

December 10, 2002

MEMORANDUM TO: Mark A. Cunningham, Chief
Probabilistic Risk Analysis Branch
Division of Risk Analysis & Applications
Office of Nuclear Regulatory Research

FROM: Patrick W. Baranowsky, Chief /RA/
Operating Experience Risk Analysis Branch
Division of Risk Analysis & Applications
Office of Nuclear Regulatory Research

SUBJECT: OERAB FIRE EVENTS DATABASE

At the request of J.S. Hyslop of your staff, the proprietary OERAB Fire Events Database information is provided for your use. The published version was previously transmitted as report RES/OERAB/S02-01 for 1986-1999 fire events. The updated fire events data is for the period 2000-2001. This update has been peer-reviewed using guidance similar to that used for the 1986-1999 data.

Since the databases are proprietary, they will be provided directly to your staff. The following is a listing of the database and associated information provided:

1. RES/OERAB/S02-01 Vo1. 1, "Fire Events-Update of U.S. Operating Experience, 1986-1999." (Non-proprietary - Hard Copy)
2. Appendix I, Table 1, Fire Events Data 1986-1999 (Proprietary - Hard Copy)
3. Table A, Plant ID, Docket Name, Plant Age Group, Reactor Type, and Commercial Date (Proprietary - Hard Copy)
4. Word Perfect Format Disc, Fire Events Database, 1986-1999 (Proprietary)
5. Word Perfect Format Disc, Fire Events Database Update 2000 and 2001 (Proprietary)
6. Appendix 1, Table 1, Fire Events Data, 1986-2001 (Proprietary - Hard Copy)
7. Appendix B - Table B.2, Acronyms and Abbreviations used in Fire Events Data 1986-1999 Proprietary Database (Non-proprietary - Hard Copy)

8. Appendix II, Table 1, Power Operations - Reactor Years (1986-2001) (Non-proprietary - Hard Copy)
9. EXCEL Format Disc, Fire Events Database, 1986-2001 (Proprietary)

It is my understanding that a working group is being formed to review the differences between the NRC/RES/OERAB database and the EPRI database for use in the SDP analysis of fire events. Since there are other users of this database for analyses (in NRR and RES) and since the database selected for use with the SDP should be the same one used in the other agency activities, issues relevant to the selection should be addressed in this working group including: quality assurance, fire events trending, timeliness of data update, handling of proprietary material, and planned updates.

An attachment to this memorandum provides a preliminary listing of differences between the two databases and comments applicable to these differences that should be included in the working group review. Jim Houghton of my staff will be a member of the working group.

If you need more information, please contact Jim Houghton of my staff at 415-6353.

Attachment: As stated

cc: C. Carpenter, RES
J.S. Hyslop, RES
M. Johnson, NRR
J. Hannon, NRR
D. Frumkin, NRR
S. M. Wong, NRR

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 S. M. Wong, NRR

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DATE	12/4/02		12/4/02		12/10/02	

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FIRE EVENTS DATABASES — NRC/OERAB VS. EPRI

	<u>NRC/OERAB</u>	<u>EPRI</u>	<u>COMMENTS</u>
● Data Period	<ul style="list-style-type: none"> – Published 1986-1999 – In-process: 2000 & 2001 – Archival: 1968-1985 	<ul style="list-style-type: none"> – 1968-2000 	EPRI latest not reviewed by NRC
● Sources of Data	<ul style="list-style-type: none"> – LERs (all years) 3. INPO (all years) 4. EPRI (1986-1988) 5. NEIL (1992-2001) 	<ul style="list-style-type: none"> – Same – “ – 1968-1988 – 1992-2000 	<p>Same source ”</p> <p>EPRI includes archival data Same source</p>
● Proprietary Nature	<ul style="list-style-type: none"> – EPRI and NEIL data is proprietary, making the database proprietary. INPO data is handled under MOI. 	<ul style="list-style-type: none"> – Data will be available to EPRI members 	EPRI database availability to public is not clear
● Data Fields	<ul style="list-style-type: none"> – Use plant ID no. as code for plant-specific name, except for LERs – Fields for fire attributes 	<ul style="list-style-type: none"> – Use plant-specific name – Same fields for fire attributes plus some narratives 	<p>Plant-specific name can not be used by NRC under present proprietary and MOI agreements except for LER source (i.e., in PDR).</p> <p>Narratives are not provided in EPRI for all fire events</p>
● Missing Data	<ul style="list-style-type: none"> – No survey data, 1989-1991 – 1968-1985 archival data not included in later database 	<ul style="list-style-type: none"> – Same – All fire data included 	<p>EPRI database does not specifically identify period of no survey data.</p> <p>Archival data considered as not applicable to fire analyses by NRC.</p>

FIRE EVENTS DATABASE USES — NRC OERAB VS. EPRI

	<u>NRC/OERAB</u>		<u>EPRI</u>		<u>COMMENTS</u>
● Fire Frequency	– Develops severe fire frequency by excluding short duration fires for plant location (1986-2001)	–	Develops total fire frequency for plant location and components		EPRI requires development of separate severity factor and includes archival period. Method for developing component fire frequency is not clear. Method for factoring missing is not clear.
	– Exclusion of short duration fires excludes need to address missing data (all small fires)	–	Does not account for missing data.		
● Quality Assurance	– Performed QA on all data entries	–	Details of QA not Reviewed		NRC not involved in QA of EPRI database, while EPRI reviewed NRC database.
● Frequency of Updates	– Presently on 2- year update (Will increase to annual for trending)	–	Update frequency not determined		Database update frequency needs to be annual.

ROUTING AND TRANSMITTAL SLIP	Date 12/04/2002
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TO: (Name, office symbol, room #, building, agency/post)	Initials	Date
1. J. Houghton - Concur - Fill in Y or N for OAR in ADAMS and Publicly Available	JRH	12/4
2. M. Cheek - Concur	MCC	12/4
3. P. Baranowsky - Concur/Signature	PWB	12/10
4. Nancy - Distribute - Fill in Template Number, Accession Number and RES Code Number	NLL	12/10
5.		
6.		
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REMARKS

FIRE EVENTS DATABASE

FROM: (Name, org. symbol, Agency/Post)	Room # - Bldg.
	Phone #