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Department of Energy
Idaho Operations Office
550 Second Street
Idaho Falls, Idaho 83401

June 4, 1982

Mr. Dale Smith, Chief
Low-Level Waste Licensing Branch
Division of Waste Management
Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: COMMENTS ON NRC BRANCH TECHNICAL POSITION WASTE CLASSIFICATION

Dear Mr. Smith:

Enclosed are ORNL comments on the subject document. These comments were inadvertently omitted in our letter of May 4, 1982.

Very truly yours,

John B. Whitsett, Chief
Radioactive Waste Management Branch
Nuclear Fuel Cycle and
Waste Management Division

Enclosure

cc: Dewey Large, DOE-OR
E. A. Jordan, DOE-HQ

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April 29, 1982

U.S. Department of Energy
Oak Ridge Operations
Post Office Box E
Oak Ridge, Tennessee 37830

Attention: Mr. D. E. Large, National Program Manager
ORO Radioactive Waste Management Program

Gentlemen:

Subject: Draft Branch Technical Position on Radioactive Waste
Classification

We have reviewed the NRC Draft Branch Technical Position Paper on Radioactive Waste Classification and are in general agreement with the intent and purpose. Specific line-by-line comments are included as an attachment.

We have a major concern over the implied content of the paper based on its title and the actual limited scope which is contained in the last paragraph of the paper's introduction:

"This branch technical position describes overall procedures acceptable to the Regulatory Staff which may be used by licensees to determine the presence and concentrations of radionuclides listed in Table 1, and thereby classifying waste for near-surface disposal."

BTP RADIOACTIVE WASTE CLASSIFICATION

- p. 1, para 1, line 16 - The requirement that "waste generators and processors must record the concentrations of the radionuclides in Table 1 on shipment manifests," appears to be broader than necessary for trace quantities of radionuclides. A listing of those radionuclides and their concentrations that both exceed detection or minimum measurement levels and contribute to the activity levels that impact the choice of the waste classification should be sufficient for shipment manifests.
- p. 2, second footnote - See above discussion for radionuclides that do not contribute a significant part of the total radioactivity or hazard in the waste.
- p. 4, para 1, line 7 - The criterion that concentrations are "...accurate in each waste stream generated to within a factor of 10," needs clarification. One common interpretation of this criterion would allow the uncertainty in the actual concentration to be equal to ten times the accepted concentration limit. In the case of 6 out of 13 radionuclides, listed in Table 1, the uncertainty level of the Class A waste would thereby exceed the acceptance level for Class C waste.
- p. 6, para 2, line 2 - The reliance on process stability to limit radionuclide concentrations to Class A levels should be demonstrated for individual waste streams before gross radioactivity measurements are accepted for waste classification.
- p. 7, para 2, line 6 - The determination of confirmatory analyses on Class A waste in the form of trash or other mixed combustibles may be difficult for many licensees due to the need for representative sample preparation and/or specialized analytical techniques. At the present time, it is doubtful if many of the licensees are analyzing their waste for all of the radionuclides that are present.
- p. 10, Appendix A - Assuming reactor refueling operations on an annual basis, there appears to be little chance of selecting a sample on an annual basis that is representative of the entire years operation. It would appear that two levels of waste concentrations will result from normal power operations, and due to refueling/maintenance operations.

Mr. D. E. Large

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April 29, 1982

The draft branch technical position paper is therefore concerned with the assignment of radionuclide concentration levels to specific waste packages, and not concerned with the selection of disposal options, justification, or impacts of the assignment of waste to different classes or categories for disposal.

If you have any questions, please feel free to contact J. E. Vath (4-6301).

Sincerely,

T. H. Row, Director
Nuclear Waste Programs

THP:JEV:b1b LLWM 82/182

Enclosure

cc: G. B. Levin, EG&G
L. J. Mezga
J. E. Vath
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