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July 31, 1980

EA-80-39
Recd 8/7/80

Mr. Victor Stello, Jr. Director
Office of Inspection and Enforcement
United States Nuclear Regulatory Commission
Washington, D. C. 20555

Docket No. 50-219

Dear Mr. Stello:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Radiation Protection Inspection of
March 18-19, 1980

This is in reply to your letter of July 8, 1980 regarding the special radiation protection inspection conducted on March 18-19, 1980 at the Oyster Creek Nuclear Generating Station. In Appendix A to your letter, there are noted several activities which were not conducted in full compliance with the NRC regulations and conditions of the Oyster Creek NRC Facility License. Attachment A to this letter contains our responses to the individual items.

JCP&L is fully committed to achieving a high quality radiological control program.

Actions being taken to improve radiological controls are not limited to those described in the Attachment but are far more extensive. We will continue to commit major amounts of time and resources to achieve these goals as soon as practicable.

With regard to Appendix B of your letter concerning the imposition of civil penalties, a check in the amount of Twenty-One Thousand Dollars (\$21,000) is enclosed.

Very truly yours,

Ivan R. Finfrock, Jr.
Ivan R. Finfrock, Jr.
Vice President Generation

IRF:dh
Attachment

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ATTACHMENT A

A. NONCOMPLIANCE:

Technical Specification 6.8, Procedures requires in Section 6.8.1, that written procedures be established, implemented and maintained that meet or exceed the requirements of Sections 5.1 and 5.3 of American National Standard N18.7-1972 and Appendix "A" of the Nuclear Regulatory Commission's Regulatory Guide 1.33-1972. Appendix "A" of Regulatory Guide 1.33 lists, in Section G.5.e, Radioactive Work Permit Procedure as a procedure to be prepared. American National Standard (ANSI) N18.7 presents in Section 5.3.2 the content to be included in a procedure. Included in Section 5.3.2 are precautions and limitations, and actions.

Contrary to the above, for the period July 2, 1979 through March 18, 1980, no Radioactive Work Permit Procedure was established, implemented or maintained meeting the above requirements in that the procedure established by the licensee as a Radioactive Work Permit Procedure did not contain precautions and limitations, nor actions. Specifically, the RWP did not contain:

- (1) Precautions, limitations or actions to be taken by personnel, including radiation program technician actions, such as termination of the RWP due to changing radiation conditions or actions to be taken as a result of a worker's failure to adhere to the requirements of the RWP;
- (2) Criteria to define the conditions for use of extended versus routine RWP;
- (3) Limitations regarding the use of one RWP to cover multiple work activities;
- (4) Required action (based on radiological hazards present) such as holding a preplanning meeting prior to commencement of the work. The preplanning meetings would serve to instruct workers in the precautions and procedures to minimize exposure; and
- (5) Conduct of an as low as reasonably achievable (ALARA) review prior to commencement of work.

This lack of precautions and limitations, and actions resulted in two individuals sustaining significant intakes of radioactive material and external radioactive contamination.

RESPONSE:

This item is correct as stated.

The reasons for the items of noncompliance were primarily changes in the radiation protection procedures that were made rapidly in an extensive effort to improve the overall program. A copy of Procedure 915.1 was issued on July 2, 1979, and simultaneously forwarded to Region I for review. In addition, the RWP's for the refueling floor were reviewed by NRC Region I inspectors at the start of the outage (Inspection Report #80-03). When further RWP procedure weaknesses were subsequently observed by the PAB Team, they were scheduled for revision as part of an overall management program for improvement. In retrospect, higher priority should have been placed on the RWP procedure.

Immediate Corrective Steps:

All work on the refueling floor was stopped after the event. Special RWP's were issued for work involving significant radiological concerns. In addition, a video tape training program of correct radiological work practices was instituted. All individuals were required to attend prior to resuming work. Contamination levels were reduced prior to restart of the job and the necessary engineering controls such as glove boxes and other types of containments for working on highly contaminated tools was put into effect. A two man decon crew was assigned continuously to maintain the area.

Longer Term Corrective Steps:

A separate RWP procedure, 915.12, was prepared. This procedure incorporates all the concerns listed in Item A and was reviewed by two NRC Inspectors prior to approval on May 22, 1980. It was issued on May 24, 1980. Procedure 915.12 contains much more detail, including ALARA reviews, man REM goals and specific instructions to stop work for loss of radiological control.

Full compliance was achieved June 24, 1980.

B. NONCOMPLIANCE:

10 CFR 20.103(a)(3) requires that the licensee use suitable measurements of concentrations of radioactive materials in air, for detecting and evaluating airborne radioactivity in restricted areas.

Contrary to the above, on March 2, 1980, at 10:00 am and 8:00 pm two control rod blade handling tools were removed from the facility's Spent Fuel Storage Pool, a restricted area. The tools were handled, and examined, and at least one tool was repaired by personnel without suitable measurements of airborne radioactivity being made. The tools had removable radioactive contamination up to 340,000 dpm beta-gamma and 390 dpm alpha per 100 square centimeters.

RESPONSE:

This item is correct as stated.

The reason for the item of noncompliance was that air samples were being taken 20 feet away, which was not sufficient for compliance with 10 CFR 20.103(a)(3). There was a radiation protection technician present and an air sampler present. The technician had been instructed prior to the event in the necessity of obtaining breathing zone air samples. An adequate RWP and adequate preplanning of the job could have reinforced this requirement.

Immediate Corrective Steps:

A temporary change to Procedure 915.5 was instituted on March 4, 1980. This change requires breathing zone air samples based on contamination levels. All technicians were instructed on March 5, 1980 in the above procedure change. A memo was issued by the Supervisor, Radiation Protection (RPM) to all Radiation Protection personnel regarding the temporary procedure change. A revision of Procedure 915.5 incorporating the above temporary change was approved and issued April 15, 1980. The technician was disqualified from responsible radiological control work.

Qualifications of all JCP&L technicians were reviewed to verify compliance with ANSI-18.1-1971. Those not in compliance were disqualified by March 17, 1980.

Full compliance was achieved March 17, 1980.

C. NONCOMPLIANCE:

10 CFR 20.103, "Exposure of individuals to concentrations of radioactive materials in air in restricted areas" requires in Paragraph (b), that to the extent practicable, the licensee as a precautionary procedure, use process or other engineering controls 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). When it is impracticable to apply process or other engineering controls, other precautionary procedures, such as increased surveillance, limitation of working times or the provision of respiratory protective equipment, shall be used to maintain intake of radioactive material by any individual within any period of seven consecutive days as far below that intake which would result from inhalation of such material for 40 hours at the uniform concentrations specified in Appendix B, Table 1, Column 1.

Contrary to the above, no process or engineering controls, or other precautionary procedures were used by the licensee during cleaning and examination of control rod blade handling tools on March 2, 1980 to limit concentrations of radioactive materials in air and intake of radioactive material by two individuals performing the above work. The individuals involved sustained extensive radioactive skin contamination and intakes of radioactive material in excess of the 7 day intake limit.

RESPONSE:

This item is correct as stated.

The reasons for the items of noncompliance were inadequate notification of the radiation protection department that the control rod blade tool would be removed for inspection and that the RWP procedure did not have adequate criteria for radiological engineering review requirements.

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Immediate Corrective Steps:

All production work on the refueling floor was halted.

The entire refueling floor was decontaminated.

All radiation protection technicians and radiation workers were reinstructed prior to resumption of work on the use of glove bags, containments, work practices with highly contaminated tools and ventilation requirements.

The ventilation flow on the refuel floor was adjusted to increase the flow rate.

A separate RWP was issued for removing items with significant contamination from the reactor water.

Longer Term Corrective Steps:

A decontamination crew was assigned full time to the refueling floor to minimize contamination.

Formalized preplanning meetings are required at the beginning of each shift which include the workers, their supervisors, and the radiation protection technicians.

The RWP procedure was revised to include criteria requiring a radiological engineering review prior to RWP issue.

A large decontamination facility, with auxiliary ventilation was constructed on the refueling floor for tool and equipment decontamination.

Portable glove boxes with exhaust filters were installed for decontamination of smaller highly contaminated items.

Full compliance was achieved March 17, 1980.

D. NONCOMPLIANCE:

Technical Specification 6.11, "Radiation Protection Program", requires that procedures for personnel radiation protection be prepared consistent with the requirements of 10 CFR 20 and be approved, maintained and adhered to for all operations involving personnel radiation exposure.

Radiation Protection Procedure No. 915.7, Revision 0, "Personnel Monitoring", developed pursuant to the above, requires in Paragraph 5.6 that extremity dosimetry be issued when the estimated extremity dose is expected to exceed four (4) times the estimated whole body dose. Additionally, 10 CFR 20.202(a) requires appropriate personnel monitoring equipment to be supplied by the licensee and used by each individual who is likely to receive 25 percent of the applicable value specified in 10 CFR 20.101(a).

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Contrary to the above, on March 2, 1980, personnel performed work on a control rod blade handling tool without being provided extremity dosimetry. The tool was contaminated with radioactive material, which produced contact dose rates (one roentgen per hour gamma and 49 rads per hour beta plus gamma), which could result in extremity doses greater than four (4) times the whole body dose. In addition, personnel were likely to receive 25 percent of the extremity dose limit specified in 20.101(a).

RESPONSE:

This item is correct as stated.

The reason for the noncompliance was failure to follow procedures.

Immediate Corrective Steps:

Halt work.

A separate RWP for removing tools from the reactor water was issued and requires extremity badges.

Longer Term Corrective Steps:

All radiation protection technicians were retrained in the requirements of procedures. A memo to this effect was issued by the Supervisor, Radiation Protection (RPM).

Full compliance was achieved March 10, 1980.

E. NONCOMPLIANCE:

10 CFR 19.12, "Instructions to Workers", requires that individuals working in or frequenting any portion of a restricted area be kept informed of the storage, transfer or use of radioactive materials or of radiation in such portions of the restricted area; be instructed in the health protection problems associated with exposure to such radioactive materials or radiation, in precautions or procedures to minimize exposure and in the purposes and functions of protective devices employed. The extent of these instructions shall be commensurate with potential radiological health protection problems in the restricted area.

Contrary to the above, on March 2, 1980, two workers, performing handling, cleaning, examination and repair of highly contaminated control rod blade handling tools were not given instructions commensurate with the potential radiological health protection problems associated with handling the tools including, but not limited to, planning meetings to discuss radiological precautions and procedures for handling the contaminated tools. Consequently, the two workers received personnel skin contamination up to 20,000 dpm over portions of their bodies and intakes of radioactive material of 1,600 nanocuries and 500 nanocuries of cobalt-60. The 1,600 nanocurie intake is 29% of the allowable quarterly quantity limit as specified in 10 CFR 20 for cobalt-60.

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RESPONSE:

This item is correct as stated.

The reasons for the item of noncompliance were inadequate notification and preplanning of the work with radiation protection personnel and failure of the radiation protection technician to halt the work.

Immediate Corrective Steps:

A preplanning meeting is held at the beginning of each shift on the refueling floor with all radiation workers and technicians. Technicians were retrained to 10 CFR 19.12 requirements.

Radiation protection technicians and all radiation workers were instructed that verbatim compliance is mandatory. Work is to stop immediately when a procedure cannot be followed.

Longer Term Corrective Steps:

RWP Procedure 915.12 was issued June 24, 1980 and requires instructions to workers in accordance with 10 CFR 19.12.

A status board has been posted in the Monitor & Change Room and survey results are updated daily.

Full compliance was achieved March 17, 1980.