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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ACRS 1979

RECEIVED
ADVISORY COMMITTEE ON
REACTOR SAFEGUARDS U.S. N.R.C.

H-1016

January 12, 1979

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Jersey Central Power and Light Company
ATTN: Dr. Shepard Bartnoff
President
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960

Docket No. 50-219
License No. DPR-16

Gentlemen:

The findings of recent inspections of the radiation protection program at the Oyster Creek Nuclear Generating Station, listed in Appendix A to this letter, indicate repeated noncompliance with the same basic requirements which have been brought to your attention in Notices of Violation issued since January 1976. The frequency of occurrence of these items of noncompliance has increased since May 1977. Because of our concern over this increase, representatives of our Region I office met with members of your corporate management on July 8, 1977, and again on June 21, 1978, to discuss your efforts at corrective action.

Appendix A also lists two items of noncompliance which were observed in the area of plant security. Both are recurrent in that they have been cited in previous Notices of Violation. The need for management attention to improving the plant security program was also emphasized during the July 1977 meeting.

In our view, the items of noncompliance in Appendix A demonstrate a lack of effective radiation safety and plant security controls. The chronic and repetitive nature of the items of noncompliance raises serious concerns about the effectiveness of the actions taken by Jersey Central Power and Light Company to correct noncompliances brought to its attention in previous Notices of Violation. Consequently, we propose to impose civil penalties in the cumulative amount of Twenty-Six Thousand Dollars (\$26,000) for these items of noncompliances. Appendix B to this letter is the Notice of Proposed Imposition of Civil Penalties.

Eight of the nine items of noncompliance listed in Appendix A have been listed in previous Notices of Violation. One of these items, failure to control high radiation areas, has been cited on three previous occasions. Another item, failure to follow radiation protection procedures, has been cited on six previous occasions.

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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January 12, 1979

During the past three years, a total of ninety items of noncompliance were identified. These included fifty-three infractions and thirty-seven deficiencies. Of the ninety items, twenty-four were associated with the radiation protection program and twenty were associated with the plant security program. The nine items in Appendix A are not included in these totals. Civil penalties of \$8,000 were imposed in June 1976 as a result of failure to maintain control of the plant's protected area.

While no single item of noncompliance has directly jeopardized public health and safety or compromised the security program, we are concerned that the numerous and repetitive items of noncompliance indicate inadequate attention by management to proper and effective controls and may lead to more serious situations.

In addition to the items of noncompliance listed in Appendix A, several findings were noted which cause us to be concerned with the adequacy of your calibration and maintenance program for radiation monitoring instrumentation. Specifically, the use of an instrument which responded low by a factor of 2.5 and identification of three out of six instruments which did not respond within the predetermined range when placed on a sealed source used to field check portable instruments demonstrated an apparent problem with your calibration and maintenance program.

Another area of concern which is not addressed in the Notice of Violation is your health physics retraining program for station personnel. Based on a random selection of training records for thirty individuals, it was determined that nine individuals had not received retraining in health physics practices for a period of three years. It was further noted that Oyster Creek Procedure No. 102, "Training of Nuclear Generating Station Personnel", Revision 2, states that all personnel will be scheduled for annual lectures, however, 100% attendance is not required. Illness, vacation, business trips and conflicting requirements are given as examples of acceptable excuses. Since health physics retraining is a vital part of an effective radiation protection program, it appears that your procedure should be revised to require that all personnel actually receive health physics retraining within a prescribed interval.

Appendix C, Notice of Deviation, identifies an example of an activity which appears to be in conflict with the basic radiation protection philosophy of maintaining radiation exposures as low as reasonably achievable. Although your company is committed to this philosophy in your Final Safety Analysis Report, results of surveys showed that adequate efforts were not made to reduce radiation levels emanating from work tables used to disassemble and rebuild control rod drive mechanisms.

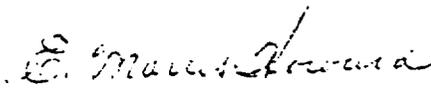
January 12, 1979

You are required to respond to this letter, and in preparing your response you should follow the instructions in Appendix A. In your reply give particular attention to describing those actions you have taken or plan to take to improve your control of the radiation protection program and the plant security program to prevent further noncompliance. In addition, please include a description of the actions you will take with respect to our concerns regarding your calibration and maintenance program for radiation monitoring instruments, your health physics retraining program for station personnel, and your implementation of the as low as reasonably achievable (ALARA) philosophy.

Your written reply to this letter and Notice of Violation and the findings of our continuing inspections of your activities will be considered in determining whether further enforcement action, such as additional civil penalties or orders to suspend, modify or revoke the license, may be required to assure future compliance. We intend to augment the NRC inspection effort in the area of radiation protection at the Oyster Creek Nuclear Generating Station to make a comprehensive evaluation of the effectiveness of your corrective actions.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosures will be placed in the NRC's Public Document Room.

Sincerely,


John G. Davis
Acting Director
Office of Inspection
and Enforcement

Enclosures:

1. Appendix A, Notice of Violation
2. Appendix B, Notice of Proposed Imposition of Civil Penalties
3. Appendix C, Notice of Deviation

APPENDIX A

NOTICE OF VIOLATION

Jersey Central Power and Light Company

Docket No. 50-219

This refers to the inspections conducted by representatives of the Region I (Philadelphia) Office at the Oyster Creek Nuclear Generating Station, Forked River, New Jersey, of activities authorized by NRC License No. DPR-16.

During these inspections conducted on September 6-8, 18-19, and 26-29, 1978 (Inspection No. 50-219/78-23) and on October 17-19, 1978 (Inspection No. 50-219/78-27), the following apparent items of noncompliance were identified.

- A. 10 CFR 20.103, "Exposure of individuals to concentrations of radioactive materials in air in restricted areas," requires in paragraph (a)(3) that for purposes of determining compliance with the requirements of section 20.103 the licensee shall use suitable measurements of concentrations of radioactive materials in air for detecting and evaluating airborne radioactivity in restricted areas. Contrary to the above:
1. Surveys of airborne radioactive material to assure compliance with 10 CFR 20.103(a) were not made on September 28, 1978, in the Centrifuge Room of the Rad Waste Building, a restricted area, when two individuals, wearing half masks with air purifying cartridges, entered the room on an inspection tour. The centrifuge was not operating. Floor smears taken by the licensee from the area entered yielded removable contamination levels of approximately 986,000 dpm/100 cm².
 2. Surveys of airborne radioactive material to assure compliance with 10 CFR 20.103(a) were not made on September 28, 1978, in the Operating Aisle of the Rad Waste Building, a restricted area, when two individuals, wearing half masks with air purifying cartridges, used the service air system to blow out air supply hoses. The rapid flow of air was directed against the contaminated floor. Floor smears taken by the licensee on September 28, 1978 indicated removable contamination levels ranging from approximately 10,000 to 163,000 dpm/100 cm². No air survey was made to determine the airborne concentrations to which the individuals were exposed during this operation. An air survey made approximately 15 minutes after the work was completed showed that the airborne concentration of radioactive material had increased substantially when compared to a survey made in the same location three hours earlier.

3. Surveys of airborne radioactive material to assure compliance with 10 CFR 20.103(a) were not made on September 27, 1978 when an individual wearing a full face supplied air respirator, entered the Centrifuge Room of the Rad Waste Building, a restricted area, while the centrifuge was processing radioactive waste. The nearest air sample taken during the centrifuge operation was obtained in the Operating Aisle of the Rad Waste Building. This sampling point was outside and at least 100 feet from the closed, unventilated Centrifuge Room, and was not representative of the air concentrations to which the individual was exposed. Smears taken in the Centrifuge Room by the licensee on September 26, 1978, revealed that removable radioactive contamination levels ranged from approximately 300,000 to 1,350,000 dpm/100 cm².

This is an infraction (Civil Penalty \$3,000).

- B. 10 CFR 20.103, "Exposure of individuals to concentrations of radioactive materials in air in restricted areas," requires in paragraph (b)(1) that the licensee shall, as a precautionary procedure, use process or other engineering controls, to the extent practicable, to limit concentrations of radioactive materials in air to levels below those which delimit an airborne radioactivity area as defined in § 20.203(d)(1)(ii).

Contrary to the above, on September 29, 1978, neither process nor other engineering controls were used to limit concentrations of radioactive materials in air during work at the open discharge chute of a hopper in the Drum Filling Aisle of the Rad Waste Building which was a restricted area. The hopper was blocked with dry caked radioactive powder and no measures to limit the dispersion of the dislodged material into the breathing zone of the two individuals were utilized. Two individuals wearing full face supplied air respirators stood beneath and to the side of the chute and poked with a stick to dislodge the radioactive material above. Floor smears taken by the licensee measured loose contamination of approximately 150 mrem/hr at contact.

This is an infraction (Civil Penalty \$3,000).

- C. 10 CFR 20.103, "Exposure of individuals to concentrations of radioactive materials in air in restricted areas," requires in paragraph (c) that when respiratory protective equipment is used to limit the inhalation of airborne radioactive material pursuant to paragraph (b)(2) of this section, the licensee may make allowance for such use in estimating exposures of individuals to such materials provided that such equipment is used as stipulated in Regulatory Guide 8.15, "Acceptable Program for Respiratory Protection".

Regulatory Guide 8.15, Table 1, "Protection Factors for Respirators", states in footnote (b) that the protection factors for respirators are, "Only for shaven faces and where nothing interferes with the seal of tight-fitting facepieces against the skin".

Oyster Creek Procedure No. 904.2, Revision 8, dated May 22, 1978, "Fitting and Removal of a Full Face Respirator," states in section 4.5; "There shall be no interference between a headgear and the normal method of wearing a respirator".

Contrary to the above, on September 29, 1978, allowance was made for the use of respiratory protective equipment, full face supplied air respirators, when two individuals worked to dislodge dry radioactive powder blocking the open discharge chute of a hopper in the Drum Filling Aisle of the Rad Waste Building, which was a restricted area. The individuals' disposable hoods interfered with the seals of the tight-fitting facepieces against their skin.

This is an infraction (Civil Penalty \$3,500).

- D. Technical Specification 6.13, "High Radiation Area," requires that each High Radiation Area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a High Radiation Area and entrance thereto shall be controlled by issuance of a Radiation Work Permit. It further requires that any individual or group of individuals permitted to enter such areas shall be provided with a radiation monitoring device which continuously indicates the radiation dose rate in the area. Contrary to the above:
1. On September 7, 1978, a survey taken by the inspector of a sealed wooden box approximately 4 feet by 8 feet by 3 feet high, located on the 119' elevation of the Reactor Building, identified a radiation field over an extended area of approximately 150 mrem/hr at 2 inches from the top of the box (apparent potential gonad dose) and the area was not barricaded and conspicuously posted as a High Radiation Area. The single High Radiation Area sign on the top surface of the box was covered by a nylon rigging sling and did not provide a conspicuous warning to personnel.
 2. On September 26, 1978, a survey taken by the inspector of piping near the wooden platform at the entrance to the Torus area identified a radiation field over an extended area of approximately 200 mrem/hr when measured at about eighteen inches from the pipes and the area was not barricaded and posted as a High Radiation Area.

3. On October 17, 1978, a survey, performed by the inspector and confirmed by the licensee, of the Reactor Cavity Drain Line, located on the 75' elevation of the Reactor Building, identified a radiation field over an extended area of approximately 120 mrem/hr when measured at about twelve inches from the pipe (apparent potential dose to lens of eyes) and the area was not barricaded.

This is an infraction (Civil Penalty \$4,000).

- E. Technical Specification 6.11, "Radiation Protection Program" in addition to requiring that procedures for personnel radiation protection be prepared consistent with the requirements of 10 CFR Part 20, also requires that they be approved, maintained and adhered to for all operations involving personnel radiation exposures.

1. Oyster Creek Procedure No. 902.4, Revision 2, "Access and Egress Control" dated May 21, 1976, states, 1) that if a personnel monitor is provided at the Radioactive Work Permit (RWP) area exit, it shall be used to check for gross personnel contamination, and 2) passage from the Radioactive Materials Area will be permitted only after an individual has removed any protective clothing and monitored himself to determine that the allowable limits of personnel contamination are not exceeded. Contrary to the above:

- (a) On September 6, 1978, one individual was observed leaving the Radioactive Materials Area at the main monitoring and change room, where monitoring equipment was provided, without performing the required monitoring.
- (b) On September 18, 1978, one individual was observed leaving the control point at the Turbine Operating Floor, an RWP area where a monitor was provided, without monitoring himself.
- (c) On September 28, 1978, two individuals were observed leaving the control point in the Rad Waste Building, an RWP area where a monitor was provided, without monitoring themselves.

2. Oyster Creek Procedure No. 914.4, Revision 9, dated March 18, 1976, "Use of Protective Clothing and Equipment" states in section 3.1 that only clothing with radiation levels less than 1 mR/hr above background is to be made available for use.

Contrary to the above, on September 7, 1978, a survey taken by the inspector and confirmed by the licensee of three pairs of coveralls from the issue bins located in the Monitor and Change Room, where they were available for use, revealed one pair of coveralls which exceeded 1 mR/hr above background.

3. Oyster Creek Procedure No. 902.1, Revision 14, dated September 13, 1978, "Radioactive Work Permits" states in section 4.2 that all applicable radiological limits and precautions shall be held in strict compliance by all personnel.

Contrary to the above, on October 18, 1978, an individual was observed working in a posted and barricaded high radiation and contamination area without the protective equipment (high range self-reading dosimeter, surgeons cap, plastic gloves and rubber shoe covers) required by the Radioactive Work Permit (No. 2731).

4. Oyster Creek Procedure No. 906.3, "Pre-operational Checkout of TLD Reader", Revision 1, dated May 22, 1978, requires that a pre-operational checkout of the TLD reader be performed prior to reading any TLD dosimeters. Specific pre-operational checkout requirements are:

- (a) In Section 5.7 which states, "Record average reading [Light Source Value] on log sheet".
- (b) In Section 5.8 which states, "Under the remarks column on the log sheet, record the name of the person performing the checkout".

Contrary to the above, a review of records showed that:

- (a) On July 26 and August 7, 1978, the average light source value was not recorded on the log sheet.
- (b) During the period July 11 thru August 16, 1978, the name of the person performing the TLD checkout was not entered on any of the log sheets.

5. Oyster Creek Procedure No. 903.2, "Personnel Monitoring" Revision 11, dated July 5, 1978, states in Section 3.2 that as a prerequisite to assigning personnel dosimetry "all dosimetry has been checked and found to be acceptable for use".

Oyster Creek Procedure No. 906.17, "Spike Testing and Leak Testing Self-Reading Dosimeters", Revision 1, dated May 22, 1978, requires:

- (a) In Section 5.1 "Spike Testing", step 5.1.17 that if the dosimeter net value is not within +10% of the Condenser R-meter reading, the dosimeter shall be removed from immediate service.
- (b) In Section 5.2 "Leak Testing", step 5.2.9 that if the dosimeter net value is not within 2% of the full scale reading, for each 24 hour service period, the dosimeter shall be removed from immediate service.

Contrary to the above, a review of test results for 10 self-reading dosimeters selected on October 18, 1978, from the in-service dosimetry racks, located in the Main Guard House, showed that:

- (a) Dosimeter No. 704221 had failed both the spike and leak testing and had not been removed from immediate service.
- (b) Dosimeter No. 602310 had not been tested (spike or leak) and found acceptable for service as required.

This is an infraction (Civil Penalty \$4,000).

- F. 10 CFR 20.203, "Caution signs, labels, signals and controls," requires in paragraph (f) that each container of licensed material shall bear a durable, clearly visible label identifying the radioactive contents. The label must bear the radiation caution symbol and the words "Caution - Radioactive Material" or "Danger - Radioactive Material". It must also provide sufficient information to permit individuals handling or using the containers, or working in the vicinity thereof, to take precaution to avoid or minimize exposures.

Oyster Creek Procedure No. 909.2, Rev. 0, dated August 20, 1976, "Radioactive Material Container Labeling", specifies in sections 5.1 and 5.2, the same basic requirement for labeling radioactive material containers as 10 CFR 20.203(f).

Contrary to the above, on September 6, 1978, two 55 gallon drums containing radioactive waste, located on the 119' elevation of the Reactor Building did not bear the "Caution-Radioactive Material" label nor were the drums labeled with information to permit individuals handling or working in the vicinity thereof to take precautions to avoid or minimize exposure.

2. On September 7, 8 and 18, 1978, door #17 was unlocked and unattended.

This is an infraction (Civil Penalty \$3,500).

This Notice of Violation is sent to Jersey Central Power and Light Company pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Jersey Central Power and Light Company is hereby required to submit to this office within twenty (20) days of the receipt of this Notice, a written statement or explanation in reply, including for each item of noncompliance, (1) admission or denial of the alleged items of noncompliance; (2) the reasons for the items of noncompliance if admitted; (3) the corrective step which have been taken and the results achieved; (4) corrective steps which will be taken to avoid further items of noncompliance; and (5) the date when full compliance will be achieved.

APPENDIX B

NOTICE OF PROPOSED IMPOSITION OF CIVIL PENALTIES

Jersey Central Power and Light Company

Docket No. 50-219

This office has considered the enforcement options available to the NRC including administrative actions in the form of written Notices of Violation, civil monetary penalties, and Orders pertaining to the modification, suspension or revocation of a license. Based on these considerations we propose to impose civil penalties pursuant to Section 234 of the Atomic Energy Act of 1954, as amended, (42 USC 2282), and to 10 CFR 2.205 in the cumulative amount of Twenty-Six Thousand Dollars (\$26,000), for the specific items of noncompliance set forth in Appendix A to the cover letter. In proposing to impose civil penalties pursuant to this section of the Act and in fixing the proposed amount of the penalties, the factors identified in the Statements of Consideration published in the Federal Register with the rule making action which adopted 10 CFR 2.205 (36 FR 16894) August 26, 1971, and the "Criteria for Determining Enforcement Action," which was sent to NRC licensees on December 31, 1974, have been taken into account.

Jersey Central Power and Light Company may, within twenty (20) days of receipt of this Notice pay the civil penalties in the cumulative amount of Twenty-Six Thousand Dollars (\$26,000), or may protest the imposition of the civil penalties in whole or in part by a written answer. Should Jersey Central Power and Light Company fail to answer within the time specified, this office will issue an Order imposing the civil penalties in the amount proposed above. Should Jersey Central Power and Light Company elect to file an answer protesting the civil penalties, such an answer may (a) deny the items of noncompliance listed in the Notice of Violation in whole or in part, (b) demonstrate extenuating circumstances, (c) show error in the Notice of Violation, (d) show other reasons why the penalties should not be imposed. In addition to protesting the civil penalties in whole or in part, such answer may request remission or mitigation of the penalties. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 2.201, but may incorporate by specific reference (e.g., giving page and paragraph numbers) to avoid repetition.

Jersey Central Power and Light Company's attention is directed to the other provisions of 10 CFR 2.205 regarding, in particular, failure to answer and ensuing orders; answer, consideration by this office, and ensuing orders; requests for hearing, hearings and ensuing orders; compromise; and collection.

Upon failure to pay any civil penalty due which has been subsequently determined in accordance with the applicable provisions of 10 CFR 2.205, the matter may be referred to the Attorney General, and the penalty, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Atomic Energy Act of 1954, as amended, (42 USC 2282).

APPENDIX C

NOTICE OF DEVIATION

Jersey Central Power and Light Company Docket No. 50-219

This refers to the inspections conducted by representatives of the Region I (Philadelphia) Office at Oyster Creek Nuclear Generating Station, Forked River, New Jersey, of activities authorized by NRC License No. DPR-16.

During these inspections conducted September 6-8, 18-19, and 26-29, 1978, (Inspection No. 219/78-23) and on October 17-19, 1978, (Inspection No. 50-219/78-27) the following apparent deviation was identified.

10 CFR 20.1, "Purposes," states in Section (c), that, "persons engaged in activities under licenses issued by the Nuclear Regulatory Commission...should, in addition to complying with the requirements set forth in this part make every reasonable effort to maintain radiation exposures,...,as low as reasonably achievable."

Regulatory Guide 8.8, "Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable," states:

- a. in Section 2.b, Radiation Shields and Geometry, paragraph (1), "exposure of personnel servicing a specific component (such as a pump, filter, or valve) to radiation from other components containing radioactive material can be reduced by providing shielding between the individual components that constitute substantial radiation sources and the receptor."
- b. in Section 3.a, Preparation and Planning, paragraph (5), "The existing radiation levels frequently can be reduced by draining, flushing, or decontamination methods or by removing and transporting the component to a lower radiation zone."

The Oyster Creek Unit No. 1 Final Safety Analysis Report (FSAR) Chapter XII, Conduct of Operations, states in Section 3.3.1, "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, on September 28, 1978, no reasonable effort (i.e., shielding, decontamination, or removal) was made to reduce the whole body radiation levels emanating from work tables used to disassemble and rebuild control rod drive mechanisms. The tables emanated radiation levels as high as 600 mrem/hr at contact and consequently produced whole body dose rates as high as 100 mrem/hr to which workers were exposed.