

LICENSEE EVENT REPORT

U. S. NUCLEAR REGULATORY COMMISSION
Update Report
Previous Report Date 8-25-80

CONTROL BLOCK: 1 2 3 4 5 6 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 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | G | A | E | I | H | 2 | 2 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 3 | 4 | 1 | 1 | 1 | 1 | 1 | 4 | 5

CON'T
0 1 | L | 6 | 0 | 5 | 0 | 0 | 0 | 3 | 6 | 6 | 7 | 0 | 7 | 2 | 6 | 8 | 0 | 8 | 0 | 3 | 1 | 0 | 8 | 3 | 9

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)
0 2 | With the reactor in shutdown mode following performance of a manual
0 3 | scram on 7-26-80, per IEB 80-17, scram discharge volume hi level switch-
0 4 | es "A" & "D" were found to be inoperable. Redundant switches "B" & "C"
0 5 | were operable. The health & safety of the public were not affected by
0 6 | this non-repetitive event.

0 7 |
0 8 |

0 9 | I | A | 11 | E | 12 | B | 13 | I | N | S | T | R | U | 14 | S | 15 | Z | 16

17 | LER/RO REPORT NUMBER | 8 | 0 | 21 | 22 | 1 | 1 | 3 | 24 | 25 | 0 | 3 | 28 | 29 | X | 30 | 1 | 32

ACTION TAKEN | FUTURE ACTION | EFFECT ON PLANT | SHUTDOWN METHOD | HOURS | ATTACHMENT SUBMITTED | NRPD-4 FORM SUB. | PRIME COMP. SUPPLIER | COMPONENT MANUFACTURER

A | 18 | Z | 19 | C | 20 | Z | 21 | 0 | 0 | 1 | 8 | Y | 23 | N | 24 | N | 25 | M | 0 | 4 | 0 | 26

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)
1 0 | Magnetrol model 751 switches "A" & "D" were opened for inspection. The
1 1 | floats were found to be crushed on both switches. New Magnetrol model
1 2 | 751 switches were installed, & all 4 level switches satisfactorily func-
1 3 | tionally tested. The cause of failure was a high differential pressure
1 4 | across the level switches experienced during scram reset.

1 5 | X | 28 | 0 | 0 | 0 | 29 | NA | 30 | C | 31 | Inspection | 32

1 6 | Z | 33 | Z | 34 | NA | 35 | NA | 36

1 7 | 0 | 0 | 0 | 37 | Z | 38 | NA | 39

1 8 | 0 | 0 | 0 | 40 | NA | 41

1 9 | Z | 42 | NA | 43

2 0 | N | 44 | NA | 45

8303210527 830310
PDR ADOCK 05000366
S PDR

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NRC USE ONLY

LER #: 50-366/1980-113, Rev. 1
Licensee: Georgia Power Company
Facility Name: Edwin I. Hatch
Docket #: 50-366

Narrative Report
for LER 50-366/1980-113, Rev. 1
Update Report - Previous Report Date 8-25-80

On 7-26-80, at 0710 CDT, Hatch Unit 2 performed a manual scram per IEB 80-17. Following the scram it was noted that 2 of the 4 scram discharge volume (SDV) level switches "A" and "D" failed to function properly. Subsequent investigation of the switches showed that the floats were crushed. The 2 switches are both Magnetrol model 751.

Further investigation followed and showed that the switches could last be verified to properly trip and reset during a scram on 5-15-80, (based on Process Computer alarm edits) and were found to not trip during scrams on 6-2, 6-14, and 7-11-80. The most probable time of failure was hypothesized to be the scram that occurred on 5-21-80; however, the process computer was not functional for approximately 21 minutes immediately following that scram, and therefore, complete alarm edits were not available. The "A" switch had last been satisfactorily functionally tested on 4-9-80, and the "D" switch had last been satisfactorily functionally tested on 5-11-80. Subsequent monthly testing had been performed on the switches but did not include functional testing by water injection to the float bowl to verify float actuation.

An investigation of the switch failures was initiated on 7-28-80, and included representatives of GPC, GE, Bechtel, and Magnetrol. Replacement level switches (Magnetrol model 751) were procured and installed, and the remaining Unit 2 level switches, "B", "C", "E", and "F" were radiographed and satisfactorily functionally tested by float chamber water injection to verify proper operation and integrity of the switch float. In addition, all Unit 1 SDV level switches were radiographed and satisfactorily functionally tested by float chamber water injection. All Unit 1 switches and the remaining Unit 2 switches were found to be functioning properly, and no indications of float damage were seen.

Following replacement of the failed switches and testing of the remaining switches, Unit 2 started up on 7-31-80, and performed an automatic scram per IEB 80-17. All SDV level switches performed properly during the test, and pressure transmitters were hooked up on both sides of the 4 scram level switches to observe and record any pressure transient occurring either during the scram or reset.

The cause of failure of the two SDV level switches was a high differential pressure across the switch occurring when the scram is reset, and the SDV is depressurized and drained. Following a scram, the SDV will fill and pressurize to approximately reactor pressure within a short time (1 to 2 minutes). When the scram is reset, the SDV vent and drain valves open and the SDV rapidly depressurizes. The scram level switches are connected to the vent line, and therefore, during a scram reset, the switch will experience a very high differential pressure as the SDV depressurizes.

Currently the site functionally tests the level switches after every scram to prove operability. Modifications have been made to reroute the vent lines from the SDV level switches with individual lines to connect directly to the scram discharge volume instead of the SDV vent valve. This will prevent the high differential pressure experienced by the SDV level switches. Since these modifications have been implemented, no problems with SDV level switch floats have been observed.