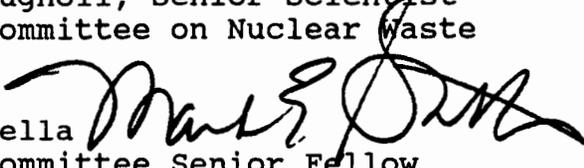




UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON NUCLEAR WASTE  
WASHINGTON, D.C. 20555

October 8, 1993

MEMORANDUM FOR: Giorgio Gnugnoli, Senior Scientist  
Advisory Committee on Nuclear Waste

FROM: Mark E. Stella   
Advisory Committee Senior Fellow

SUBJECT: NRC SOFTWARE QUALITY ASSURANCE GUIDELNES

I have reviewed your recent memo for Dr. Paul Pomeroy on the subject of the software quality assurance (SQA) practices of the Center for Nuclear Waste Regulatory Analyses (CNWRA) and their application to the development of Iterative Performance Assessment (IPA) codes for use by the NRC.

Your attention is directed to the recently published document Software Quality Assurance Program and Guidelines, NUREG/BR-0167, February 1993. This document was developed by an experienced SQA consultant, with significant input from a working group of expert software and quality assurance personnel representing all major NRC offices, including NMSS. The document offers explicit guidance for the implementation of an SQA plan by NRC code developers, and by NRC contractors developing codes for use by the NRC.

Very specific guidelines for the development of Level 1 Software<sup>1</sup> are provided in the NUREG. Guidance on the application of these Level 1 Software SQA guidelines to codes in existence or under development is also contained in the document. I believe that the implementation of an SQA program based on NUREG/BR-0167 guidelines would resolve the management-related SQA issues discussed in the attachment to your October 5 memo for Dr. Pomeroy.

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<sup>1</sup> Level 1 Software is technical application software used in a safety decision by the NRC. The IPA software being developed by CNWRA is an example of Level 1 software.

Giorgio Gnugnoli

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October 8, 1993

cc: P. W. Pomeroy, ACNW  
J. T. Larkins  
R. P. Savio  
R. K. Major  
E. W. Robinson, IRM/ITSB  
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