



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

JUL 26 1977

Docket No. 50-289

Metropolitan Edison Company
ATTN: Mr. J. G. Herbein
Vice President
P. O. Box 542
Reading, Pennsylvania 19603

Gentlemen:

Subject: Inspection 50-289/77-20

This refers to the inspection conducted by Mr. K. Plumlee of this office on June 13-15 and 20-21, 1977, at the Three Mile Island Nuclear Generating Station of activities authorized by NRC License No. DPR-50 and to the discussions of our findings held by Mr. Plumlee with Mr. G. Miller and others of your staff at the conclusion of the inspection, and to a subsequent telephone discussion between Mr. Miller and others of your staff and Mr. P. Knapp, Mr. A. Davis and Mr. Plumlee of this office on June 16, 1977.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, measurements made by the inspector, and observations by the inspector.

Based on the results of this inspection, it appears that certain of your activities were not conducted in full compliance with NRC requirements, as set forth in the Notice of Violation, enclosed herewith as Appendix A. These items of noncompliance have been categorized into the levels as described in our correspondence to you dated December 31, 1974. This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office, within twenty (20) days of your receipt of this notice, a written statement or explanation in reply including: (1) corrective steps which have been taken by you and the results achieved; (2) corrective steps which will be taken to

1454 235

7910170

829

PH

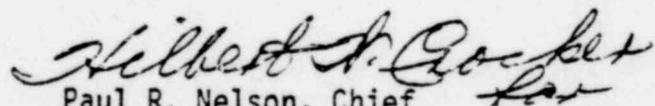
avoid further items of noncompliance; and (3) the date when full compliance will be achieved.

Item number A, shown in the Notice of Violation enclosed with this letter, is a recurrent or uncorrected item. In your response please give this matter your particular attention.

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. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must be accompanied by an affidavit executed by the owner of the information, which identifies the document or part sought to be withheld, and which contains a statement of reasons which addresses with specificity the items which will be considered by the Commission as listed in subparagraph (b)(4) of Section 2.790. The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,


Paul R. Nelson, Chief *for*
Fuel Facility and Materials Safety
Branch

Enclosures:

1. Appendix A, Notice of Violation
2. Office of Inspection and Enforcement Inspection Report
Number 50-289/77-20

cc w/encl:

L. L. Lawyer, Manager, Generation Operations - Nuclear
G. P. Miller, Superintendent
R. W. Heward, Project Manager, GPUSC
Miss Mary V. Southard, Chairman, Citizens for a Safe Environment
(Without Report)

Metropolitan Edison Company
Three Mile Island Nuclear Station Unit 1 (TMI-1)
Docket No. 50-289
License No. DPR-50
Inspection No. 77-20

RESPONSE TO DESCRIPTION OF APPARENT VIOLATION

Infraction A

10 CFR 20.203 (c)(1) requires that each high radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: "CAUTION - HIGH RADIATION AREA", and your procedure OP 1104-28 "Solid Waste Disposal" in Section 28.2.1.8 requires that radiation warning signs shall be utilized prior to the start of any packaging operation as required to restrict access of personnel into areas which may be subject to high radiation levels.

Contrary to this requirement at 4 P.M. on June 15, 1977, a high radiation area around two solidified radwaste containers in the Auxiliary Building, an area accessible to personnel, was not posted as a high radiation area. The sign had been removed earlier in the day even though the radiation level was 150 mR/hr at 12 inches from each of these containers.

Response to Infraction A

It is not felt that this item is recurrent in that it is not identical in nature to previous infractions. The difference is that the area was properly posted, however, a worker took the rope and posting down to pass through and neglected to put it back in the proper location.

The infraction is part of the subject matter presented to plant personnel in a one hour special training session to increase awareness of proper Health Physics practices. Additionally, vacancies previously existing in the Health Physics supervisory staff have been filled to increase supervisory capabilities, thereby, providing additional assurance of proper Health Physics practices.

Full compliance was achieved on June 15, 1977. The training will be completed by September 1, 1977.

Infraction B.1.a.

"All shipments of radioactive materials will comply with DOT Regulations."
(1003.6.3.1.3)

Contrary to this requirement solidified radioactive waste shipment No. 77-60 was not provided adequate leak-resistant and corrosion-resistant inner containers, enough absorbent material and an adequate secondary container to retain the radioactive contents under normal conditions of transport as required by 49 CFR 173.393(g)(1), (2) and (3) and this resulted in releasing in excess of 105 microcuries of liquid radioactive material into the transport trailer and dripping a small but detectable quantity of radioactive material on the public highway on June 13, 1977.

Response

Although a shipping container containing radioactive waste material did in fact leak a small amount of radioactive liquid to the environment during shipment, the container was not considered inadequate at the time of shipment. The containers were ordered to meet DOT Specification 7A type A packaging criteria. Record of certifications that the criteria were met was maintained by the container vendor and was subsequently supplied to Met-Ed. Changes to the solidification procedure (OP 1104-28) shall be made to more closely control storage and draining of the container prior to shipment. Certification of compliance with the container specifications shall be insured by the Quality Control Department with records of future shipments maintained on site. Full compliance will be achieved by September 1, 1977. Additionally, Met-Ed is investigating possible administrative re-organization to improve overall control of Radwaste Operations.

Infraction B.1.b. & c.

"All shipments of radioactive materials will comply with DOT Regulations".
(1003.6.3.1.3)

- b. Contrary to this requirement the containers used for shipment No. 77-60 were not marked with the shipping name of the hazardous material, the transport index and the gross weight of each container, and the proper size letters for some of the information as required by 49 CFR 172.100, - 173.310 (a)(1) and (2), and this could have caused errors in transporting and receiving this shipment.
- c. Contrary to this requirement specific instructions to the carrier for maintenance of vehicle exclusive use controls were not provided in the shipping papers as required by 49 CFR 173.393 (j) even though six of the containers of shipment No. 77-60 each had a transportation index greater than 10 and the aggregate transport index was greater than 50, and this could have caused errors in transporting this shipment.

Response

Changes to the Health Physics Procedure for shipping radioactive materials (HPP 1618) will be made to correct the deficiencies identified in the violation and to insure proper container labeling. Full compliance will be achieved prior to shipping additional solidified radioactive waste and no later than September 1, 1977.

Infraction B.2 & B.3

- 2. "The Shift Foreman shall enter instructions for the sampling, analysis and packaging of batches of waste...in the "Process Instruction and Data Sheet" prior to the initiation of any transfer from these tanks and the operator(s) performing these function(s) shall enter all subsequent data concerning sampling, analysis and packaging of a batch of solid waste."
(1104-28.2.1.1)

Contrary to this requirement no entries were made on "Process Instruction and Data Sheets" for any batch of solid waste prepared during the period January 1 to June 13, 1977, and specifically there was no information on the eight solidified radioactive waste containers composing shipment No. 77-60, and this could have resulted in errors in managing this material, and prevented any such errors being identified.

3. "The Supervisor of Operations, or his designee, designates on the applicable data log that a sufficient amount of radwaste has accumulated in specified tanks to warrant initiation of the packaging operation." (1104-28.3.1.a)

Contrary to this requirement, no such data log appeared to be maintained, and this could have resulted in errors in radwaste operations.

Response

The event occurred because deficiencies in the solidification procedure (OP 1104-28), made use of the "Process Instruction and Data Sheet" and other administrative controls unworkable. The procedure (OP 1104-28) will be extensively modified to provide workable controls for the solidification of radioactive waste. The modification will include a more workable instruction sheet ("Rad Waste Solidification Process Sheet") and step by step control of the process. The completed process sheets and procedures will be maintained to document plant activities in this area. Corrective action will be taken by September 1, 1977 or prior to solidifying radioactive materials.

Infraction B.4

4. "All work or entry for surveillance purposes in radiation areas that could cause exposure to radiation in excess of the following limits will require a Radiation Work Permit - 5 mrem/hr...greater than 2200 DPM/100 cm² Beta-Gamma," and "...it is the responsibility of the personnel involved to adhere to instructions listed on the Radiation Work Permit. (1003-2.10)

Contrary to this requirement an individual was found on June 21, 1977, at 2 P.M. who was in a posted high radiation area and contaminated area, wherein 150 mR/hr and 50,000 DPM removable contamination existed, without the shoe covers, gloves and protective garment listed in the applicable Radiation Work Permit, No. 11962.

Response

The individual, an Auxiliary Operator "A", was counseled by the Supervisor of Operations regarding the importance of complying with the Health Physics requirements. Disciplinary action was also administered. Full compliance was achieved on June 22, 1977.

Infraction B.5

Contrary to the referenced requirement of ANSI N18.7-1972 no written approved procedure was provided for the draining of solid radwaste containers and for patching radwaste containers that leaked prior to shipment, and the failure to effectively perform these operations resulted in radioactive liquid escaping from four containers during shipment No. 77-60 on June 13, 1977, releasing in excess of 105 microcuries of radioactivity into the transport trailer and dripping a detectible quantity on the public highway.

Response

Changes shall be made to the solidification procedure OP 1104-28 to include detailed instructions regarding the draining of solidified radioactive waste containers. This will be completed by September 1, 1977. A Special Operating Procedure was issued to provide guidance on draining the containers prior to making a change to OP 1104-28. The effective date of the SOP was June 20, 1977.

Infraction C

10 CFR 20.203 (f)(1) and (2) require that each container of licensed material shall bear a label showing the radiation caution symbol and the words "Caution-Radioactive Material", and identification of the radioactive contents.

Contrary to this requirement, on June 15, 1977, there were two 50 cu. ft. containers of solidified radioactive waste stored in the Auxiliary Building, an area accessible to personnel, without labels showing the required information, and the radiation level was measured to be 150 mr/hr at 12 inches from each of these containers which were not part of any shipment or immediate planned shipment.

Response to Infraction C

Full compliance was achieved on June 16, 1977, when the two subject drums were posted. A procedure change to solidification procedure OP 1104-28 will be implemented which requires that immediately after a container has been filled with radioactive waste material a "Caution-Radioactive Material" sticker will be placed on the container. Additionally, vacancies previously existing in the Health Physics supervisory staff have been filled to increase supervisory capabilities thereby providing additional assurance of proper Health Physics practices.

1454 240