

LICENSEE EVENT REPORT

CONTROL BLL

(PLEASE PRINT ALL REQUIRED INFORMATION)

LICENSEE NAME F L C R P 3														LICENSE NUMBER 0 0 - 0 0 0 0 0 - 0 0										LICENSE TYPE 4 1 1 1 1					EVENT TYPE 0 3	
01 CONT		CATEGORY - -		REPORT TYPE L		REPORT SOURCE L		DOCKET NUMBER 0 5 0 - 0 3 0 2						EVENT DATE 0 2 0 7 7 7					REPORT DATE 0 3 0 1 7 7											

EVENT DESCRIPTION

02	7	8	9	In Mode 5, while preparing to enter Mode 4, DHR in recirculation, NaOH was introduced																80
03	7	8	9	into the RCS due to cycling BSV-36 with valves DHV-41, DHV-4, and DHV-3 open. Re-																80
04	7	8	9	dundant systems were available. This was not a repetitive occurrence. Surveillance																80
05	7	8	9	Procedures have been revised to prevent introduction of NaOH into the DH System.																80
06	7	8	9	(7-17)																80

SYSTEM CODE C B		CAUSE CODE D		COMPONENT CODE V A L V E X				PRIME COMPONENT SUPPLIER A		COMPONENT MANUFACTURER Z Z Z Z				VIOLATION Y	
--------------------	--	-----------------	--	-------------------------------	--	--	--	-------------------------------	--	-----------------------------------	--	--	--	----------------	--

CAUSE DESCRIPTION

08	7	8	9	Procedural inadequacy in that no precautions were listed in SP-342 to caution																80
09	7	8	9	against cycling BSV-36 with DHR System lined up for RCS recirculation. SP's have																80
10	7	8	9	been revised.																80

FACILITY STATUS B		% POWER 0 0 0			OTHER STATUS N/A				METHOD OF DISCOVERY B		DISCOVERY DESCRIPTION Boron Analysis				
----------------------	--	------------------	--	--	---------------------	--	--	--	--------------------------	--	---	--	--	--	--

FORM OF ACTIVITY RELEASED Z		CONTENT OF RELEASE Z		AMOUNT OF ACTIVITY N/A				LOCATION OF RELEASE				
--------------------------------	--	-------------------------	--	---------------------------	--	--	--	---------------------	--	--	--	--

PERSONNEL EXPOSURES

13	7	8	9	NUMBER 0 0 0		TYPE Z		DESCRIPTION N/A								80
----	---	---	---	-----------------	--	-----------	--	--------------------	--	--	--	--	--	--	--	----

PERSONNEL INJURIES

14	7	8	9	NUMBER 0 0 0		DESCRIPTION N/A								80
----	---	---	---	-----------------	--	--------------------	--	--	--	--	--	--	--	----

OFFSITE CONSEQUENCES

15	7	8	9	N/A												80
----	---	---	---	-----	--	--	--	--	--	--	--	--	--	--	--	----

LOSS OR DAMAGE TO FACILITY

16	7	8	9	TYPE		DESCRIPTION N/A								80
----	---	---	---	------	--	--------------------	--	--	--	--	--	--	--	----

PUBLICITY

17	7	8	9	N/A												80
----	---	---	---	-----	--	--	--	--	--	--	--	--	--	--	--	----

ADDITIONAL FACTORS

18	7	8	9	See Supplementary Information Attached.												80
----	---	---	---	---	--	--	--	--	--	--	--	--	--	--	--	----

8002270604

19	7	8	9													80
----	---	---	---	--	--	--	--	--	--	--	--	--	--	--	--	----

NAME: W. P. Stewart *WPS* PHONE: (813) 866-4159

Supplementary Information

1. Report No.: 50-302/77-17
2. Facility: Crystal River Unit 3
- 3a. Report Date: 1 March 1977
- 3b. Occurrence Date: 7 February 1977

4. Identification of Occurrence:

In Mode 5, while preparing to enter Mode 4, Decay Heat Removal in recirculation, sodium hydroxide was introduced into the Reactor Coolant System due to cycling BSV-36 with valves DHV-41, DHV-4, and DHV-3 open.

5. Conditions Prior to Occurrence:

On 7 February 1977, during routine operations while in Mode 5 (Cold Shutdown), Train "A" of the Decay Heat Removal System was being used to recirculate the Reactor Coolant System and the Reactor Coolant System was being filled from the "C" Bleed Tank.

6. Description of Occurrence:

In preparation to enter Mode 4 (Hot Shutdown), Reactor Coolant System filling and recirculation was discontinued by closing DHV-5, and "A" Decay Heat Pump was left on recirculation, in order to cycle valves BSV-36 and BSV-37 as required by SP-342, Building Spray System Valve Check.

When BSV-36 was cycled, sodium hydroxide was introduced into the Reactor Coolant System from the sodium hydroxide tank via open valves DHV-41, DHV-4, and DHV-3.

Recirculation and filling were resumed and a Boron analysis indicated a concentration of 305 ppmB. Actual Boron concentration (approximately 1500 ppm) was masked by sodium hydroxide.

Filling was immediately terminated and source range instrumentation was closely monitored with no increase in count rate.

After a second Boron analysis, it was realized that sodium hydroxide had been introduced into the Reactor Coolant System.

7. Designation of Apparent Cause of Occurrence:

The cause of this occurrence was procedural inadequacy in that no precautions in the Surveillance Procedure noted that BSV-36 should not be cycled with the Decay Heat Removal System in Reactor Coolant System recirculation mode.

8. Analysis:

Initial concern that a Boron dilution had occurred was found to be unjustified. The alkaline sodium hydroxide masked the Boric Acid in the titration analysis. Boron concentration remained at approximately 1500 ppm. There are no specifications for sodium hydroxide content in the Reactor Coolant System below 250° F. The system temperature was approximately ambient. The chloride and fluoride content of the water in the sodium hydroxide tank were sufficiently high to cause a violation of Technical Specification 3.4.7. Engineering evaluation indicates that, because of the low system temperature and the pH remaining above 7, chloride contamination in the range of 1.0 ppm which was experienced is not of significant concern. The level was returned to less than .05 ppm using the makeup and purification demineralizers. Redundant systems (both Decay Heat and Boron addition) were available and operable. No hazard was presented to the Plant or public as a result of this occurrence.

9. Corrective Action:

Cleanup was initiated via the cation demineralizer system. Procedures have been revised to preclude recurrence. Final sodium content after cleanup was less than .1 ppm.

10. Failure Data:

No previous failures of this type have occurred.