

MAR 16 1973

Charles Gallina, Radiation Specialist, RO:I

INPUT TO YOUR ENVIRONMENTAL INSPECTION REPORT OF
THE OYSTER CREEK FACILITY

The following areas were reviewed by me during the inspection:

1. Film badge data

Environmental film badge data for the period December 24, 1970 to November 22, 1972 was reviewed. The data consisted of film reports for 20 stations on-site and off-site. Data was reported as above background and were zeros for the most part, pointing out a basic problem in sensitivity. Data for the monthly period October 1, 1971 to October 31, 1971 was missing for all stations. The period July 31, 1972 to August 28, 1972 were noted to be conspicuously higher than all other periods. The reason was not established and was not investigated further due to the low levels involved.

2. Data from air, surface water, well water, silt and clam analyses were also reviewed but since you reviewed also, I will not comment specifically. A general observation was that they are doing unnecessary analyses for K-40, Uranium, Radium-226, 228. Levels of these nuclides have been pretty well established, and requirements to continue these analyses should be changed.
3. A review was made of the methods of sampling and analysis used by the licensee. The description provided by the licensee was very general and not given in sufficient detail for me to make an evaluation. Perhaps a comparison of analytical results is the best evaluation. In comparing results on various environmental media between the State lab and the licensee's contractor, Teledyne, I find that the licensee results for Co-60 in clams was notably low and the results for Cs-137 and Sr-90 in clams is notably high. (Exact values upon request).

4. Inspection of Station One

Station one is a external radiation (Radiogas), air, and meteorology monitoring station. Station one is the only station on-site. At my visit the air sampler was inoperative due to a recent motor failure.

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The film badges (2) were taped to the north side of a metal building at a height of approximately 5 feet. Station one has not shown any values above background for external exposure, however, a direct survey, using a pressurized con chamber revealed levels of 125 mrem/year above background at a distance of approximately 300 feet south of the turbine building. The film badge was unable, apparently, to detect a radiation level approximately twice natural background.

5. A considerable portion of my time was spent in discussing and evaluating the licensee analytical results of spiked filters sent to him as well as effluent samples that were split in November, 1972. The licensee's efforts leaves much to be desired. I would recommend that you not mention these problems at the present time in your inspection report, however, Oyster Creek Management should be appraised of these problems so that solutions can be generated as soon as possible. Rather than mention specific results, I would mention their basic problems, as I see it.
 - a. Inadequate facility in terms of location and space. The location near the reactor creates a high and variable background, making the licensee results subject to considerable error. The lab space is inadequate for the types and number of analyses to be performed.
 - b. The number and skill of the support personnel is questioned. It appears that they must select from a bedding process throughout the Jersey Power and Light Company, rather than to hire skilled personnel from the outside. The counting equipment appears adequate, but no computer hook-up to resolve gamma spectra so it must be handled by hand.

In addition to wide discrepancies in their analytical results, they have not performed all the analyses required in order to correlate data with the State and IHSL. Here again, personnel do not have time to do much beyond their present load. I don't see much point in doing anymore sample splitting until some improvements are made along the lines mentioned above.

6. Finally, I would comment on the Operational Environmental Program in general. The program is pretty much the same as the Pre-op Program as evidenced by the number and locations of stations being the same and the contamination of certain nuclide analyses that are typically done only in Pre-op programs. Based upon these points, I would say that they have not evaluated the results of the Pre-op Program in a manner sufficient to make intelligent decisions on their operational program.

R. J. Everett
Radiation Specialist

cc: P. Stohr



Jersey Central Power & Light Company

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

March 16, 1973

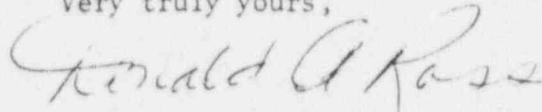
Mr. James P. O'Reilly, Director
Directorate of Regulatory Operations, Region 1
United States Atomic Energy Commission
970 Broad Street
Newark, New Jersey 07102

Dear Mr. O'Reilly:

Subject: Oyster Creek Station
Docket No. 50-219
Your February 23, 1973 Letter to R. H. Sims

In accordance with the subject letter, we have checked our facility and have determined that there are no Westinghouse circuit breakers with model numbers DB-25, DB-50, or DB-75 used in any of the engineered safeguards systems.

Very truly yours,



Donald A. Ross
Manager, Nuclear Generating Stations

pk

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MAR 15 1973

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J. G. Keppler, Chief, Reactor Testing & Operations Branch
Directorate of Regulatory Operations, HQ

RO INQUIRY REPORT NO. 50-219/73-04Q
JERSEY CENTRAL POWER & LIGHT COMPANY
OYSTER CREEK - BWR

The subject inquiry report is forwarded for your action. It is recommended that this event be publicized to demonstrate the problems that can develop by the failure to use and/or follow written procedures and the specific trap associated with the cleanup system. The temperature change in the idle loop caused by continued operation of the cleanup system was not recognized by the procedures; however, if the temperature differential specified as a prerequisite for starting the idle pump had been determined, the violation would not have occurred.

We have requested the licensee to provide us the results of his strain/stress analysis by March 15, 1973. We will keep you advised as information develops.

As you know from inspection reports 50-219/72-05 and 50-219/73-02, we have concerns about the management controls employed by this licensee. We plan to follow up on this matter as part of our total concern.

D. L. Caphton
Senior Reactor Inspector
Facility Operations Branch

Enclosure:
Subject Inquiry Report (21 copies)

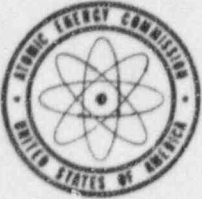
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PDR, report only
Local PDR, report only
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DTIE, report only
State of N. J., report only

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DATE ▶	3/14/73					



UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION 1
970 BROAD STREET
NEWARK, NEW JERSEY 07102

RO INQUIRY REPORT NO. 50-219/73-04Q

Subject: Jersey Central Power & Light Co.
Madison Avenue at Punchbowl Road
Morristown, New Jersey

License No.: DPR-16

Facility: Oyster Creek
Forked River, New Jersey

Title: Technical Specification Violation -
Restarting Recirculation Pump with
Greater Than 50°F Temperature
Differential

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

3/14/73
Date

A. Date and Manner AEC was Informed:

By telephone call from a licensee representative on March 12, 1973 and during a special inspection at the site on March 13, 1973 to review the circumstances relating to this event.

B. Description of Particular Event or Circumstance:

The B recirculation loop was returned to service on March 10, 1973 by opening the discharge valve and restarting the B recirculation pump. At the time of this action there existed a differential temperature of 117°F between the temperature of the reactor water and the loop water. Technical Specification paragraph 3.3 prohibits restarting an idle loop unless the temperature of the coolant within the idle recirculation loop is within 50°F of the reactor coolant temperature.

Other pertinent facts:

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The B recirculation loop had been removed from service to replace brushes on the MG set at 12:30 AM on March 10, 1973, by closing the pump discharge valve, opening the bypass valve around the discharge valve, and de-energizing the MG set. Opening the bypass valve permits back flow through the recirculation loop and normally maintains the coolant temperature in the loop within approximately 10°F of the reactor coolant temperature, however, operating personnel did not consider the effect of continued operation of the clean up system on idle loop temperatures. The clean up system is fed from the B loop, upstream of the suction valve, and discharges to the B loop, downstream of the discharge valve. With the loop discharge valve closed and the bypass valve open, the colder water from the clean up system back flowed through the bypass valve gradually lowering the temperature of the water in the recirculation pump and the temperature of the feedwater to the clean up system. The recorder for the recirculation loop temperature showed that the B loop temperature dropped approximately 117°F while the loop was isolated and increased the same amount when the pump was restarted approximately two hours later. The APRM recorders in the same reactor quadrant as the B recirculation loop showed that the flux increased approximately 17% when the pump was restarted. This flux increase is attributed to the associated increase in recirculation flow and a negative moderator temperature coefficient. Rod block alarms were received when the pump was restarted, but the flux increase was less than required to initiate a high flux scram. The narrow range reactor pressure recorder showed approximately 4 - 5 psig pressure surge at the same time.

Subsequent to the above, the D loop was isolated and returned to service without the above effects (after replacing the brushes on its MG set).

The above event was analyzed for a 375°F differential in the FDSAR with respect to the resulting nuclear transient, but not with respect to the thermal effect on the recirculation nozzles.*

C. Action by Licensee:

1. The prime cause of the above violation was the failure to check the loop temperature prior to restoring the loop to service, even though Technical Specifications and the operating procedures (No. 301) stipulate 50°F as the maximum allowable temperature differential. The licensee is revising the operating procedure to provide more definitive instruction in this area.

*The application for an increase in power level dated December 31, 1970 states on page B-IV-10 that the startup of a cold recirculation loop "...is essentially prevented by procedure and interlocks, and is not reanalyzed".

2. At present the licensee does not require the use of a check list when isolating or restoring a recirculation loop. The licensee is examining the need for such a check list as a part of his investigation.
3. The licensee is making an evaluation of the strain/stress in the recirculation nozzle that resulted from restarting the B recirculation loop with a temperature differential of 117°F.
4. The licensee plans to submit a 10 day written report to Licensing as required by Technical Specification paragraph 6.6.