

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report Nos.: 50-254/88025(DRS); 50-265/88026(DRS)

Docket Nos.: 50-254; 50-265

License Nos: DPR-29; DPR-30

Licensee: Commonwealth Edison Company  
Post Office Box 767  
Chicago, IL 60690

Facility Name: Quad Cities Station, Units 1 and 2

Inspection At: System Materials Analysis Department, Maywood, IL

Inspection Conducted: September 8 and 14, 1988

Inspector: *D. H. Danielson*  
J. F. Schapker

9/20/88  
Date

Approved By: *D. H. Danielson*  
D. H. Danielson, Chief  
Materials and Processes Section

9/20/88  
Date

Inspection Summary

Inspection on September 8 and 14, 1988 (Report Nos. 50-254/88025(DRS); 50-265/88026(DRS))

Areas Inspected: Unannounced special inspection of licensee's written practice for nondestructive examination pertaining to the "25% Rule" as described in SNT-TC-1A and review of NDE personnel qualification records in accordance with the 25% Rule.

Results: Review of the written practice - CECo SPPM Procedure 1-1-0, Revision 24, disclosed the following:

- The procedure reflects the words of SNT-TC-1A in regards to the 25% Rule.
- The description of the Radiograph (RT) Interpreter, Level II's duties does not adequately describe the limitations of his/her qualifications.
- Certification requirements for experience is not adequately described for the RT Interpreter Level II.

Review of the CECo personnel qualification records revealed the following:

- CECo NDE personnel were qualified to perform/survey nondestructive testing in the disciplines referenced in their NDE qualification records.
- Certain personnel who qualified as RT Interpreters, Level II, do not meet the minimum requirement for training/experience as described in SNT-TC-1A for a Level II radiographer.

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Results: continued:

Although the written practice did not adequately describe the RT Interpreter's working limitations and the training and experience of the RT Interpreter's reviewed was not adequate for these individual to perform code acceptance of radiographs, the actual performance of individuals qualified in this category is a Quality Assurance/Quality Control function and no code acceptance of radiographs is performed by these individuals. The licensee has committed to revise SPPM 1-1-0 to reflect the working limitations of Level II RT Interpreters and specify the appropriate qualification requirements for this classification. These corrections will clarify the duties and responsibilities of the individuals identified in Unresolved Item (50-255/88011-04). The licensee's corrective action to resolve this item is commensurate with SNT-TC-1A and applicable Code and regulatory requirements.

## DETAILS

### 1. Persons Contacted

Commonwealth Edison Company (CECo)  
System Materials Analysis Department (SMAD)

\*W. Witt, Chief, Level III, NDE  
R. Gaitonde, Supervising Staff Engineer  
C. Polito, Manager, SMAD

The NRC inspector also contacted and interviewed other licensee and contractor employees.

\*Denotes those contacted at the telecon final exit interview on September 14, 1988.

### 2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item 50-265/88011-04:

#### BACKGROUND

A routine safety inspection of station activities at Quad Cities Station, Units 1 and 2, was conducted by the NRC NDE Mobile Team of the NRC's Region I office during April 18 through 29, 1988. A part of the NRC inspection activities consisted of a selective examination of procedures and representative records. The NRC inspector, during his review of CECo's Special Process Procedure Manual (SPPM), made an observation that the requirements in CECo's SPPM are not consistent with or do not meet the intent of the SNT-TC-1A. As a result, Mr. J. J. Harrison, NRC Region III, requested a written response to the item (No. 50-265/88011-04) in a letter dated June 21, 1988 to Mr. C. Reed, Commonwealth Edison Company.

The NRC inspector's observation pertains to the "25% Rule" in recommended Practice No. SNT-TC-1A, June 1980 Edition, published by the American Society for Non-Destructive Testing (ASNT) and the requirements in the Procedure 1-1-0, Revision 24, of CECo's SPPM. The NRC inspector stated that the CECo procedure in the SPPM has improperly used the SNT-TC-1A 25% rule and that a possibility exists that CECo NDE personnel could fulfill certification requirements without satisfying the ASME requirements for minimum experience. The conclusion was based on the review of the certification of one CECo individual who spent most of his work time on Quality Control (QC) related activities not involving actual application of NDE. The NRC inspector believed this individual may have been certified using the 25% rule. The individual referenced here is actually certified as a "Radiographic Interpreter", a special category of NDE personnel identified in CECo's SPPM.

## INSPECTION

The NRC Region III inspector reviewed the CECO response to the unresolved item. CECO believes that the application of the 25% rule and qualification requirements of "Radiographic Interpreter" are two separate issues. First, the response to the 25% rule was as follows:

Table 6.2.1A of SNT-TC-1A contains a statement, "credit for experience may be gained simultaneously in two or more disciplines. The candidate must spend at least 25 percent of his work time on each discipline for which experience is claimed." This provision has been incorporated into procedure 1-1-0, Paragraph 6.1.1 of CECO's SPPM in which it is required that "an individual may gain field experience in two or more NDE methods simultaneously. The individual must spend at least 25% of his work time on each NDE method for which field experience is being claimed." This clearly shows that CECO's requirements in the SPPM are consistent with those in the SNT-TC-1A.

## PERSONNEL QUALIFICATION REVIEW

The licensee reviewed the qualifications and certification of all present and past Commonwealth Edison Company personnel where the SNT-TC-1A 25% rule was used. The results of the review of the certification records showed that, of the seventeen NDE inspectors qualified within the Commonwealth Edison system, six work in SMAD which is a group dedicated full time to performing NDE. The remaining eleven are assigned to various generating stations. Of those eleven, eight are qualified and experienced individuals who were hired into Commonwealth Edison from outside NDE companies. It was the licensee's understanding that the question of adequacy of training and experience pertains to neither the SMAD NDE group nor with respect to experienced inspectors recruited from outside testing companies. The question was raised in regard to those CECO qualified individuals who are not full time NDE personnel. The licensee's records show only three inspectors fell into this category. Two are certified to perform only penetrant testing (PT) and one is certified to perform the PT and magnetic particle testing (MT).

If the provision in the SPPM and SNT-TC-1A for simultaneous qualification using the 25% rule was to be used, it would have been in the case of this one individual who is certified in both PT and MT. The review of this certification showed that the 25% rule was not invoked. He had logged one month's work experience as defined in the SPPM for each discipline separately before he was certified as a Level I inspector. He also worked an additional two months as a Level I PT inspector before becoming a Level II PT inspector, and an additional three months as a Level I MT inspector before being certified as a Level II MT inspector. Even though CECO's SPPM provides for use of the 25% rule as stated above, a review of personnel certification records showed that this rule was not invoked for CECO qualified inspectors.

The NRC Region III inspector's review of NDE personnel qualification records confirmed that the licensee's review was accurate excepting the qualification of the Level II Radiographic Interpreters in which the licensee responded as a separate issue. The response is as follows:

#### Radiographic Interpreters

A special subcategory of NDE personnel certified as "Radiographic Interpreter" is identified in the SPPM. This special "RT Interpreter" category was created to develop individuals who would have sufficient knowledge of RT method to review radiographic work done by outside testing contractors. As specified in Commonwealth Edison Company's "written practice" (SPPM), an "RT Interpreter's" duties are limited to reviewing the radiographic work performed by the others to ensure that radiographs are of good quality and that proper codes and standards have been followed and that defects have been properly identified and evaluated. These RT interpreters are neither trained to perform actual radiography nor are they allowed to specify techniques or test parameters. We believe that with these limitations, the subcategory of RT Interpreter, is acceptable and meets the intent of the code because:

- a. It is permissible according to the SNT-TC-1A recommended practice to create subcategories of NDE personnel depending upon the employer's special needs provided the duties, responsibilities, qualification requirements, and any limitations on their certification are described in the employer's written practice.
- b. Paragraph IWA-2300.a.3 of ASME Section XI, Winter 1980 Addenda, states that, ". . . training for NDE personnel who perform only one operation of a non-destructive examination method that contains more than one operation, or who perform non-destructive examination of limited scope, may be less than that recommended in Table 6.2.1A of SNT-TC-1A . . .".

The licensee believes that reading and reviewing radiographs is only one aspect of multiple tasks involved in radiographic testing. CECO RT Interpreters receive extensive classroom training and they spend a minimum of three months reviewing radiographs under the supervision of an experienced and certified RT person. Finally, they take a practical film interpretation test to demonstrate their ability to CECO's Chief Level III before being certified as Level II RT Interpreters. These Interpreters played a valuable role in overseeing quality of a voluminous amount of RT work performed by the contractors during Commonwealth's nuclear plant construction program.

The NRC Region III inspector pointed out to the licensee that Paragraph 5.1.5 of CECO's SPPM 1-1-0, Revision 24, which describes the duties of an RT Interpreter, Level II, does not adequately describe his/her duties as to limit him/her from performing ASME Code acceptance work. Paragraph 5.1.5 states:

"A Level II Radiograph Interpreter may interpret radiographs, and evaluate the results with reference to applicable codes and specifications. He shall be familiar with the principles of radiography but shall neither make radiographs nor specify techniques for doing so."

The licensee agreed to revise this paragraph to reflect the limitations intended, as described in the above CECO description of the radiographers interpreter's Level II duties and limitations. In addition, the licensee agreed to revise Paragraph 6.2.5 of SPPM 1-1-0, Revision 24, which describes the certification requirements of a Level II RT interpreter. The revision in this paragraph is to specify the experience requirements methodology where two hours of film interpretation equals one day of experience. This formula applies only to the RT Interpreter position.

### CONCLUSION

The licensee does not utilize the RT Interpreter Level II position for code acceptance of radiographs. However, the written practice, CECO procedure SPPM 1-1-0, Revision 24, did not adequately describe the RT Interpreter's Level II limitations as to code acceptances of radiographs. The revision of the written practice as described within this report will resolve this issue.

The licensee's revision of their written practice is adequate to assure that the ASME/SNT-TC-1A requirements are not violated.

### 3. Exit Meeting

The NRC inspector contacted the licensee representative (denoted in Paragraph 1) at the conclusion of the inspection on September 14, 1988. The inspector summarized the scope and findings of the inspection activities. The licensee representative conveyed the changes in the licensee's written practice as described within this report. The inspector also discussed the likely informational content of the inspection report with regard to documents reviewed by the inspector during the inspection. The licensee did not identify any such documents as proprietary.