

SEP 8 1989

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MEMORANDUM FOR: David J. Diehl, Chief
 Information Technology Services Branch
 Division of Information Support Services, IRM

FROM: Ronald L. Ballard, Chief
 Geosciences & Systems Performance Branch
 Division of High-Level Waste Management, NMSS

SUBJECT: OPTIMIZATION OF NEFTRAN COMPUTER PROGRAM ON THE INEL CRAY
 XMP-24 COMPUTER

NMSS and RES are working jointly on a project to scope the performance of the proposed Yucca Mountain Project for disposal of high-level nuclear waste. This work is covered under an interoffice Memorandum of Understanding. We are currently working on a tight schedule to develop computer codes and methods to do a preliminary performance assessment of the site by November 1989. An important part of the computer code package is NEFTRAN, developed for NRC by Sandia National Laboratories. Richard Codell of the Systems Performance Section has been running this code successfully on the INEL Cray XMP-24 computer, but he has determined that the computational performance can be improved greatly by vectorizing several small segments of the code. As we expect this code to consume considerable resources (several hours) on the Cray computer for the current task, we would like to have an experienced programmer from EG&G make these modifications. We estimate the modifications to require one or two days. Because of our extremely tight schedule, we would appreciate having the modifications completed by September 30, 1989. Please contact Richard Codell at 492-0408 with any further questions.

Philip S. Justus

for

Ronald L. Ballard, Chief
 Geosciences & Systems Performance Branch
 Division of High-Level Waste Management, NMSS

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