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12 July 2002

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

Dear Mr. Virgilio:

Many thanks for your letter of July 5, 2002. I always appreciate hearing from cognizant persons in the government.

I am looking forward to attending another public meeting here in Pahrump, NV. Since the general public is invited, by necessity the technical content of presentations has to be limited somewhat. So, allow me to suggest some important details regarding the testing of the shipping containers, as I see it.

I do not know the materials which will be tested but I heard that stainless steel, titanium, beryllium, and others are present candidates for shipping containers. Since the stored spent fuel rods are located at various sites which include seashore (salt atmosphere) desert climates (sand and dust), cold temperatures (frost) keeping the interior temperature of the shipping containers constant is almost impossible without air conditioning. There will be condensation, thermal gradients; possible hydrogen embrittlement, stress corrosion cracking, and creep or metal fatigue. Some of these may not happen until years after entombment inside Yucca Mountain.

Environmental testing of the shipping containing must be tested for the aforementioned potential problems plus impact testing to guard against foreign intrusion. Of course shipping container integrity against radiation leakage is a given. Talking about the latter, I am surprised to learn that truck drivers or train engineers are not slated to wear radiation exposure badges to prevent overexposures should leaks occur.

Another problem is the transportation routes. In rural areas, like Pahrump, other than a few major highways, the roads are paved with either thin asphalt or single-layer chip sealing which cannot support heavy trucks. The Nevada Dept. of Transportation (NDOT) can provide details.

Sincerely,



Ralph Landers

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