Conclusion

- The nuclear industry is pursuing an integrated approach to used fuel management
- Yucca Mountain is currently part of that approach and TADs are a key integration tool
- Specific operational strategies for systems integration should be developed when it is appropriate to do so
  - Nature of future system evolutions must 1st be known
- It is currently too early to engage in detailed systems integration operational planning beyond continued TAD demonstration

NEI

ATTACHMENT 16

AFFIDAVIT OF ENGELBRECHT VON TIESENHAUSEN

I, Engelbrecht von Tiesenhausen, being first duly sworn, hereby depose and state as follows:

1. I am a citizen of the United States, and a resident of Las Vegas, Nevada.

2. My formal education consists of the following: A Bachelor of Applied Science from the University of British Columbia and a Master in Business Administration from Pepperdine University

3. My professional employment experience with respect to nuclear waste disposal, is as follows: For more than 18 years I was the technical advisor to Clark County on the Yucca Mountain Program

4. I have reviewed and am familiar with the applicable parts of the Yucca Mountain Repository License Application filed by the Department of Energy ("DOE") with the Nuclear Energy Commission ("NRC") in June, 2008 (the "LA") as they relate to this contention.

5. I have also reviewed and am familiar with the applicable parts of the Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada (DOE/EIS-0250F-SI) ("SEIS") and the Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada (DOE/EIS-0250F) ("FEIS") as they relate to this contention.

6. It is not practicable for the NRC to adopt the DOE environmental impact statement (the FEIS), as it has been supplemented (in the SEIS), based upon the significant and substantial new information and new considerations set forth below which render the FEIS and the SEIS (together, the "NEPA Analyses") inadequate.

7. DOE's assumption in the NEPA Analyses potentially underestimates the number of shipments of SNF and HLW to be made to the repository by means of Dual Purpose Canisters (DPCs) by significant numbers, based upon the analysis which follows.

(a) The DOE assumption of the quantities of SNF to be shipped in Transportation, Aging and Disposal Canisters (TADs) (Final SEIS Section S.2.3.1, Page S-13; SAR Chapter 1, Section 1.2.1, Page 1.2.1-4) is based upon two arbitrary and specious assumptions.

(i) First, DOE assumes that legal agreements with most of the utilities will be concluded, containing provisions assuring shipping by means of TADs. It is equally valid to assume that such agreements will not be executed with some or most of the utilities. Rod McCullum stated that "while utilities generally support the TAD concept, they do not intend to purchase (and load) TADs until waste acceptance—i.e. 2017 or later. Meanwhile, SNF removed from pools will be placed in dual purpose canisters, which utilities do not intend to reload to TADs for shipment. SNF removed from pools for on-site dry storage will be shipped in dual-purpose canisters (DPCs), and reloaded to disposal canisters at the repository site." (WIEB Meeting Summary April 23, 2008, Rod McCullum, National Transportation Plan Issues). It would be a significant financial burden to repackage the SNF currently stored at the utility sites in TADs, as well as the additional SNF which will accumulate prior to the availability of TADs or the opening of the repository. Any decision with reference to the choice of shipping canisters will be made by the utilities based upon business considerations. (WIEB Meeting Summary April 23, 2008, Rod McCullum, National Transportation Plan Issues). Absent agreements enabling the use of TADs, DPCs would be more likely to be utilized than TADs.

8. Despite the factors set forth in Paragraph 7 above, DOE assumes that, at a maximum, the number of DPCs utilized for shipment would be 307. (SEIS Appendix A, Section A.2.1, Page A-3). The industry estimates the number of DPCs loaded at commercial generator sites, by the year 2020, could be 2,100 DPCs. (Rod McCullum, Nuclear Energy Institute Nuclear Waste Technical Review Board "Integrated System Operations Industry Perspectives" Presentation September 24, 2008). EPRI found that the number of DPCs loaded at commercial generator sites, by the year 2020, could be as high as 2,155. (Occupational Risk Consequences of the Department of Energy's Approach to Repository Design, Performance Assessment and Operation in the Yucca Mountain License Application. EPRI, Palo Alto, CA: 2008. 1018058, Page 4-1). In any event, the DOE estimate of DPC canisters is significantly and substantially lower than can reasonably be expected to be received at the repository.

9. By virtue of their proximity to the repository, residents of the Nevada Counties of Churchill, Esmeralda, Lander and Mineral are likely to become employees at the repository during repository operations, where they may reasonably be expected to be involved in the handling of SNF.

10. The analysis set forth in the NEPA documents fails to recognize how environmental and worker radiation exposure at the repository will change in proportion to the change in percentage ratios of DPCs received as contrasted with TADs received. Maximum worker does (annual individual doses, total individual does and total population doses) would differ significantly when processing DPCs as compared to when processing TADs.

11. As a result of the acknowledged and well recognized uncertainties and realities described in Paragraphs 7, 8, 9 and 10 above, DOE must properly analyze the alternative environmental effects upon repository employees of the receipt and handling of a quantity greater than the 307 DPC canisters of SNF which DOE forecasts will be received at the repository.

12. The failure to estimate the alternative effects the of receipt and handling of the alternative numbers of DPCs as described in Paragraphs 7, 8 and 9 above is a fatal flaw in the

NEPA Analyses in that a valid estimate of the number of such DPCs is vital to the determination of the environmental impacts and environmental effects upon the repository, the employees, and its related processes.

DATED: December __, 2008

ENGELBRECHT VON TIESENHAUSEN

State of Nevada)
)ss.
County of Clark)

Subscribed and sworn to before me this 18th day of December, 2008

Notary Public

SALLY T. CHRISTENSEN
Notary Public State of Nevada
No. 04-87256-1
My appt. exp. Feb. 1, 2012

NYE -JOINT-SAFETY-5

Failure to include the requirements of the National Incident Management System (NIMS), dated March 1, 2004, and related documentation in Section 5.7 Emergency Planning of the Yucca Mountain Repository Safety Analysis Report (SAR).

1. Statement of issue of law or fact. [2.309(f)(1)(i)]

The applicant failed to include key interoperability and standardized procedure and terminology requirements of the National Incident Management System (NIMS), in the Emergency Planning required as part of the Safety Analysis Report [Yucca Mountain Repository License Application, General Information and Safety Analysis Report. DOE/RW-0573 REV 0. 2008 (SAR Section 5.7; SAR pp 5.7-1 to 5.7-55). LSN DEN001592183] to sufficiently ensure the ability of Nye County and other offsite agencies to properly plan and respond to onsite emergency actions. See requirements at 10 CFR 63.161 and 10 CFR 72.32(b).

2. Explanation of basis. [2.309(f)(1)(ii)]

The applicant is required by 10 CFR 61.161 and 10 CFR 72.32(b) to prepare an emergency plan which will provide for offsite notification and coordination, offsite assistance and participation in exercises, arrangements for providing information to the public, the training of offsite response personnel, and provisions for prompt communications among principal response organizations to offsite emergency personnel who would be responding onsite. The SAR addresses NRC directives and DOE requirements, but does not include the critical interoperability and communications requirements of the National Incident Management System (NIMS), dated March 1, 2004, that was promulgated subsequent to the NRC regulations cited above. NIMS has been implemented for the federal government under Homeland Security Presidential Directive/HSPD-5, dated February 28, 2003; HSPD-7, dated December 17, 2003; and by HSPD-

8, dated December 17, 2003. [Homeland Security Presidential Directive/HSPD-5 (February 28, 2003) Nye County RID # 7572, Nye County LSN Assession Number: nye_rid7572_01_00.pdf, an NRC LSN Assession number will be provided when available; HSPD-7(December 17, 2003) Nye County RID # 7573, Nye County LSN Assession Number: nye_rid7573_01_00.pdf, an NRC LSN Assession number will be provided when available; HSPD-8 (December 17, 2003) Nye County RID # 7574, Nye County LSN Assession Number: nye_rid7574_01_00.pdf, an NRC LSN Assession number will be provided when available.] Homeland Security National Preparedness Guidelines, dated September 2007, and the Homeland Security National Response Framework, dated January 2008, further describe how the various government agencies should work together. [Homeland Security National Preparedness Guidelines, dated September 2007, Nye County RID #7570, Nye County LSN Assession No. nye_rid7570_01_00.pd, an NRC LSN Assession number will be provided when available; Homeland Security National Response Framework, dated January 2008, Nye County RID #7571, Nye County LSN Assession No. nye_rid7571_01_00.pd, an NRC LSN Assession number will be provided when available.] NIMS and HSPD-5 are anticipated to be specifically included in the requirements of 10 CFR 73.32(b) as a subsequent, pertinent directive to ensure public safety and the full participation of Nye County in emergency planning and offsite assistance to Yucca Mountain. The absence of a specific reference to the new Federal requirements from the cited NRC regulations in no way alleviates DOE and NRC responsibility to ensure the implementation of such requirements.

3. Issue is within scope of proceeding. [2.309(f)(1)(iii)]

See response at 4.

4. Issue raised is material to finding NRC must make. [2.309(f)(1)(iv)]

a. The SAR contains no reference to the NIMS or Homeland Security Presidential Directive (HSPD)-5. The incorporation of NIMS is basic to ensuring the proper coordination and integration of Nye County and other offsite responder agencies in the emergency plan. "HSPD-5 requires all Federal departments and agencies to adopt the NIMS and to use it in their individual domestic incident management and emergency prevention, preparedness, response, recovery, and mitigation programs and activities, as well as in support of all actions taken to assist State, local, or tribal entities." [National Incident Management System, Preface, Homeland Security, March 1, 2004]

b. The SAR must include:

- "Notification and coordination. A commitment to and a brief description of the means to promptly notify offsite response organizations and request offsite assistance, ..." [10 CFR 72.32(b)(8)]
- "Exercises. (i) Provisions for conducting quarterly communications checks with offsite response organizations and biennial onsite exercises to test response to simulated emergencies." [10 CFR 73.32(b)(12)]
- "Comments on Plan. The licensee shall allow the offsite response organizations expected to respond in case of an accident 60 days to comment on the initial submittal of the licensee's emergency plan before submitting it to NRC. Subsequent plan changes need not have the offsite comment period unless the plan changes affect the offsite response organizations." [10 CFR 72.32(b)(14)]
- "Offsite assistance. The applicant's emergency plans shall include the following:
  - a brief description of the arrangements made for requesting and effectively using offsite assistance on site and provisions that exist for using other organizations capable of augmenting the planned onsite response.
  - Provisions that exist for prompt communications among principal response organizations to offsite emergency personnel who would be responding onsite." [10 CFR 72.32(b)(15)]
- "Arrangements made for providing information to the public." [10 CFR 72.32(b)(16)]

c. Because the applicant failed to include NIMS or adopt the NIMS requirements, the NRC has no assurance of communications and equipment interoperability, or the integration of local

government participation in effective emergency planning and the provision of emergency information to the public. Failure to include these principles encourages site personnel to act independently of surrounding governmental agencies, greatly increases the likelihood of miscommunication and misunderstanding, and limits the ability of offsite responders to be sure their equipment will fully integrate with onsite equipment. Additionally, because the applicant intends to forward only those emergency plan changes deemed by the applicant to affect the offsite agency, it is very possible that important issues will be missed. The same holds true if the offsite agency does not coordinate changes to their plans.

5. Statement of alleged facts or opinions and references to be relied upon [2.309(f)(1)(v)]

a. While the DOE SAR addresses the NRC directives and DOE requirements as they are currently written, it does not include the requirements of the National Incident Management System (NIMS), dated March 1, 2004. NIMS has been implemented for the federal government under Homeland Security Presidential Directive/HSPD-5, dated February 28, 2003; HSPD-7, dated December 17, 2003; and by HSPD-8, dated December 17, 2003. [Homeland Security Presidential Directive/HSPD-5 (February 28, 2003) Nye County RID # 7572, Nye County LSN Assession Number: nye_rid7572_01_00.pdf, an NRC LSN Assession number will be provided when available; HSPD-7(December 17, 2003) Nye County RID # 7573, Nye County LSN Assession Number: nye_rid7573_01_00.pdf, an NRC LSN Assession number will be provided when available; HSPD-8 (December 17, 2003) Nye County RID # 7574, Nye County LSN Assession Number: nye_rid7574_01_00.pdf, an NRC LSN Assession number will be provided when available.] Homeland Security National Preparedness Guidelines, dated September 2007, and Homeland Security National Response Framework, dated January 2008, further identify how the various government agencies should work together. [Homeland Security National Preparedness Guidelines, dated September 2007, Nye County RID #7570, Nye County LSN

Assession No. nye_rid7570_01_00.pd, an NRC LSN Assession number will be provided when available; Homeland Security National Response Framework, dated January 2008, Nye County RID #7571, Nye County LSN Assession No. nye_rid7571_01_00.pd, an NRC LSN Assession number will be provided when available.] In accordance with the above directives, specific information on Nye County participation in the planning effort should be submitted to NRC in a future SAR revision or supplement prior to the License Application update required by NRC before DOE can be granted a license to receive and possess radioactive material under 10 CFR 63. This information should include the following revisions as a minimum.

- "Notification and coordination. A commitment to and a brief description of the means to promptly notify offsite response organizations and request offsite assistance, ..." [10 CFR 72.32(b)(8)]

- "The communications system provides communication services for data, voice, and video transmissions throughout the repository, both the surface and the subsurface. The communications system permits reliable communications under anticipated circumstances during both normal and emergency conditions. The communication system supports safeguards and security, fire protection, employee safety and health, construction, operations, and emergency management." [Yucca Mountain Repository License Application, General information and Safety Analysis Report. DOE/RW-0573 REV 0. 2008 (SAR p. 5.7-12, Section 5.7.5.2.4.5). LSN DEN001592183]

- The preceding statement from the DOE License Application contains no reference to ensuring integrated or interoperable communications where offsite emergency responders are concerned. Interoperable communications are too critical to effective emergency response to merely assume they are in place. The same is true of Section 5.7.5.2.4.6 Emergency Communications (SAR p 5.7-12), in which there is no reference to communications with offsite emergency responders. Nye County believes that the inclusion of these specific NIMS concepts are required to ensure effective and efficient response capabilities are in place prior to an emergency.

    - "Effective communications, information management, and information and intelligence sharing are critical aspects of domestic incident management. Establishing and maintaining a common operating picture and ensuring accessibility and interoperability are principal goals of communications and information management." [National Incident Management System, page 54, Homeland Security, March 1, 2004]

- By including NIMS requirements, or at least a commitment to the requirements at this time, in the emergency plan, many of the assumed conditions will be specifically addressed. For example, the SAR Section 5.7.5.2.4.5 Communications, begins "The communications system provides communications services for data,

voice, and video transmissions throughout the repository, ..." Under this section all site communications are included – the unspoken assumption being that the site will be able to communicate with all surrounding offsite jurisdictions and any offsite responders. The same assumption that all communications will work appears in Section 5.7.5.2.4.6 Emergency Communications. Yet there is no assurance that all agencies involved will have interoperable communications – especially in an emergency situation. NIMS requires reviews for communications integration and interoperability and that steps be taken to ensure first responders can communicate with site personnel and networks.

- "Exercises. (i) Provisions for conducting quarterly communications checks with offsite response organizations and biennial onsite exercises to test response to simulated emergencies." [10 CFR 73.32(b)(12)]

- "Exercises will be conducted biennially, at a minimum, to test the adequacy and effectiveness of organizational command and control, implementing procedures, notification and communication networks, emergency equipment, response organization performance, and the overall emergency preparedness program. Exercises are designed and conducted for maximum realism and attempt to duplicate the sense of stress inherent in an actual emergency situation.

- Exercises will be designed to test integrated response capabilities of the repository and offsite response agencies, the NRC, and the DOE headquarters organization. Offsite response organizations (including the NRC and DOE headquarters organization) shall be invited to participate in the biennial exercises; however, their participation is not required." [Yucca Mountain Repository License Application, General information and Safety Analysis Report. DOE/RW-0573 REV 0. 2008 (SAR p. 5.7-36). LSN DEN001592183]

- "Preparedness requires a unified approach. A major objective of preparedness efforts is to ensure mission integration and interoperability in response to emergent crises across functional and jurisdictional lines, as well as between public and private organizations." [National Incident Management System, page 30, Homeland Security, March 1, 2004] The inclusion of NIMS in the emergency plan will ensure that exercises are fully interoperable and utilize the same terminology and standard operating procedures for all responding agencies.

- "Comments on Plan. The licensee shall allow the offsite response organizations expected to respond in case of an accident 60 days to comment on the initial submittal of the licensee's emergency plan before submitting it to NRC. Subsequent plan changes need not have the offsite comment period unless the plan changes affect the offsite response organizations." [10 CFR 72.32(b)(14)]

    - "The Emergency Plan will be provided to offsite response organizations identified in the Emergency Plan for review prior to submittal to the NRC. The offsite response organizations will have 60 days to review and comment on the Emergency Plan. Offsite response organization comments, if provided, will be included with the Emergency Plan submitted to the NRC. Comments from offsite response organizations, as appropriate, will be dispositioned in subsequent revisions to the Emergency Plan. If

subsequent revisions to the Emergency Plan affect the offsite response organizations, future revisions will also be provided to those organizations for review. The comment period for subsequent revisions to the Emergency Plan will be 60 days. Comments provided by offsite organizations during this period will again be included with the revised Emergency Plan submitted to the NRC." [Yucca Mountain Repository License Application, General information and Safety Analysis Report. DOE/RW-0573 REV 0. 2008 (SAR p. 5.7-41, Section 5.7.5.2.4.5). LSN DEN001592183]

b. The President, through the Department of Homeland Security, has required the implementation of NIMS by federal, state, local and tribal governments to avoid the inability to work together efficiently and seamlessly demonstrated during 9/11 and Hurricane Katrina. Based upon that hard learned emergency response experience there is no assurance that this section, while meeting the specific requirements of 10 CFR 72.32(b)(14), takes into account the coordination of all changes to emergency plans (onsite or offsite) that may have a possible bearing on nearby agencies. For example, changes in the number of personnel or equipment at a fire station due to mission changes may not be seen as affecting another agency. But the change may require a response from another location and an associated delay in arrival time to assist the other agency. Or, if both agencies decided to reduce their stations in an area due to budget restrictions, the ability of each to assist the other will have been reduced in an overall view. All changes need to be coordinated.

c. As stated in NIMS "Preparedness is the responsibility of individual jurisdictions; this responsibility includes coordinating various preparedness activities among all appropriate agencies within a jurisdiction, as well as across jurisdictions and with private organizations. This coordination is effected by mechanisms that range from individuals to small committees to large standing organizations. These mechanisms are referred to in this document as "preparedness organizations," in that they serve as ongoing forums for coordinating preparedness activities in advance of an incident. Preparedness organizations represent a wide variety of committees, planning groups, and other organizations that meet regularly and

coordinate with one another to ensure an appropriate focus on planning, training, equipping, and other preparedness requirements within a jurisdiction and/or across jurisdictions. The needs of the jurisdictions involved will dictate how frequently such organizations must conduct their business, as well as how they are structured. When preparedness activities routinely need to be accomplished across jurisdictions, preparedness organizations should be multijurisdictional.. Preparedness organization at all jurisdictional levels should:

- •establish and coordinate emergency plans and protocols including public communications and awareness;
- •integrate and coordinate the activities of the jurisdictions and functions within their purview;
- •establish the standards, guidelines, and protocols necessary to promote interoperability among member jurisdictions and agencies;
- •adopt standards, guidelines, and protocols for providing resources to requesting organizations, including protocols for incident support organizations;
- •set priorities for resources and other requirements; and
- •ensure the establishment and maintenance of multiagency coordination mechanisms, including EOCs, mutual-aid agreements, incident information systems, nongovernmental organization and private-sector outreach, public awareness and information systems, and mechanisms to deal with information and operations security." [National Incident Management System, Preface, Homeland Security, March 1, 2004, Nye County RID #7569, Nye County LSN Assession No. nye_rid7569_01_00.pd, an NRC LSN Assession number will be provided when available.]

d. Furthermore, DOE unilaterally assigning Nye County 60 days to review emergency plans and changes does not comply with the spirit of the communications requirements of NIMS. The commitment in DOE's emergency plan should be to engage in communications with local government to ensure a fully integrated emergency plan and response system is in place, to the extent that the local community agrees to work cooperatively. In the case of Nye County, it is our desire to work cooperatively with DOE to ensure the safety of our citizens. This entails a common communications plan, not simply the opportunity for Nye County to review documents 60 days before DOE unilaterally implements its emergency plans.

- "Offsite assistance. The applicant's emergency plans shall include the following:

- a brief description of the arrangements made for requesting and effectively using offsite assistance on site and provisions that exist for using other organizations capable of augmenting the planned onsite response.
- Provisions that exist for prompt communications among principal response organizations to offsite emergency personnel who would be responding onsite." [10 CFR 72.32(b)(15)]

- SAR Section 5.7.15.1 Planning Goals states: "To facilitate a coordinated and planned emergency response, provisions for advance arrangements with offsite organizations will be addressed in the Emergency Plan. These arrangements include:
    - •Identification of offsite response organizations that have agreed to provide support, as well as other support organizations capable of augmenting the planned onsite response
    - •Means for requesting offsite assistance
    - •Provisions for prompt communications among principal response organizations with offsite emergency personnel who would be responding
    - •Provisions for providing and maintaining emergency response facilities and equipment to support the emergency response
    - •The availability of adequate methods, systems, and equipment for assessing and monitoring actual or potential consequences of a radiological emergency
    - •Provisions for medical services for contaminated or injured individuals
    - •Arrangements for radiological emergency response training to be offered to offsite support organizations that may be called upon to assist in an onsite emergency
    - •Documentation of assistance agreements in the form of letters of agreement or memoranda of understanding." [Yucca Mountain Repository License Application, General information and Safety Analysis Report. DOE/RW-0573 REV 0. 2008 (SAR p. 5.7-42, Section 5.7.5.2.4.5). LSN DEN001592183]

- Provision for prompt communications does not ensure interoperable communications. Nor does the paragraph contain any reference to ensuring the equipment of the responding agencies is compatible with the onsite equipment. However, the following NIMS requirement exists for DOE and NRC.

- "Incident communications are facilitated through the development and use of a common communications plan and interoperable communications processes and architectures. This integrated approach links the operational and support units of the various agencies involved and is necessary to maintain communications connectivity and discipline and enable common situational awareness and interaction. Preparedness planning must address the equipment, systems, and protocols necessary to achieve integrated voice and data incident management communications." [National Incident Management System, page 18, Homeland Security, March 1, 2004]

- "Arrangements made for providing information to the public." [10 CFR 72.32(b)(16)]

- SAR Table 5.7-7 and Figure 5.7-1 contain no provision for a Nye County Representative within the Joint Information Center Staff to provide local liaison and insight for any information which will be released and which will affect the County and its residents. Nye County, as the Site Host for the repository, has a strong and practical interest in the impact that center pronouncements will have on county residents. [Yucca Mountain Repository License Application, General information and Safety Analysis Report. DOE/RW-0573 REV 0. 2008 (SAR p. 5.7-52, and p. 5.7-55). LSN DEN001592183]

- "Public Information Functions Must Be Coordinated and Integrated Across Jurisdictions and Across Functional Agencies; Among Federal, State, Local, and Tribal Partners; and with Private-Sector and Nongovernmental Organizations." [National Incident Management System, p. 36, Homeland Security, March 1, 2004]

e. In summary, the inclusion of NIMS in the emergency plan is not meant to denigrate the actions which have been taken to prepare this plan. It is intended to strengthen the plan by ensuring that all participants are working from the same integrated script (Standard Operating Procedures, terminology, etc.), with fully interoperable communications and equipment.

f. Nye County remains committed to a continued emergency management relationship with the Yucca Mountain Site, as is evidenced by the Memorandum of Understanding (MOU) between the US DOE/OCRWM and Nye County, Nevada signed by Edward F. Sproat, III, Director, DOE/OCRWM, on January 14, 2008, and by Joni Eastley, Chairman, Nye County Board of Commissioners, on February 5, 2008. [Memorandum of Understanding (MOU) between the US DOE/OCRWM and Nye County, Nevada signed by Edward F. Sproat, III, Director, DOE/OCRWM, on January 14, 2008, and by Joni Eastley, Chairman, Nye County Board of Commissioners, on February 5, 2008, Nye County RID #7575, Nye County LSN Assession No. nye_rid7575_01_00.pd, an NRC LSN Assession number will be provided when available.] The MOU delineates communication and coordination for mutual assistance associated with DOE/OCRWM activities and the commitment to participate in

broader multi-agency emergency response and planning activities to include all governmental agencies active in Nye County.

6. References to portions of the application or environmental documents. [2.309(f)(1)(vi)]

Yucca Mountain Repository License Application, General Information and Safety Analysis Report. DOE/RW-0573 REV 0. 2008 (SAR Section 5.7; SAR pp 5.7-1 to 5.7-55). LSN DEN001592183

Homeland Security Presidential Directive/HSPD-5 (February 28, 2003) Nye County RID # 7572, Nye County LSN Assession Number: nye_rid7572_01_00.pdf, an NRC LSN Assession number will be provided when available;

Homeland Security Presidential Directive/HSPD-7(December 17, 2003) Nye County RID # 7573, Nye County LSN Assession Number: nye_rid7573_01_00.pdf, an NRC LSN Assession number will be provided when available;

Homeland Security Presidential Directive/HSPD-8 (December 17, 2003) Nye County RID # 7574, Nye County LSN Assession Number: nye_rid7574_01_00.pdf, an NRC LSN Assession number will be provided when available.

Homeland Security National Preparedness Guidelines, dated September 2007, Nye County RID #7570, Nye County LSN Assession No. nye_rid7570_01_00.pd, an NRC LSN Assession number will be provided when available.

Homeland Security National Response Framework, dated January 2008, Nye County RID #7571, Nye County LSN Assession No. nye_rid7571_01_00.pd, an NRC LSN Assession number will be provided when available.

National Incident Management System, Preface, Homeland Security, March 1, 2004, Nye County RID #7569, Nye County LSN Assession No. nye_rid7569_01_00.pd, an NRC LSN Assession number will be provided when available.

Memorandum of Understanding (MOU) between the US DOE/OCRWM and Nye County, Nevada signed by Edward F. Sproat, III, Director, DOE/OCRWM, on January 14, 2008, and by Joni Eastley, Chairman, Nye County Board of Commissioners, on February 5, 2008, Nye County RID #7575, Nye County LSN Assession No. nye_rid7575_01_00.pd, an NRC LSN Assession number will be provided when available.

10 CFR 63.161

10 CFR 72.32(b)

7. Statement Regarding Joint Ownership

Nye County is jointly sponsoring this Safety Contention with the Nevada Counties of Churchill, Esmeralda, Lander, and Mineral, and Inyo County, California.

NYE - JOINT-SAFETY-6

The LA lacks any justification or basis for excluding potential aircraft crashes as a category 2 event sequence.

1. Statement of Issue of Law or Fact (2.309(f)(1)(i))

Contrary to the requirements of 10 CFR 63 to provide the technical basis for the inclusion or exclusion of specific human-induced hazards in the repository preclosure safety analysis, the Department of Energy (DOE) has merely assumed the U.S. Air Force (USAF) will restrict their activities in the repository vicinity. No basis or justification for that assumption is provided by DOE in its repository License Application (LA) or supporting documents.

2. Explanation of Basis 2.309(F)(1)(ii))

In its LA Safety Analysis Report (SAR), DOE takes credit for various flight restrictions on USAF operations in the vicinity of the proposed repository (SAR section 1.6.3.4.1, pages 1.6-21, -22, and -23). In the same SAR section on page 1.6-22, DOE states, "The accident an alysis conducted assumed that such flight restrictions would occur." No further basis or justification of this critical assumption is discussed. In the same SAR section on page 1.6-23, DOE discusses its event sequence probability calculations (based in large part on the noted unsupported assumption) and states, "Consequently, the aircraft hazard to the surface facilities is screened out as an initiating event."

3. Issue is Within the Scope of the Proceeding (2.309(f)(1)(iv))

Determination of potential event sequences is a key step in DOE's repository preclosure safety analysis required by 10 CFR 63.112. Without understanding the potential event sequences and their probability, neither NRC, nor other stakeholders can judge with reasonable assurance that the repository can be operated safely. The regulatory basis for this requirement is described in detail in the next section of this contention.

4. Issue Raised Is Material to Findings NRC Must Make (2.309(f)(1)(v))

a. 10 CFR 63.111 states the performance objectives for the repository through permanent closure. The relevant portions of that regulation states the following requirements:

Preclosure Performance Objectives

§ 63.111 Performance objectives for the geologic repository operations area through permanent closure.

* * *

(b) Numerical guides for design objectives.

* * *

(2) The geologic repository operations area must be designed so that, taking into consideration any single Category 2 event sequence and until permanent closure has been completed, no individual located on, or beyond, any point on the boundary of the site will receive, as a result of the single Category 2 event sequence, the more limiting of a TEDE of 0.05 Sv (5 rem), or . . .

(c) *Preclosure safety analysis*. A preclosure safety analysis of the geologic repository operations area that meets the requirements specified at § 63.112 must be performed. This analysis must demonstrate that:

(2) The design meets the requirements of § 63.111(b).

* * *

b. Preclosure safety analysis is defined in 10 CFR 63.112. The relevant portions follow:

§ 63.112 Requirements for preclosure safety analysis of the geologic repository operations area.

The preclosure safety analysis of the geologic repository operations area must include:

(a) A general description of the structures, systems, components, equipment, and process activities at the geologic repository operations area;

(b) An identification and systematic analysis of naturally occurring and human-induced hazards at the geologic repository operations area, including a comprehensive identification of potential event sequences;

* * *

(d) The technical basis for either inclusion or exclusion of specific, naturally occurring and human-induced hazards in the safety analysis;

c. Further guidance regarding the identification and evaluation of potential event sequences is provided in the NRC Yucca Mountain Review Plan (NUREG-1804, Revision 2) on pages 2.1-25 and -26 as follows:

2.1.1.4 Identification of Event Sequences

Review Method 2 Categories 1 and 2 Event Sequences

Verify that the U.S. Department of Energy has properly considered the hazards and initiating events reviewed . . .

Acceptance Criterion 1 Adequate Technical Basis and Justification are Provided for the Methodology Used and Assumptions Made to Identify Preclosure Safety Analysis Event Sequences

(1) Methods selected for event sequence identification are appropriate, and are consistent with Agency [NRC] guidance or standard industry practices or are adequately justified.

(2) The methods selected are consistent with, and supported by, site-specific data; and

(3) Assumptions made in identifying event sequences are valid and reasonable.

The definition of event sequence in 10 CFR 63.2 is also relevant to this contention as follows.

§ 63.2 Definitions

Event sequence means a series of actions and/or occurrences within the natural and engineered components of a geologic repository operations area that could potentially lead to exposure of individuals to radiation. An event sequence includes one or more initiating events and associated combinations of repository system component failures, including those produced by the action or inaction of operating personnel. Those event sequences that are expected to occur one or more times before permanent closure of the geologic repository operations area are referred to as Category 1 event sequences. Other event sequences that have at least one chance in 10,000 of occurring before permanent closure are referred to as Category 2 event sequences.

5. Statement of Alleged Facts or Opinions and References to be Relied On (2.309(f)(1)(vi))

a. DOE is required to perform a preclosure safety analysis of the geologic repository operations area that must include an identification and systematic analysis of naturally occurring and human-induced hazards at the geologic repository operations area, including a comprehensive identification of potential event sequences (10 CFR 63.112 (b)). Additionally, DOE must provide the data used to identify naturally occurring and human-induced hazards at the geologic repository operations area (10 CFR 63.112 (c)). It must further provide the technical basis for either the inclusion or exclusion of specific, naturally occurring and human-induced hazards in the safety analysis (10 CFR 63.112 (d)). This technical basis must be implemented by the determination of potential event sequences that result in release of and public exposure to radioactive contaminates that could occur during repository operations and determining the probability of such event sequences. If the event sequences are such that they could occur with a probability of at least one chance in 10,000 over the period of preclosure repository operations, DOE must prepare consequence calculations and compare those calculated consequences to prescribed standards in 10 CFR 63.111(b)(2).

b. Contrary to these requirements, DOE has failed to provide any justification or basis for its assumption that it can achieve a binding agreement with the USAF to prescribe flight restrictions on its operations in the vicinity of the repository. DOE merely makes the unsupported assumption that, "The accident analysis conducted assumed that such flight restrictions would occur." Without the flight restrictions assumed by DOE, its calculation of aircraft crash event sequence probability would likely have significantly different results. Based on the assumption and its prominence in SAR section 1.6.4.3.1 and in Bectel SAIC Company (BSC) calculation, "Frequency Analysis of Aircraft Hazards for License Application," page 22 (BSC identifier 000-00C-WHS0-00200-000-00E and DOE LSN

Participant Accession Number ALOA.20071023.0985), it is presumed that without the unjustified assumption that an aircraft crash into repository facilities would be much more probable and categorized as a category 2 event sequence per 10 CFR 63.2. The consequences of such an aircraft crash are unknown because DOE has not performed a consequence analysis using NRC regulated processes because of its claim that the probability of such an event sequence is below the regulatory probability threshold for category 2 event sequences.

c. Nye County believes that before NRC allows DOE to begin construction of the repository, it should require a binding agreement between DOE and the USAF mandating the flight restrictions assumed by DOE in its preclosure safety analysis. At a minimum, DOE should be required to provide justification and basis for its assumption showing that there is reasonable assurance, such as documentation from the USAF, that such an agreement with the USAF is forthcoming with a prescribed implementation date or milestone. NRC should also make ongoing flight restrictions as assumed in DOE's safety analysis a condition of any license it issues for DOE to receive and possess nuclear materials at the repository. Otherwise, it is unknown whether or not the USAF would implement such restrictions and DOE's safety analysis is without basis in regard to the aircraft crash event sequence categorization. Such an indeterminate state is not adequate to show that repository workers and other Nye County residents in the vicinity of the repository will be safe.

6. References (including relevant LA sections)

Yucca Mountain Repository License Application, General Information and Safety Analysis Report. DOE/RW-0573 REV 0. 2008 (SAR Section 1.6.3.4.1, pp. 1.6-21, 6-22, and 6-23, Section 5.7; SAR pp 5.7-1 to 5.7-55). LSN DEN001592183

NRC "Yucca Mountain Review Plan," pp. 2.1-25 and -26 (NUREG-1804, Revision 2)

Bechtel SAIC Company calculation, "Frequency Analysis of Aircraft Hazards for License Application," page 22 (BSC identifier 000-00C-WHS0-00200-000-00E and DOE LSN Participant Accession Number ALA.20071023.0985)

10 CFR 63.2

10 CFR 63.111 (b), (c)

10 CFR 112 (a), (b), (d)

7. Statement Regarding Joint Ownership

Nye County is jointly sponsoring this Safety Contention with the Nevada Counties of Churchill, Esmeralda, Lander, and Mineral, and Inyo County, California.

December 19, 2008

United States Of America Nuclear Regulatory Commission
High Level Waste Application

In the Matter of	)	
	)	Docket No. 63-001
U.S. DEPARTMENT OF ENERGY	)	
	)	
(High-Level Waste Repository:	)	
High-Level Waste Application)	)	
	)	

NEVADA COUNTIES OF CHURCHILL, ESMERALDA, LANDER AND MINERAL

Certificate of Service

I hereby certify that the foregoing "The Nevada Counties of Churchill, Esmeralda, Lander and Mineral Petition to Intervene" was served this date via the Nuclear Regulatory Commission's Electronic Information Exchange ("EIE"), which to the best of my knowledge transmitted the foregoing upon those on the Service List maintained by the EIE for the above-captioned proceeding.

Respectfully submitted

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Dated in Las Vegas, Nevada
This 19th day of December 2008