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MR. HALSTEAD: Good morning. I'm Bob

7 Halstead, Transportation Advisor for the Nevada Agency for
8 Nuclear Projects. As you can probably tell, I have a
9 terrible cold this morning. The Shoshone people who stand to
10 be so heavily effected by Yucca Mountain project recommend
11 willow tea for colds. That failing, they recommend chewing a
12 piece of willow bark, but I found no willow trees on my way
13 to this hearing this morning. So I'd like my statement,
14 Barry, to be entered in the record as if it were read in its
15 entirety. The attachments are referenced in the record are
16 available on our web site.

17

Over the next year, at the Draft EIS
18 hearings, we will talk transportation, about heavy hall
19 trucking. And Denver will talk about severe accidents and 20
Reno will talk about rallying issues, and Austin will talk 21
about rail spur construct, and the valley will talk about
22 native American transportation issues. And I know I'll find

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/

1 my willow trees there. [But today we address the
2 vulnerability of repository shipments to terrorism and
3 sabotage, specifically the consequences of attacks on
4 shipping cask utilizing high-energy explosive devices. You 5
6 are not going to hear much applause from the State of Nevada
7 for the Draft EIS by the DOE, but there is one issue on which
8 we will applaud them this morning, and that is their decision
9 to address the issues of terrorism and the consequences of
10 sabotage, radiologic sabotage, forthrightly in this document.]

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11 [We differ with them on their assessment of
12 the severity of the consequences, but there is no longer any
13 debate on the vulnerability of shipping casks to attacks with
14 high-energy explosive devices. It is rather a debate now on
15 the amount of radioactive materials that are released, the
16 human, health and economic impacts and importantly what
17 measures should be taken to protect these shipping casks from
18 attack.]

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19 Spent nuclear fuel shipments to a repository
20 will differ dramatically. They will be highly visible
21 nationwide. They will be a daily occurrence for 24 to 39
22 years. They will be traveling predictable routes to a single
23 destination. They will be averaging 2,000 miles in

2 continued 1 several days travel time each, and they will be traversing
2 major cities on a daily basis.

3 These differences will create greater
4 opportunities for terrorism and sabotage. Moreover, the
5 State of Nevada believes a repository operated by DOE and DOE
6 shipments will have greater symbolic value to terrorists than
7 attacks upon commercial facilities and shipments.

8 | Since the mid 1980's, the State of Nevada
9 has repeatedly urged DOE and NRC to examine the consequences
10 of terrorism and sabotage against these shipments. Many of
11 you know we have prepared reports on this topic in 1996 and
12 1997. They are referenced in the statement available on the
13 web site and entered in this record as attachments. The NRC
14 accepted Nevada's petition for rule making on this issue, and
15 I invite all of you to accept the NRC's invitation to comment
16 on the Nevada petition. The comment period ends November
17 29th. The department's DEIS, and a Sandia National Laboratories
18 report on which their analysis is referenced, unfortunately
19 make no reference to the Nevada technical reports nor our
20 petition for rule making.

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21 | Nevada believes a successful terrorist
22 attack on a truck cask could result in a catastrophic release

1 of radioactive materials. Attack using a top of the line
2 antitank weapon could completely perforate GA-4, GA-9 truck
3 cask and cause release of more than one percent of cask
2 continued 4 contents, a release of at least 8,000 curies with fission
on page 5 5 products, such as Sr-90, Cs-134, and Cs-137, constituting
6 over a third of the total curies, plus plutonium 241, perhaps
7 20 percent or more.

8 Nevada's petition to the NRC requests a
9 comprehensive consequence assessment of such an incident,
10 looking specifically at the immediate and long-term
11 implications for public health; environment impacts, broadly
12 defined; standard socioeconomic impacts, including emergency
13 response and evacuation costs, cleanup and disposals costs
14 and opportunity costs to affected individuals and businesses;
15 and also importantly the so-called special socioeconomic
16 impacts resulting from individual and collective
17 psychological trauma and economic losses resulting from
18 perceptions of risk and stigma.

19 Now, DOE DEIS addresses those impacts in a
20 much more limited fashion than the State of Nevada has
21 recommended. The DEIS uses release estimates developed by
22 Sandia National Labs and RISKIND model to develop health

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1 impacts. Assuming the attack took place in an urbanized area
2 under average weather conditions, the DEIS estimated a
3 population dose of 31,000 person-rem and 15 fatal cancers
4 resulting from an attack on a truck cask and 4900 person-rem
5 population dose and 2.4 fatal cancers, resulting from an
6 attack on a rail cask. The DEIS unfortunately is silent
7 regarding any other impacts.

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8 Now, we are going to be identifying a
9 detailed technical critique of the sabotage analysis at the
10 end of the comment period, and in particular, we'll be
11 looking at the Sandia report on which their analysis is based
12 and their failure to consider any impacts other than human
13 health effects.

14 Today, let me state in summary fashion our
15 reasons why the Sandia analysis is, in our opinion, a
16 significant under estimation of these impacts. We believe
17 that the impacts would be at least 10 times greater than the
18 15 cancers and 31,000 person-rem dose that's acknowledged in
19 the Draft EIS. First, Sandia failed to use attack scenarios
20 using more than one high-energy explosive device or
21 incendiary explosive device. In conjunction, Sandia ignored
22 information suggesting that the M3A1 military demolition

1 device they considered to perforate a truck cask failed too.

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2 Commercial shaped charges, which are more efficient metal
3 penetrators, failed to consider importantly the full range of
4 portable antitank weapons which includes the one that meets
5 NRC design basis threat but excludes U.S. Army's definition
6 of man-portability.

7 There are a number of technical issues that
8 have to do, for example, with use of the swept volume method
9 of estimating mass release, use of improperly bench marked
10 code, SCAP code, for modeling damage to the cask. |

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11 Let me close by saying that while we have
12 serious disagreements with the department over the methods to
13 be used in calculating these consequences. | We are heartened
14 to see that for the first time in the 20 years that I have
15 been reviewing Department of Energy EIS there's at least a
16 willingness on their part to acknowledge the vulnerability of
17 shipping casks to such attacks. | Thank you.