Center for Nuclear Waste Regulatory Analyses

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U. S. Nuclear Regulatory Commission Attn: Mr, Seth M. Coplan Mail Stop 4-H-3 Washington, D. C. 20555

Subject:

Report on ¹⁴C Transport: Intermediate Milestone 3702-065-115

Dear Mr. Coplan:

Drs. R. Codell and W. Murphy completed the work on ¹⁴C transport recently. This work seeks to provide a mechanistic interpretation of ¹⁴C retardation by coupling non-isothermal flow with carbon chemistry evolution and transport. The flow model used is one-dimensional.

One of the principal investigators (W. Murphy) is of the opinion that these investigations should be extended to two-dimensional flow systems. We would propose to do that in Phase III of IPA at which time a detailed report would also be written. The work done so far has been well summarized in the enclosed paper. I propose that no additional report be written on this topic and that the paper be accepted as meeting the requirements of the subject milestone.

Please note that results of this paper will be summarized in the final IPA report. If you have any questions, please call me at (512) 522-5252.

Very truly yours,

Budhi Sagar, Manager

Performance Assessment & Hydrologic

Transport

BS/mag f:CTrans.ltr Attachment

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