



To: James P. O'Reilly
Directorate of Regulatory Operations
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

From: Jersey Central Power & Light Company
Oyster Creek Nuclear Generating Station Docket #50-219
Forked River, New Jersey 08731

Subject: Abnormal Occurrence Report No. 50-219/74/ 19

The following is a preliminary report being submitted
in compliance with the Technical Specifications
paragraph 6.6.2.

Preliminary Approval:

J. T. Carroll 3/11/74
J. T. Carroll, Jr. Date

cc: Mr. A. Giambusso

2172

Initial Telephone

Report Date: 3/11/74

Date of

Occurrence: 3/9/74

Initial Written

Report Date: 3/11/74

Time of

Occurrence: 0530

OYSTER CREEK NUCLEAR GENERATING STATION
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
Report No. 50-219/74/19

IDENTIFICATION
OF OCCURRENCE:

Violation of the Technical Specifications, paragraph 3.5.A.1,
failure to maintain primary containment integrity with reactor
water temperature above 212°F and fuel in the reactor vessel.

This event is considered to be an abnormal occurrence as de-
fined in the Technical Specifications, paragraph 1.15B.

CONDITIONS PRIOR
TO OCCURRENCE:

<input 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	

The plant was shutdown with reactor coolant <212°F.

DESCRIPTION
OF OCCURRENCE:

At 1000 on March 8, 1974, an orderly shutdown of the plant
commenced to perform maintenance on six of the fourteen torus
to drywell vacuum breaker valves. Although thirteen of the
valves were considered to be operable at this time, the plant
was shutdown in order to effect more permanent repairs on the
valves (see Abnormal Occurrence Report No. 74-16, dated

March 8, 1974). In accordance with the requirements of paragraph 3.5.A.1 of the Technical Specifications, maintenance on these valves did not begin until reactor coolant temperature was below 212°F.

At approximately 0520 on March 9, 1974, a radiation protection technician reported to the Shift Foreman that water vapor appeared to be issuing from a special manometer which had been installed for monitoring of the pressure difference between the drywell and reactor vessel. The Shift Foreman's investigation revealed that the reactor side of the manometer was not. The recirculation loop temperature recorder, which was being used to monitor reactor water temperature, was immediately rechecked. This recorder indicated a temperature of 160°F. However, the indication jumped to approximately 250°F when the recorder was bumped. At this time (0531 on March 9, 1974) shutdown cooling system flow was increased to decrease the reactor water temperature. Reactor water temperature was reduced to less than 212°F within approximately 30 minutes. Within approximately 130 minutes, a reactor water temperature of 160°F was established and maintained.

APPARENT CAUSE
OF OCCURRENCE:

☒ Design
☐ Manufacture
☐ Installation/
Construction
☒ Operator

☐ Procedure
☐ Unusual Service Condition
☐ Inc. Environmental
Component Failure
☐ Other (Specify)

This abnormal occurrence is attributed to equipment malfunction and operator error. The recirculation loop recorder did stick and give a false indication of reactor coolant temperature. However, the control room operator failed to react properly to indications that reactor water temperature was increasing. Specifically, a review of the chart paper from the recorder monitoring shutdown cooling system temperatures showed that the "C" loop heat exchanger inlet temperature was increasing at a rate of about 10°F/hr during the three hour period prior to 0230 on March 9, 1973. At this time, the control room operator secured flow in this loop and thereby contributed to the rise in reactor water temperature.

ANALYSIS OF
OCCURRENCE:

The primary containment system provides a barrier against uncontrolled release of fission products to the environs in the event of a break in the reactor coolant systems. Whenever the reactor coolant water temperature is above 212°F, failure of the reactor coolant system could cause rapid expulsion of the coolant from the reactor with an associated pressure rise in the primary containment. Primary containment is required, therefore, to contain the thermal energy of the expelled coolant and fission products which would be released from any fuel failures resulting from the accident.

The safety significance of this event is that primary containment integrity was not maintained during the period that the reactor coolant temperature was in excess of 212°F due to the

maintenance being performed on the vacuum breaker valves. At the condition that existed, the safety significance is considered minimal.

CORRECTIVE
ACTION:

The following remedial actions will be taken prior to the PORC evaluation to preclude a recurrence of this type event:

1. Control room operators will be instructed to "jog" any recorder that is producing a suspiciously straight trace. This will be accomplished by momentarily turning the recorder off and then on again.
2. Involved personnel will be reminded to utilize all available indicators when monitoring critical parameters such as reactor water temperature.
3. The shutdown log will be reviewed and modified to require the recording of additional system temperatures which are related to the reactor coolant temperature.

FAILURE DATA: Basic recorder data are as follows:

Manufacturer - General Electric
Type - GE/MAC 531
Span - 4 inches

Prepared by:

[Signature]

Date:

3/11/74

Abnormal Occurrence
Report No. 50-219/74/19

March 18, 1974

March 9, 1974

Violation of the Technical Specifications, paragraph 3.5.A.1, failure to maintain primary containment integrity with reactor water temperature above 212°F and fuel in the reactor vessel. This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraph 1.15B.

The plant was shut down with reactor coolant <212°F.

At 1000 on March 8, 1974, an orderly shutdown of the plant commenced to perform maintenance on six of the fourteen torus to drywell vacuum breaker valves. Although thirteen of the valves were considered to be operable at this time, the plant was shut down in order to effect more permanent repairs on the valves. (See Abnormal Occurrence Report No. 50-219/74/16 dated March 15, 1974). In accordance with the requirements of paragraph 3.5.A.1 of the Technical Specifications, maintenance on these valves did not begin until reactor coolant temperature was below 212°F.

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containment integrity was not in effect. Shutdown cooling system flow was then increased to decrease the reactor water temperature. Reactor water temperature was reduced to less than 212°F within approximately 30 minutes. Within approximately 130 minutes, a reactor water temperature of 160°F was established and maintained.

Apparent Cause of Occurrence

This abnormal occurrence is attributed to equipment malfunction and operator error. The recirculation loop recorder did stick and give a false indication of reactor coolant temperature. However, the control room operator failed to react properly to indications that reactor water temperature was increasing. Specifically, a review of the chart paper from the recorder monitoring shutdown cooling system temperatures showed that the "C" loop heat exchanger inlet temperature was increasing at a rate of about 10°F/hr during the 3-hour period prior to 0230 on March 9, 1974. At this time, the control room operator secured flow in this loop and thereby contributed to the rise in reactor water temperature.

Analysis of Occurrence

The primary containment system provides a barrier against uncontrolled release of fission products to the environs in the event of a break in the reactor coolant systems. Whenever the reactor coolant water temperature is above 212°F, failure of the reactor coolant system could cause rapid expulsion of the coolant from the reactor with an associated pressure rise in the primary containment. Primary containment is required, therefore, to contain the thermal energy of the expelled coolant and fission products which would be released from any fuel failures resulting from the accident.

The safety significance of this event is that primary containment integrity was not maintained during the period that the reactor coolant temperature was in excess of 212°F due to the maintenance being performed on the vacuum breaker valves. At the condition that existed, the safety significance is considered minimal.

Corrective Action

The following corrective actions will be taken:

1. The operator retraining program will emphasize that all available indications are to be used when critical parameters such as reactor water temperature are being monitored. In addition, the operators will be instructed in their retraining to regard extremely straight recorder traces as suspect and to view confirming indications whenever such suspicious recorder traces are encountered, both while operating and shut down.

2. The shutdown log will be reviewed and modified to require the recording of additional system temperatures related to the reactor coolant temperature.

Failure Data

Basic recorder data are as follows:

Manufacturer: General Electric Company
Type: GE/MAC 531
Span: 4 inches

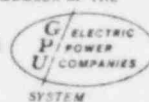
Jersey Central Power & Light Company



MADISON AVENUE AT PUNCH BOWL ROAD • MORRISTOWN, N. J. 07960 • 201-539-6111

MEMBER OF THE

General



Public Utilities Corporation

March 18, 1974



Mr. A. Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
United States Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Giambusso:

Subject: Oyster Creek Station
Docket No. 50-219
Abnormal Occurrence Report No. 50-219/74/19

The purpose of this letter is to forward to you the attached Abnormal Occurrence Report in compliance with paragraph 6.6.2.a of the Technical Specifications.

Enclosed are forty copies of this submittal.

Very truly yours,

Donald A. Ross
Manager, Nuclear Generating Stations

CS
Enclosures

cc: Mr. J. P. O'Reilly, Director
Directorate of Regulatory Operations, Region I

Handwritten:
Sent
5/2/74

COPY SENT REGION I

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