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Steven Mays, Assistant Branch Chief
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THROUGH: Dale Rasmuson
Operating Experience Risk Analysis Branch
Division of Risk Analysis and Applications
Office of Nuclear Regulatory Research

FROM Bennett Brady
Operating Experience Risk Analysis Branch
Division of Risk Analysis and Applications
Office of Nuclear Regulatory Research

SUBJECT: SUMMARY OF NRC/INPO DISCUSSION ON EPIX/RADS INTERFACE
ISSUES, JUNE 26 AND 27, 2000

Dr. Bennett Brady and Dr. Dale Rasmuson met with the Equipment Performance and Information Exchange (EPIX) System staff at INPO headquarters in Atlanta on June 26 and 27 to discuss interface issues and status of EPIX and the NRC Reliability and Availability Data System (RADS). Jim Maddox, Watts Bar, Craig Neirode, Monticello, and Steve Eide, INEEL, also attended. The complete list of attendees and agenda for the discussion are shown in Attachments 1 and 2.

The issues discussed by the participants, actions to resolve them, and date for resolution were:

- **Engineering, reliability (demands and run hours) and failure data being reported to EPIX**
 - EPIX contains more than 900,000 device records and 14,000 failure records.
 - Currently about 14 percent of the device records are missing engineering data. The utilities have committed to completing missing engineering data by August 30, 2000.
 - Five sites are less than 88 percent complete in providing reliability data for all risk-significant components.

- INPO is maintaining current status reports of utility reporting on their web site and calling engineering managers at units with significantly low or late reporting
- INPO anticipates a significant improvement in the completeness of reliability and failure data reporting in the September data submittal to NRC.
- **Maintenance rule risk-significant scope of equipment**
 - The utilities are reporting failure data on equipment in their maintenance rule systems and both failure and reliability data on equipment in the maintenance rule risk-significant systems.
 - Representative PRA data users in RES and NRR have identified the components that are needed for RBPIs, SPAR models and other NRC risk-informed applications. We have used this input to develop the list of components that are currently being loaded in RADS (Attachment 3). This list was provided to INPO for their information.
 - Based on this list, INPO has initiated a scoping comparison study for all utilities to benchmark their component scope. The scoping documents do not necessarily include all the maintenance rule risk-significant key components but are a reasonable basis for comparing scoping between sister units. The documents include the NPRDS application code name (used by RADS), INPO's recommendation as to the designation of the component as key component, and NRC's preferred system name.
 - The utilities have voluntarily agreed to review and compare the scope of their components in EPIX with those in the scoping documents, make appropriate changes or document why the recommendation is not appropriate by November 30, 2000.
- **PRA failure mode classification**
 - Some failure modes in EPIX are physical failure modes such as "low output," others are vague such as "failed to operate" rather than PRA failure modes such as "failed to open, failed to start."
 - A mapping to translate EPIX physical (engineering) failure modes into PRA failure modes (Attachment 4) is being developed. It will need to be verified that this translation mapping is producing the correct failure modes for inputting into PRAs and PRA applications.
 - The utilities have committed to completing and backfitting a new field in EPIX to indicate if a failure was a PRA failure by February 28, 2001.
 - PRA failure modes will be implemented with EPIX 4.0, currently scheduled for April 2001.
- **Consistent coding**
 - During review of EPIX submittals, NRC has identified some inconsistencies in data coding. The NRC has contacted INPO when such issues have been identified, and INPO has taken actions to correct them.

- Attachment 5 shows these data quality issues and other enhancements INPO has undertaken to make the data more useful for PRA analysis and RADS implementation, an estimate of the magnitude of the issue, actions INPO has taken, and the schedule for resolution.
- **Quality assurance of data**
 - An open issue that needs to be resolved is the extensive and costly quality assurance required by 10 CFR 50.9, and 10 CFR 50-Appendix B. Less onerous approaches to providing the quality assurance needed for estimating reliability parameters need to be pursued with NRC.
- **Additional data needed for risk-informed regulatory applications**
 - The NRC proposals for additional reporting to EPIX are under consideration by the NEI Data Review Group.
 - Although there is no requirement to report these additional data, INPO has taken steps to include additional fields and tools in EPIX 3.01 or in the design of EPIX 4.0 to implement these additions should they be approved. These are shown in Attachment 6.

Other Items

1. NRC provided INPO the list of SPAR models completed since the original list used for RBPI development.
2. We also provided INPO the specific errors noted by Steve Eide in his use of EPIX data for RBPI development.
3. We plan to search EPIX for component failures on ESF actuations found in 1998 LERs and provide the results to INPO.

Attachments: As stated

cc: J. Bishop, INPO
G. Masters, INPO

MEMORANDUM DATED: / /00

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NRC/INPO MEETING ON EPIX/RADS INTERFACE ISSUES
June 26 and 27, 2000

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Joe Bishop	INPO
Bennett Brady	NRC
Steve Eide	INEEL
Amy ElChaar	INPO
Nancy Fletcher	INPO
Dave Hambree	INPO
Kim Hulsey	INPO
Neil Lossing	INPO
Jim Lynch	INPO
Jim Maddox	Watts Barr
Glen Masters	INPO
Craig Nierode	Monticello
Dale Rasmuson	NRC

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3. S. Mays - Concur						
4. P. Baranowsky - Concur						
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