August 22, 2003

Dr. Gordon W. Wittmeyer
Manager, Performance Assessment
Center for Nuclear Waste Regulatory Analyses
6220 Culebra Road
P.O. DRAWER 28510
San Antonio, Texas 78238-5166

SUBJECT: REQUEST FOR TOTAL-SYSTEM PERFORMANCE ASSESSMENT VERSION 5.0 CODE DOCUMENTATION

Dear Dr. Wittmeyer:

The Center for Nuclear Waste Regulatory Analyses (CNWRA) transmitted the Total-system Performance Assessment (TPA) Version 5.0o code on July 30, 2003, and it was received on July 31, 2003. I want to thank you and your staff for your efforts to complete the development of the TPA version 5.0 code. The development of the TPA version 5.0 code has extended over many months, culminating in the recently completed validation testing, which identified additional changes that needed to be made in the TPA code. We recognize the effort and the many hours that you and your staff have spent on this activity.

Because it was important to have the TPA code available for use, we had decided that the report documenting the validation testing would be completed after the TPA code was provided to the U.S. Nuclear Regulatory Commission (NRC). This report is not scheduled to be provided to the NRC until fiscal year 2004. Although the TPA code has undergone this round of validation testing, we may still decide that additional testing — which might be conducted concurrent to our routine use of the TPA code— is warranted to further increase our confidence in the TPA code. We will use the results of our acceptance review of the TPA code, our forthcoming review of the final software validation test report, and other experiences using the TPA code to make a decision about whether we would request additional testing to be performed on the TPA code.

We are conducting our acceptance review of the TPA code. We need to understand better some of the specific activities and tests used to develop and validate the TPA code in order to be more effective in our review. As we intend to make a decision promptly, we will not have the final validation testing report available during our review. Therefore, I am requesting that you provide us, in advance of the formal software validation testing report, with some documentation relating to software development and validation testing. This information will enable us to complete our acceptance review of the TPA code.

Specifically, I am requesting Software Validation Test Reports created during the recent validation testing of TPA version 5.0 which would implement the Software Validation Test Plan for the Total-system Performance Assessment Version 5.0 Code (ML031950097) for individual tests involving modifications made during TPA version 5.0 development. These Software Validation Test Reports identify the test procedures used during the validation testing. By knowing and understanding the bounds of the tests and, consequently, the domain over which the TPA 5.0o code has been validated, we can develop tests and evaluate their results in light of the validated domain of TPA. As these Software Validation Test Reports have already been created by individuals performing the validation testing, it is my belief that these reports would provide the most efficient way for you to provide this information. As we may be conducting activities similar to those conducted during the validation testing, I would like to request copies of scripts created to accelerate the validation testing, which might help us to complete our acceptance review more efficiently. In addition, I am requesting the Software Change Reports resulting from development and subsequent testing for all modifications which were initially described in your letter transmitting the Software Requirements Description, dated September 30, 2002 (ML031000465). Further, I am requesting Software Change Reports as they pertain to the modifications summarized by Mr. Ron Janetzke, of your staff, via electronic mail (Attachment) in response to an earlier staff request. Christopher Grossman (301-415-7658 or cjg2@nrc.gov) can provide you with additional details about the type of information that would assist our acceptance review of the TPA code.

I would like to thank you in advance for your efforts to provide the requested information in time to support our acceptance review of the TPA version 5.0 code, preferably before August 29, 2003. If this date presents a problem, please contact me so we can make the necessary arrangements to maintain the staff's acceptance review schedule. We plan to document our decision regarding the acceptability of the TPA version 5.0 code shortly and the requested information will assist our progress. We will review the formal software validation test report after it has been submitted for our review. If you have any questions, please contact Christopher Grossman at (301-415-7658 or cjg2@nrc.gov), David Esh at (301-415-6705 or dwe@nrc.gov), or me at (301-415-6628 or jrf2@nrc.gov).

Sincerely,

/RA/

James R. Firth, Element Manager
Total System Performance Assessment
and Integration KTI
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Attachment: Electronic Mail from Mr. Ron Janetzke dated August 4, 2003

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Sincerely,

James R. Firth, Element Manager
Total System Performance Assessment
and Integration KTI
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Attachment: Electronic Mail from Mr. Ron Janetzke dated August 4, 2003
DISTRIBUTION: EPAB r/f LEKokajko PAS Staff
* See previous concurrence
DOCUMENT NAME: S:\DWM\EPAB\jrf\TPA50o Acceptance Review.WPD Log No.:03-148
ML

OFC	DWM: EPAB		DWM:EPAB		SC:DWM:EPAB			
NAME	CJGrossman:rmh*		JRFirth*		ACCampbell			
DATE	8/ 14 /03		8/ 19 /03		8/ 22 /03			