

Telephone  
Date: \_\_\_\_\_

Date of Occurrence: May 2, 1979

Written  
Date: \_\_\_\_\_

Time of Occurrence: 1351 hours

OYSTER CREEK NUCLEAR GENERATING STATION  
FORKED RIVER, NEW JERSEY 08731

Reportable Occurrence  
Report No. 50-219/79/14-1P

DESCRIPTION  
OF OCCURRENCE:

Closure of all recirculation loop discharge isolation valves with all suction and discharge valve bypass valves open, which caused actuation of reactor triple low level sensors.

This event is considered to be a reportable occurrence as defined in the Technical Specifications, paragraph 6.9.2, a, 6.

OPERATIONS PRIOR  
TO OCCURRENCE:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Steady State Power | <input type="checkbox"/> Routine Shutdown        |
| <input type="checkbox"/> Hot Standby                   | <input type="checkbox"/> Operation               |
| <input type="checkbox"/> Cold Shutdown                 | <input type="checkbox"/> Load Changes During     |
| <input type="checkbox"/> Refueling Shutdown            | <input type="checkbox"/> Routine Power Operation |
| <input type="checkbox"/> Routine Startup               | <input type="checkbox"/> Other (Specify)         |
| <input type="checkbox"/> Operation                     | _____  |

Power: 1895.6 Mwt  
657 MWe

Flow: Recirc. 14.8 x 10<sup>6</sup> gpm  
Feed. 7.07 x 10<sup>6</sup> lb/hr.

Stack Gas Activity: 4.07 x 10<sup>4</sup>  $\mu$ Ci/sec.

Bank 6 (startup transformer to 1B bus) out of service

DETAILS  
OF OCCURRENCE:

On Wednesday, May 2, 1979, during the performance of the isolation condenser automatic actuation surveillance test, a false inadvertent reactor high pressure scram occurred. The pressure spike initiating the scram was sensed on reactor pressure switches RE03A and RE03B after completion of surveillance testing on reactor pressure switches RE15A and B. During the verification of the excess flow check valve associated with these instruments being open, the pressure spike is suspected to have occurred. Concurrently, a recirculation pump trip occurred due to the pump trip logic associated with reactor high pressure. Subsequently, a turbine trip occurred on low load and a loss of power to "B" and "D" 4160V buses associated with Bank 6 (S1B breaker) being out of service for preventative maintenance resulted. Diesel Generator #2 energized "D" 4160 bus in the fast start mode.

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Because of the loss of power to 4160 Bus "B" (feedwater pumps B and C) and the failure of feedwater pump "A" to start on the "A" 4100V Bus, a continual water level decrease occurred as measured on the Yarway indication in the Control Room, resulting in a reactor low water level condition. A closure of the mainsteam line isolation valves was initiated by the operator prior to reaching reactor low water level, to prevent further loss in reactor water inventory with a subsequent manual initiation of the isolation condensers, to provide reactor cooldown and pressure control. Further, the recirculation loop discharge isolation valves associated with the isolation condensers were closed and, possibly at a later time, the discharge isolation valves of all recirculation loops were closed with their corresponding 2" bypass valves open.

The reactor low water level condition reset after initiation of the isolation condenser, but after approximately 1.5 minutes, the reactor triple low water level alarm was received. After a period of time, "C" recirculation pump was started, then was tripped because of dropping of the Yarway and GEMAC level indication. Shortly, "A" feed pump was placed in service to recover reactor water level and "A" recirculation pump was placed into service. A cooldown continued with the reactor isolated, utilizing the isolation condensers and shutdown cooling until a cold shutdown condition was achieved at 2228 that evening.

CAUSE  
REFERENCE:

- |  |  |
|--|--|
| <input type="checkbox"/> Design                        | <input checked="" type="checkbox"/> Procedure      |
| <input type="checkbox"/> Manufacture                   | <input type="checkbox"/> Unusual Service Condition |
| <input type="checkbox"/> Installation/<br>Construction | <input type="checkbox"/> Inc. Environmental        |
| <input checked="" type="checkbox"/> Operator           | <input type="checkbox"/> Component Failure         |
|  | <input type="checkbox"/> Other (Specify)           |

Suspected cause of the occurrence can be attributed to possible operator error in the closing of all discharge valves and lack of procedural direction with the reactor in this condition. Further investigation is taking place to identify in more detail causes of this occurrence.

OF  
CE:

Analysis of this occurrence is underway and will be submitted with the written follow up report. Reactor coolant analyses were performed after the event to reveal no abnormal increases in activity.

E

Corrective action taken to resolve the discrepancy between Yarway and GEMAC level indication and the triple low level indication was to start a recirculation pump and feedwater pump to increase recirculation flow and reactor water level respectively.

E.S. GISS  
 Derrell  
 Event  
 Rush  
 301-492-7371

Initial Conditions

Reactor power 1910 Mw  
 Reactor water level 75" yawway  
 Reactor pressure 1020 psig  
 Recirc flow 14.8 x 10<sup>4</sup> gpc  
 Core ΔP 12 psid

Equipment Out of Service

1. "D" recirc pump removed, discharge valve closed, suction and bypass open.
2. Bank 6 (S1B) out of service tagged.

Work in Progress

1. Isolation condenser reactor high pressure initiation surveillance 609.3.003.
2. Bank 6 4160V cable inspection.

Control Room Personnel

1. Callahan (BSS) in office
2. Ard in Control Room
3. Ciganik in Control Room
4. Howey (EOS) at condensate desin. area
5. Hascek (Instrument Tech.) in Control Room

Event Recorder T<sub>0</sub> = 1:51 p.m.

- T = 0 Reactor high pressure scram (false signal) from surveillance test)
- T = 0 Recirc pump trip from reactor high pressure (RPT)
- T = -10 Turbine trip/gen. lock out (25% low load trip)
- T = -10 Loss of B&D 4160V. bus, 2 condensate and 2 feedwater pumps tripped, cleanup pump trip (followed by cleanup system isolation), "A" feedwater pump tripped, condensate transfer pump trip, fuel pool pump trip (generator lock out with Bank 6 out of service)
- T = -13.6 Reactor low water level (loss of feedwater)
- T = -16.8 Reactor prot. system II HS set output breaker tripped (loss of "D" bus)
- T = -25 DG2 on line, energized "D" bus (fast start)
- T = -42.8 Operator closed MSIV's (operator action)
- T = 44.8 MSIV closure scram
- T = -49.8 MSIV's full closed
- T = 55.6 MSIV closure scram reset (<600 psf)
- T = -72 Initiated "A" isolation condenser (operator action)
- T = -85-205 "A" & "E" (and possibly all) recirc discharge valves closed (operator action)
- T = 93 Reactor low level reset (isolation condenser - swell)
- T = 173 Low-low-low water level
- T = 1932 Start "C" recirc pump, noticed rapid water decrease (operator action)
- T = 2022 Trip "C" recirc pump (operator action)
- T = 2190 sec. Start "A" feed pump (operator action)
- T = 2340 sec. Start "A" recirc pump (operator action)

reactor scram occurred at 1:50 p.m. on May 2, 1979. The Instrument Technician  
in the process of valving in a pressure gage to verify that Excess Flow Check  
(EFCV) V-130-1 had not shut during the just completed surveillance test of  
or high pressure switches RE-15A and RE-15B.

The trace on event recorder (RE-01) indicated that of the four (4) reactor high  
pressure scram switches, only two (2), RE-03A (System I) and RE-03B (System II),  
tripped momentarily (but simultaneously) to cause scram. RE-03A and RE-03B share a  
common sensing line with RE-15A and RE-15B as well as the pressure gage that was  
being valved in.

Discussion with Instrument Technician revealed the following sequence of events:  
Calibration and testing of RE-15A and B at RK01 had just been completed and  
proceeded to reactor building 51' elevation to verify EFCV was open by indication  
of pressure on gage near IA-83B (ERV B pressure switch).  
Pressure gage isolation valve was cracked open and gage pointer jumped upward  
rapidly from zero psig. Isolation valve was then shut in response to the rapid  
movement of point.

After pausing, the gage isolation valve was slowly cracked open once again to  
establish equilibrium indication. It was at this point that the Technician  
heard the CRD hydraulic control units initiate scram.

The cause of scram can thus be attributed to the hydraulic disturbance of common  
sensing line when cycling of gage isolation valve occurred, resulting in a reflected  
pressure spike, the magnitude of which, although small, was sufficient to trip RE-03A  
and B.