

EVENT RATING FORM (ERF)

THE INTERNATIONAL NUCLEAR EVENT SCALE (INES)															
EVENT TITLE Potential Common Cause Failure of Auxiliary Feedwater											EVENT DATE 2001.11.29				
RATING		RATING DATE	OUT OF SCALE	DEVIATION	INCIDENT			ACCIDENT				FACILITY TYPE			
PROVISIONAL <input type="checkbox"/>				0	1	2	3	4	5	6	7	Power Reactor <input checked="" type="checkbox"/>		Research Reactor <input type="checkbox"/>	
FINAL <input checked="" type="checkbox"/>		2002.07.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Radwaste Facility <input type="checkbox"/>		Radiation Source <input type="checkbox"/>					
COUNTRY United States of America				FACILITY NAME Point Beach, Nuclear Management Co., United States of America								Irradiation <input type="checkbox"/>		Transportation <input type="checkbox"/>	
LOCATION Two Rivers, Wisconsin												Fuel Fabrication <input type="checkbox"/>		Fuel Reprocessing <input type="checkbox"/>	
												Research Facility <input type="checkbox"/>		Mining/Milling <input type="checkbox"/>	
												Enrichment Facility <input type="checkbox"/>		Other <input type="checkbox"/>	
OFF-SITE IMPACT											YES	NO			
RELEASE BEYOND AUTHORIZED LIMITS											<input type="checkbox"/>	<input checked="" type="checkbox"/>			
OVEREXPOSURE OF MEMBERS OF PUBLIC											<input type="checkbox"/>	<input checked="" type="checkbox"/>			
ON-SITE IMPACT															
CONTAMINATION SPREAD											<input type="checkbox"/>	<input checked="" type="checkbox"/>			
WORKER OVEREXPOSURE											<input type="checkbox"/>	<input checked="" type="checkbox"/>			
DAMAGE TO RADIOLOGICAL BARRIERS											<input type="checkbox"/>	<input checked="" type="checkbox"/>			
DEGRADATION OF DEFENSE IN-DEPTH											<input checked="" type="checkbox"/>	<input type="checkbox"/>			
PERSON INJURED PHYSICALLY OR CASUALTY											<input type="checkbox"/>	<input checked="" type="checkbox"/>			
IS THERE A CONTINUING PROBLEM											<input type="checkbox"/>	<input checked="" type="checkbox"/>			
PRESS RELEASE ISSUED (IF YES, PLEASE ATTACH)											<input type="checkbox"/>	<input checked="" type="checkbox"/>			
EVENT DESCRIPTION															
<p>On November 29, 2001, the licensee identified a potential common mode failure of the auxiliary feedwater (AFW) system upon a loss of instrument air. Specifically, a loss of instrument air would cause the AFW minimum flow recirculation valves to fail closed. At the time, there were no backup air or nitrogen accumulators associated with these specific valves. If the discharge or flow control valves for the AFW pumps had been throttled or closed while the minimum flow recirculation valves were also closed, the AFW pumps would have been placed in a condition of insufficient flow. This could have resulted in pump damage in a short interval of time. The licensee also identified that early in the post reactor trip emergency operating procedures, the operators were directed to control the AFW system flow without specific written guidance to maintain minimum AFW flow. The plant operators were directed to control flow to the steam generators to maintain desired level and to prevent overcooling of the reactor coolant system. The AFW minimum flow recirculation valves are air-operated. Without the short-term recovery of instrument air (within less than 10 minutes), the AFW minimum flow recirculation valves would fail closed potentially damaging the AFW pumps and causing the loss of secondary heat removal capability. There was no indication of recirculation flow</p>															

available to operators in the control room. Heat removal capability through primary system feed and bleed would also be adversely affected since instrument air is required to operate the pressurizer power-operated relief valves and nitrogen backup was not available. A loss of instrument air would cause a loss of normal feedwater and would initiate a dual-unit reactor trip.

In addition, other initiating events, e.g., fire, loss of off-site power, may have a similar vulnerability. The licensee's corrective actions included prompt operator training, procedural changes to the emergency operating procedures, and the addition of back-up pneumatic supplies for the AFW pump minimum flow recirculation valves.

CONTACT PERSON FOR FURTHER INFORMATION

NAME	Jerry Dozier	AFFILIATION	US Nuclear Regulatory Commission		
ADDRESS					
PHONE	(301) 415-1014	FAX	(301) 415-1032	E-MAIL	jxd@nrc.gov