

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION I

Report No. 79-27
Docket No. 50-320
License No. DPR-73 Priority - Category C

Licensee: Metropolitan Edison Company
100 Interpace Parkway
Parsippany, New Jersey 07054

Facility Name: Three Mile Island Nuclear Station, Unit 2

Investigation At: Middletown, Pennsylvania

Investigation Conducted: October 2-5 and 9-11, 1979

Investigator: G. Napuda
G. Napuda, Reactor Inspector

2/14/80
date

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Approved by: W. H. Baunack
W. H. Baunack, Acting Chief, Nuclear Support
Section No. 2, RO&NS Branch

2/15/80
date

Investigation Summary:

Investigation on October 2-5 and 9-11, 1979 (Report No. 50-320/79-27)

Areas Investigated: Unannounced investigation of three allegations concerning quality control associated with the "pulling" of electrical cables during 1976 construction activities. The investigation involved 48 hours on site by one regional based inspector.

Results: One of the allegations investigated was substantiated, but it did not constitute an item of noncompliance or deviation with then current regulatory requirements or licensee commitments. The inspector further determined that no safety concern existed with respect to the allegations.

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I. BACKGROUND

A. Reason for Investigation

On July 31, 1979, Region I received a telephone call from an individual requesting anonymity, alleging that he and other licensee employees performed quality assurance inspections during 1976, Unit 2, construction activities without proper qualifications. The individual expanded his allegations in an August 1, 1979 letter to the Region I office.

The investigator telephoned the individual on August 29, 1979, and discussed the allegations further. An investigation regarding the allegations contained in the August 1, 1979 letter was initiated at the Three Mile Island Units 1 and 2 site by the NRC, Region I, on October 2, 1979.

B. Identification of Involved Organizations

1. Metropolitan Edison Company (Met Ed)
100 Interpace Parkway
Parsippany, New Jersey 07054

A utility that had been issued a Construction Permit by the NRC for Three Mile Island, Unit 2.

2. General Public Utilities (GPU) Corporation
100 Interpace Parkway
Parsippany, New Jersey 07054

A corporation, one of whose subsidiaries, is Met Ed.

II. SUMMARY OF FINDINGS

A. Allegation and Investigation Findings

The NRC representative investigated essentially three allegations which were extracted from the letter received by Region I and subsequent discussions with the alleged. The allegations and NRC findings on each are as follows:

1. Allegation No. 1

Auxiliary Operators "C" were utilized to inspect cable pulling and sign the associated inspection documents during 1976 construction activities on Unit 2.

The NRC investigation found that eight auxiliary operators did perform cable pulling inspections and signed the required inspection documents.

2. Allegation No. 2

The Auxiliary Operators "C" did not receive sufficient training for their inspection assignment and were not certified as inspectors.

The NRC investigation did not substantiate the allegation that the training was not sufficient for the specific task and found that certification of the inspectors was not required at that time.

3. Allegation No. 3

As a result of insufficient training, the Auxiliary Operators "C" did not have the knowledge to determine if the work was accomplished in accordance with quality assurance/control criteria.

The NRC investigation found no evidence that the Auxiliary Operators lacked the specific knowledge required for the particular inspections.

B. Conclusions

No items of noncompliance were identified even though Allegation No. 1 and the latter part of Allegation No. 2 were substantiated. The investigator determined this to be the case since no regulatory requirements in effect at that time were violated; the licensee was not committed to anything other than what was done; and, no safety concern existed because of extensive corrective actions that were accomplished later as the result of unrelated, identified discrepancies associated with the electrical cables and trays.

III. DETAILS

A. Introduction

This investigation was initiated as a result of a July 31, 1979 telephone call and an August 1, 1979 letter to the NRC, Region I office.

B. Scope of Investigation

This investigation was limited to the allegations dealing with cable pulling activities during 1976 construction activities associated with Unit 2. This investigation included examination of pertinent documents, such as cable pull slips, inspection reports, nonconformance reports, audit reports and interviews with Auxiliary Operators and other site personnel, many of whom were present at the site during the subject time period.

C. Persons Contacted During NRC Investigation

1. Metropolitan Edison Company (Met Ed)

- R. Boehner, Auxiliary Operator
- *J. Floyd, Supervisor of Operations, Unit 2
- J. Fishell, Auxiliary Operator
- *G. Hahn, Administrative Personnel
- A. Horning, Auxiliary Operator
- B. Keller, Auxiliary Operator
- C. Miller, Auxiliary Operator
- W. Reigle, Auxiliary Operator (no longer an employee)
- M. Ross, Supervisor of Operations, Unit 1
- W. Shumaker, Lead QC Engineer - Electrical
- J. Stupack, Auxiliary Operator
- D. Trump, Auxiliary Operator

2. General Public Utilities Corporation (GPU)

- *R. Fenti, Senior Site QA Auditor
- *N. Kazanas, Manager of QA
- *J. Wright, QC Manager - Site

The investigator also contacted other licensee and GPU employees during the course of the investigation. They included engineering, construction, quality assurance and administrative personnel.

* denotes those present at the exit interview

D. Allegations

1. It was alleged that during 1976 Unit 2 construction activities, Auxiliary Operators "C" were assigned to cable pulling inspection duties, two at a time for six weeks, with acceptance and sign-off authority.
2. It was alleged that the training provided for the assigned inspection duties was insufficient in that it consisted of a reading assignment, a brief tour of the working area, and introduction to the electricians.
3. It was alleged that as a result of insufficient training few, if any, of the auxiliary operators had the knowledge to determine if the work was accomplished in accordance with established quality assurance/control criteria.

E. Site Investigation

An investigation was conducted at the Three Mile Island Units 1 and 2 site on October 2-5 and 9-11, 1979. This investigation included an examination of pertinent documentation associated with Unit 2 construction activities during 1976 and included:

- several hundred hard copies of cable pull slips
- several cartridges of microfilmed inspection records
- Audit Reports 76-14 and 77-03A-E
- QA Department Report November 1976 - November 1977, dated February 9, 1978
- Quality Assurance Semi-Annual Reports November 1975 - April 1976 (dated July 7, 1976) and May - October 1976 (dated January 25, 1977)

The investigator also questioned six operators in private interviews and a seventh, who is no longer an employee, during a telephone conversation. The pertinent points addressed by the questions were: training received; guidance in the form of a procedure or checkoff sheets; understanding of stipulated or required acceptance criteria; corrective action; and, possible falsification of records.

F. NRC Findings and Conclusions

1. Allegation No. 1

The investigator examined the cable pull slips and inspection records and identified eight auxiliary operators who had performed inspection duties in this area between April and November, 1976. Seven of the

operators were still employed by Met Ed. The eighth operator was no longer an employee. One of the current employees was unavailable for an interview due to a leave of absence.

The investigator determined that the auxiliary operators' performance of cable pull inspections and acceptance of the work by inspection report sign-offs did not conflict with any regulatory requirements nor other licensee commitments in effect during the specified time period.

2. Allegation No. 2

The investigator interviewed QA/QC supervisory and training personnel who had been on site during 1976, as well as, the seven operators. He also reviewed the QA reports listed in Paragraph E; Procedure ECP-3-2, Receiving, Storing, Handling and Installing Wire and Cable, Revisions 12-20; and, appropriate sections of Burns and Roe Specification 2555-70. The latter two documents were, to the best information available, the ones utilized for cable pulling activities.

Based on the above, it appears that the auxiliary operators spent from 2 days to a week reading procedures, etc., had two days of training with an experienced "regular" inspector, and then performed inspections.

3. Allegation No. 3

The investigator determined that Procedure ECP-3-2 was very explicit as to cable pulling inspection characteristics; specific cable run documentation was required and the inspections in question were limited in scope.

The operators stated, during questioning by the investigator, that they basically understood what to look for during their inspections and had they any questions they would seek the answers, usually from the "regular" inspector. All the operators also agreed that corrective action was taken when necessary. In response to a question by the investigator all operators stated that they had never falsified any document, had no knowledge of anyone who did, were never asked or directed to do so and had no specific safety concerns to discuss.

The NRC investigation found no information or evidence to substantiate the allegation. Further, based on the discussion of cable pull status in paragraph G, the investigator determined that no safety concern existed.

G. Status of Cable Pulls

The inspector reviewed the records associated with Internal Audits 76-14, 77-03A, B, C, D and E. The inspector noted that findings of these audits included the identification of unauthorized and undocumented repulling of certain cables. The resulting corrective actions were essentially a massive re-inspection of cable trays and pulls. The corrective action responses to Audit 76-14 contained statements such as: "a thorough re-inspection is continually underway regarding ES and BOP circuits, and any nonconformances documented..."; "...a complete and 100% re-inspection of cable tray barriers has been completed."; "a continuous check is being made on safety-related cable at the Drop Out locations and discrepancies will be documented..."; "an item is being added to the termination C/L to verify pre-termination routing per the pull slip."; and, "...a re-inspection and removal of tie downs in conjunction with construction has been completed...." In addition, a lengthy response to Finding 9 of this audit states that a major review of the existing routing of all circuits for tray overloading was being made and that it literally involved the point by point review of each circuit in an overloaded tray to produce by hand the re-routing of selected circuits.

Based on the documented evidence that a substantial re-inspection had been conducted on electrical cables and related areas, the investigator concluded that there was no apparent safety concern.

H. Management Meeting

The investigator met with licensee representatives (denoted in paragraph III.C) at the conclusion of the investigation on October 11, 1979. The investigator summarized the purpose, scope and findings of the investigation as detailed in this report.