

Event Description (continued)

(50-219/77-22-1T)

determine the reason for the misadjustment. (No. 50-219/77-22-1T).

Cause Description (continued)

converter. APRM System I flow converter was replaced with a calibrated spare, and System II flow converter was replaced with the recalibrated System I flow converter.

LICENSEE NAME H J O C P 1														LICENSE NUMBER 0 0 - 0 0 0 0 0 - 0 0														LICENSE TYPE 4 1 1 1 1					EVENT TYPE 0 1	
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32									

CATEGORY CONT		REPORT TYPE T	REPORT SOURCE L	DOCKET NUMBER 0 5 0 - 0 2 1 9					EVENT DATE 0 9 0 1 7 7					REPORT DATE 0 9 1 4 7											
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

EVENT DESCRIPTION (77-22/17)

02 During steady state operation, the recirculation flow signals that are input to the flow biased trip units for both APRM systems were approximately 1.7% higher than actual recirculation flow. For all possible conditions of flow, the scram setting was within required Technical Specification limits. APRM System I flow converters were replaced which corrected the problem. Further investigation will be performed, to

(SEE-ATTACHED PAGE)

SYSTEM CODE I A		CAUSE CODE F		COMPONENT CODE X X X X X X X					PRM COMPONENT SUPPLIER N	COMPONENT MANUFACTURER G 0 8 0			VIOATION Y												
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

CAUSE DESCRIPTION

03 Two General Electric Company No. 135B8309G1 flow converters failed to send correct signals to the flow biased trip units for both APRM systems because of a zero shift in the System I flow converter and a high gain adjustment on the System II flow converter.

(SEE-ATTACHED PAGE)

FACILITY STATUS E	% POWER 0 9 1	OTHER STATUS NA	METHOD OF DISCOVERY A	DISCOVERY DESCRIPTION NA																					
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

FORM OF ACTIVITY RELEASED Z	CONTENT OF RELEASE Z	AMOUNT OF ACTIVITY NA	LOCATION OF RELEASE NA																						
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

PERSONNEL EXPOSURES

NUMBER 0 0 0	TYPE Z	DESCRIPTION NA																							
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

PERSONNEL INJURIES

NUMBER 0 0 0	DESCRIPTION NA																								
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Probable Consequences

DESCRIPTION NA																									
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

LOSS OR DAMAGE TO FACILITY

TYPE Z	DESCRIPTION NA																								
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

PUBLICITY

DESCRIPTION NA																									
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

ADDITIONAL FACTORS

DESCRIPTION NA																									
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

DESCRIPTION NA																									
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

18877

OYSTER CREEK NUCLEAR GENERATING STATION
Forked River, New Jersey 08731

Licensee Event Report
Reportable Occurrence No. 50-219/77-22-1T

Report Date

September 15, 1977

Occurrence Date

September 1, 1977

Identification of Occurrence

Violation of the Technical Specifications, paragraph 2.3.2, when it was discovered that the recirculation flow signals that are input to the flow biased trip units for both APRM systems were approximately 1.7% higher than actual recirculation flow. This event is considered to be a reportable occurrence as defined in the Technical Specifications, paragraph 6.9.2.A.2.

Conditions Prior to Occurrence

The major plant parameters at the time of the event were as follows:

Power:	Core 1749 MWt (90.6% power)
	Electric 585 MWe
Flow:	Feedwater 6.51×10^6 lbm/hr
	Recirculation 13.0×10^4 gpm
Stack Gas:	2.00×10^4 μ Ci/sec

Description of Occurrence

On September 1, 1977, at approximately 0800 hours, it was observed that an anomalous condition existed with respect to recirculation flow, reactor thermal power, and the rod block setting. Specifically, based upon an indicated recirculation flow of 13.03×10^4 gpm (81.43% of rated) and a core thermal power of 1749 MWt (90.6% of rated), all APRM channels should have been at least 2% into the rod block. At this time, it was observed that only three APRM's were in the rod block. To further investigate this condition, the percent flow signals that are input to each of the APRM's were read with the results presented in Table One. The percent output from the flow converter for System I was measured to be 83.125% which correspond to the observed rod block condition. At this time, it was thought that the control room recirculation flow indicator was reading low since both APRM systems were in close agreement. It should be noted that the flow signal input to the APRM's comes from two separate flow converters, i.e., one per system. The electronics for the converters are completely separate.

A subsequent investigation completed at 1530 hours indicated that the total recirculation flow signal that is input to the flow converters agreed with the control room recirculation flow indication and the output from the flow converters was incorrect. The flow converter for System I was replaced with a calibrated spare which corrected the disagreement. The System I converter was recalibrated and used to replace the System II flow converter.

TABLE ONE

<u>APRM Channel</u>	<u>Percent of Rated Recirculation Flow</u>
1	84
2	83.5
3	85
4	83.5
5	84.5
6	84
7	82.5
8	83.0

Apparent Cause of Occurrence

The cause of the occurrence was due to a zero shift in the System I flow converter and a high gain adjustment on the System II flow converter. The reason for these misadjustments is under investigation.

Analysis of Occurrence

Because of the characteristics of the circuitry used to develop the ramp functions for the rod block and scram lines and additional conservatism employed in setting the instrument trip points, the limiting safety system settings in the technical specification for rod block and scram would not have been exceeded for recirculation flows up to 13.7×10^4 gpm. However, had recirculation flow been increased to approximately 98.3% of rated, the rod block setting would have been nonconservative by approximately 1.4% for System I and 1.6% for System II. It should be noted that for all conditions of flow the scram setting was within required technical specification limits.

Corrective Action

Action Item No. 96-77-1 was issued to the Operations Engineer to perform a daily cross check of the recirculation flows output from the System I and System II flow converters for a period of 30 days. At the end of that period, the Operations Engineer shall report the results of this study to the PORC.

Action Item No. 96-77-2 was also issued to the Maintenance Engineer to have the calibration of the "transfer standard" used in calibrating the flow converters checked. The results will be presented to the PORC.

Failure Data

General Electric Flow Converter -- No. 135B8308G1