

May 23, 2003

Mr. Lance Christinson  
Duane Arnold Energy Center  
Nuclear Management Company  
3277 DAEC Road  
Palo, Iowa 52324

Dear Mr. Christinson:

Per your request, enclosed is a compact disk containing the Level 1, Revision 3 Standardized Plant Analysis Risk (SPAR) model for Duane Arnold Energy Center and the SAPHIRE 6.75 suite of probabilistic risk assessment (PRA) computer codes. Also enclosed is a copy of the user's manual for the Duane Arnold Energy Center SPAR model. The SAPHIRE code suite is required to perform analyses with the Revision 3 SPAR model. Both of these software packages are in the form of executable files that can be run directly from the compact disk. These items are for your organization's use only and are not to be distributed further without the consent of the NRC. Also please note that the information contained in the SPAR model is considered sensitive and should be treated accordingly.

The Revision 3 SPAR model for Duane Arnold Energy Center has been reviewed with your PRA staff and benchmarked against your PRA model for the plant. Subsequent to this review and benchmarking, the SPAR model: (1) was revised to address comments and issues identified during the review, (2) now yields results which are in reasonable agreement with those produced by your PRA model, and (3) has no associated outstanding modeling issues. For these reasons, we are certifying that the Duane Arnold Energy Center SPAR model meets all Revision 3 SPAR model quality assurance (QA) criteria and is therefore acceptable for unrestricted use by your staff analysts.

Although the Revision 3 SPAR models are certified as acceptable for unrestricted use, nevertheless, we advise analysts to understand the inputs and assumptions inherent in the models and to apply model results giving them due consideration. The Revision 3 SPAR models have been designed to capture the significant risk contributors associated with internal event initiators for plants operating at full power. Therefore, these models may not provide the level of detail necessary to capture the risk from the less significant contributors. Thus, for a particular application, the analyst may obtain results that do not appear to be reasonable. Questions about the model should be directed to Mr. Robert Buell of the Idaho National Engineering and Environmental Laboratory (INEEL) at (208) 526-9400 (buelrf@inel.gov) . Questions about the SAPHIRE code suite should be directed to Mr. Ted Wood, INEEL, at (208) 526-8729 (stw@inel.gov). Comments and suggestions may also be directed to either of these gentlemen or to Dr. Patrick O'Reilly, NRC project manager for SPAR model development, at (301) 415-7570 (pdo@nrc.gov).

L. Christinson

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If you are interested in receiving on-going technical support for SAPHIRE, you are invited to join the SAPHIRE Users' Group. Mr. John Schroeder, INEEL, at (208) 526-8755 (roe@inel.gov) can provide more details about the group and the services offered.

Due to the potential sensitivity of the information contained in the Enclosures, they are not publicly available.

Sincerely,

*/RA/*

Scott F. Newberry, Director  
Division of Risk Analysis and Applications  
Office of Nuclear Regulatory Research

Enclosures: As stated

cc: D. Hood, NRR/LPD3-1

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**REMARKS**

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