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MEMORANDUM FOR: Leo B. Higginbotham, Chief
Low-Level Waste and Uranium
Recovery Projects Branch
Division of Waste Management

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FROM: R. John Starmer, Section Leader
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SUBJECT: TRIP REPORT FOR 1985 ANNUAL MEETING OF THE AMERICAN
GEOPHYSICAL UNION IN BALTIMORE MD - MAY 29 - 31, 1985

I attended the American Geophysical Union Annual Meeting in Baltimore MD on May 29, 30 and 31, 1985. The purpose of my attendance was to interview a prospective employee and to attend scientific sessions on the subjects of geochemistry and hydrologic transport (specifically the symposium on coupled geochemical and hydrologic modeling).

I attended a half day on May 29 and, in addition to attending several presentations, interviewed Sarah Hokanson who is interested in a position as project manager in the Low-Level Waste Section.

On Thursday I spent the day attending the sessions on coupling of hydrologic and geochemical models. The conclusions of the investigators that have been working in this area was that such modeling is possible, yet in many cases the input data, thermodynamic data bases, is not as well developed as the models and that the models themselves are far from being slim svelte number crunchers. One of the more successful models presented, TRANQL, by Gail Cederberg, a "brute force" coupled model, required large amounts of computer time to model a simple system containing cadmium, cobalt, EDTA and natural ligands. Other codes which were successful were also computer-time expensive. Bob Gillham of the University of Waterloo made the point that field data is generally inadequate to validate the models and that often the available field data confirms the results of simpler models. Those models, using only Kd (distributions coefficient) to describe chemical processes, are often adequate to describe natural processes. He felt that more data, collected by the most sophisticated methods available was needed to provide proof that the coupled models were needed or were working.

On Friday I again attended sessions concerned with transport and including some coupled transport papers that did not fit into the symposium.

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