



Commonwealth Edison

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April 13, 1983

Director, Office of Inspection and
Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Dresden Station Units 2 and 3
Quad Cities Station Units 1 and 2
Inspection Report Nos. 50-237/82-20,
50-249/82-21, 50-254/82-16, and
50-265/82-18
NRC Docket Nos. 50-237, 50-249,
50-254 and 50-265

Reference (a): J. G. Keppler letter to J. J. O'Connor
dated February 16, 1983.

Dear Sir:

This letter is in response to the special safety inspection conducted during the period August 16 through November 3, 1982 of activities at Dresden Nuclear Power Station Units 2 and 3, and Quad Cities Nuclear Power Station Units 1 and 2. Reference (a) indicated that certain activities appeared to be in noncompliance with NRC requirements. The Commonwealth Edison Company response to the Notice of Violation is provided in the enclosure.

In our review of these events we concur with the NRC of the seriousness of the use of Ardillo valve guides but have found this to be an isolated case. Both Dresden and Quad Cities maintenance personnel have made an effort to identify, review and evaluate other applications in which non-Original Equipment Manufacturer (OEM) parts are currently being used in safety-related components and have not found any similar misuse of spare parts nor has the NRC provided evidence of a broader problem. This single event therefore should not be held as an example of overall management or programmatic weakness as alleged. Moreover, the NRC has not given CECO proper credit for the comprehensive corrective actions taken to prevent recurrence of this situation. Preparation of the classification lists as reflected in the Attachment will take hundreds if not thousands of man-hours and will prevent recurrence.

No Ardillo valve guides were in operation in Dresden Station Unit 2, and only one in Unit 3. No evidence exists that the one affected valve in Unit 3 was inoperative and even if it did fail would not have compromised the safety function of the Automatic Pressure Relief system. Therefore, at Dresden Station clearly there was no loss of a safety function.

Appl

April 13, 1983

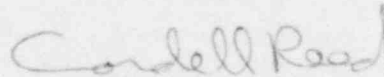
As for Quad Cities Station, the NRC has not given any credit for the Station's attempts to use only OEM material by obtaining the valve guides from Dresden, initiation of the Action Item Record in 1978, or the requests in early 1981 for evaluation of the Ardillo guides vs OEM parts. Clearly, there has been attempts at both sites to resolve the EMR failures and purchase only the OEM valve guides. Even at Quad Cities Unit 1 where two valves were found to have Ardillo valve guides, no evidence exists that these valves would not have performed their intended safety function.

In summary, CECO's response in this matter was both timely and comprehensive and we have taken specific corrective actions to prevent recurrence.

To the best of my knowledge and belief the statements contained herein and in the attachment are true and correct. In some respects these statements are not based upon my personal knowledge but upon information furnished by other Commonwealth Edison employees. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

If you have any further questions on this matter, please direct them to this office.

Very truly yours,



Cordell Reed
Vice President

BR/lm

Attachment

cc: NRC Resident Inspector - Dresden
NRC Resident Inspector - Quad Cities
J. G. Keppler - Region III

6362N

ATTACHMENT

COMMONWEALTH EDISON COMPANY

RESPONSE TO NOTICE OF VIOLATION

NRC DOCKET NOS. 50-254/265 and 50-237/249

The items of noncompliance identified in the enclosure to the NRC letter, dated February 16, 1983, are responded to in the following paragraphs:

Items of Noncompliance

10 CFR 50, Appendix B, Criterion VI, states in part, "Measures shall be established to control the issuance of documents....including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents, including changes....are distributed to and used at the location where the prescribed activity is performed."

Commonwealth Edison Company Quality Assurance Program for Nuclear Generating Stations, Topical Report CE-1-A, Section 6, states in part, "A document control system will be used to assure that documents....will be distributed to and used at the locations where the prescribed activity is performed. Changes to these documents will be handled similarly...."

10 CFR 50, Appendix B, Criterion XV, states in part, "Measures shall be established to control....parts....which do not conform to requirements in order to prevent their inadvertent use or installation."

Commonwealth Edison Company Quality Assurance Program for Nuclear Generating Stations, Topical Report CE-1-A, Section 15, states in part, "Items involving....maintenance....which are found nonconforming to the engineering requirements or specifications....will be controlled to prevent their inadvertent use or installation. Nonconforming items are....documented and segregated for disposition."

Contrary to the above, at Dresden and Quad Cities Stations, measures were not established to assure that the safety classification list and changes to that list were distributed to and used at the location where the prescribed activity was performed.... Also, measures were not established to control nonconforming electromatic relief (EMR) valve guides manufactured by Ardillo Corporation after it was determined by the Station Nuclear Engineering Department (SNED) on April 10, 1981, that these valve guides were not of sufficient quality to warrant their use in any of the electromatic relief valves.

Admission or Denial of Alleged Violations

Commonwealth Edison admits to both alleged violations at each station.

Reasons for the Violations

Quad-Cities Station:

A classification error of the EMR valve guides resulted in these parts being ordered non-safety related. Procurement procedures for non-safety related equipment allows purchasing parts from other than the Original Equipment Manufacturer (OEM), thus, Ardillo Corporation parts were received at the Station. Station personnel were aware of the quality differences between the Ardillo Corporation manufactured parts and the OEM manufactured parts. These differences prompted Maintenance personnel at the Station to obtain available OEM parts from Dresden Station. It was later learned that Dresden had also received parts manufactured by the Ardillo Corporation. Due to the similar features of the two parts, nonconforming parts manufactured by Ardillo Corporation were installed at Quad Cities Station.

Dresden:

The SNED letter dated January 5, 1979, which classified the valve guides in the electromatic relief valves as safety-related was sent to Quad Cities Station with a copy to Dresden Station. Upon investigation, no evidence of the copy could be found in the station files. A request from Quad Cities Station to SNED was initiated in early 1981 to evaluate the Ardillo Corporation valve guides. This request precipitated the Operational Analysis Department (OAD) reports dated February 19, 1981 and March 26, 1981 which found the Ardillo valve guide material and manufacturing quality substandard. The OAD reports were subsequently received by Dresden Station and reviewed. The station has refrained from purchasing valve guides from the Ardillo Corporation since May, 1979. All purchases since that time have been made from the OEM.

Corrective Action Taken and Results Achieved

Dresden and Quad Cities Stations' personnel conducted an extensive review of station records to determine the quantity of Ardillo Corporation valve guides in use. Quad Cities determined that possibly both units could contain the substandard EMR valve guides. On September 1, 1982, Dresden concluded that only one EMR valve (3-203-3C) on Unit 3 contained the substandard valve guide and none were installed on Unit 2.

Also on September 1, 1982, members of Commonwealth Edison's Nuclear Safety, Station Nuclear Engineering, Nuclear Fuel Services and Nuclear Licensing Departments met to determine the safety significance of operating Dresden Unit 3 and Quad Cities Unit 2 with the possibility of one EMR valve containing an Ardillo valve guide. Because Quad Cities Unit 1 was scheduled to shutdown for refueling within one week, the safety significance was viewed as minimal. It was determined at this meeting that the operating performance of the Ardillo Corporation valve guide had demonstrated that there was no concern regarding the continued safe operation of Dresden and Quad Cities Stations. The following actions were taken as a result of this meeting.

1. All EMR valves equipped with Ardillo valve guides would be replaced within one fuel cycle.
 - Quad Cities Unit 1 overhauled all four EMR valves during the recent Fall 1982 Refuel Outage. Two valves were found to contain an Ardillo Corporation main valve guide. All EMR valves were verified to contain OEM valve guides prior to startup on December 21, 1982.
2. If possible, EMR valves equipped with Ardillo valve guides will be removed at the first available maintenance outage of sufficient length.
 - Quad Cities Unit 2 removed and overhauled the 2-203-3E EMR valve during an October 11, 1982 scheduled maintenance outage. This valve was found to contain an OEM valve guide. On Quad Cities Unit 2, the 2-203-3D EMR valve was replaced on March 26, 1983, during a short maintenance outage.
 - Dresden Unit 3 replaced the 3-203-3C EMR valve during an October 29, 1982 outage. This EMR valve was found to have an Ardillo Corporation valve guide.
3. The operability status of the Quad Cities Unit 2 and Dresden Unit 3 "C" EMR valves will be checked every six months (\pm 25%) by manually actuating each valve at rated pressure until the valve guide is replaced with OEM components. (Since this commitment was made, the Dresden 3C valve guide has been replaced.)
4. Quad Cities has implemented an administrative derating on Unit 2. This consists of reducing the Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) allowable limit in the event either HPCI or a Main Steam Relief Valve is taken out of service. This was implemented on September 9, 1982 and will be terminated when all Ardillo valve guides have been replaced. Dresden had implemented an Operating Order defining similar limitations. This Order was terminated when all Ardillo valve guides were replaced.

Quad Cities Storeroom and Maintenance personnel inspected all the EMR valve guides that were in the Storeroom. All Ardillo Corporation valve guides were properly tagged and removed from the Storeroom to ensure these parts would not be installed. A similar inspection at Dresden found no Ardillo valve guides.

Corrective Action to Avoid Further Violations

The Stores Item numbers and the Stores Requisition cards for EMR valve guides were changed to safety-related status. This will ensure that all subsequent re-orders of these parts will be ordered properly.

On December 29, 1982, a meeting was held at the CECO Corporate Office to discuss the means to establish a listing of safety related/non-safety related spare parts. As a result, it was agreed that each operating Station would develop procedures which will outline the proper methodology for: 1) performing technical reviews of spare parts, 2) determining their classification in accordance with criteria provided by the Station Nuclear Engineering Department, and 3) providing administrative control of a Spare Parts Classification List. The last item will address issues such as format, contents, distribution, and control of revisions to the list.

In addition, Dresden and Quad Cities maintenance personnel have made an effort to identify, review and evaluate other applications in which non-OEM parts are currently being used in safety-related components. Dresden Station has submitted other parts to OAD for testing. OAD testing results of these parts indicate no significant variations in material or manufacturing quality on a comparable basis.

SNED will review their distribution list for applicable documents to ensure proper personnel are made aware of future changes.

Quality Assurance will review their procedures to ensure their personnel independently receive and audit station copies of spare parts Classification Lists.

Date when Full Compliance will be Achieved

Quad-Cities:

All EMR valves on Unit 1 have been inspected and verified to contain OEM parts as of December 21, 1982. It is planned to shutdown Unit 2 for refueling in September, 1983. All valves will be inspected and replaced (if necessary) with OEM parts prior to startup. Station procedures to evaluate and classify all parts to be used in safety-related components and administratively control a Spare Parts Classification List have been implemented.

Dresden:

The Unit 3, 3-203-3C EMR valve was replaced during an outage which occurred on October 29, 1982. Station procedures to evaluate and classify all parts to be used in safety-related components and administratively control a Spare Parts Classification List will be implemented by May 1, 1983.

Quality Assurance:

The Quality Assurance Department reviewed the aspects of the Quality Assurance Program for which these events had an effect. It was determined that existing procedures were adequate and no changes to the program were needed.

Until the review and classification of spare parts used in safety-related components is completed, Quality Assurance has upgraded their review of work packages in order to assure that all parts used in safety-related applications are classified on a case-by-case basis.

Station Nuclear Engineering Department:

SNED revised its procedure (Q.12) on December 30, 1982 on classification and listing of safety-related items. This revision includes expanding the distribution list to include both site and corporate Q.A. and routes copies of all project groups for their review of applicability to their respective stations.