

U.S. ATOMIC ENERGY COMMISSION  
DIRECTORATE OF REGULATORY OPERATIONS  
REGION I

RO Inspection Report No: 50-219/74-18 Docket No: 50-219

Licensee: Jersey Central Power and Light Company License No: DPR-16

Madison Avenue at Punch Bowl Road Priority: \_\_\_\_\_

Morristown, New Jersey 07960 Category: C

Location: Oyster Creek, Forked River, New Jersey 08731 Safeguards Group: \_\_\_\_\_

Type of Licensee: BWR (GE) 1930 MW(t)

Type of Inspection: Routine, unannounced

Dates of Inspection: November 19-22, 1974

Dates of Previous Inspection: \_\_\_\_\_

Reporting Inspector: *Gary Snyder, acting for* 12-19-74  
E. G. Greenman, Reactor Inspector Date

Accompanying Inspectors: None \_\_\_\_\_  
Date

\_\_\_\_\_ Date

\_\_\_\_\_ Date

\_\_\_\_\_ Date

Other Accompanying Personnel: None \_\_\_\_\_  
Date

Reviewed By: *D. L. Capton* 12/19/74  
D. L. Capton, Senior Reactor Inspector Date  
Reactor Operations Branch

*B/442*

## SUMMARY OF FINDINGS

### Enforcement Action

#### A. Violations

1. Technical Specification 3.3.C.1 - Failure to maintain average rate of reactor coolant temperature change within 100°F during a one hour period, during a cooldown (Details 6.c)
2. Technical Specification 3.5.A.1 - Loss of primary containment integrity due to:
  - a. Butterfly isolation valve V-26-16 inoperability (JCP&L letter to DL dated April 19, 1974, Subject: AO 74-25)
  - b. Failure of a cleanup system DC isolation valve to close (JCP&L letter to DL dated October 11, 1974, Subject: AO 74-50)
3. Technical Specification 2.3.3 - Failure of reactor high pressure sensor RE03D to trip at a point corresponding to reactor pressure less than or equal to 1060 psig (JCP&L letter to DL dated July 18, 1974, Subject: AO 74-36)
4. Technical Specification 2.3.7 - Failure of low pressure main steam line pressure switches to trip at less than required value during surveillance tests.
  - a. RE23 A, B, C and D (JCP&L letter to DL dated July 19, 1974, Subject: AO 74-37)
  - b. RE23 C and D (JCP&L letter to DL dated July 26, 1974, Subject: AO 74-41)
  - c. RE23 A, B, C and D (JCP&L letter to DL dated August 2, 1974, Subject: AO 74-42)
  - d. RE23 B (JCP&L letter to DL dated August 12, 1974, Subject: AO 74-43)
  - e. RE23 A, B, C and D (JCP&L letter to DL dated August 19, 1974, Subject: AO 74-44)

- f. RE23 A (JCP&L letter to DL dated October 4, 1974, Subject: AO 74-49)
  - g. RE23 B and C (JCP&L letter to DL dated October 11, 1974, Subject: AO 74-51)
  - h. RE23A (JCP&L letter to DL dated October 21, 1974, Subject: AO 74-52)
  - i. RE23 A, B, C and D (JCP&L letter to DL dated November 4, 1974, Subject: AO 74-56) (Details 8)
- 5. Technical Specification 4.5.F.1.2 - Failure of MSIV NS 04B to close within specified interval (JCP&L letter to DL dated July 23, 1974, Subject: AO 74-38)
  - 6. Technical Specification 2.3.4 - Failure of electromatic relief valve switches to trip within maximum allowable value during surveillance (JCP&L letter to DL dated July 23, 1974, Subject: AO 74-39)
  - 7. Technical Specification 3.5.B.1 - Failure to maintain secondary containment integrity (JCP&L letter to DL dated November 18, 1974, Subject: AO 74-58)

B. Safety Items

None

Licensee Action on Previously Identified Enforcement Items

- 1. Failure to perform weekly checks of station and diesel generator batteries.

The licensee has implemented a surveillance test data sheet and initiated controls for routing of test records. Item is considered closed.

- 2. Failure to notify the Director of the Regional Regulatory Operations office within 24 hours followed by a 10 day report concerning abnormal occurrences, within the required time frame.

The licensee has re-established time intervals for review and reporting. No recurrence has occurred. This item is considered closed.

Design Changes

None reported

Unusual Occurrences

The following abnormal occurrences and events were reviewed. Comments concerning specific areas are noted within this report.

- A. Loss of primary containment integrity due to failure of torus vacuum breaker valves V-26-15 and 16 to seat correctly.<sup>1</sup>
- B. Failure of emergency service water pump (52C) to start when a normal start was attempted.<sup>2</sup>
- C. Failure of core spray booster pump pressure switch RV40D in the permissive position.<sup>3</sup>
- D. Failure of one reactor high pressure sensor to trip at reactor pressure  $\leq$  1060 psig.<sup>4</sup>
- E. Four (4) of four main steam line low pressure switches tripped below specified TS limits.<sup>5</sup>
- F. Main steam isolation valve NS04B failed to close in less than ten seconds.<sup>6</sup>
- G. Four (4) of five electromatic relief valve pressure switches tripped in excess of TS limits.<sup>7</sup>
- H. Failure of two shock and sway arrestors on the core spray system and feedwater loop and disclosure of an additional leaking unit.<sup>8</sup>
- I. Two (2) of four main steam line low pressure switches tripped below specified TS values.<sup>9</sup>
- J. Four (4) of four main steam line low pressure switches tripped below specified TS values.<sup>10</sup>

- 1 JCP&L report to RO:I dated April 10, 1974, Subject: AO 74-25
- 2 JCP&L report to RO:I dated April 12, 1974, Subject: AO 74-26
- 3 JCP&L report to RO:I dated May 22, 1974, Subject: AO 74-32
- 4 JCP&L report to RO:I dated July 10, 1974, Subject: AO 74-36
- 5 JCP&L report to RO:I dated July 12, 1974, Subject: AO 74-37
- 6 JCP&L report to RO:I dated July 16, 1974, Subject: AO 74-38
- 7 JCP&L report to RO:I dated July 16, 1974, Subject: AO 74-39
- 8 JCP&L report to RO:I dated July 16, 1974, Subject: AO 74-40
- 9 JCP&L report to RO:I dated July 19, 1974, Subject: AO 74-41
- 10 JCP&L report to RO:I dated July 25, 1974, Subject: AO 74-42

- K. One (1) of four main steam line low pressure switches tripped below specified TS values.<sup>11</sup>
- L. Four (4) of four main steam line low pressure switches tripped below specified TS values.<sup>12</sup>
- M. Failure to follow MAPLHGR limits as submitted to DL on August 5, 1974.<sup>13</sup>
- N. Failure of one torus to drywell vacuum breaker to demonstrate operability.<sup>14</sup>
- O. Failure of two hydraulic shock and sway arrestors on core spray system and identification of four additional snubbers previously unlocated.<sup>15</sup>
- P. Isolation condenser inoperability due to high flow as sensed by condensate line break sensors.<sup>16</sup>
- Q. One (1) of four main steam line low pressure switches tripped below specified TS limits.<sup>17</sup>
- R. Failure of a cleanup system DC isolation valve to close electrically.<sup>18</sup>
- S. Two (2) of four main steam line low pressure switches tripped below specified TS values.<sup>19</sup>
- T. One (1) of four main steam line low pressure switches tripped below specified TS values.<sup>20</sup>
- U. Failure of a containment spray pump to start in the automatic mode.<sup>21</sup>
- V. Four (4) of four main steam line low pressure switches tripped below specified TS values.<sup>22</sup>
- W. Failure to maintain secondary containment integrity due to isolation valve failure to fully close.<sup>23</sup>
- X. Diesel generator number 2 trip due to high temperature caused by louver control temperature switch failure.<sup>24</sup>

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- 11 JCP&L report to RO:I dated August 2, 1974, Subject: AO 74-43
  - 12 JCP&L report to RO:I dated August 9, 1974, Subject: AO 74-44
  - 13 JCP&L report to RO:I dated August 26, 1974, Subject: AO 74-45
  - 14 JCP&L report to RO:I dated August 27, 1974, Subject: AO 74-46
  - 15 JCP&L report to RO:I dated September 16, 1974, Subject: AO 74-47
  - 16 JCP&L report to RO:I dated September 26, 1974, Subject: AO 74-48
  - 17 JCP&L report to RO:I dated September 30, 1974, Subject: AO 74-49
  - 18 JCP&L report to RO:I dated October 4, 1974, Subject: AO 74-50
  - 19 JCP&L report to RO:I dated October 8, 1974, Subject: AO 74-51
  - 20 JCP&L report to RO:I dated October 15, 1974, Subject: AO 74-52
  - 21 JCP&L report to RO:I dated October 21, 1974, Subject: AO 74-55
  - 22 JCP&L report to RO:I dated October 29, 1974, Subject: AO 74-56
  - 23 JCP&L report to RO:I dated November 11, 1974, Subject: AO 74-58
  - 24 JCP&L report to RO:I dated November 13, 1974, Subject: AQ 74-59

Other Significant Findings

A. Current Findings

1. Staffing

Shift Supervisor complement was increased to five (5) effective November 17, 1974 (Details 2.a)

2. Chormate Water Removal Status

Approximately 1200 gallons of chromated water remain in tank car storage on site. (Details 13.c)

B. Status of Previously Reported Unresolved Items

None Closed

Management Interview

An exit interview was conducted on November 22, 1974 with Mr. D. A. Ross, Manager, Nuclear Generating Stations, Mr. J. T. Carroll, Station Superintendent and Mr. J. E. Menning Staff Engineer. Inspection results were discussed further with Mr. J. T. Carroll on November 27 and December 9, 1974. Items discussed are summarized below:

A. General

The inspector summarized the scope of the routine inspection as related to a review of abnormal occurrences, plant operations, selected reactor operating and surveillance records with respect to compliance with safety limits, limiting safety system settings, and limiting conditions for operations. Facility tour and discussions held with the reactor operating staff were referenced.

B. Staffing

The inspector stated that he considered the recent addition of a fifth shift supervisor to reflect favorably on overall station organization.

A licensee representative stated it was the intent of JCP&L to maintain the shift complement on a permanent basis (Detail- 2a)

C. Chromate Storage Status

The inspector asked licensee representatives for a current status report concerning processing of chromate water stored in tank cars on site.

A licensee representative stated that approximately 1,200 gallons remained in tank car storage in addition to water in permanent tank storage still requiring processing. A licensee representative further stated that tank trucks would be removed from the site. Engineering support was referenced by the licensee as an example related to resolution of this item. (Details 13.c)

D. Housekeeping

The inspector stated that based on his tour of interior facility areas, the repainting and refurbishment operations were successful and that housekeeping was improved as a result.

Licensee representatives acknowledged the inspectors remarks. (Details 13.b)

E. Adequacy of Plant Drawings and Records

The inspector stated that his review of AO 74-47, and discussions with licensee representatives related to seismic shock suppressors indicated that problems existed with respect to plant drawings and descriptions. The inspector further stated his position that engineering support services should be committed to assure that as built drawings and records are complete, up to date, and correct.

A licensee representative stated that this area had been discussed by the General Office Review Board (GORB), in connection with a GORB action item. The licensee representative further stated that a system or mechanism to accomplish the above would be established on or about January 1, 1975. The long term nature of this project and JCP&L Generation Engineering Department involvement was discussed (Details 10)

F. Valve Tagging

The inspector stated that during conduct of a facility tour, tags were noted, referring to leaking packing dated April 1972, which involved one mislabeled valve and which should have been removed previously, by the licensee. The inspector noted that this matter was corrected prior to the conclusion of the inspection and stated his position based on his sampling, that tagging operations should be audited, reviewed and updated.

A licensee representative stated that new procedural coverage would be implemented to alleviate the above concerns by January 1975. (Details 13a)

G. Personnel Exposure

The inspector stated that he had reviewed the licensee's documentation related to one individual's recent exposure history and discussed the ongoing investigation of the exposure with the licensee's consultant. The inspector stated that uncertainties precluded his acceptance of 1,781 mRem evaluation thus far documented by licensee, and referenced his understanding based on discussions that the referenced employee would be restricted from all radiation areas until the end of the current quarter.

Licensee representatives concurred with the inspectors statements.  
(Details 11)

H. GORB Audit Results

The inspector stated that a review of documentation indicated that results of 1974 GORB audits to date had not been furnished to the site and discussed his concerns in this area.

A licensee representative concurred with the inspectors remarks.  
(Details 2.c)

I. Enforcement Action

Items listed under enforcement action above were identified to the licensee.



## DETAILS

### 1. Persons Contacted

Mr. D. A. Ross, Manager, Nuclear Generating Stations  
Mr. J. T. Carroll, Station Superintendent  
Mr. J. P. Maloney, Operations Supervisor  
Mr. R. F. Swift, Maintenance Engineer  
Mr. E. I. Riggle, Maintenance Supervisor  
Mr. E. D. Skalsky, Radiation Protection Supervisor  
Mr. J. L. Sullivan, Operations Engineer  
Mr. J. E. Menning, Staff Engineer  
Mr. E. J. Gowney, Technical Engineer  
Mr. R. L. Stodnour, Staff Engineer  
Mr. B. J. Cooper, Shift Foreman  
Mr. H. Callahan, Control Room Operator  
Mr. C. J. Silvers, Control Room Operator  
Mr. K. Fickeissen, Technical Supervisor  
Mr. T. Johnson, Electrical Foreman  
Mr. C. McGee, Radiation Management Corporation

### 2. Administration and Organization

#### a. Facility Staffing

The inspector was apprised that effective November 17, 1974 the Oyster Creek Shift Foreman complement had been increased to five (5). An Operating Foreman was selected to fill this position. No additional staffing changes were reported.

#### b. Plant Operations Review Committee (PORC) Meetings

The PORC met on the following dates and the minutes were reviewed by the inspector. No deficiencies were identified.

<u>Date</u>	<u>Meeting No</u>
April 30, 1974	34-74
May 2, 1974	35-74
May 3, 1974	36-74
May 6, 1974	37-74
May 7, 1974	38-74
May 9, 1974	39-74

<u>Date</u>	<u>Meeting No</u>
May 10, 1974	40-74
May 14-15, 1974	41-74
May 16, 1974	42-74
May 17, 1974	43-74
May 20, 1974	44-74
May 22, 1974	45-74
May 23, 1974	46-74
May 24, 1974	47-74
May 28, 1974	48-74
May 30, 1974	49-74
June 2, 1974	50-74
June 6, 1974	51-74
June 8, 1974	52-74
June 12, 1974	53-74
June 13, 1974	54-74
June 24, 1974	55-74
June 26-28, 1974	56-74
July 9, 1974	57-74
July 11, 1974	58-74
July 15, 1974	59-74
July 18, 1974	60-74
July 25, 1974	61-74
July 26, 1974	62-74
August 2, 1974	63-74
August 8, 1974	64-74
August 14, 1974	65-74
August 20, 1974	66-74
August 29-30, 1974	67-74
September 20, 1974	69-74
September 23, 1974	70-74
September 24, 1974	71-74
September 25, 1974	72-74
October 2, 1974	73-74
October 9, 1974	74-74
October 9, 1974	75-74
October 10, 1974	76-74
October 16, 1974	77-74
October 18, 1974	78-74

c. General Office Review Board (GORB)

Technical Specification 6.2.d.4 requires GORB to conduct periodic audits of plant operations at least quarterly. The

inspector's review of the licensee's documentation indicated that no records were available with respect to 1974 audits, to verify Technical Specification compliance. Discussion indicated that no documentation had been provided to the site by GORB. Documentation regarding conduct of audits and timely issuance of same to site management is unresolved.

### 3. Operations

#### a. Operational Status

The reactor was operating at approximately 1908 MW(t) - 664 MW(e) at the time of this inspection. Representative stack gas and off gas rates were 20,500  $\mu$ ci/sec and 378,900  $\mu$ ci/sec respectively. The facility had returned to power operation November 15, 1974 following a four day shutdown to effect repairs to a failed feedwater bypass valve gasket and leaking valve packing on a recirculation pump discharge valve.

#### b. Unscheduled Shutdowns

Unscheduled shut downs occurred October 8 and November 11, 1974 as a result of increasing unidentified leakage in the drywell. In both instances contributing leakage was related to a gasket failure associated with V-2-36, a feedwater bypass valve. In the latter shutdown the "C" recirculation discharge valve packing was also leaking and required repair.

The inspector's review indicated the one inch feedwater bypass valve repair was conducted utilizing an approved procedure and "freeze plug" technique. The affected valve utilizes a flexatalic gasket in order to seal the bonnet to body joint. Repairs following the October 8, 1974 shutdown included machining of 0.62 inches from the bonnet tongue and flange and subsequent installation of a new oversized gasket. Original dimensions were 2 7/16 inches OD X 1 7/8 inches ID X 3/16 inches thick. Required dimensions were 2 11/32 inches OD X 1 7/8 inches ID X 1/8 inch thick. The inspector was apprised that lack of availability of a properly sized gasket necessitated removal of 3/32 inch from the OD and 0.62 inches from the thickness. Following installation a hydro test was successfully performed. Following the November 11, 1974 shutdown, the same valve gasket was found failed. A gasket was procured with proper dimensions, the cut area on the bonnet tongue was welded and machined. No distortion on the valve body was detected and a hydro test was performed.

4. Logs and Records

The following logs and records were reviewed without comment except as noted elsewhere within this report

- a. Station Log Book - September 1 - November 19, 1974
- b. Plant Operating Review Committee(PORC) meeting minutes (34-74 through 78-74)
- c. Surveillance Records for the reactor coolant system for intervals as indicated within this report.
- d. All Abnormal Occurrences since the last routine inspection.
- e. Unscheduled shutdowns since the last inspection.

5. Facility

A. Procedures

Severe Weather Conditions

Discussions with licensee representatives indicated that a formalized procedure was not available delineating actions to be taken or required inspections to be made in the event of severe winter weather and icing conditions. A licensee representative stated that this procedural coverage would be provided. This item is considered open.

6. Reactor Coolant System

The following surveillance records were reviewed.

a. Idle Recirculation Loop Pump Start\*

The inspector reviewed multipoint recorder chart records on a sampling basis for the period July 13 - October 16, 1974. Licensee records indicated that the 48 point recorder monitoring 100° temperatures was last calibrated September 10, 1974. Additionally a system has been installed to differentiate between two (2) 24 point banks. No violations of a 50° Technical Specification limit on pump start were noted. The inspector observed that logging of pump start sequences was not consistently performed. Problems in documenting TS compliance were discussed at the exit interview. This item is considered unresolved.

\*RO Inspection Report 50-219/74-02, Details 5.b.(2)

b. Heatup and Cooldown

The inspector audited temperature recorder chart records on a sampling basis for the period July 13 - October 16, 1974, recording recirculation pump suction temperatures. Temperatures recorded over a one hour interval as measured on an average (not including peak and trough) indicated a temperature change of 550°F to 440°F, a 110°F change and 545°F to 425°F a 120°F change respectively for the measured interval following a reactor scram on September 25, 1974. A licensee representative acknowledged the inspectors measurements. The chart recorder permits selection of two of five recirculation pumps for temperature readout. The licensees procedures do not require formal plotting of heat up and cooldown rates. The inspector was subsequently informed that pressure relationship indicated a cooldown of 104°F as measured by monitoring reactor pressure on the wide range recorder whereas comparison of the saturation temperature curve utilized by operators showed a 99°F/hr cooldown for the referenced time interval.\* Technical Specification 3.3.C.1 restricts the average rate of coolant temperature change to 100°F in any one hour period. (Violation)

7. Reactivity Control and Core Physics

MAPLHGR Limits

The inspector's review of AO 74-45, indicated that the licensee was conducting formal training sessions. The inspector discussed timely completion of lecture requirements with a cognizant licensee representative. This item is considered open pending completion of the lecture series.

8. Protective Instrumentation

a. Main Steam Line Low Pressure Switches

The inspector reviewed AO's 74-37, 41, 42, 43, 44, 49, 51, 52 and 56 related to setpoint drift. Review indicated that the frequency of Abnormal Occurrences related to setpoint drift was indicative of insufficient tolerances in switch settings and the licensee's self imposed and stepped up weekly surveillance frequency. The inspector was apprised that the licensees review committees had approved a TS change for submittal to DL concerning a reduction in the 850 psig setpoint. The inspector was apprised that as of the date of the TS change request approval surveillance intervals had been reduced to prescribed TS requirements. This item is unresolved pending the licensees resolution of recurrent setpoint drift problems.

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\*telephone conversation, November 27, 1974

9. Auxiliary Systems

Isolation Condensers

The inspector reviewed AO 74-28. The relationship of isolation condenser operations on recirculation flow and applicable plant procedures is to be reviewed in the operator training program. This item is considered open.

10. Other Engineered Safeguards

Hydraulic Seismic Shock and Sway Arrestors (HSSA)

The inspector discussed AO 74-47 with cognizant licensee representatives. The involved HSSA units were installed during construction of Oyster Creek. According to licensee representatives no shock and sway arrestors were installed after the originals. Discussion and review indicated that the licensee was unaware of the piping in this area prior to locating the additional units. No isometrics of piping located outside the drywell were available and isometrics of the drywell piping were wrong. Adequacy of drawings and records was discussed at the exit interview. This item is considered unresolved.

The licensee's program to date, has included the rebuilding of HSSA units with ethylene propylene seals. Experience has indicated that certain kits were provided which contained millable gum polyurethane. Additionally, some units contained chevron type shaft piston packing and accumulator pistons not directly adaptable to standard u-cup seals. Piston machining was required to facilitate seal installation and resulted in seal fit which did not insure leak tightness. Problems evident to date include maintenance aspects, involving installation i.e. pinching of the numerous "O" rings, burrs in the main piston rod, etc, which can result in leakage, leaking alemite inserts, and assurance of proper seal material. The licensee has verbally cautioned personnel concerning burr removal and has implemented additional testing following a 4,000 psi pressure test.

11. Radiation Protection

Personnel Exposure\*

The inspector reviewed exposure data related to an individual.

\*RO Inspection Report 50-219/74-17, Details 6.b

The licensee had re-evaluated exposure based on various RWP's taking credit for those employee activities such as break intervals and tool procurement and recharging of dosimeters. The individual was found to have been working additionally under an RWP not previously accounted for by the licensee. The licensee's evaluation indicated a total exposure of 1781 mRem versus TLD badge indications of 2990 mRem total body exposure.

An outside consultant was conducting an investigation of the referenced exposure on November 21, 1974. Written evaluations from the consultant were not completed at the conclusion of the inspection. Discussion indicated the following:

- a. No overexposed dosimeters were disclosed.
- b. No problems with TLD's were disclosed.
- c. A probable assigned number of the magnitude of 1500 mRem or less would be recommended to the licensee.
- d. It was the consultant's position that the individual could not have received the exposure.

The inspector discussed the exposure with licensee representatives and stated that uncertainties precluded justification for discounting TLD exposure. This item was discussed at the exit interview.

## 12. Radioactive Waste Systems

### a. Stack Gas Particulate Filter Analysis\*

The licensee had modified procedural checkoff sheets and incorporated a delayed particulate spectrum count and a delayed particulate gross count. The inspector was informed by a licensee representative that the procedure is undergoing revision. This item remains open for review during a subsequent inspection.

## 13. Miscellaneous

### a. Valve Tagging

The inspector reviewed tag status during conduct of a facility tour. Tags were noted on valves V-15-34 and V-15-39 in the CRD hydraulic system dated April 6, 1972 identifying packing leakage. No leakage was observed present. Subsequent investigation

by the licensee disclosed that the system had been returned to normal and packing leaks repaired. The referenced tags should have been placed on valves V-15-34 and V-15-35. Tags were removed prior to the completion of the inspection. This item was discussed at the exit interview and is considered open.

b. Housekeeping

The inspector during conduct of a facility tour observed that the licensee is completing repainting and refurbishment of the facility. Housekeeping in interior areas was observed to be generally good. The inspector also observed control room housekeeping. Problems with cigarette butts noted in a previous inspection\* had been corrected. Item is considered closed. Overall improvements in facility appearance were discussed at the exit interview.

c. Chromate Water Storage Status\*\*

The licensee's processing of chromate water in tank car storage was continuing. The inspector was informed that about 1200 gallons remained in tank car storage. This water will be drummed according to licensee representatives. Additional water is still awaiting processing and is contained in permanent storage. The licensee's plans include tank car clean up and removal of cars from the facility site. This item was discussed at the exit interview.

d. Inlet Canal and Discharge Canal Temperatures following November 11, 1974 Shutdown

Following the unscheduled shutdown occurring November 11, 1974, a reconstruction of temperatures obtained from the licensee indicated discharge canal temperatures measured at the U. S. Route No. 9 bridge were 51°F at approximately the time of reactor startup. Bay temperatures were estimated to be 46-49°F during the shutdown. The licensee did not utilize dilution pumps during the duration of the shutdown. No fishkills were reported as a result of this shutdown.

\*RO Inspection Report 50-219/74-03, Details 7

\*\*RO Inspection Report 50-219/74-16, Details 3