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July 2, 2004

Mr. Dirk Schmidhofer
NEPA Document Manager
National Nuclear Security Administration
Nevada Site Office
P.O. Box 98518
Las Vegas, Nevada 89193

Re: State of Nevada Comments on DOE/NNSA's Preapproval Draft Environmental Assessment (EA) for a Radiological/Nuclear Countermeasures Test and Evaluation Complex at the Nevada Test Site (DOE/EA-1499)

Dear Mr. Schmidhofer:

Attached please find the State of Nevada's comments on the above-referenced draft EA. The comments were prepared with input from affected State agencies and are in addition to comments submitted on May 4, 2004 in response to the April 6th, 2004 notification of intent to prepare the EA.

Thank you for the opportunity to comment on this important matter. If you have questions or need additional information, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert R. Loux".

Robert R. Loux
Executive Director

RRL/cs
Attachment

cc Steve Robinson, Governor's Office
Allen Biagi, NDEP
Jolaine Johnson, NDEP
Stan Marshall, NSHD
Mike Alexander, NSHS

**STATE OF NEVADA COMMENTS ON THE
U.S. DEPARTMENT OF ENERGY/NATIONAL NUCLEAR
SECURITY ADMINISTRATION'S PREAPPROVAL
DRAFT ENVIRONMENTAL ASSESSMENT FOR A
RADIOLOGICAL/NUCLEAR COUNTERMEASURES
TEST AND EVALUATION COMPLEX,
NEVADA TEST SITE (DOE/EA-1499)**

General Comments

(1) The draft Environmental Assessment (EA) does not address comments received during the scoping period that ran from April 6th – May 9th, 2004.

Discussion: The draft EA contains no mention of comments received by DOE/NNSA regarding the scope of analysis for and potential impacts of the proposed test and evaluation complex. The draft EA should have clearly articulated the comments received, identified the commenter for each, and provided a response as to how each comment was addressed. This could have easily been done in a comment-response section of the draft EA. As it stands, it is impossible to tell whether DOE/NNSA considered (or even read) any of the comments it received and how those comments did or did not affect the scope of the analyses described in the draft EA.

(2) Nevada officials are concerned that the process for making the public aware of the proposed Test and Evaluation Complex and the preapproval draft EA does not provide adequate notice of the proposed project or the process for commenting on it.

Discussion: Since the proposed test and evaluation complex deals with radioactive materials, and given the sensitivities among Nevada citizens and communities with respect to past, present and contemplated nuclear activities at NTS, it would have been in DOE/NNSA's interest (as well as the interests of affected Nevadans) to go beyond what is minimally required and assure that ample opportunities for public comment were made available. The type of project contemplated (i.e., the use of radiological/nuclear source terms at NTS and planned emissions of radioactive materials) has the potential, especially in Nevada, to evoke considerable public concern given the past history of contamination from the nuclear weapons testing program, the lingering distrust engendered by that program, and the current atmosphere of conflict and controversy surrounding the Yucca Mountain high-level waste repository project.

As was the case with respect to the April 6, 2004 notice of intent dealing with scoping for the draft EA, DOE/NNSA has not widely publicized or distributed the preapproval draft EA to assure that the public and others are adequately informed about the proposal and opportunities for comment. Nevada officials believe it would be in DOE/NNSA's interest to schedule public meetings on the draft EA in (at least) Nye County and Las Vegas and give serious consideration to one or more additional meetings in "downwind" communities in Nevada (and possibly Utah). Meeting dates, times and places plus addresses for making written comments should also be well publicized so as to maximize public awareness and participation.

Specific Comments

Section 2.0 – Proposed Action and Alternatives

2.1.1 – Facility Description: Page 6 describes a simulated “Airport Inspection Facility” that would presumably include airport X-ray equipment. Such equipment would contain “machine-produced radiation sources” that could be subject to State Health Division regulation depending on the source. The final EA should describe any such equipment and the radiation source(s) to be used.

Active Interrogation Facility – The narrative suggests that highly enriched uranium, special nuclear material (SNM) and/or fissile materials may be available for operators to test their equipment. What does “source-to-target” container distances mean? “Accelerator-produced radiation fields” are mentioned. What size and safety features for this equipment are intended? What “high activity neutron-emitting radionuclide” is intended to be used?

The text also indicates that the Active Interrogation Facility would operate a neutron beam emitted by emplacement of the high-activity neutron emitting radionuclide that is capable of “sweeping across moving containers on the integral roadway” suggesting an open beam in the environment. What is being done to prevent workers from inadvertently walking into a radiation field? What specifically is the safety design to safely handle the high neutron field mentioned and the monochromatic high energy photon sources, muon beams and other charged particle beams. The final EA should describe details of the “shielding and exclusion areas to be established” and other safety mechanisms to be used.

High-Speed Road – The draft EA discusses the use of vehicles loaded with “sealed sources, medical isotopes or a quantity of special nuclear materials.” The final EA should discuss the sources of these materials (i.e., where will they come from and are they NRC-regulated) and whether any would be subject to State Health Division regulation.

2.1.2 – Construction and Operations: It is unclear from the discussion whether there are Corrective Action Units in the area in which the facilities would be constructed. The Federal Facilities Agreement and Consent Order (FFACO) requires that the Nevada Division of Environmental Protection (NDEP) have access to such sites for inspections and observation of remedial activities if they are present.

2.1.1.3 – Nuclear Operations: The second paragraph indicates that special nuclear materials will be stored at the NTS Device Assembly Facility (DAF) after completion of activities. Does this mean that SNM will remain at the Radiological/Nuclear Countermeasures Complex facilities at the end of each work day prior to completion of the training sessions and other activities? If so, what security or other surveillance will be in place if the SNM is not stored at the end of each work day at the DAF?

The 1st paragraph on page 9 describes “up to 50 kg of highly enriched uranium or other SNM components in various shapes and sizes up to several kg each” that could be used at the facility. In paragraph 2 on page 9, the draft references the use of other “radioactive source material” including undefined “additional large sealed sources.” The final EA

should describe the non-SNM source material that would be in either solid or liquid form and whether or not these materials derive from NRC licensees.

2.1.3 – Safeguards and Security: To the extent possible, the final EA should include, as an appendix, the “nuclear implementation plan” that is being developed to control nuclear materials and prevent their loss. If some information in the plan is classified, the non-classified portions of the plan could be included. As an alternative, a classified appendix containing the plan could be referenced and shared with State personnel with appropriate clearances.

2.2 – Alternative Actions: The draft EA does not address possible alternative locations outside of the Nevada Test Site (NTS) that could potentially host the test and evaluation complex. While the document describes certain features of the NTS that seem to fit well with the proposed facility, there are likely other locations within the DOE/NNSA complex nationwide that would also be viable locations. Sites in New Mexico (Sandia, Los Alamos), Idaho (INEEL), South Carolina (Savannah River) and others would seem to be alternatives that should have been assessed and discussed in the draft EA. The draft EA contains no analyses demonstrating that NTS is the most appropriate site and no rationale for why DOE/NNSA chose NTS over locations in other states. An adequate evaluation of alternatives should include the comparison of sites on NTS with potential sites at other DOE/NNSA facilities.¹

Section 3.0 – Affected Environment

3.1 – Land Use: The draft EA fails to address whether the proposed action is consistent with the purpose for which Congress withdrew the land for the Nevada Test Site (i.e., atomic weapons testing-related activities). Under the terms of the negotiated settlement of the State of Nevada’s lawsuit challenging the Nevada Test Site EIS, DOE was to have consulted with the Bureau of Land Management regarding the status of the land withdrawal and consistency of various NTS activities with the mission of the NTS as specified in the land withdrawal legislation. To date, State officials are not aware that such consultation has taken place or any plans for resolving the issue.

3.1.2 – Water (also 4.1.1.2): The final EA should discuss whether any of the referenced wells would be used as potable sources for human consumption and, as such, be subject to State Health Division water program requirements.

Section 4.0 – Environmental Effects

4.1.2 – Infrastructure (Waste Management, page 19):

Hazardous Waste: The draft EA notes that “[s]mall quantities of hazardous wastes ... could be generated during construction activities. Any hazardous wastes would be transported to Area 5 RWMS to await off-site disposal.” The final EA should clearly specify the procedure that will be used for the final disposal of such wastes (i.e., what off-site facility will be used for final disposal, how would the waste be moved there; the types of agreements, etc. that would be needed to effectuate such disposal; etc.).

¹ An example of this type of analysis is contained in DOE/NNSA’s Draft Supplemental Programmatic Environmental Impact Statement on Stockpile Stewardship and Management For a Modern Pit Facility (DOE/EIS-236-S2), which looked at potential sites for the proposed modern pit facility at various locations in the DOE/NNSA complex.

Low-Level Radioactive and Mixed Waste: While the draft EA indicates that little, if any, radioactive or mixed waste would be expected to result from project activities, the final EA should clearly describe how such waste would be handled, managed and disposed of. Especially in the case of mixed hazardous and low-level radioactive waste, what would be the path for disposal, given the status of DOE's Part B permit application with the Nevada Division of Environmental Protection?

Medical Isotopes: The draft EA states "it is anticipated that the *medical isotope supplier* would reclaim any unused material when the activity was below the levels needed for use at the complex. Non-medical isotopes would be retained during the facility's lifetime and either excessed if suitable users are available or disposed of according to current radioactive waste disposal procedures" (emphasis added). The final EA should identify "the medical isotope supplier" to determine if this is an out-of-state NRC-licensee subject to State Health Division regulation. The final EA should also contain a discussion of the regulatory regime that will govern such materials. Would medical isotopes provided by commercial suppliers be subject to NRC (and agreement state) regulation? What is the role of the Nevada State Health Division Radiological Health Section in overseeing and regulating such materials, given that Nevada is an NRC agreement state and Radiological Health implements regulations governing the use of such materials? If DOE is asserting self-regulation with respect to such materials, what is the statutory/regulatory basis for such assertion?

The final EA should describe the storage protocols to be used for retaining "non-medical isotopes" during the facility's lifetime.

The final EA should also describe in detail what the "current radioactive waste disposal procedures" are and how DOE/NNSA proposes to implement them for any radioactive wastes from the complex that requires disposal.

The draft EA also indicates that "special nuclear materials" will be employed during operations of the test and evaluation complex (ref. Section 1.1 – Proposed Action and the text box on page 8). While the draft EA infers that such special nuclear materials will be "sealed sources," the final EA should address the regulatory regime governing the use of such materials as well as regulations and procedures governing the disposal of "special nuclear materials" that may be required in the event of a failure of the sealed source container or unexpected contamination from such sources.

4.1.7 – Air Quality: The final EA should address the potential for construction and other Test and Evaluation Complex activities to result in the re-suspension of radionuclides left over in the soils from prior weapons testing activities at NTS. Some questions to be addressed include: Have there been analyses done to determine the amount and types of radionuclides in the soils at the proposed project site? What are the potential exposure pathways? What would be the potential health impacts to workers, trainees, and others of soil disturbances that re-suspend these radionuclides?

The second paragraph under this section discusses "emissions from uranium and plutonium sources," noting that "[p]otential emissions were evaluated using an EPA-approved computer model, CAP-88, to determine whether monitoring would be required.

Preliminary results indicate that emissions would fall well below the NESHAPS dose limit of 10 millirems per year (40 CFR 61.92) and that no monitoring would be required.” Because this section discusses emissions from radionuclides and other sections of the draft EA references radionuclides as being sealed sources or otherwise contained, it is unclear just what “emissions” there may be from such sources or why the use of the CAP-88 computer model is necessary.

Given the nature of the activities contemplated for the proposed action, DOE/NNSA would be well-advised to establish an effective monitoring system to demonstrate what the actual annual emissions from all potential radionuclide sources are instead of relying on hypothetical computer modeling.

4.1.11 – Occupational and Public Health and Safety: The final EA should address the issues of radiation exposures to workers, trainees, and others resulting from the re-suspension of radionuclides from past weapons testing activities (see discussion in relation to 4.1.7 – air quality – above).

The final EA should also provide the reference supporting the statement, “[v]isitors to the NTS are subject to essentially the same safety and health requirements as workers” (i.e., DOE or other regulations governing visitor safety and health requirements), since the operation of the Radiological/Nuclear Countermeasures Complex will necessarily involve the participation of a significant number of “visitors” to NTS to participate in facility activities. Is it likely that, because of the numbers of such visitors and the nature of their involvement, special safety and health requirements might have to be developed?

Section 5.0 – Cumulative Effects

5.1.1 – Land Use, Transportation, and Waste Management: Almost simultaneous with the release of the Countermeasures Complex Preapproval Draft EA, DOE/NNSA is in the process of finalizing an EA for using biological simulants and releases of chemicals at NTS (ref. the April, 2004 “Predecisional Draft Environmental Assessment for Using Biological Simulants and Releases of Chemicals at the Nevada Test Site” DOE/EA-494). The final EA for the Countermeasures Test and Evaluation Complex should assess possible cumulative impacts from biological and chemical releases as well as from training and other activities contemplated in the EA for the biological/chemical releases project.

Likewise, the final EA should examine possible cumulative impacts from DOE’s ongoing low-level radiological waste (LLW), mixed LLW and hazardous waste, and transuranic waste activities at NTS. Thousands of shipments of waste come into NTS each year. The EA should assess any potential health or safety impacts to DOE LLW or truwaste workers, drivers, inspection personnel, etc. from radiological and non-radiological activities contemplated under the proposed action. Potential impacts to these other DOE programs resulting from accidents or incidents at the Countermeasures Complex (i.e., work stoppages, evacuations, etc.) should also be thoroughly examined. Likewise, impacts to the Test and Evaluation Complex from activities or incidents associated with other NTS activities should be evaluated.

If DOE adheres to its published schedule and overcomes State of Nevada opposition to the proposed Yucca Mountain repository program, large numbers of workers and others

involved with the construction of that project will be working and traveling on NTS regularly. Likewise, starting in 2010 (according to DOE's current schedule), large numbers of spent fuel and high-level waste shipments could start arriving at the repository. The EA should examine possible impacts of the proposed action on Yucca Mountain workers, drivers, inspectors, and others involved with that project as well as any impacts to the Countermeasures Complex from Yucca Mountain project activity. For example, could there be harmful health effects to individuals who are exposed to radiological materials accidentally or intentionally disbursed under the proposed action? The EA should examine meteorological conditions that could cause such exposures and assess any short or long-term consequences.

5.1.6 – Air Quality: The final EA should evaluate construction and other relevant activities planned for other projects/locales at the NTS and assess whether there could be cumulative impacts from re-suspension of weapons testing radionuclides in soils. Construction and/or other soil-disturbing activities occurring at the Test and Evaluation Complex simultaneously with such activities at other NTS or proximate locations (i.e., the Yucca Mountain project; Area 5 low-level waste operations; etc) could result in cumulative impacts associated with re-suspension, depending on certain factors such as meteorological conditions, etc.

DOE/NNSA needs to ensure that a modification to the application for the existing air quality operating permit is submitted and approved prior to the addition of any new emission unit or modification to an existing emission unit requiring a permit.

5.1.10 – Occupational and Public Health and Safety: See comment above (5.1.6) regarding cumulative effects of various NTS activities on re-suspension of radionuclides from weapons testing and potential that might require analysis to determine impacts on worker and public health.

Section 6.0 – Mitigation Measures

The final EA should contain a detailed plan for ongoing monitoring of radiation and radiological emissions/exposures.

Section 7.0 – Accident Analysis

The section of the draft EA on Accident Analysis appears to be inadequate. The blanket assertion that engineering and administrative controls and standard industrial safety programs support the conclusion that “no significant residual safety risks were identified,” is unsubstantiated. At a minimum, the final EA should identify and define credible worst case accidents for both Test and Evaluation Complex operations and for transportation/vehicle operations (i.e., explosion and fire resulting in aerosolized release of radioactive or toxic materials, etc.). Without a clear evaluation of potential worst case accidents, it is not possible to conclude that hypothesized engineering and administrative controls or industrial safety programs will be adequate to prevent, mitigate, or otherwise deal with such occurrences.

Section 8.0 – Regulatory Requirements

This section is intended to describe “some” of the laws and regulations which would be applicable to this proposed action. It is unclear how some were identified and others not. For example NAC 445A refers to Water Pollution Control, yet Section 8.2 talks only about public water systems and leaves out the discussion about pollution control and spill reporting as well as other aspects of the regulations. The list of DOE Orders in Section 8.3 does not include DOE Order 435.1. Section 8.4 regarding permits does not include the relevant agreements such as the FFACO and the Agreement in Principle.

The section either needs to clarify that this is an incomplete list (and justify why such a list is used) or the discussion needs to be more specific and inclusive about applicable requirements.

8.1 – Federal Laws and Regulations: The final EA should also identify the following federal laws/regulations and discuss how they relate to the proposed action:

(1) The Resource Conservation and Recovery Act (RCRA)

RCRA governs how any hazardous or mixed hazardous/radioactive wastes are managed and disposed of.

(2) U.S. Nuclear Regulatory Commission (NRC) Regulations

NRC regulations govern the use of commercial and medical radiation sources that originate from NRC licensees.

8.2 – State Laws and Regulations: The State of Nevada has delegated authority with respect enforcing to RCRA and NRC regulations. The final EA should include an evaluation of (1) the Nevada State Health Division’s authority with respect to the use of commercial and medical radiation sources at the proposed Test and Evaluation Complex and (2) the Nevada Division of Environmental Protection’s authority for enforcing applicable RCRA regulations.

8.4 – Permits: Table 1 on page 30 should include hazardous materials permits required for transporting hazardous and radioactive materials. It should also include any permits required from the Nevada State Health Division (for the use of radioactive sources) and the Nevada Division of Environmental Protection (for hazardous materials disposal, etc.).

The Air Quality Operating Permit, AP9711-0549.01, referenced on Table 1 was issued on June 25, 2004 and expires June 25, 2009. All facilities on the Nevada Test Site are/will be subject to the renewed permit.