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Ms. Susan K. Whatley
Oak Ridge National Laboratory
P.O. Box X
Chemical Technology Division
Building 4500N, MS 211
Oak Ridge, TN 37831

WM Project 10/16/85
Docket No. _____
PDR
LPDR (B,N,S)

WM-RES
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B0290
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Distribution:

Dear Ms. Whatley: (Return to WM, 623-SS) *af*

SUBJECT: REVIEW OF AUGUST MONTHLY PROGRESS REPORT FOR B0290, "LABORATORY EVALUATION OF DOE RADIONUCLIDE SOLUBILITY DATA AND SELECTED RETARDATION PARAMETERS, EXPERIMENTAL STRATEGIES, LABORATORY TECHNIQUES AND PROCEDURES"

I have reviewed the August, 1985 Monthly Progress Report dated September, 9, 1985 for the subject contract. Based on my review, progress to date is satisfactory.

Considerable effort has gone into solving the problem of ²³³Pa contamination of ²³⁷Np solutions. The past three monthly reports have included discussions on this work. However, no mention is made about the size of the error in sorption parameters introduced by this contamination. Does this problem occur in systems containing radionuclides other than neptunium and is the error large enough that the DOE should consider it in its experimental methodologies? As you have mentioned to me earlier, your counting equipment is archaic in comparison to that used by the DOE contractors. My concern is that, lacking state-of-the-art equipment, your findings might have little effect on the DOE strategies. We can discuss this further at the contract review meeting this month.

Apparently, some work at LANL has involved Pu and Am sorption. I suggest that, prior to initiating our own experimental studies, we take a trip out to Los

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B-0290 PDR

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Alamos and, under the Appendix 7 Agreement, look at the details of the experiments involving these two elements. Otherwise, there may be a duplication of effort.

The experimentalists at LANL assume that it is conservative to allow the pH of the liquid in sorption experiments to increase during the course of the experiment. I suggest this is one assumption that we should test.

The action taken by this letter is considered to be within the scope of the current contract FIN B-0290. No change to cost or delivery of contract products is authorized. Please notify me immediately if you believe this letter would result in changes to costs or delivery of contract products.

Sincerely,

John W. Bradbury
Geochemistry Section
Geotechnical Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

DFC	:WMT JWB	:	:	:	:	:	:
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