

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555

October 24, 1989

NRC INFORMATION NOTICE NO. 89-72: FAILURE OF LICENSED SENIOR OPERATORS TO CLASSIFY EMERGENCY EVENTS PROPERLY

Addressees:

All holders of operating licenses or construction permits for nuclear power reactors and all licensed operators of nuclear power reactors.

Purpose:

The purpose of this notice is to alert addressees to potential problems related to failures of licensed control room senior operators to classify events properly using the site-specific emergency plan implementing procedures. It is expected that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. Suggestions contained in this information notice do not constitute NRC requirements; therefore, no specific action or written response is required.

Description of Circumstances:

The NRC has identified inaccurate emergency action level classifications during operator examinations and during emergency exercises. NRC requalification examinations, conducted earlier this year with typical operating shift crews, identified at several plants the failure of licensed senior operators to properly classify events on the basis of plant conditions presented on the control room simulator. Also, several events were improperly classified, based on simulated plant conditions, during the course of NRC requalification examinations or evaluations of emergency exercises. Recently, one nuclear power station was issued a civil penalty because shift supervisors did not know how to classify emergency events properly.

Such classification problems have also occurred during actual events. At one facility, in January 1989, an Alert was not declared (as it should have been) during a reactor coolant system leakage situation that occurred while the reactor was in a cold shutdown condition.

Discussion:

It is essential that operators be able to recognize degraded plant conditions, classify the emergency on the basis of those conditions, and activate emergency response capabilities of the utility and offsite organizations at the appropriate emergency action level. Demonstrating knowledge of the emergency plan,

8910180092 ZA


IDR-11C

including the responsibility to decide whether the plan should be executed, is required by 10 CFR 55.45, "Operating Tests." Requalification examinations and emergency exercises have been administered by the NRC under the shift team format at numerous facilities at which licensed senior operators were required to demonstrate this competence.

At several facilities there has been lack of emphasis, during operator requalification training, on the bases of and strategies for the implementation of the emergency plan. This weakness has led to the problems noted above. The NRC has noted a direct correlation between inadequate training and incorrect performance by licensed operators. At facilities where licensed senior operators satisfactorily passed the requalification examination, the training program included intensive simulator training on event classification as opposed to relying solely on classroom exercises and lectures.

The root causes for classification errors are attributable to implementing procedures that are not "user friendly" and to ineffective training methods. Implementing procedures are sometimes difficult to interpret and, in some cases, it was apparent that licensed operators had not received sufficient training in event classification to understand and implement the guidance provided. It is important that licensees ensure the usability of event classification procedures and the effectiveness of training in those procedures.

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate NRR project manager.


Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

Technical Contact: C. Casto, Region II
(404) 331-5594

Attachment: List of Recently Issued NRC Information Notices

LIST OF RECENTLY ISSUED
NRC INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
89-71	Diversion of the Residual Heat Removal Pump Seal Cooling Water Flow During Recirculation Operation Following a Loss-of-Coolant Accident	10/19/89	All holders of OLs or CPs for nuclear power reactors.
89-70	Possible Indications of Misrepresented Vendor Products	10/11/89	All holders of OLs or CPs for nuclear power reactors.
89-69	Loss of Thermal Margin Caused by Channel Box Bow	9/29/89	All holders of OLs or CPs for BWRs.
89-68	Evaluation of Instrument Setpoints During Modifications	9/25/89	All holders of OLs or CPs for nuclear power reactors.
89-67	Loss of Residual Heat Removal Caused by Accumulator Nitrogen Injection	9/13/89	All holders of OLs or CPs for PWRs.
89-66	Qualification Life of Solenoid Valves	9/11/89	All holders of OLs or CPs for nuclear power reactors.
88-46, Supp. 4	Licensee Report of Defective Refurbished Circuit Breakers	9/11/89	All holders of OLs or CPs for nuclear power reactors.
89-65	Potential for Stress Corrosion Cracking in Steam Generator Tube Plugs Supplied by Babcock and Wilcox	9/8/89	All holders of OLs or CPs for PWRs.
89-64	Electrical Bus Bar Failures	9/7/89	All holders of OLs or CPs for nuclear power reactors.

OL = Operating License
CP = Construction Permit

including the responsibility to decide whether the plan should be executed, is required by 10 CFR 55.45, "Operating Tests." Requalification examinations and emergency exercises have been administered by the NRC under the shift team format at numerous facilities at which licensed senior operators were required to demonstrate this competence.

At several facilities there has been lack of emphasis, during operator requalification training, on the bases of and strategies for the implementation of the emergency plan. This weakness has led to the problems noted above. The NRC has noted a direct correlation between inadequate training and incorrect performance by licensed operators. At facilities where licensed senior operators satisfactorily passed the requalification examination, the training program included intensive simulator training on event classification as opposed to relying solely on classroom exercises and lectures.

The root causes for classification errors are attributable to implementing procedures that are not "user friendly" and to ineffective training methods. Implementing procedures are sometimes difficult to interpret and, in some cases, it was apparent that licensed operators had not received sufficient training in event classification to understand and implement the guidance provided. It is important that licensees ensure the usability of event classification procedures and the effectiveness of training in those procedures.

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate NRR project manager.

Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

Technical Contact: C. Casto, Region II
(404) 331-5594

Attachment: List of Recently Issued NRC Information Notices

* SEE PREVIOUS CONCURRENCES

EAB:NRR	EAB:NRR	TECH:EDITOR	RII:DRIS	C:EAB:NRR
*RBenedict:db	*RLobel	*RSanders	*KPerkins	CJHaughney
9/28/89	10/3/89	9/28/89	10/4/89	10/16/89

*C:OGCB:NRR	C:LOLB:NRR	C:PEPB:NRR	C:IRB:AEOD	DD:AEOD
CHBerlinger	*GWright	*RErickson	*DCollins	*CHeltemes
10/17/89	10/4/89	10/4/89	10/10/89	10/10/89

B:DOEA:NRR
CER6551
10/18/89

Demonstrating knowledge of the emergency plan, including the licensed senior operator's responsibility to decide whether and how the plan shall be executed, is required by 10 CFR 55.45, "Operating Tests." Requalification examinations and emergency exercises have been administered by the NRC under the shift team format at numerous facilities at which licensed senior operators were required to demonstrate this competence.

At several facilities there has been lack of emphasis, during operator re-qualification training, on the bases of and strategies for the implementation of the emergency plan. This weakness has led to the problems noted above. The NRC has noted a direct correlation between inadequate training and incorrect performance by licensed operators. At facilities where licensed senior operators satisfactorily passed the requalification examination, the training program included intensive simulator training on event classification as opposed to relying solely on classroom exercises and lectures.

The root causes for classification errors are attributable to implementing procedures that are not "user friendly" and to ineffective training methods. Implementing procedures are sometimes difficult to interpret and, in some cases, it was apparent that licensed operators had not received sufficient training in event classification to understand and implement the guidance provided. It is important that licensees ensure the usability of event classification procedures and the effectiveness of training in those procedures.

No specific action or written response is required by this information notice. If you have any questions about this matter, please contact the technical contact listed below or the Regional Administrator of the appropriate regional office.

Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

Technical Contact: Mr. C. Casto
(404) 331-5594

Attachment: List of Recently Issued NRC Information Notices

* SEE PREVIOUS CONCURRENCES

EAB:NRR	EAB:NRR	TECH:EDITOR	RII:DRIS	C:EAB:NRR	
*RBenedict:db	*RLobel	*RSanders	*KPerkins	CJHaughney	
/ /89	/ /89	/ /89	/ /89	10/16/89	
C:OCB:RPP	C:LOLB:NRR	C:PEPB:NRR	C:IRB:AEOD	DD:AEOD	D:DOEA:NRR
CHBerlinger	*GWright	*RErickson	*DCollins	*CHEltemes	CERossi
10/17/89	/ /89	/ /89	/ /89	/ /89	/ /89

Demonstrating knowledge of the emergency plan, including the licensed senior operator's responsibility to decide whether and how the plan shall be executed, is required by 10 CFR 55.45, "Operating Tests." Requalification examinations and emergency exercises have been administered by the NRC under the shift team format at numerous facilities at which licensed senior operators were required to demonstrate this competence.

At several facilities there has been lack of emphasis, during operator re-qualification training, on the bases of and strategies for the implementation of the emergency plan. This has led to the problems noted above. The NRC has noted a direct correlation between inadequate training and incorrect performance by licensed operators. At facilities where licensed senior operators satisfactorily passed the requalification examination, the training program included intensive simulator training on event classification as opposed to relying solely on classroom exercises and lectures.

The root causes for classification errors are attributable to implementing procedures that are not "user friendly" and to ineffective training methods. Implementing procedures are sometimes difficult to interpret and, in some cases, it was apparent that licensed operators had not received sufficient training in event classification to understand and implement the guidance provided. It is important that licensees ensure the usability of event classification procedures and the effectiveness of training in those procedures.

No specific action or written response is required by this information notice. If you have any questions about this matter, please contact the technical contact listed below or the Regional Administrator of the appropriate regional office.

Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

Technical Contact: Mr. C. Casto
(404) 331-5594

Attachment: List of Recently Issued NRC Information Notices

* SEE PREVIOUS CONCURRENCE

EAB:NRR	EAB:NRR	TECH:EDITOR	RII:DRIS	C:EAB:NRR
*RBenedict:db	*RLobel	*RSanders	*KPerkins	CJHaughney
/ /89	/ /89	/ /89	/ /89	/ /89

C:OGCB:NRR	C:LOLB:NRR	C:PEPB:NRR	C:IRB:AEOD	DD:AEOD	D:DOEA:NRR
CHBerlinger	GWright	*RErickson	DCollins	CHeltemes	CERossi
/ /89	10/14/89	/ /89	10/10/89	10/10/89	/ /89
	<i>D. J. Gars</i>		<i>Telephone from R. Ariebe to RBenedict RAB</i>	<i>Telephone from R. Ariebe to RBenedict RAB</i>	

senior operators were required to demonstrate this competence.

At several sites there has been an apparent lack of emphasis during operator requalification training on the bases of and strategies for the implementation of the emergency plan. This has led to misclassification of events during operator training, operator license examinations, and emergency exercises, as well as during actual events. There is an apparent direct correlation between inadequate training and incorrect performance by licensed operators. At sites where licensed senior operators satisfactorily passed the requalification examination, the training program included intensive simulator training on event classification as opposed to relying solely on classroom exercises and lectures.

The root causes for classification errors are apparently attributable to implementing procedures that are not "user friendly" and ineffective training methods. Implementing procedures are sometimes difficult to interpret and, in some cases, it was apparent that licensed operators had not received sufficient training in event classification to understand and implement the guidance provided. It is important that licensees ensure the usability of event classification procedures and the effectiveness of licensed operator training in those procedures.

No specific action or written response is required by this information notice. If you have any questions about this matter, please contact the technical contact listed below or the Regional Administrator of the appropriate regional office.

Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

Technical Contact: Mr. C. Casto
(404) ~~841~~-5594
331

Attachment: List of Recently Issued NRC Information Notices

DOCUMENT NAME: IN FOR BENNETT

*(see previous concurrence)

*EAB:NRR	EAB:NRR	*TECH:EDITOR	RII:DRS	C:EAB:NRR	C:OGCB:NRR
RBenedict:db	RLobel		KPerkins	CJHaughney	CHBerlinger
09/28/89	10/3/89	09/28/89	10/14/89	1/89	1/89

C:LOLB:NRR	C:PEPB:NRR	C:IRB:AEOD	DD:AEOD	D:DOEA:NRR
GKright	R. Erickson	DCollins	CHeltemes	CERossi
1/89	10/4/89	1/89	1/89	1/89

Concurrence by telecon to RA Benedict CAB

Concurrence by telecon from C. Casto to RA Benedict CAB

senior operators were required to demonstrate this competence.

At several sites there has been an apparent lack of emphasis, during operator requalification training, on the bases of and strategies for the implementation of the Emergency Plan. This has led to misclassification of events during operator training, operator license examinations, and emergency exercises, and during actual events. There is an apparent direct correlation between inadequate training and incorrect performance by licensed operators. At sites where licensed senior operators satisfactorily passed the requalification examination the training program included intensive simulator training on event classification as opposed to relying solely on table-top exercises and classroom lectures.

The root causes for classification errors are apparently attributable to non-"user friendly" implementing procedures and ineffective training methods. Implementing procedures are sometimes difficult to interpret and, in some cases, it was apparent that licensed operators had not received sufficient training in event classification to understand and implement the guidance provided. It is important that licensees assure the usability of event classification procedures and the effectiveness of licensed operator training in those procedures.

No specific action or written response is required by this information notice. If you have any questions about this matter, please contact the technical contact listed below or the Regional Administrator of the appropriate regional office.

Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

Technical Contact: Mr. C. Casto
(404) 841-5594

Attachment: List of Recently Issued NRC Information Notices

<i>Raw</i> EAB:NRR RBenedict:db 9/28/89	EAB:NRR RLobel / 189	<i>Ray Sanders</i> TECH:EDITOR <i>RB</i> 9/29/89	<i>K. Perkins</i> RII:DRS RB / 189	C:EAB:NRR CJHaughney / 189	C:OGCB:NRR CHBerlinger / 189
G. Wright C:LOLB:NRR KPerkins / 189	<i>PEPB</i> C:DEPB:NRR WTravers / 189	C:IRB;AEOD DCollins / 189	DD:AEOD CHeltemes / 189	D:DOEA:NRR CERossi / 189	

R Erickson