NRC FORM 366 (7-77) U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

Field	Value
01 Licensee Code (2)	MIDCC1
License Number (3)	00-00000-00
License Type (4)	41111
CAT (5)	
CON'T 01 Report Source (6)	L
Docket Number (7)	05000315
Event Date (8)	092382
Report Date (9)	100782

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 DURING A REVIEW OF THE UNIT ONE ECCS ANALYSIS BY AEPSC PERSONNEL, AN INCONSISTENCY
03 WAS NOTED IN THAT THE ANALYSIS USED A VALUE OF 70°F FOR THE SAFETY INJECTION FLOW
04 WATER TEMPERATURE, BUT A VALUE OF 80°F WAS USED IN THE ANALYSIS FOR THE CONTAINMENT
05 SPRAY WATER TEMPERATURE. THIS IS CONTRARY TO TECHNICAL SPECIFICATION 3.5.5C AND THE
06 ASSOCIATED BASES WHICH SPECIFY A MINIMUM RWST TEMPERATURE OF 70°F. UPON IDENTIFICATION,
07 THE EXXON NUCLEAR COMPANY, WHO PERFORMED THE ECCS ANALYSIS, WAS NOTIFIED OF THE
08 PROBLEM AND CONCURRED THAT THERE WAS AN ERROR.

09	System Code (11)	Cause Code (12)	Cause Subcode (13)	Component Code (14)	Comp. Subcode (15)	Valve Subcode (16)
	RA	B	A	ZZZZZZ	Z	Z

(17) LER/RO Report Number	Event Year		Sequential Report No.		Occurrence Code	Report Type		Revision No.
	82	—	080	/	01	T	—	0

Action Taken (18)	Future Action (19)	Effect on Plant (20)	Shutdown Method (21)	Hours (22)	Attachment Submitted (23)	NPRD-4 Form Sub. (24)	Prime Comp. Supplier (25)	Component Manufacturer (26)
G	F	Z	Z	0000	Y	N	Z	ZZZZ

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 ADMINISTRATIVE CONTROLS HAVE BEEN ESTABLISHED TO MAINTAIN THE RWST TEMPERATURE ABOVE
11 80°F AND WILL SUPERSEDE THE PRESENT TECHNICAL SPECIFICATION VALUE OF 70°F UNTIL A
12 FORMAL AMENDMENT CAN BE APPROVED AND ISSUED. ANY VIOLATIONS OF THE ADMINISTRATIVE
13 LIMIT WILL BE REPORTED TO THE NRC AND REQUIREMENTS OF THE ACTION STATEMENT WILL BE
14 FOLLOWED. REFER TO THE ATTACHED SUPPLEMENT.

15	Facility Status (28)	% Power (29)	Other Status (30)	Method of Discovery (31)	Discovery Description (32)
	C	000	N/A	A	AEPSC REVIEW

16	Activity Released (33)	Content of Release (34)	Amount of Activity (35)	Location of Release (36)
	Z	Z	N/A	N/A

PERSONNEL EXPOSURES

17	Number (37)	Type (38)	Description (39)
	000	Z	N/A

PERSONNEL INJURIES

18	Number (40)	Description (41)
	000	N/A

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PDR ADOCK 05000315
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LOSS OF OR DAMAGE TO FACILITY (43)

19	Type (42)	Description
	Z	N/A

PUBLICITY

20	Issued (44)	Description (45)
	N	N/A

NRC USE ONLY

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AN INCONSISTENCY IN THE UNIT 1 ECCS LOCA ANALYSIS WAS NOTED BY AEPSC NUCLEAR ENGINEERING DIVISION PERSONNEL ON SEPTEMBER 22, 1982. WHILE REVIEWING THE WESTINGHOUSE LOCA PARAMETERS THAT ARE TO BE USED IN UNIT 1, CYCLE 3 LOCA ANALYSIS, IT WAS FOUND OUT THAT THE INITIAL CONTAINMENT SPRAY WATER TEMPERATURE TO BE USED WAS 80°F. THIS WAS CONSISTENT WITH THE TEMPERATURE REPORTED IN THE ORIGINAL FSAR APPENDIX P BUT WAS DIFFERENT FROM THE VALUE GIVEN IN THE UNIT 1 TECHNICAL SPECIFICATIONS.

THE UNIT 1 TECHNICAL SPECIFICATION 3.5.5 WAS CHANGED TO REFLECT THE ECCS REANALYSIS PERFORMED BY EXXON NUCLEAR COMPANY (ENC) AND WAS BASED ON ENC LETTER SEJ-79-4 DATED JANUARY 26, 1979. FURTHER REVIEW OF ENC'S ECCS REANALYSIS SHOWED THAT THE TEMPERATURE OF THE S.I. WATER WAS INDEED 70°F BUT THE INPUT TO THE ICECON MODEL, WHICH CALCULATES THE CONTAINMENT BACK PRESSURE WAS NOT CHANGED TO REFLECT THE 10°F DROP IN THE RWST WATER TEMPERATURE. THIS TEMPERATURE VALUE OF THE RWST WATER DETERMINES THAT OF THE SPRAY WATER INITIALLY DELIVERED TO THE CONTAINMENT FOLLOWING LOCA. IT IS ONE OF THE FACTORS WHICH DETERMINES THE CONTAINMENT BACK-PRESSURE IN THE ECCS ANALYSES. TABLE A1.1 IN ENC REPORT XN-NF-CC-39A, REVISION 1 LISTS THE INITIAL SPRAY WATER TEMPERATURE AS 80°F. ENC CONFIRMED THIS VIA LETTER DATED SEPTEMBER 24, 1982 AND ALSO CONFIRMED THAT THE INCONSISTENCY OF USING 70°F FOR S.I. WATER TEMPERATURE AND 80°F FOR INITIAL CONTAINMENT SPRAY WATER TEMPERATURE WAS NONCONSERVATIVE WITH REGARD TO LOCA ECCS

ANALYSIS. THE ENC LETTER ALSO NOTED THAT, RAISING THE S.I. TEMPERATURE TO 80°F WOULD BE CONSERVATIVE WITH RESPECT TO ECCS ANALYSIS. INCREASING THE S.I. WATER TEMPERATURE HAS THE FOLLOWING EFFECTS:

1) INCREASED TEMPERATURE OF THE S.I. WATER FLOWING OUT OF THE BREAK (COLD LEG) WILL CONDENSE LESS STEAM IN THE CONTAINMENT AND THEREFORE INCREASE THE BACK PRESSURE.

2) INCREASED TEMPERATURE OF THE S.I. WATER WILL CONDENSE LESS STEAM IN THE INTACT LOOP (HOT LEG) AND THEREFORE WILL INCREASE THE STEAM PRESSURE IN THE UPPER PLENUM.

3) INCREASED S.I. WATER TMPERATURE WILL EXTRACT LESS HEAT FROM THE FUEL.

THE COMBINED EFFECT OF THE FIRST TWO IS MORE IMPORTANT THAN THE THIRD IN THE TIME PERIOD OF INTEREST. THEREFORE, INCREASING THE S.I. WATER TEMPERATURE FROM THE ANALYZED VALUE OF 70°F TO 80°F WOULD BE CONSERVATIVE.

THE RWST TEMPERATURE WOULD BE KEPT AT A MINIMUM OF 80°F WITH HEAT TRACING AND/OR INSTALLING RWST HEATERS.

PREVENTIVE ACTION

AEPSC HAS INFORMED ENC OF THIS PROBLEM. AEPSC WILL FURTHER REQUEST ENC TO RESPOND TO OUR CONCERN AND TELL US WHAT ACTIONS THEY PLAN TO IMPLEMENT SO THAT THIS WILL NOT OCCUR AGAIN.