UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I
970 BROAD STREET
NEWARK, NEW JERSEY 07102

201 645-3960

NOV 9 1971

R. T. Carlson, Sr. Reactor Inspector
Division of Compliance, Region I

CO INSPECTION REPORT NO. 50-219/71-03
JERSEY CENTRAL POWER & LIGHT COMPANY
OYSTER CREEK 1 - BWR

The inspection conducted on October 7 and 8, 1971, which was limited to reviewing control of personnel exposures, and radiation and contamination control during the current extended outage, showed no significant deficiencies in their program. Exposure control was maintained on a daily basis with a central control mechanism. Radiation levels in the major work areas were generally low. High radiation areas were well delineated and spoken to in the RWP's covering those areas. All work was controlled by RWP's covering those areas. All work was controlled by RWP's in which work conditions and requirements were well defined. Contamination control appeared adequate.

The radiation protection staff had been increased by six additional technicians provided by contract from General Electric and Eberline. The coverage appeared to be adequate to cope with outage problems, however it may have been spread a little thin during the early stages of the outage.

Two air balance problems noted by the inspector during the inspection apparently had not generated any problems; howevery, they did provide a potential for contamination spreads or high air concentrations outside of radiation zones. Corrective actions to prevent recurrence were initiated.

The licensee currently has no capability to monitor air concentrations on a continuous basis. Licensee has recognized this and is currently investigating their needs. They do sample continuously with the results not being indicative of any problems to date; however the potential for exposure to excessive air concentrations does exist. Licensee agreed to investigate the needs for a bioassay program. It appears that the current outage has provided experience that will be applied to future outages.

R. T. Carlson

R. J. Meyer
Radiation Specialist

U. S. ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I

Field Notes for:

CO Inspection Report No. 50-219/71-03

Subject: Jersey Central Power & Light Company

Oyster Creek 1 License No. DPR-16

Location: Forked River, N. J. Priority

Category C

Type of Licensee: BWR

Type of Inspection: Special, Announced

Dates of Inspection: October 7, 1971

Dates of Previous Inspection: June 22-25 & July 2, 1971

Principal Inspector: T. Young, Jr. Date

Accompanying Inspectors: Date

Date

Other Accompanying Personnel: Date

Reviewed By: R. T. Carlson 11/8/71
Date

Proprietary Information:

OC1

A. Persons Contacted

1. T. McCluskey Station Superintendent
2. D. Ross Technical Supervisor
3. D. Reeves Technical Engineer
4. E. Riggle Maintenance Supervisor
5. J Sullivan Asst. Technical Engineer
6. J. P. Zilinskas GE Manager
7. W. L. Swanson GE Shift Supervisor

B. Operations

1. Sipping complete (12 bundles x rat sipped)
   44 leakers detected
   24 New fuel bundles at the site and will be placed around the periphery in the core.
   20 of the leakers to be reconstituted and placed in the high flux area of the core.
   11 fuel bundles have been inspects to date.
2. 8 LPRM Chambers are being replaced.

3. Procedures reviewed

(a) General Information
Fuel Rod Inspection & Bundle
Reconstitution, JCP&L Co.
OC Power Station

Prepared by:
Nuclear Fuel Dept.
GE Co. San Jose Calif.
J. P. Zilinskas, Jul 23, 1971

(A) Proprietary Information

(b) Fuel Reconstitution Procedure
JCP&L Co, OC Power Station

Prepared by:
Nuclear Fuel Dept.
GE Co, San Jose Calif
JP Zilinskas, Jul. 23, 1971

(A) Proprietary Information

(A) Both Procedures were reviewed and approved by JCP&L Co. on 9/29/71.

(C) (E). Reactor fuel examination & reconstitution

Prepared by:

J. S. Atkinson Specialist - Field Service.
W. L. Swanson " " "
J. P. Zilinskas " " "

Approved by:

K W Hess, Manager - Field Services

Aug 71

(A) Proprietary ~~Proprietary~~ Information

C. Observation of operations

1. All stripping was done by ~~GE~~ GE personnel.
2. Inspection is done by GE personnel with a GE and a ~~GE~~ GE checker to check the rod's position out and placement into the bundles.
   a) When the rod is taken out of the bundle it is first run through a brush cleaner and then ran through the inspection station.
   b) While in the inspection station the rod is checked over 100% of its length with ultrasonics & eddy currents.

The ultrasonic test is for water inside the fuel rod and the eddy current test is for flaws in the cladding.

3. All fuel bundle handling is done by OC ~~[redacted]~~ personnel.
   a) Fuel movement from core to spent fuel pit (SFP)
   b) Fuel bundle movement from SFP to fuel preparation racks.
   c) Removal, storage and replacement of channels and storage of channel hardware.
   d) Fuel movement from fuel preparation racks to SFP. and,
   e) Fuel movements from SFP to the reactor core.

4. All of the fuel rod cleaning, inspection and reconstitution is done by GE personnel in the fuel preparation racks.

5. Independent records are ~~[redacted]~~ kept by the OC ~~[redacted]~~ and the GE. Checks of the fuel rod removals and the fuel rod placement back into the bundle.

6. When the decanned fuel assembly is placed into the fuel preparation machine, the GE supervisor and the QC checker verified the assembly identification and orientation in the rack so that fuel rods were readily identifiable upon removal and replacement. This information was recorded on the check sheets.
7. The QC personnel were in constant communication (via intercom) with the control room from the fuel handling crane platform. (3 Men) The fuel handler supervisor, who was also the fuel operator, was a licensed senior operator. In the inspector's opinion very alert and aware of what was going on.

(R) There was a check sheet typed to the bridge telling the operator which fuel bundle to move next and where to place it. The checker on the bridge recorded this information on his check sheet.

All direction for fuel bundle movement

Came from the control room and logged in the console log. The fuel handler's check sheet was only to insure that the information relayed from the control room was correct.

An up to date record board was kept in both the control room and in the Reactor Building fuel room area, depicting all fuel bundles by identification numbers and their placement, whether in the core, in the SFP or in the preparation racks.

8. The weak point in the over all operation were the lack of nuclear experience of the four GE refuelers. (The GE SS and the manager have well grounded backgrounds) They are technicians (non nuclear trained) from a GE service shop. They were given one week of training on the job on the tools using a dummy fuel bundle and some training on the hazards

of radiation. This was a controled operation with the GE shift supervisor looking over the fuel handlers shoulders most of the time. However on one occasion the inspector witnessed that one of the GE fuel handlers, hung four (4) [redacted] fuel handling tools on one hook. This was too much weight for the hook and it partially straighten out allowing two (2) of the tools to fall into the SFP. The tools landed in a spent fuel rack. Fortunately no fuel was in the rack. This was pointed out [redacted] to Mr McCluskey at the exit interview.

D. Exit Interview

An exit interview was held with Mr McCluskey and concern was expressed with the lack of nuclear experience of the GE fuel handlers and their backgrounds. The incident of the fuel handling tools was

pointed out as an example which may have resulted in a messy serious problem if fuel had been stored in those particular racks. Mr McCluskey stated that this was also a concern of Oyster Creek management and that their [redacted] (OCI) Checker was an experienced licensed operator with orders to report any [redacted] unsafe operations to management.

U. S. ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I

Field Notes for:

CO Inspection Report No. 50-219/71-03

Subject: Jersey Central Power & Light Company

Oyster Creek 1 License No. DPR-16

Location: Forked River, N. J. Priority

Category C

Type of Licensee: BWR

Type of Inspection: Special, limited, announced

Dates of Inspection: October 7 and 8, 1971

Dates of Previous Inspection: June 22-25 and July 2, 1971

Principal Inspector: R. J. Meyer Date

Accompanying Inspectors: Date

Date

Other Accompanying Personnel: Date

Reviewed By: R. T. Carlson 11/8/71 Date

Proprietary Information:

A. Persons Contacted

T. McCluskey, Station Superintendent
D Ross, Technical Supervisor
D. Kaulback, Radiation Protection Supervisor
R. Stoudnour, Radiation Protection Supervisor (Waste Mgmt.)
A. Grimes, General Employee Training

B. Administration of Outage

Ross stated that the Superintendent [illegible] was in the area of responsibility and that he worked with that responsible [illegible] Mr. McCluskey, Sta. Supt. D. Kaulback, Radiation Protection Supervisor reporting to [illegible]

As directed by Ross, additional personnel [illegible] added to the Rad. Protection staff for the outage. Robert Stoudnour (waste management) was moved to provide additional [illegible] coverage, reporting to Kaulback. Six additional Rad. Techs. have been added to the staff for the outage by contract with Eberline and [illegible] Electric. Responsibility for the [illegible] outage work has been split between Kaulback and

stoudmeter for purposes of greater exposure coverage.

C. Precautions

Readers down for extended outage

D thereof

I. - Introduction

Personnel exposure to ionizing radiation was documented on Form 4 and 5 equivalent. JCP&L provided to the crew personal dosimeters and maintained a supply of spares as determined by the pocket dosimeters. Film badges removed on a monthly exchange frequency.

It was stated that all extra [illegible]

ciency. Losses at control were attributed to careless removal and control of pulverizing and general poor step off pad discipline. Rad. Technicians stated that thought was emphasized given regarding during the training given to control people but that were slowly getting them accustomed to good practices. Rees stated training would be given in the

1. No Title

[illegible] the Type [illegible] stated that [illegible] purposes [illegible] noted that the air flow [illegible] of the drywell area. The [illegible] [illegible] should be into the drywell. [illegible] by Rees. The ventilation system was checked [illegible] the [illegible] pressure zone [illegible] Rees stated that during the pulverizing removal some air flow adjustments [illegible] that an adequate air flow could be maintained down and across the face and working personnel. He stated that it apparently [illegible] [illegible]

be used for a specific job that was dangerous or of an unusual nature. RWP's [illegible] by the Rad Tech (Chief or any [illegible] Rad. Supvr. and signed by [illegible] counter signed by the User unit Foreman. The RWP's define the requirements for, monitoring, clothing, dosimeters, and respiratory protection. Description of work allowed is detailed and instructions as to hazards, areas to avoid and dose rates are given. [illegible] to work under [illegible]

[illegible] that all used Rad's are [illegible] detailed, appropriate signatures [illegible] dated with [illegible] location and in the Rad. Log. It is noted that upon [illegible] a Rad. removed from service and [illegible]

6. Misc.

[illegible] was [illegible] and appropriate to the need.

[illegible]

Friskers, portable GM's, and hand and foot monitors for personnel surveys were in good supply.

It was noted that a Rad. Tech was in attendance or available to the major work areas.

OCT 26 1971

J. G. Keppler, Chief, Reactor Testing & Operations Br.
Division of Compliance, HQ

CO INQUIRY REPORT NO. 50-219/71-07
JERSEY CENTRAL POWER & LIGHT COMPANY
OYSTER CREEK - BWR
CONSTRUCTION UNIONS PICKETING TO PROTEST THE
USE OF GE EMPLOYEES FOR MAINTENANCE WORK

The subject inquiry report is forwarded for information.

The plant was shut down for removal of poison curtains, fuel replacement/reconstitution, and a turbine warranty inspection at the time. No safety problems were identified with respect to this event.

No further action is planned by Region I.

R. T. Carlson
Senior Reactor Inspector

Enclosure:
Subject Inquiry Report

cc: E. G. Case, DRS (3)
R. S. Boyd, DRL (2)
R. C. DeYoung, DRL (2)
D. J. Skovholt, DRL (3)
H. R. Denton, DRS (2)
A. Giambusso, CO
L. Kornblith, CO
R. H. Engelken, CO
Regional Directors, CO
DR Central Files

8304190170 (1p)

B1406

OFFICE ▶	CO					
SURNAME ▶	Cantrell:smg	Carlson				
DATE ▶	10/26/71					

Form AEC-318 (Rev. 9-53)

U.S. GOVERNMENT PRINTING OFFICE : 1969—O-364-598

CO Inquiry Report No. 50-219/71-07

Subject: Jersey Central Power & Light Company

License No.: DPR-16

Facility: Oyster Creek (BWR)

Title: Construction Unions Picketing to Protest the Use of GE Employees for Maintenance Work

Prepared by: F. S. Cantrell, Reactor Inspector _____ Date

A. Date and Manner AEC was Informed:

In telephone conversation with Plant Superintendent T. McCluskey at 9:00 am, October 26, 1971.

B. Description of Particular Event or Circumstance:

At 6:00 am October 23, 1971, the Monmouth County - Ocean County Building Trades Association put out pickets at the entrances to the Oyster Creek Nuclear Generating Station protesting the use of General Electric Company employees to perform maintenance and repair work. The normal day shift crew reported for work at 4:00 am as scheduled, but a special crew for handling fuel was turned back at 8:00 am as well as GE employees performing warranty work on the main turbine and the core spray system check valves. Discussions were held between JCP&L and the Building Trades representatives. Ten maintenance, supervisory and technical personnel were allowed in the plant at 2:00 pm. The 4 - 12 shift was permitted to enter and the pickets were withdrawn at 6:00 pm. The net effect was approximately 1 day lost time for the outage. Mr. McCluskey stated that the plant always had at least the required number of licensed personnel to run the plant and no safety problems were encountered.

C. Action by Licensee:

No further action is planned at this time. According to Mr. McCluskey, JCP&L Co. does not normally use construction trades people in any of their plants for maintenance and repair work.

~~8304101796~~ (1p)

3944

OCT 7 1971

J. G. Keppler, Chief, Reactor Testing & Operations Br.
Division of Compliance, HQ

CO INQUIRY REPORT NO. 50-219/71-06
JERSEY CENTRAL POWER & LIGHT CO. (OYSTER CREEK - BWR)
CO INSPECTOR REVIEW OF RESULTS OF FUEL SIPPING -
LICENSEE REFUELING PLANS

The attached inquiry report is forwarded for information in advance of a detailed inspection report.

Preliminary results of our inspection indicate that the licensee's refueling activities are proceeding according to plans with no major difficulties having been encountered to date.

We intend to continue following closely the current outage and will keep you informed as is appropriate.

R. T. Carlson
Senior Reactor Inspector

Enclosure:
Inquiry Rpt 50-219/71-06

cc: E. G. Case, DRS (3)
R. S. Boyd, DRL (2)
R. C. DeYoung, DRL (2)
D. J. Skovholt, DRL (3)
H. R. Denton, DRS (2)
A. Giambusso, CO
L. Kornblith, CO
R. Engelken, CO
Regional Directors, CO
DR Central Files

~~8304210185~~

8407

OFFICE ▶	CO					
SURNAME ▶	Cantrell:smg	Carlson				
DATE ▶	10/7/71					

Form AEC-318 (Rev. 9-53) U.S. GOVERNMENT PRINTING OFFICE : 1969 — O-364-596

CO Inquiry Report No. 50-219/71-06

Subject: Jersey Central Power & Light Company

License No.: DPR-16

Facility: Oyster Creek 1 (BWR)

Title: CO Inspector Review of Results of Fuel Sipping - Licensee Refueling Plans

Prepared by: F. S. Cantrell, Reactor Inspector _____ Date

A. Date and Manner AEC was Informed:

October 7, 1971 during a telephone conversation with Tolbert Young, Jr., Reactor Inspector, who is currently at the site reviewing refueling activities.

B. Description of Particular Event or Circumstance:

Mr. Young reported that the licensee has completed the planned fuel sipping of the reactor core. All but 12 assemblies on the periphery were sipped. The results indicate 44 of the 548 assemblies sipped contain one or more leaking fuel pins. All of the identified leakers were located in the high flux region (central) of the core. The licensee believes that the probability of the remaining 12 assemblies being leakers is very low.

C. Action by Licensee:

According to Mr. Young, the licensee plans to replace 24 of the leaking assemblies with assemblies from the periphery of the core, with the latter assemblies being replaced with new fuel assemblies. The remaining 20 leaking assemblies will be reconstituted, replacing identified leaking fuel pins with non-leaking pins from the removed assemblies as necessary.

8204211189 (1p)

3944

SEP 10 1971

J. G. Keppler, Chief, Reactor Testing and Operations
Branch, Division of Compliance, HQ

EVALUATION MEMORANDUM
CO INQUIRY REPORT NO. 50-219/71-05
JERSEY CENTRAL POWER & LIGHT CO. (OYSTER CREEK - BWR)
ISOLATION CONDENSER RELAY FAILURE

The attached Inquiry Report relating to the failure of time delay relays associated with the isolation condenser is forwarded for information. The action taken by the licensee appears to be adequate.

It is recommended that a survey of other BWR licensees be conducted to determine their experience with this type relay. From the amount of trouble JC has experienced, it would appear that this relay is not reliable for this type service. We plan to review this subject with Nine Mile Point and Millstone. We will keep you informed as appropriate.

R. T. Carlson
Senior Reactor Inspector

Enclosure:
CO Inquiry Rpt. No. 50-219/71-05

cc: E. G. Case, DRS (3)
R. S. Boyd, DRL (2)
R. C. DeYoung, DRL (2)
D. J. Skovholt, DRL (3)
H. R. Denton, DRS (2)
A. Giambusso, CO
L. Kornblith, CO
R. H. Engelken, CO
Regional Directors, CO
DR Central Files

8304210499 (P)

B/408

OFFICE ▶	CO					
SURNAME ▶	Cantrell:smg	Carlson				
DATE ▶	9/10/71					

FORM AEC-318 (Rev. 9-53) U.S. GOVERNMENT PRINTING OFFICE 1965 O-861-508

CO Inquiry Report No. 50-219/71-05

Subject: Jersey Central Power & Light Co.

License No.: DPR-16

Facility: Oyster Creek (BWR)

Title: Isolation Condenser Relay Failure

Prepared by: F. S. Cantrell, Jr., Reactor Inspector _____ Date

A. Date and Manner AEC Was Informed:

1. Mr. Tom McCluskey, Station Superintendent, reported the matter by phone to Region I on September 8, 1971. Additional information was obtained in phone conversations with Messrs. McCluskey and Joe Carroll, Operations Supervisor, on September 9, 1971.

B. Description of Event:

2. On September 3, 1971 while conducting a surveillance test to insure isolation of the two redundant isolation condensers upon detection of a line break, the two relays on B isolation condenser, which initiate isolation in the event of a line break, would not operate. (Previous failures of isolation condenser relays were reported to DRL in letters from I. R. Finfrock dated May 17 and July 21, 1971.)

3. The relays that activate the isolation condenser were still operable. In the event of a line break, the condensers could have been isolated manually.

C. Action by Licensee:

4. Due to the physical location of the relays in the control board, the failed relays were not removed; however, the wiring was disconnected from the old relay (GE CR 120) and a replacement time delay relay (Agastat 7022PD) was installed at an accessible location. The Agastat relay performs the same function. All eight of the GE type relays associated with the isolation condensers have now been replaced with the Agastat relays.

5. One of the relays that failed previously was examined and the cause of failure was determined to be differential expansion resulting from overheating. The heat source is a resistor in the relay. The differential expansion physically prevented operation of the relay.

~~8304170493~~ (2R)

6. Mr. Carroll stated that JC is reviewing their instrumentation to see ff the GE relay is used in other services at the plant.

7. Mr. McCluskey stated that JC would submit a written report of the most recent failure to DRL in accordance with the requirements of the license.