

**EXXON NUCLEAR COMPANY, Inc.**

RESEARCH AND TECHNOLOGY CENTER

2955 George Washington Way, Richland, Washington 99352

PHONE: (509) 375-7100

May 4, 1981



Mr. H. E. Book, Chief  
Radiological Safety Branch  
U.S. Nuclear Regulatory Commission  
1990 N. California Boulevard  
Suite 202, Walnut Creek Plaza  
Walnut Creek, CA 94596

Docket No. 70-1257  
License No. SNM-1227

Dear Mr. Book:

This letter is in response to the Notice of Violation dated April 17, 1981, and is being submitted as required by 10 CFR 2.201.

On March 10, 1981, Contaminated Waste Shipment H-10 departed Richland, Washington for Beatty, Nevada. On March 12, 1981, Exxon Nuclear was advised by U.S. Ecology, operator of the Beatty site, that some packages in the shipment violated DOT packaging standards. On March 13, 1981 a representative of Exxon Nuclear visited the Beatty site and inspected the packages. The inspection confirmed that certain seams on four of the boxes had a few gaps large enough to permit insertion of a wire coat hanger. No evidence of leakage or contamination was observed or measured. The Exxon Nuclear representative authorized U.S. Ecology to close the gaps by nailing, to be followed by burial of the shipment. The steps outlined above provided resolution to the immediate incident.

Attached is a copy of a letter to Mr. Edmundson of the Nevada Division of Health which explains why we feel that the problem which resulted in the cited violation could not have permitted leakage of radioactive material from the packages. As seen from the letter, it is the position of Exxon Nuclear Company, Inc. that the citation for violation of DOT regulation: 49 CFR 173.392(c)(1) by the State of Nevada Division of Health was based on a difference in interpretation of that regulation.

Our letter to Nevada authorities describes pertinent portions of the procedures already in place to assure that our waste packages meet applicable State and Federal regulations. For example, the letter states as follows:

May 4, 1981

1. Item 3.3.1 of Rev. 3 of Exxon Nuclear's operating procedure 1.3.13 (dated 7/31/80) entitled "Packaging of Low Level Radioactive Waste" requires verification that there is no visual contamination on or in equipment and materials packaged for off-site shipment as waste.
2. All waste materials are packaged under the supervision of an Exxon Nuclear Company Health Physics Technician who lists the individual items in each package and certifies that no significant smearable contamination exists on the items packaged as waste.

Furthermore, copies of detailed packing lists for each box of the shipment show that the identifiable items were quite large and contaminated with only minimal quantities of low enriched uranium. (The shipment contained only two grams of <sup>235</sup>U within the ten packages.)

Paragraph 173.392(c)(1) of 49 CFR states:

"Materials must be packaged in strong, tight packages so that there will be no leakage of radioactive material under conditions normally incident to transportation".

While it is recognized that the term "tight" is somewhat ambiguous in nature, the clarification (i.e., no leakage) in the above paragraph establishes a possibility of determining adequacy based on performance. The above noted observations relative to the precautions taken by Exxon Nuclear to assure that only items were included with insignificant fixed contamination, plus the results of extensive surveys performed at the Beatty site which demonstrated that there had indeed been no leakage of radioactive material from the packages, leads us to conclude that the packages were in full compliance with the details and intent of Paragraph 173.392(c)(1) of 49 CFR. Consequently, it is requested that the Notice of Violation be reconsidered and withdrawn.

Although we feel that the citation by the State of Nevada is unwarranted, we nevertheless recognize that a consensus must be reached between Exxon Nuclear and the State of Nevada on this matter. Procedures, in addition to those already in place, which will be implemented to assure in the future that packages are tight are outlined below:

"Irrespective of package contents, each radioactive waste package having visible cracks shall be renailed and the cracks taped and/or caulked."



ATTACHMENT

**EXXON NUCLEAR COMPANY, Inc.**

RESEARCH AND TECHNOLOGY CENTER

2955 George Washington Way, Richland, Washington 99352

PHONE: (509) 375-7100

March 26, 1981

Mr. J. A. Edmundson, Chief  
Bureau of Consumer Health Protection Services  
State of Nevada, Division of Health  
505 East King Street  
Carson City, Nevada 89710

- Ref: 1) Nevada State Site Use Permit  
No. 359  
2) Letter, J. Vaden to P.R. McMurray,  
dated March 20, 1981

Dear Mr. Edmundson:

On March 12, 1981 an Exxon Nuclear Company shipment of low level radioactive waste material was received at the Beatty, Nevada site. Upon inspection, your site representative noted that there were small gaps in a few locations along the seams of four of the ten waste packages. Those observations were confirmed by an Exxon Nuclear Company representative (Mr. T. C. Smith) who visited the site on March 13, 1981 prior to the burial of that shipment on March 16, 1981. The Exxon Nuclear Company was later cited (see reference 2) for four violations of two DOT regulations, 49 CFR 173.392(c)(1) and 49 CFR 173.393(n)(2), and four violations of Article 2.3 of the Nevada State Board of Health Regulations Governing Use of Site for Disposal of Radioactive Waste.

As a result of the problems with that shipment, we have reviewed both our waste packaging methods and the applicable regulations. That review, together with the observations of our representative who visited the Beatty site, leads us to conclude that the citation resulted from a difference in our respective interpretations of the DOT requirement that LSA materials be packaged in strong, "tight" packages.

1. A review of our packaging procedures and other facts relative to the shipment in question results in the following observations.
  - o Item 3.3.1 of Rev. 3 of our operating procedure 1.3.13 (dated 7/31/80) and entitled "Packaging of Low Level Radioactive Waste" requires verification that there is no visual contamination on or in equipment and materials packaged for off site shipment as waste.
  - o All waste materials are packaged under the supervision of an Exxon Nuclear Company Health Physics Technician who lists the individual items in each package and certifies that no significant smearable contamination exists on the items packaged as waste.

- o Copies of detailed packing lists for each box in question show that the identifiable items were quite large and contaminated with only minimal quantities of low enriched uranium. (The shipment contained only two grams of <sup>235</sup>U within the ten packages.)

Paragraph 173.392(c)(1) of 49 CFR states:

"Materials must be packaged in strong, tight packages so that there will be no leakage of radioactive material under conditions normally incident to transport."

While it is recognized that the term "tight" is somewhat ambiguous in nature, the clarification (i.e., no leakage) in the above paragraph establishes a possibility of determining adequacy based on performance. The above noted observations relative to the precautions taken by Exxon Nuclear to assure that only items were included with insignificant fixed contamination, plus the results of extensive surveys performed at the Beatty site which demonstrated that there had indeed been no leakage of radioactive material from the packages, leads us to conclude that the packages were in full compliance with the details and intent of paragraph 173.392(c)(1) of 49 CFR.

2. With respect to the citation for violation of DOT regulation 49 CFR 173.393(n)(2), it should be noted that shipments of LSA material consigned as exclusive use shipments are exempted from all requirements of 49 CFR 173.393 by paragraph 173.392(b). Despite the exemption, the damage to one package that was originally believed to be in an impaired condition (a splinter in one layer of the plywood bottom of one package), was shown by detailed examination by the site operators, the Nevada inspector, and our Mr. Smith to be of a superficial nature.
3. Article 2.3 of the "Nevada State Board of Health Regulations Governing Use of Site for Disposal of Radioactive Waste" at the Beatty site specifies only that materials must be packaged and received at the site in packages that meet applicable state and federal regulations. Since no additional clarification beyond that in 49 CFR is known to us to exist against which one can define the term "tight", it can only be reiterated that the packages satisfied all applicable requirements.

Mr. J. A. Edmundson

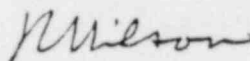
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March 26, 1981

As a result of our detailed review, the citation for violations is believed to be based on an overly stringent interpretation of the DOT regulations and in our opinion, is unwarranted. Since the violations were based on a judgment that radioactive materials could have been released from the packages, without prior knowledge of the precautions taken by Exxon Nuclear to assure that no radioactive materials could be released, it is requested that the citations be withdrawn and that our Use Permit No. 359 be reinstated pending audit of our facility by NIS and subsequent issuance of a Nevada State Qualification Permit.

We would appreciate your reconsideration of this important matter and welcome any opportunity to further discuss the above facts with you.

Sincerely,



R. Nilson, Manager  
Corporate Licensing & Compliance

RN:clc

cc: HE Book  
WJ Cooley  
D Nussbaumer  
J Vaden

Approved:



E. R. Astley, Vice President  
Fuels Manufacturing Department