Ralph Landers
5381 East Grain Mill Road
Pahrump, NV 89061-7700

19 March 2003

Mr. Martin J. Virgilio, Director
Office of Nuclear Material Safety & Safeguards
US Nuclear Regulatory Commission
Washington, DC 20555-001

Dear Mr. Virgilio:

Many thanks for your response letter of 12 March 2003. Since your letter was written, I have attended the local (Pahrump) meeting by reps of the NRC on 13 March 2003. I have enclosed the actual newspaper article reviewing this meeting for your perusal. Many "darts" were thrown at Rob Lewis, Ken Sorenson of Sandia NL, Andy Murphy, Bill Brach, and many others.

There seems to be a mistrust, and lack of confidence by the average citizen as to the integrity of the shipping casks. Too many responses at the meeting were: "We are validating computer codes". Thats **not** what the people want to hear. They want to know what **actual dynamic** tests had been conducted and the test results.

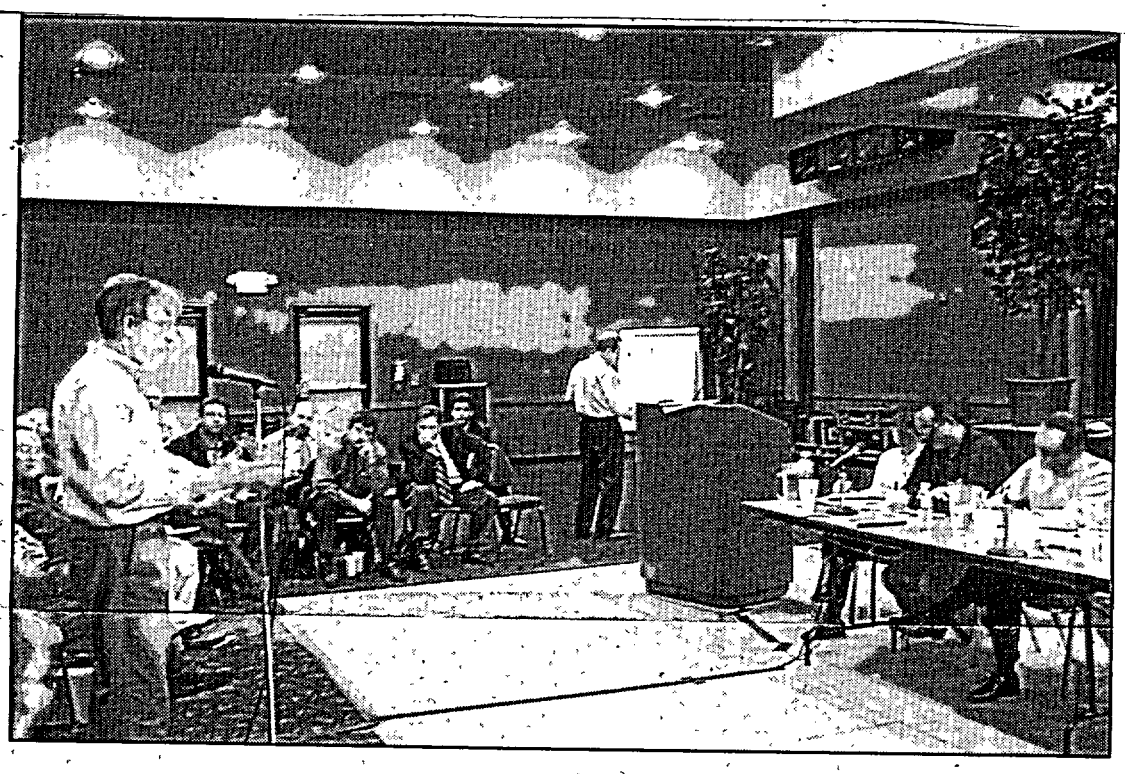
As stated in my previous letter to you, I am worried about a possible critical mass (criticality) achievement after a serious multiple-cask accident involving entry of water into the cask.The water could act as a moderator and cause a chain reaction. This is possible even with only 30% radioactive fuel rods. I would like to refer you to one of your publications, NUREG/CR-6768 (SAND2001-0821P, page 28, paragraph 3.4.2).This paragraph states it is extremely unlikely that a fully flooded cask interiorwould produce a criticality configuration.... as could be demonstrated by a simple event tree analysis. What this paragraph DOES NOT say is that an actual test using real-world, actual casks loaded with spent fuel rods has been done to verify this scenario. Thats validation! There are several areas suitable for this kind of testing, among them: Bikini Atoll [where the WWII A-bomb was tested] which is still uninhabital over 60 years later.

I sincerely believe that computer simulations, event tree analyses, modal studies, et al, does not instill confidence in the public minds. Its time for actual, real-world, three-dimensional testing. Using telemetry instrumentation the results would validate/verify results that are inrefutable.

Sincerely,

Ralph Landers

NMSS07
WM-11
Add: Martin Virgilio



MARK WAITE / PVT

Jim Williams, a consultant for Nye County, addresses members of the Nuclear Regulatory Commission during Thursday's meeting in Pahrump.

Tests: Audience urges NRC officials to push casks past the point of failure

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will be required to use different levels of security depending on nation's security threat level.

But what about the unforeseen, asked Bill Green. "We never thought two airplanes would bring down two skyscrapers," the Pahrump resident said.

Judith Holmgren asked if there would be anyone guarding the unloading of the nuclear waste at Yucca Mountain. Brach said DOE is required to submit its planned security measures in its application for an NRC license to operate Yucca Mountain.

Tilgis charged that the NRC had ruled out the need for evaluating a terrorist scenario. She asked about what would happen if an F-16 jet crashed into a cask.

Another audience member, Robert Patzer, said terrorists could use high tech explosives to disintegrate casks.

"We don't want anyone to get the impression we're not looking at terrorism or sabotage events," Lewis said. But he added, "Those (reports) are not public information."

"People who have a security clearance can't tell you everything they would like to, and we have to live with that," Halstead explained.

Brach said armed guards would escort each shipment and the state would be notified in advance when the material will be shipped. There would be constant communication with the shippers, he said.

Dick Ungefer said that by using the Global Positioning System, officials should know right away if drivers deviate from the planned transportation route.

Jim Williams, a consultant for the Nye County nuclear waste oversight program, suggested the NRC test casks for impacts with and without shock absorbers.

He then asked why the casks wouldn't be tested for barge shipments.

"If the nation decides to transfer its entire inventory of nuclear waste from 139 sites in 39 states to this county then there's a way to do that to eliminate maximum transfer of risk to this county," Williams said.

DeMeo said nuclear regulatory officials can't guarantee the protection of a nuclear power plant from terrorist attacks. He asked for assurances when the casks are shipped through Nye County they'll be completely safe.

Written comments on the nuclear waste package design testing will be accepted until May 30. They may be mailed to: Chief, Rules Review and Directives, U.S. Nuclear Regulatory Commission, Mail Stop T-6-D-59, Washington, D.C. 20555-0001. Comments may also be posted on line at http://www.nrc.gov/public-involve/doc-comment/form.html.

Casks: Terrorist threat worries public

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one of the most important.

Ken Sorenson, with Sandia National Laboratories, said one cask design is being finalized for rail shipments and another for truck. Both designs would be strong enough to withstand a drop at 75 mph, along with puncture tests, fire tests and tests involving submersion in water.

Starting as early as 2010, the U.S. Department of Energy wants to ship approximately 77,000 metric tons of high-level radioactive waste into Nye County and bury it inside Yucca Mountain, roughly 20 miles from the communities of Beatty and Amargosa Valley.

Lewis said a truck cask may weigh 40 tons, but the radioactive spent fuel would only account for about two tons of that — an indication of the amount of shielding in each cask to guard against radioactive release. Casks will include a four-inch lead gamma shield and a four-to-six-inch polymer neutron shield.

Andy Murphy, from the Office of Nuclear Regulatory Research, said the issue is whether to conduct a full-scale test or a partial-scale test of the casks. His office proposes full-scale testing.

As for whether it should be tested for impact by being dropped from a tower or propelled on a rocket sled, his office suggests the tower test. The NRC doesn't plan to test the casks with actual radioactive fuel inside.

Bill Brach, with the NRC spent fuel project office, assured one audience member that shipments would not be arriving at Yucca Mountain every couple of hours. "The Department of Energy has forecast 175 shipments on an annual basis," he said.

> **"People who have a security clearance can't tell you everything they would like to, and we have to live with that."**
>
> **BOB HALSTEAD**
> NEVADA AGENCY FOR NUCLEAR PROJECTS

Despite the assurances, audience members still had concerns over a worst-case scenario: an accident or act of sabotage that releases radioactivity into the surrounding area.

Nye County Commission Chairman Henry Neth inquired about what would happen if one of the radioactive fuel assemblies managed to pop out of a cask.

Lewis acknowledged that the radioactive dose from an unshielded fuel assembly would be very high, but the chances of such a cask failure are incredibly remote. "The fuel can't really pop out of a cask," he said. "These tests we're proposing here, they're very severe tests."

The vagueness of that answer drew criticism from Nye County Sheriff Tony DeMeo and Kalynda Tilgis, who was there representing the Pahrump-based anti-nuclear Shundahai Network.

The probability of an accidental release Lewis put in the range of one in a million or one in 10 million. In an accident, first responders will be relied on heavily, he said.

Halstead said the state endorses full scale testing of the casks and testing them to the point of failure. If there was an accidental release, it only takes one to five minutes for someone a yard away to receive a fatal dose, he said.

County Commissioner Candice Trummell suggested the cask tests be conducted in Nye County.

"The main word is modeling. You have nothing and you've done nothing," persistent anti-nuclear critic Sally Devlin said. She argued for actual, full-scale tests, not computer simulations. "You will never get confidence from the public using surrogates."

"When they escalate the alert to orange are you going to stop these shipments? Are you going to pull them off the road?" one audience member asked.

Brach said the casks would also be tested to withstand terrorist attacks. Without offering specifics, he added that any transportation companies licensed by the NRC

SEE **TESTS** PAGE A6

Skeptics turn out in force for meeting on waste transportation

By MARK WAITE
PVT

Members of the Nuclear Regulatory Commission touted the safety record of shipping nuclear material around the country to a skeptical audience at the Mountain View Casino Thursday.

NRC officials came under criticism for giving vague answers to various "what if" scenarios, mostly concerning possible terrorist attacks.

"There's been about 1,300 shipments of spent (nuclear) fuel in NRC-certified casks over the last 25 years," said Rob Lewis, chief of the NRC transportation division. "We've never had, to our knowledge, any injury attributable to the radioactive material being shipped or any release of radioactive material."

Upon inquiries from the audience, however, Lewis acknowledged there had been four accidents involving the transportation of radioactive material but no release of radiation. A truck driver in Tennessee was killed in the 1970s when his truck jackknifed while hauling a load of nuclear waste, he said.

The terrorist attacks of Sept. 11, 2001 didn't stop the shipments of radioactive material, which are often used in nuclear medicine, Lewis told about 60 people. Instead the NRC fully staffed its emergency response center after 9/11 and required those transportation license holders to go to the highest levels of security, he said.

"We worked very closely with the FBI, CIA and other agencies to define possible threats," he said.

The latest NRC public hearing was convened to discuss cask designs. Bob Halstead, a transportation advisor for the Nevada Agency for Nuclear Projects, called this round of hearings

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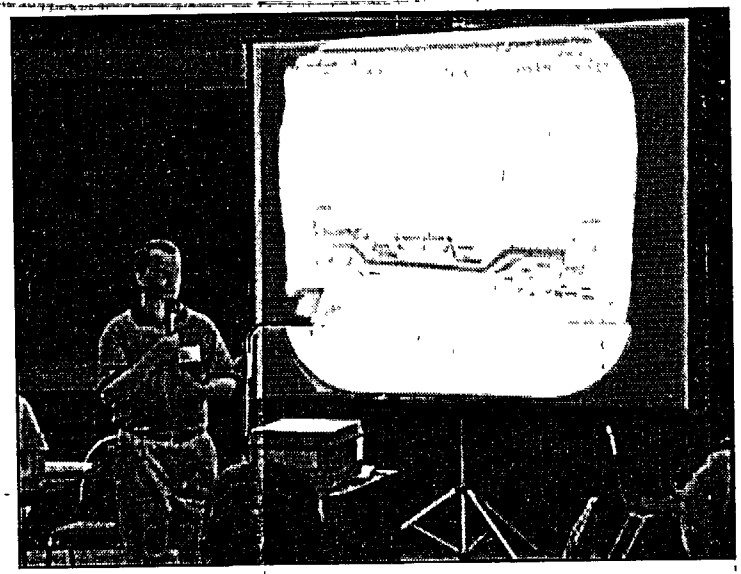

MARK WAITE / PVT

Rob Lewis, chief of the Nuclear Regulatory Commission's transportation division, speaks during a public hearing Thursday at the Mountain View Casino while showing a slide of one of the casks for transporting nuclear waste to Yucca Mountain on an overhead projector.

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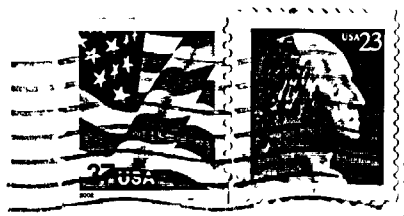

Bill Brach

Marty has not seen

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