

LICENSEE EVENT REPORT

50-285/76-23

CONTROL BLOCK:

1	2	3	4	5	6
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(PLEASE PRINT ALL REQUIRED INFORMATION)

LICENSEE NAME

LICENSE NUMBER

LICENSE TYPE

EVENT TYPE

01	N	E	F	C	S	1	0	0	-	0	0	0	0	0	-	C	0	4	1	1	1	1	0	1
7	8	9	14	15	25	26	30	31	32															

CATEGORY

REPORT TYPE

REPORT SOURCE

DOCKET NUMBER

EVENT DATE

REPORT DATE

01	CON'T		T	L	0	5	0	-	0	2	8	5	0	7	2	6	7	6	0	8	0	4	7	6
7	8	57	58	59	60	61	68	69	74	75	80													

EVENT DESCRIPTION

02	As a result of an unplanned increase in SIRWT (Safety Injection Refueling Water																							80
03	Storage Tank) level during steady state power operation, the SIRWT boron concentration																							80
04	was reduced to 1825 ppm which is below the Technical Specification limit of 1900 ppm -																							80
05	a limiting condition for operation (LCO). Although the LCO was violated, plant safety																							80
06	was not jeopardized in that a SIRWT boron concentration (con't in Additional Factors)																							80

SYSTEM CODE

CAUSE CODE

COMPONENT CODE

PRIME COMPONENT SUPPLIER

COMPONENT MANUFACTURER

VIOLATION

07	S	F	E	V	A	L	V	E	X	A	C	6	6	5	Y
7	8	9	10	11	12	17	43	44	47	48					

CAUSE DESCRIPTION

08	Valve CH-152 leak-by caused the SIRWT dilution incident. Tightening down on valve																							80
09	CH-152 stopped the leak-by. Weekly SIRWT samples for boron concentration will be																							80
10	conducted until such time as valve CH-152 is removed, inspected and repaired if req'd.																							80

FACILITY STATUS

% POWER

OTHER STATUS

METHOD OF DISCOVERY

DISCOVERY DESCRIPTION

11	E	0	9	8	NA	A	Sample analysis requested by Ops.Supv.																	80
7	8	9	10	12	13	44	45	46																

FORM OF ACTIVITY RELEASED

CONTENT OF RELEASE

AMOUNT OF ACTIVITY

LOCATION OF RELEASE

12	Z	Z	NA	NA																				80
7	8	9	10	11	44	45																		

PERSONNEL EXPOSURES

NUMBER

TYPE

DESCRIPTION

13	0	0	0	Z	NA																			80
7	8	9	11	12	13																			

PERSONNEL INJURIES

NUMBER

DESCRIPTION

14	0	0	0	NA																				80
7	8	9	11	12																				

OFFSITE CONSEQUENCES

15	NA																								80
7	8	9																							

LOSS OR DAMAGE TO FACILITY

TYPE DESCRIPTION

16	Z	NA																						80
7	8	9	10																					

PUBLICITY

17	NA																								80
7	8	9																							

84-3230205 760804
PDR ADOCK 05000285
S PDR

ADDITIONAL FACTORS

18	Event Description (con't): of only 1477 ppm would have provided adequate shutdown																							80
19	margin in the event of an accident. A power reduction was commenced and continued																							80
20	until the SIRWT boron concentration was brought above 1900 ppm by direct addition of																							80
21	boric acid. (LER 50-285/76-23)																							80

NAME: W. Dermeyer/R. Andrews

PHONE: 402-426-4011

ATTACHMENT NO. 1

Safety Analysis/Analysis of Occurrence

During the early morning hours of July 26, 1976, operations personnel noticed a slow increase in level in the Safety Injection Refueling Water Tank (SIRWT). The Operations Supervisor was notified of the situation and directed that the excess water be pumped to the Spent Fuel Pool (to prevent overflow of the SIRWT) and that the SIRWT be placed on recirculation in preparation for sampling. Also, an investigation was commenced to ascertain the cause for the unplanned increase in SIRWT level. At 1430 hours on July 26, 1976, the SIRWT boron concentration was determined to be 1825 ppm which is less than the Technical Specification limit of 1900 ppm specified in Limiting Condition for Operation (LCO) Section 2.3(1)(a). Although the LCO was violated, plant safety was not jeopardized in that a SIRWT boron concentration of only 1477 ppm would have provided a 5% shutdown margin under accident conditions even if -

all CEA's were fully withdrawn from the core, and
the reactor coolant system was in a cold condition, and
NO xenon or samarium poison were in the core.

Since a LCO was violated and the Technical Specification specified no remedial course of action, reactor shutdown was commenced in accordance with 10CFR50.36(c)(2). Concurrent with power reduction, direct addition of boric acid to the SIRWT was initiated and also an effort was initiated to obtain a temporary change to the Technical Specifications.

NOTE: It was intended to place the reactor in a hot shutdown condition within 12 hours (this number is the most conservative number in the Emergency Core Cooling Section of the Technical Specifications) unless the SIRWT boron concentration could be returned to within specification or unless license relief could be received in the form of a temporary change to the specification.

Valve CH-152 leak-by was determined to be the cause of the unplanned level increase in the SIRWT. This leak-by was confirmed by the fact that the valve was hot to the touch and that the valve was determined to be a radioactive "hot spot". Tightening down on the valve stopped the leak-by.

The power reduction was terminated at 1950 hours on July 26, 1976, after confirming boron samples (taken at either end of the SIRWT) indicated a boron concentration in excess of 1900 ppm.

ATTACHMENT NO. 2

Corrective Action

Maintenance Order No. 11503 was initiated to remove, inspect, and repair as required valve CH-152. Until this maintenance is completed, the SIRWT will be sampled for boron concentration on a weekly basis (Technical Specifications require a monthly surveillance sample) or immediately sampled if an unplanned increase in SIRWT level is indicated.

ATTACHMENT NO. 3

Failure Data

This is the first incident involving an unplanned or inadvertent dilution of the emergency core cooling system.



Omaha Public Power District

1623 HARNEY ■ OMAHA, NEBRASKA 68102 ■ TELEPHONE 536-4000 AREA CODE 402

August 4, 1976
FC-236-76

Mr. E. Morris Howard
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive
Suite 1000
Arlington, TX 76012

Dear Mr. Howard:

Reference: Fort Calhoun Station Unit No. 1
Docket No. 50-285

In accordance with the Fort Calhoun Station's Technical Specifications, the Omaha Public Power District, as holder of facility operating license DPR-40, submits three copies of the following licensee event report 50-285/76-23 to satisfy the requirements of Regulatory Guide 1.16.

Sincerely,

W. C. Jones
Section Manager
Operations

WCJ/WDD:rge

Enclosure

cc: Director, Office of Management
Information and Program Control
U. S. Nuclear Regulatory Commission
Washington, DC 20555 (3)

Director, Office of Inspection and
Enforcement
U. S. Nuclear Regulatory Commission
Washington, DC 20555 (30)

Mr. L. C. Shalla
SARC Chairman
PRC Chairman
Fort Calhoun File (2)

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