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19 mai 2010

## Etats-Unis : Prairie Island : panne des deux voies de retrait de chaleur résiduelle du coeur du réacteur n°2

**Le problème a été découvert lors du changement de mode d'arrêt du réacteur en le faisant passer du système de refroidissement d'urgence du coeur (ECCS) à celui du système de retrait de chaleur résiduelle du coeur (RHR).**

**Suite à une défaillance du clapet anti-retour sur chaque pompes "RHR", ces dernières n'ont pas répondu. La déclaration est faite suite au non fonctionnement d'éléments nécessaires à évacuer la chaleur du coeur et d'atténuer les conséquences d'un accident.**

**Type : PWR - Puissance : 1 667 MWth - Première divergence : 12 / 1974 -**

***Available in english only***

Event Number : 45937 -

Facility : PRAIRIE ISLAND - State : MN



Unit : [2] - RX Type : [2] W-2-LP -

Event Date : 05/19/2010 - Event Time : 16:40 -

Emergency Class : NON EMERGENCY

10 CFR Section :

50.72(b)(3)(v)(D) - ACCIDENT MITIGATION

Initial PWR : 0 % - Current PWR : 0 %

Event Text

## **BOTH TRAINS OF RESIDUAL HEAT REMOVAL (RHR) INOPERABLE**

"On 5/19/2010 at 1209 CDT, Unit 2 entered Mode 4 from Mode 5 and started realigning RHR from a shutdown cooling to an Emergency Core Cooling System (ECCS) lineup. During this transition, the suction check valves for the RHR pump are tested for safety function closed per the in-service testing program . The valves are closed to provide train separation for the RHR trains and to prevent diversion of flow from suction sources.

"On 5/19/2010 at 1228 CDT, both Unit 2 trains of RHR were declared inoperable due to the failure of the pump suction line check valve for each RHR pump (2RH-3-1 and 2RH-3-2) to meet In-Service Testing (IST) acceptance criteria. Technical Specification 3.5.2 Condition A was entered for inoperability of the one required ECCS train (RHR) in Mode 4 with Reactor Coolant System (RCS) cold leg temperatures above safety injection pump disable temperature.

"On 5/19/2010 at 1640 CDT, both RHR pit sump covers were opened to facilitate multiple entries into each sump while performing a revised test procedure to verify the operability of check valves 2RH-3-1 and 2RH-3-2. The pit sump covers are required to be closed in [Modes 1 through 4] for each operable RHR train. Since both trains of RHR were inoperable both covers were opened.

"On 5/19/2010 at 1947 CDT the pit sump cover was closed for one train of RHR.

"On 5/19/2010 at 2005 CDT the revised test procedure was approved and completed satisfactorily. The train of RHR with the pit sump cover closed was declared operable and Technical Specification 3.5.3 Condition A was exited. Both suction check valves passed the closed safety function and a loss of safety function did not occur as originally thought on 5/19/2010 at 1228 CDT.

"On 5/19/2010 from 1640 CDT to 1947 CDT both trains of RHR were inoperable due to both pit sump covers open on both RHR trains. The inoperability of both trains of RHR represents a condition that prevented the fulfillment of the safety function of structure or systems that are needed to remove residual heat and mitigate the consequences of an accident."

The licensee has notified the NRC Resident Inspector.

<https://www.nrc.gov/reading-rm/doc-collections/event-status/event/2010/20100520en.html>