



Commonwealth Edison

One First National Plaza, Chicago, Illinois

Address Reply to: Post Office Box 767
Chicago, Illinois 60690

LC

July 9, 1980

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

Subject: Response to IE Bulletin 80-08,
concerning "Examination of Containment
Liner Penetration Welds"
Dresden Station Units 1, 2, and 3;
Quad Cities Station Units 1 and 2;
Zion Station Units 1 and 2;
LaSalle County Station Units 1 and 2;
Byron Station Units 1 and 2; and
Braidwood Station Units 1 and 2
NRC Docket Nos. 50-10/237/249,
50-254/265, 50-295/304, 50-373/374,
50-454/455, and 50-256/457

Reference (a): J. G. Keppler letter to C. Reed dated
April 9, 1980

Dear Mr. Keppler:

Enclosed is the Commonwealth Edison Company response to the request for information concerning "Examination of Containment Liner Penetration Welds" contained in Reference (a). With the exception of Dresden Unit 1, the review on each of the subject plants has been completed with the results summarized in the enclosure. In the case of Dresden Unit 1, the penetration designs will be reviewed and the feasibility of performing radiographic examinations will be assessed before this unit is returned to service in June, 1986. In the case of LaSalle County Unit 1 and 2 the review as indicated in the enclosure is partially complete and will be completed by August 8, 1980. The updated response for LaSalle County will be submitted at

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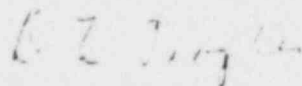
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that time.

If there are any further questions in this regard, please direct them to this office.

Very truly yours,



D. L. Peoples
Director of
Nuclear Licensing

cc: Director, Division of Reactor Construction Inspection
Directorate of Inspection and Enforcement
Washington, DC 20555

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Enclosure
Commonwealth Edison Company
Response to IE Bulletin 80-08

The subject IE Bulletin presented three questions concerning welds between the process penetration sleeve and process piping. Responses for the named stations are as follows using numbers corresponding to the bulletin numbers:

Dresden Station Unit 1

Review of the Dresden 1 sphere penetrations regarding IE Bulletin No. 80-08 indicate the following:

1. Reactor enclosure penetrations do not use the flued head design. A typical penetration detail is attached. Review of this detail does, however, exhibit apparent containment boundary butt welds between the penetration sleeve and the process pipe similar to that shown as item (e) in Fig. NE-1120-1 (attached).
2. There are eleven (11) sphere penetrations utilizing expansion bellows. The original Code of Construction was ASA B31.1-1955 (Section I), including 1956 Addenda.
3. Drawings indicate butt welds with backing rings were used for fabrication. We have not been able to locate records describing the type of nondestructive examinations used or their results.

We will review penetration design and determine the feasibility of performing radiographic examinations prior to unit startup.

Dresden Station Unit 2 and 3,
Quad Cities Station Unit 1 and 2

1. The Dresden and Quad Cities Stations do use flued head penetrations in many applications.
- 2a. The ASME Code governing Dresden is the 1965 Edition, with Summer, 1965 Addenda. For Quad Cities, the 1965 Edition with Addenda through Winter, 1965 applies.
- 2b. The original specifications required radiography for all such penetrations. In addition, surface examinations (PT or MT, as appropriate) were required. A review of construction records indicates that all required examinations were performed. No record of use of ultrasonic examination in place of radiography was found. For Quad Cities, we have determined that

radiographic films are present in most cases, and as-built information indicates radiography for all cases. Although a similar search was not conducted at Dresden, the specification requirements (i.e. radiography in all cases) are identical.

- 2.c. Weld joints of concern to Bulletin 80-08 of both stainless and carbon steels employed a J-groove type design. Consumable inserts were used, not backing rings.
- 2.d. Those records reviewed show acceptable results. Detailed identification of repairs and defects has not been researched, since the fundamental concern of the bulletin (substitution of UT for RT) does not apply to Dresden 2, 3, and Quad Cities.
3. This question does not apply to Dresden 2 & 3 and Quad Cities.

Zion Station Units 1 and 2

1. Zion Station contains flued and other penetration designs which have circumferential butt welds as described in the bulletin.
- 2a. The ASME Code governing the Zion penetrations is Section III Subsection B-1968.
- 2b. The shop and field butt welds of interest were required to be radiographed.
- 2c. The shop and field butt welds of interest utilized either consumable insert or open butt design without backing materials.
- 2d. Radiographic examinations of penetration butt welds found conditions requiring repair in some instances. Repairs were effected and the welds were re-examined to meet code requirements. Radiographic records are available at Zion Station for review upon request.
3. As radiography was required for all butt welds identified in the bulletin this question does not apply to Zion Station.

As a further assurance of containment integrity, the Zion Station penetrations are continually pressurized to 47 psig with a 45 psig backup system. This system is safety-related and is

required to be operable by the Technical Specifications. Any leak in any penetration would be immediately detected and repairs could then be made. The pressurization penetration system requires the failure of welds both inside and outside of containment of any given penetration to provide a leak path of containment air to the auxiliary building.

Byron Station Unit 1 and 2
Braidwood Station Unit 1 and 2

1. The Byron and Braidwood units utilize a flued head design for penetration connections.
- 2a. The penetration sleeves are being installed in accordance to ASME Section III, 1974 Edition with Addenda up to and including Summer 1975.
- 2b. Both volumetric and surface examination techniques are used for installation of the penetration sleeves. Type I and II penetration welds are radiographed; Type III penetration welds are examined via MT or PT techniques.
- 2c. Type I and II penetrations employ circumferential butt welds with no backing ring. Type III penetrations employ a square partial penetration joint weld with backing ring.
- 2d. Results of examinations on the above penetration welds have yielded some cases where repair was required. Repair was effected and the welds were retested satisfactorily. Records are kept on the construction site and are available for review upon request.
3. All examinations are performed in accordance with ASME Section III paragraph NE5000. No further commitments, other than to test to code, are made in the Byron/Braidwood FSAR.

LaSalle County Station Unit 1 and 2

1. The flued head design for penetration is utilized on LaSalle County Unit 1 and 2.
- 2a. The applicable code for LaSalle is the 1974 Edition of the ASME Code with no Addenda. In addition, in 1976 radiographic examination in accordance with Section NE-5000 of the ASME Code was specified for these welds.

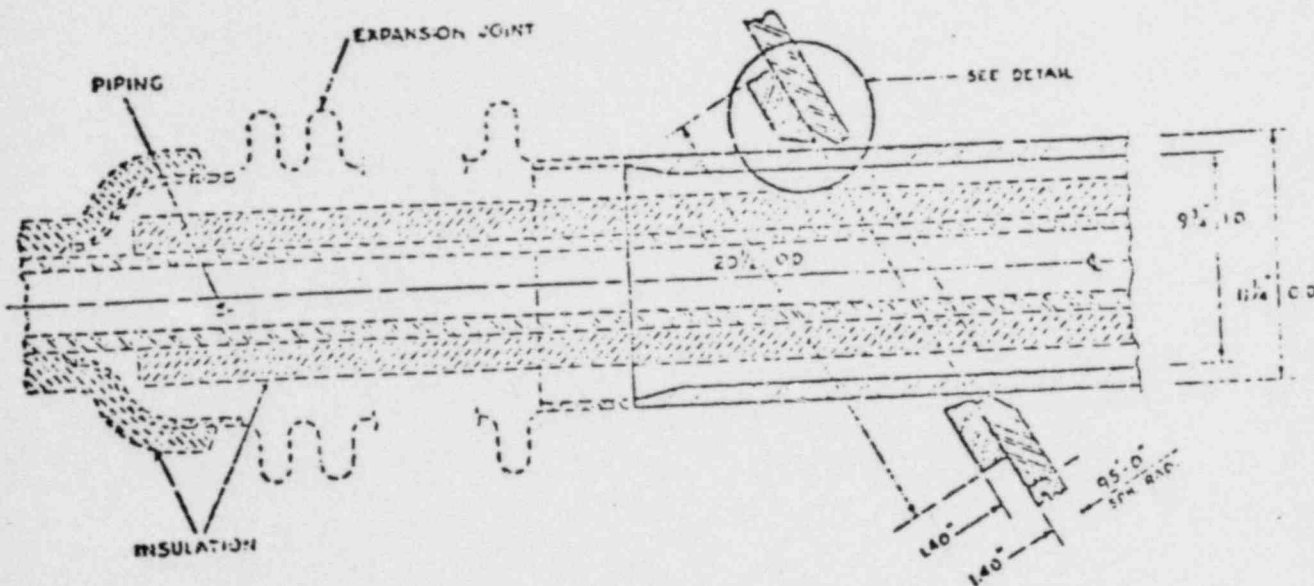
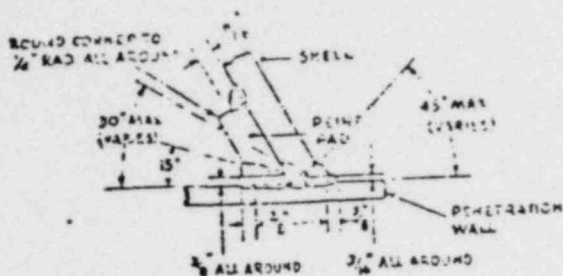
- 2b. It has been verified by review of the weld data reports that all the Unit 1 welds were radiographed. A similar review is currently being conducted for Unit 2. This review will be completed by August 8, 1980.
- 2c. A detailed review and listing of weld joint types including a determination of whether or not backing rings were used is being performed. This review will be completed by August 8, 1980.
- 2d. A complete review of all weld records is in progress. To the extent repairs were required, these repairs will be documented for the purpose of responding to this bulletin and will be available at the site for review on or before August 8, 1980.
- 3. As was previously indicated, radiographic inspection of the subject welds has been specified and will be completed as a part of the construction on the LaSalle County Units.

ATTACHMENT
RESPONSE TO IE BULLETIN 80-08

Buildings and Facilities

1-11-11

DRESDEN I
NRC DOCKET 50-10



TYPICAL PENETRATION DETAIL

Figure 7

POOR ORIGINAL

4. Access Openings

Normal access for personnel and equipment is provided by two pressure locks. Each of these air locks has two doors in series with an interlocking arrangement which assures that one door is closed at all times. In addition, a small emergency exit air lock is provided. A large opening through the reactor enclosure is provided by a bolted access cover 16 feet in diameter. This opening permits the replacement of large pieces of equipment during plant shutdowns.