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WM Record File

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WM Project

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Docket No.

PDR

LPDR

Mr. K.C. Chang

623-SS

U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Distribution:

KC Chang

(Return to WM, 623-SS)

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Dear Mr. Chang:

ERRORS IN BWIP DOCUMENT

On October 24, I sent you my comments on a preliminary/unpublished BWIP document: SD-BWI-TI-287, "Waste Package Preliminary Reliability Analysis Report".

During my work on the engineered barrier analysis, I have discovered some apparent errors in this BWIP document. You may wish to retain this information for review of the SCP, which will probably include the sections in question.

On page 166, the initial inventory of radium-226 is given as 63 Ci/1,000 MTU, and on page 169 the 1,000-year inventory is given as 1.26 Ci/1,000 MTU. This is a reduction by a factor of 50 in 1,000 years. However, the half-life of this radionuclide is 1,600 years. Apparently, some of the numbers are in error.

The maximum fractional release rate of 4.09E-5 (page 169) is 100 times that shown on page 6-292 of the BWIP Environmental Assessment (May 1986).

At least some of the other repository projects do not include radium-226 in their tables. For example, it is not mentioned in Table 6-26 (page 6-200) of the Richton Dome EA.

In addition, pages 166 and 169 of SD-BWI-TI-287 do not include plutonium-239 at all, although page 6-293 of the BWIP Final EA shows it as having a greater fractional release than plutonium-240, which is included. The other EA's include plutonium-239 in their tables.

I will keep you posted if I see additional items of this sort.

Very truly yours,

Kenneth W. Stephens

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