

ENCLOSURE NO. 1

DESCRIPTION OF VIOLATIONS

Jersey Central Power and Light Company
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960
Docket No. 50-219

Certain activities under your license appear to be in violation of AEC regulations and license requirements as indicated below:

1. 10 CFR 20.105(b)(2), "Permissible levels of radiation in unrestricted areas", requires that radiation levels in unrestricted areas be limited so that if an individual were continuously present in the area, he could not receive a dose in excess of 100 millirems in any seven consecutive days.

Contrary to this requirement, radiation levels existed for two seven day periods, November 20 to November 27, 1972, and November 27 to December 3, 1972, in the unrestricted area along the east fence, of such magnitude, that if an individual had been continuously present in this area, he could have received a dose of 161 millirems and 230 millirems for the respective consecutive seven day periods as measured by your fence line dosimeters.

2. 10 CFR 20.202(a)(1), "Personnel monitoring", requires you to supply appropriate monitoring equipment to, and shall require the use of such equipment by: each individual who enters a restricted area under such circumstances that he receives, or is likely to receive a dose in any calendar quarter in excess of 25 percent of the applicable value specified in paragraph (a) of 10 CFR 20.101.

Contrary to this requirement, you failed to supply a film badge or a pocket dosimeter to an individual to assure compliance with 10 CFR 20.101(a). Specifically, an off-site truck driver remained at the 23 foot elevation of the reactor building, for a period in excess of two hours on February 14, 1973. Radiation levels to 200 millirems per hour existed in the area such that he could have received a radiation dose in excess of 25 percent (312 mrem) of the limit specified in 10 CFR 20.101(a).

3. 10 CFR 20.206(a), "Instruction of personnel, posting of notices to employees", requires, in part, that all individuals working in or frequenting any portion of a restricted area shall be informed of the occurrence of radioactive materials or of radiation in such portions of the restricted area.

Contrary to this requirement, you failed to provide such information to an employee working in a restricted area on February 14, 1973. Specifically, the employee was unloading new fuel from a truck at the 23 foot elevation in the reactor building and was not informed of existing radiation levels up to 200 millirems per hour.

4. Technical Specification 6.2.F.2 (in lieu of 10 CFR 20.203(c)(2)), requires that each "high radiation area" (100 milliroentgen per hour or greater) in which the intensity of radiation is 1000 milliroentgen per hour or less shall be barricaded and conspicuously posted as a "high radiation area"... Each "high radiation area" in which the intensity of radiation is greater than 1000 milliroentgen per hour shall be provided with locked doors to prevent unauthorized entry...

Contrary to this requirement, high radiation areas existed within the restricted area that were not posted, barricaded, or the entry controlled as identified below:

- a. The outside east door of the radwaste building and the large pump room inside the building, were not posted. Radiation levels to 300 and 1500 millirems per hour existed in the respective areas on February 13, 1973.
 - b. Areas at the 23 and 75 foot elevations in the reactor building were not posted or entries controlled by a barricade. Radiation levels to 200 millirems per hour existed in these areas on February 14, 1973.
 - c. The area at the northeast corner of the radwaste building, the drum storage room inside the radwaste building, and the outside drum storage area were not posted or entries controlled by a locked door. Radiation levels to 1500 millirems per hour existed in these areas on February 13, 1973. We noted that the first item in 4.c had been corrected prior to the completion of the inspection.
5. 10 CFR 20.203(b), "Caution signs, labels, signals, and controls", requires that each radiation area be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words, "Caution - Radiation Area". A "Radiation Area" is defined in Part 20 as any area accessible to personnel in which radiation exists, originating in whole or in part within licensed material, at such levels that a major portion of the body could receive in any one hour a dose in excess of 5 millirems, or in any five consecutive days a dose in excess of 100 millirems.

Contrary to this requirement, radiation levels greater than 5 millirems per hour, existed for periods of greater than one hour within your restricted area which were not posted with the required signs as identified below:

- a. The area around a drum at the northeast corner of the radwaste building; the areas adjacent to the east and south doors of the radwaste building; the area around a drum on the south side of the radwaste building; the area around the drums stored north of the radwaste building; and the north side entry to the outside waste storage tanks were not posted. Radiation levels up to 100 millirems per hour existed in these areas on February 13, 1973. We noted that the drums at the northeast corner and south side of the radwaste building had been removed to shielded storage prior to the completion of the inspection.
 - b. The RR Tip Drive area; the area adjacent to a drum on the operating floor; the area around the emergency condensers; and the liquid poison storage area in the reactor building were not posted. Radiation levels up to 15 millirems per hour existed in these areas on February 14, 1973.
6. 10 CFR 20.203(f)(1) and (2), "Caution signs, labels, signals, and controls", requires that each container of licensed material bear a durable, clearly visible label showing the radiation caution symbol, the words, "Caution - Radioactive Material", the identification of its radioactive contents, and that the label provide sufficient information to permit individuals handling or using the container to take precautions to avoid or minimize exposure.

Contrary to this requirement, you failed to label the containers identified below:

- a. A drum at the 23 foot elevation in the reactor building, drums identified in Item 5a and the fiberglass storage tanks containing chromated water.
7. 10 CFR 20.203(e)(1), "Caution signs, labels, signals, and controls", requires that rooms or areas in which byproduct material is used or stored in an amount exceeding ten times the quantity of such material specified in Appendix C to 10 CFR 20 be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: "Caution - Radioactive Material".

Contrary to this requirement, the doors on the south and east sides of the radwaste building were not posted.

8. 10 CFR 20.201(b), "Surveys", requires that surveys be conducted as may be necessary to comply with the regulations contained in each section of Part 20. A "survey", as defined in Paragraph 20.201(a), means "an evaluation of the radiation hazards incident to production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions. When appropriate, such evaluation includes a physical survey of the location of materials and equipment, and measurements of levels of radiation or concentrations of radioactive material present".

Contrary to this requirement, you failed to make such surveys as were necessary to assure compliance with the applicable parts of 10 CFR 20 as described in violations Nos. 1 through 7. Surveys were conducted with the intention of achieving this objective, however, these surveys were not performed at a sufficient number of locations on a timely basis, consistent with existing radiological conditions.

9. Technical Specification 6.2.C requires that standing instructions to the operating staff shall require that procedures defined in 6.2.B are to be followed in conducting activities identified therein. The subject procedures are contained in Section 900, Oyster Creek Nuclear Electric Generating Station, Procedures Manual. Section 907, Item 907.4.1, Storage Facilities, states that drummed radioactive waste will be stored in the radwaste facility.

Contrary to this requirement, approximately 25 drums of radioactive waste were stored in an outside area north of the radwaste facility on February 13, 1973. Furthermore, the subject area had been used for this purpose for a time period of approximately one year, as evidenced by survey records.

10. Section IX, Subsection 3-3.1.1 of your FDSAR states that leakage and spills from tanks containing potentially radioactive wastes will be collected in catch basins, floor drains, and sumps, and returned to the waste system for processing. Additionally, your letter dated December 12, 1972, stated that the drains from the catch basin at the outside waste storage tanks will be directed to the 1-9 radwaste sump.

Contrary to the above, the drains from the catch basin at the outside storage tanks were not directed to the 1-9 radwaste sump, in that plugs had been installed in the drains which effectively blocked drainage to the sump and defeated the intent of the catch basin. On February 13, 1973, the water that had collected in the catch basin was frozen solid, thus preventing access to the plugs for removal.

ENCLOSURE NO. 2

DESCRIPTION OF SAFETY ITEMS

Jersey Central Power and Light Company
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960
Docket No. 50-219

Certain items appear to raise questions concerning the safety of operations as identified below:

1. Prudent practices dictate that a safety program for protection of the health and safety of employees should: (a) contain a system of management controls to assure that the program is maintained, (b) provide procedures and internal audits to assure program quality, (c) provide specialized training requirements for radiation protection personnel and, (d) include methods or procedures for the surveillance necessary to insure that employees are suitably informed of and protected from the radiation hazards incident in their work.

Contrary to the above, the following deficiencies were observed during the inspection of your facilities and safety program records:

- a. Station Radiation Protection Procedures, Section 900, requires that employees follow radiation safety rules and procedures; however, a program had not been implemented whereby Plant Management could be assured that individuals were fulfilling this obligation.
- b. Administrative control mechanisms had not been implemented relative to: internal audits or inspections with respect to radiological practices; internal audits to establish a measure of the radiation protection function; and formal reporting requirements by line organization of program deficiencies, problem areas, and violations of plant procedures and AEC regulations.
- c. A continuous radiological protection training program for plant personnel had not been established. Specifically, there was no evidence of training relative to and consistent with the present

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- radiological conditions and high exposure use. The training program conducted for Radiation Technicians did not include instructions or training regarding AEC requirements, specifically, 10 CFR 20.
- d. Standard Operating Procedures had not been issued to assure control of stored chromated water with respect to routine inspections for the detection of leakage, open tank hatches and overflows. An Emergency Procedure had not been issued to include tank leakage or rupture, alternate storage, pumping equipment, etc. There was no evidence of an evaluation program in the event of a gross loss to the environment.
 - e. Extended Radioactive Work Permits posted at several locations in the Reactor Building did not adequately reflect the radiological conditions. Specifically, containers of radioactive waste providing excessive dose rates, containers not labeled, and radiation zones not properly posted.
 - f. Waste drums in the radwaste building were being manually capped without a radiation survey to determine exposure rates prior to capping. Drums in storage were observed with identified radiation levels up to 10 R/hr.
2. The expenditure of every reasonable effort to maintain low levels of contamination and radiation, in areas where radioactive materials are present or where area occupancy may result in radiation exposure to persons, is a universally accepted precept of radiation safety and is supported in principle in Section XII, Item 3.3.1 of the FDSAR which states: "It is the policy of the company to keep personnel radiation exposure within the regulations, and beyond that, to keep it as low as practicable."
- Contrary to the above, the following deficiencies were noted:
- a. Improperly stored and unidentified radioactive waste containers at various locations inside the restricted area were contributing exposure to personnel performing assigned work; the floor of the large pump room in the radwaste building was in need of decontamination which was a continuing problem because of recurring drain stoppage; work was being performed in areas where the individuals were not aware of the existing radiation levels; and the general housekeeping with respect to radiological control was deficient.

.. The program for disposal of solid waste has not been consistent with the accumulation rate and storage capacity. On February 13, 1973, the waste drum inventory was about 600 drums, of which approximately 25 drums were stored outside of the rad-waste shielded facility.

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Jersey Central Power and Light Company
Attention: Mr. Ivan R. Finfrock
Vice President of Power Generation
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960

Docket No. 50-219

Gentlemen:

The attached RO Inquiry Report is forwarded for your information. This report was previously cleared verbally by Mr. Don Ross of your staff for proprietary information. Distribution is being made by this office to the Public Document Room.

Sincerely,

Paul R. Nelson, Chief
Radiological and Environmental
Protection Branch

Enclosure:
RO Inquiry Report No. 50-219/73-03Q

cc: Mr. T. J. McCluskey, Station Superintendent

bcc: RO Chief, Reactor Testing & Operations Branch, HQ
RO Chief, Environmental Inspection Branch
RO:HQ (5)
DR Central Files
RS (3)
Directorate of Licensing (13)
RO Directors (4)
PDR
LPDR
NSIC
DHP
State of New Jersey

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SURNAME ▶	Gallina: ss	Stohr	Cantrall	Capnton	Carlson	Nelson
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RO Inquiry Report No. 50-219/73-030

Licensee: Jersey Central Power and Light Company (JCPL)
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960

License No.: DPR-16

Facility: Oyster Creek, Forked River, New Jersey

Descriptive Title: Fish Kill

Prepared by: C. O. Gallina, Ph.D., Radiation Specialist

A. Date and Manner AEC was Informed:

Articles were observed in local newspapers (commencing on or about February 17, 1973) and the matter was discussed with RO:I consultant, Mr. John Reintjes (Atlantic Estuarine Fisheries Center, Beaufort, North Carolina) who had been in communication with JCPL personnel and other agencies on this subject. Also, J. P. Stohr, RO:I, was at Oyster Creek site on February 21, 1973 and observed dead fish along the banks and floating in the discharge canal as well as seagull activity in the area.

B. Description of Particular Event or Circumstance:

Information obtained from the licensee and Mr. Reintjes indicated that there had been a fish kill (thousands of 1 1/2 to 4 inch menhaden) commencing on or about February 16 and 17, 1973 in the Oyster Creek discharge canal. The nuclear power plant had been operating prior to and during the initial phases of this kill.

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Cold shock does not appear to have been the direct cause of the fish dying during this period of time. Subsequent similar fish kills were reported on February 18 and on February 21 and 22, 1973. The licensee has stated that the subsequent kills were, in effect, continuing phases of the original kill which commenced on February 16, 1973. The correlation of these kills with any particular plant activity is not known at this time, although the licensee reported that the plant was shutdown for approximately eight hours beginning late on February 18, 1973 during which time the discharge canal water temperature dropped from an ambient of approximately 54°F to approximately 33°F. The licensee stated that it was his belief that the shutdown may have accelerated the fish kill which was already in progress.

C. Action by Licensee:

The licensee is evaluating these occurrences and has stated that RO:I will be informed as to the results of their findings.