “view toward including” those wastes that have characteristics similar to commercially regulated GTCC waste. This means DOE is considering an action to broaden the scope of the EIS to include disposal of GTCC waste (now regulated by the Nuclear Regulatory Commission), with “other similar waste” under DOE’s self regulatory control.

Authority for disposition of these other DOE wastes represents a key programmatic issue that is not fully described in the ANOI. Specifically, in the notice DOE eludes to the notion that these “other wastes” do not have a path forward for disposal. What the notice fails to acknowledge, is that DOE does not have, nor has ever produced, a decision document per CEQ regulations that addresses a path forward for disposal of these “other wastes.”

It's worth remembering that in May 1997, DOE issued the Final Waste Management Programmatic Environmental Impact Statement (WMPEIS). That document addressed path forward disposal decisions for all of DOE's major waste types, (i.e., High Level, Low Level, Mixed and TRU). Following the WMPEIS, DOE issued Records of Decision, which defined "path forward" disposal actions for each of these waste types. However, in the WMPEIS DOE specifically excluded the above mentioned "other wastes" from consideration, presumably because of their unique radiation hazard and diversity in waste forms.

In the past, DOE officially "labeled" these other wastes as Special Case Waste. The term Special Case Waste (i.e., high activity low-level waste) was considered by DOE to be equivalent in hazard to GTCC wastes, and thus inappropriate for shallow land burial in low-level waste disposal facilities like those at the Nevada Test Site (NTS) and elsewhere. It is worth noting that the term Special Case Waste was defined in a past version of DOE's waste management order. This order was subsequently revised and the Special Case Waste category was simply eliminated and redefined as low-level defense waste.

It's important to recognize that DOE's existing waste management order governs disposal of all low-level defense waste; yet the order fails to define degrees of hazard associated with different types of low-level waste. As the ANOI points out, DOE does not use the classification system (10 CFR part 61) applied by the Nuclear Regulatory Commission (NRC) for managing different levels of radiation hazards associated with low-level radioactive waste.

Accordingly, DOE should be strongly encouraged to incorporate these "other wastes" as part of the inventory of wastes that will be addressed in the above referenced EIS. Such action would represent a major programmatic decision. Moreover, by including these other wastes in the analysis, DOE would meet its legal obligation, per the National Environmental Policy Act, to ensure full disclosure of major federal actions regarding disposition of these "other wastes" in the biosphere.

Finally, by including these "other wastes" in the EIS, DOE would not be permitted to dispose of high activity radioactive waste in boreholes and/or shallow land burial sites at NTS or other DOE facilities through an undisclosed, self-regulated process. It should be recognized that commercially generated GTCC waste must be disposed of in a facility licensed by the NRC, i.e., to insure adequate protection of public health and the environment. Hence, because these "other wastes" are being managed by DOE and have radionuclide concentrations similar to GTCC waste, they should be analyzed together in one single EIS. This would insure that the NRC would regulate these wastes in a licensed disposal facility.

Institutional Controls

The above referenced EIS must demonstrate that federal authority is in place to maintain in-perpetuity control of any and all disposal sites considered for GTCC wastes and potentially other "high activity" low-level defense wastes managed by DOE. If the Nevada Test Site (NTS) is considered as a site for disposal of GTCC waste in greater

confinement disposal (i.e., disposal in boreholes or through intermediate depth disposal), DOE will need, among other things, to resolve issues associated with land use and control of the surface and sub-surface areas at the site. In 1997, the Nevada Attorney General and DOE entered into a [settlement agreement](#)² with DOE concerning resolution of the land withdrawal status at the NTS. However, actions necessary to fully implement that agreement are still pending. Accordingly, it would seem unworkable for DOE to consider the NTS as an alternative disposal site without resolving legal issues associated with the NTS land withdrawal.

Issues related to Deep Geologic Disposal of GTCC Waste

If DOE intends to consider deep geologic disposal as an alternative for GTCC waste, either at the proposed Yucca Mountain repository (should that facility ever be built) or another facility developed under the Nuclear Waste Policy Act of 1982 as amended (NWPA), the PEIS must thoroughly evaluate the legal basis for such a decision. It is by no means clear that the NWPA would permit GTCC waste to be disposed of in such a repository, since such waste is neither spent nuclear fuel nor high-level radioactive waste as those terms are currently understood.

Resource Conservation and Recovery Act (RCRA)

The suggested PEIS and/or any subsequent site-specific EISs must thoroughly assess the applicability of RCRA provisions governing disposal of hazardous materials that are or may be constituents of the GTCC waste streams. Any disposal facilities or disposal options considered in the PEIS and/or site-specific EISs must fully conform to the requirements for such facilities as specified in RCRA, regardless of whether they are commercial facilities or facilities located on DOE/federal sites.

Transportation of GTCC Waste

Any NEPA analysis addressing disposal of GTCC waste must thoroughly describe the transportation of such waste from generator/storage sites to proposed disposal facilities, and all impacts associated with such transportation must be fully assessed.

Transportation issues and impacts could be addressed in a more general manner in the PEIS and subsequently dealt with more specifically in tiered site-specific EISs. Issues to be covered in the PEIS/tiered EISs include, but are not necessarily limited to, characteristics of the various forms of GTCC waste and the risks posed during transport; types and characteristics of shipping containers to be used for the various types of GTCC waste and documentation supporting the choice of containers; modes of shipment (highway, rail, barge); routing issues, including the identification of preferred and alternative routes from generator/storage sites to proposed disposal locations; consequences of worst case accidents involving GTCC waste shipments; potential for and consequences of successful sabotage or terrorism against GTCC shipments; and radiological and non-radiological impacts to people and communities located along

² The State of Nevada and DOE entered into a settlement agreement related to litigation involving the Nevada Test Site Site-Wide Environmental Impact Statement on April 17, 1997. That agreement is available on the State of Nevada web page at: <http://ndep.nv.gov/boff/suite.htm>.

GTCC shipping routes, including socioeconomic, risk perception and stigma-related impacts.

Cumulative Impacts

It will be extremely important for DOE to fully assess potential cumulative impacts of GTCC waste disposal activities and other ongoing or planned DOE and private sector nuclear waste activities. Specifically, any PEIS and/or site specific EISs must evaluate cumulative impacts from GTCC waste disposal and spent nuclear fuel (SNF) and high-level radioactive waste (HLW) disposal or storage. The proposed Yucca Mountain high-level waste repository will, if it is permitted to go forward, involve thousands of shipments of SNF and HLW over three decades or more. Such shipments will be occurring at the same time that reactor sites and other locations would be also be preparing GTCC waste for transport to disposal locations, and shipments of GTCC waste would be on the nation's highways and railroads concurrently with repository shipments.

If, as expected, the Private Fuel Storage (PFS) interim storage facility in Utah is licensed and begins operation, shipments of SNF to PFS would also be occurring at the same time as GTCC waste shipments. In addition to impacts of the shipments themselves, nuclear power plants would be required to deal with activities associated with the preparation, handling, packaging and transport of both SNF and GTCC waste.

There could also be cumulative impacts associated with GTCC waste activities and DOE's ongoing low-level radioactive waste and transuranic waste programs. Such activities could result in cumulative impacts at DOE sites where both LLW/clean-up activities and GTCC waste activities are occurring simultaneously. Potential cumulative impacts associated with the transportation of GTCC, low-level, mixed low-level and transuranic waste are also possible.

If you have questions regarding these comments, please feel free to contact me.

Sincerely,



Robert R. Loux
Executive Director

RRL/cs

cc Leo Drozdoff, NDEP
Tim Murphy, NDEP
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