



Commonwealth Edison
One First National Plaza Chicago, Illinois
Address Reply to Post Office Box 767
Chicago, Illinois 60690

September 7, 1978

Mr. James G. Keppler, Director
Directorate of Inspection and
Enforcement - Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Subject: Braidwood Station Units 1 and 2
Response to IE Inspection Report
Nos. 50-456/78-06 and 50-457/78-06
NRC Docket Nos. 50-456 and 50-457

Reference (a): R. F. Heishman letter to Byron Lee, Jr.
dated August 7, 1978
NRC Docket Nos. 50-456 and 50-457

Dear Mr. Keppler:

The following is in response to an inspection conducted by Messrs. C. M. Erb, K. D. Ward and E. J. Gallagher of your office on June 13-15, 1978 of activities at Braidwood Station. Mr. Heishman's letter, Reference (a), indicated that certain of our activities appeared to be in noncompliance with NRC requirements. The attachment to this letter discusses these items and, based on the additional information presented, requests your consideration in changing the first two items from infractions to observations. The attachment also requests that the third item of apparent noncompliance be placed in abeyance until Commonwealth Edison Company receives a response on the code inquiry which Commonwealth Edison has submitted to the American Society of Mechanical Engineers (ASME) Committee.

Please address any additional questions that you might have to this office.

Very truly yours,

A handwritten signature in cursive ink, appearing to read "M.S. Turak".

(cc) Cordell Reed
Assistant Vice-President

7810050061

attachment

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ATTACHMENTITEM A.1

Contrary to 10 CFR 50, Appendix B, Criterion XII, the Braidwood Station PSAR, Chapter 17, and the Commonwealth Edison QA Manual, Quality Requirement QR-12, on June 13-15, 1978, the inspector determined that Pittsburgh Testing Laboratory (PTL) was using standard sieves for acceptance of materials affecting quality, such as aggregate and soils gradation tests, that did not meet the requirements of ASTM E-11, "Standard Specification for Wire-Cloth Sieves used for Testing Purposes", in that the #8, #50, and #100 sieves had "punctures or other obvious defects in the cloth". Furthermore, the PTL procedure QC-CA1-3, Tools, Gauges, and Instrument Control did not include these or any of the standard sieves in the inspection and calibration frequency or control requirements.

RESPONSE

The apparent noncompliance involved the use of defective and "uncalibrated" sieves. The guidance which our testing laboratory is and has been using for testing is the appropriate ASTM standards. Many standards relating to this area exist. By various ASTM standards (C-136, 134, etc.), Commonwealth Edison is required to use sieves manufactured in accordance with ASTM E-11. ASTM E-11 in turn clearly states with a footnote to the scope section that "complete instructions and procedures on the use of test sieves are contained in ASTM STP 447". This cascading of standards forms the basis for applying the guidance of ASTM STP 447 for instructions on the use of test sieves as discussed below.

The NRC inspector observed four "obviously" defective sieves (one #8, two #50's, and one #100). Two of the sieves, one #8 and one #50, did indeed have punctured screens at the time of the NRC Audit. The PTL Lab Supervisor acknowledged the fact that the two screens were now defective but stated that the two sieves were not damaged the previous day when he inspected them prior to their use in accordance with PTL Procedure QC-LT-1. Further, ASTM STP 447A as referenced in ASTM E-11 states in part "holes or breaks are sometimes indicated by very noticeable irregularities in the end-point weighings". No such irregularities have been observed. In view of this, Commonwealth Edison is very confident that no defective or punctured sieves were used to perform any tests! In addition, due to the nature of the equipment, the physical condition of all sieves is examined prior to each test to assure that no defective sieves are used.

The physical condition of the two punctured sieves would have been observed and found unacceptable by PTL technicians during their routine pre-test equipment inspection. Upon observance of the defective nature of the sieves, they would have been immediately removed from use and replaced, as was the case. The fact that the NRC inspector examined the two sieves prior to our required inspection should not be used as a basis for questioning the quality of future inspections. Furthermore, since time had elapsed since the last test was performed with these sieves, the NRC inspector should not assume that the physical condition found when examined also existed during previous tests. Rather, the fact that the sieves had not been placed in a protected storage area is a more plausible explanation for the condition of the sieves when observed by the NRC inspector. As a result, a special storage rack has been constructed for protection of sieves.

The inspector also observed two additional defective sieves (one #50 and one #100). However, the inspection report did not clearly indicate the form of the defects in these sieves. Although based on observations while accompanying the inspector during his examination and subsequent visual examinations, Commonwealth Edison personnel concluded that the referenced "defects" were as follows:

1. The #50 sieve was discolored due to use of a zinc-chloride solution to perform the ASTM-C123 test for lightweight pieces in aggregate. ASTM-C123 specifies the use of sieves manufactured in accordance with ASTM E-11.

However, neither ASTM-C123 nor ASTM STP 447 warns or even cautions against the normal discoloration of brass sieves when used with zinc-chloride. Therefore, Commonwealth Edison has concluded that discoloration is an expected condition and not a defect.

2. The only observable discontinuity on the #100 sieve was an area which had been repaired by soldering. ASTM STP 447A "Manual on Test Sieving Methods" establishes and allows for this type of repair by stating in part "small holes can be repaired by soldering".

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If the discontinuities, as discussed above, were not the cause of the apparent noncompliance, Commonwealth Edison would appreciate a prompt disclosure of their exact nature. However, if the "defects" were as previously described, Commonwealth Edison requests that the NRC reconsider its findings since no physical requirements appear to have been violated. In addition, Commonwealth Edison is concerned that the aesthetics of the sieves in a field laboratory environment may have had an undue influence on the inspector's observations. The discolored #50 sieve and the solder repaired #100 sieve along with the two previously mentioned defective sieves were removed from use immediately after the inspection. However, based on the above considerations, there appears to be no reason why the #50 and #100 sieves cannot be returned to service.

The secondary portion of the apparent noncompliance deals with the lack of a program for calibrating sieves to ASTM E-11. Pittsburgh Testing Laboratory (PTL) does not include the calibration of sieves in its calibration procedures, QC-CAL-3, because no calibration of sieves is required. ASTM E-11 Standard Specification for Wire-Cloth Sieves for Testing Purposes is a manufacturing standard. ASTM STP 447A, "Manual on Test Sieving Methods", states that "ASTM Specifications E-11 specify certain manufacturing tolerances". Upon receipt of the sieves PTL verifies that certification to ASTM E-11 accompanies each sieve.

According to ASTM STP 447A "a test sieve should retain the accuracy of its openings throughout the life of the sieve, since ordinary wear is on the top of the knuckles of the wire cloth and no measurable wear occurs in the openings". Furthermore, ANSI N45.2, Section 13 dealing with calibration states "This requirement (for calibration) is not intended to imply a need for special calibration and control measures on rulers, tape measures, levels and such other devices if normal practices provide adequate accuracy". Commonwealth Edison feels that sieves are covered by this category since ASTM E-11 requires a permanent label stating certification be affixed to the sieve by the sieve manufacturer and since the previous quote from ASTM 447A clearly implies that this is the case!

The fact that ASTM E-11 is a manufacturing standard is additionally reinforced by the following statement on sieve skirts "... the bottom of the frame or sieve skirt shall be so constructed as to have an easy sliding fit in any sieve". The NRC Inspection Report references the aforementioned statement and continues with "The inspector observed that none of the sieves being used met this requirement". The sieves in use are

certified to be manufactured (constructed) to fit easily together, however, it is inconceivable that the slight tolerance dimension of +.03 in. referenced in ASTM E-11 is intended for verification of test sieves being used in a field laboratory. The ASTM standard for "Test Sieving Methods" does not appear to be concerned with the fit of the sieve skirts as it does not even deign to mention this fact when describing the effects of wear on the accuracy of the sieves.

At the time of the inspection, ASTM STP 447A "Manual on Test Sieving Methods" was not used as a basis for the NRC inspector's determination. By various ASTM standards (C-136, 134, etc.) Commonwealth Edison is required to use sieves manufactured in accordance with ASTM E-11 which states "Complete instructions and procedures on the use of test sieves are contained in ASTM STP 447". ASTM STP 447 in turn refers to E-11 to "specify certain manufacturers tolerances". Commonwealth Edison is concerned that the requirements applicable to manufacturing and manufacturer's responsibilities were incorrectly imposed on sieves being used in its field testing laboratories. Therefore, based on this additional information which identifies a more appropriate baseline for interpretation of the inspector's field observations, Commonwealth Edison requests that the NRC reexamine this apparent item of noncompliance and consider changing this infraction to an observation.

ITEM A.2

Contrary to 10 CFR 50, Appendix B, Criterion XIII, and the Commonwealth Edison QA Manual Quality Requirement QR-13 which requires cleaning and preservation of materials in accordance with work and inspection procedures to prevent damage and deterioration, on June 13-15, 1978 the inspector determined that the Unit 1 & 2 tendon bearing plates and trumplets were not being maintained in accordance with specification L-2721, Section 2-303(d). This states, "the interior surfaces on all trumplets and funnels shall be protected from corrosion prior to tendon and greasing installation by coating and inside surface with a film of ... the contractor shall maintain this coating protection during the entire course of work until tendons are in place and grease is installed" (emphasis included in spec.) The inspector observed 162 vertical tendon bearing plates and trumplets in both Units 1 and 2 noted surface corrosion in every instance.

RESPONSE

Commonwealth Edison disagrees with the finding that there was surface corrosion in every instance. The inspector was informed that the great majority of the surface rusting was actually a coating of rust particles which had been washed down from the vertical sheathing. This was confirmed in the presence of the inspector by scraping some of this rust coating off the bearing plates, revealing that the plate surface coating was still intact.

Based on this information, Commonwealth Edison requests that the NRC reexamine this apparent item of noncompliance and consider changing this infraction to an observation.

As a further measure of protection, immediately after this inspection the coating of rust particles was removed from the vertical tendon bearing plates and trumplets in both Units 1 and 2 and an additional protective grease coating was applied to minimize corrosion potential. This grease coating will be maintained on the bearing plates and trumplets with no further maintenance being conducted until just prior to the tendon installation at which time the surfaces of the bearing plates will be cleaned. In addition, monthly surveillances of the tendon tunnel will be performed by the contractor in order to maintain this grease coating and minimize any corrosion potential.

ITEM A.3

Contrary to 10 CFR 50, Appendix B, Criterion IX; the Braidwood PSAR, Table 3.2-2, which lists ASME Section III as the applicable code for class 1, 2 and 3 components and piping systems; the S&L Specification No. L/F 2739 which specifies safety related piping shall be in accordance with ASME Section III, 1974 Edition; and subarticle NB5100, ASME Section III, which states in part that radiographic examination shall be in accordance with ASME Section V, Article 2, the inspector observed during review of radiographs of three welds that an Iridium 192 source had been used on material less than 0.75 inches without a special procedure being prepared and proven satisfactory by actual demonstration as required by ASME Section V.

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RESPONSE

ASME Section V, Article 2, 1974 Edition states in part "A special procedure shall be prepared and proved satisfactory by actual demonstration of penetrrometer resolution." It is Commonwealth Edison Company's interpretation that an additional "special" procedure is not intended by the code when an existing procedure produces radiographs of acceptable sensitivity. It is Commonwealth Edison's contention that the procedure is proven satisfactory with each radiograph shot "by actual demonstration of penetrrometer resolution."

In order to clarify this position, Commonwealth Edison has submitted a code inquiry to the appropriate committee of the American Society of Mechanical Engineers. A written reply is anticipated from the committee by the end of October 1978. Therefore, Commonwealth Edison Company requests that this item of apparent noncompliance be placed in abeyance until Commonwealth Edison receives a response on this code inquiry.



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LPDR

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PDR ADDCK 050-456 Q 780925 1978
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