

December 11, 1978

SNRC-342

Mr. Boyce Grier, Director
Office of Inspection & Enforcement
Region 1
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

LONG ISLAND LIGHTING COMPANY
Shoreham Nuclear Power Station - Unit 1
Docket No. 50-322

Dear Mr. Grier:

On November 8, 1978, in accordance with 10CFR50.55(e) we reported verbally to Region 1 a deficiency with the installation of socket weld fittings on Category I schedule 160 small bore pipe. This letter serves as our 30-day written report of this deficiency.

DESCRIPTION OF THE DEFICIENCY

The deficiency associated with the installation of socket weld fittings on schedule 160 small bore pipe is that the fillet welds joining the socket weld fittings to the pipe have undersized fillet leg length (refer to Attachment I). The fillet leg length is required to be 1.09 times the nominal pipe wall thickness as per Figure NB-4427-1 in the summer of 1977 addenda of ASME Section III (refer to Attachment II). The subject fillet welds on schedule 160 small bore pipe do not meet this requirement in many cases. The fillet welds on small bore pipe other than schedule 160 are adequate as installed since there is a smaller required fillet leg length due to the thinner pipe wall of lower schedule pipe.

CORRECTIVE ACTION

All fillet welds for socket weld fitting attachments to schedule 160 small bore pipe will be inspected for proper fillet leg length. Socket weld fittings with insufficient fillet leg length will have additional weld material added to increase the fillet leg length to meet the code requirement.

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CORRECTIVE ACTION TO PREVENT RECURRENCE

Inspectors will be made cognizant of the requirement delineated above and all future inspections of socket weld fittings will include this requirement. Training classes have been held wherein inspection personnel were instructed in the minimum fillet leg length for various size and schedule pipe. A comprehensive document was distributed to all inspection personnel delineating the required minimum fillet leg length for all size and schedule small bore pipe.

DATE OF FULL COMPLIANCE

We estimate that all fillet welds for socket weld fittings on schedule 160 small bore pipe will be in full compliance with the above code requirement by December 1, 1979.

Very truly yours,

Original signed by
J. P. Novarro
J. P. Novarro

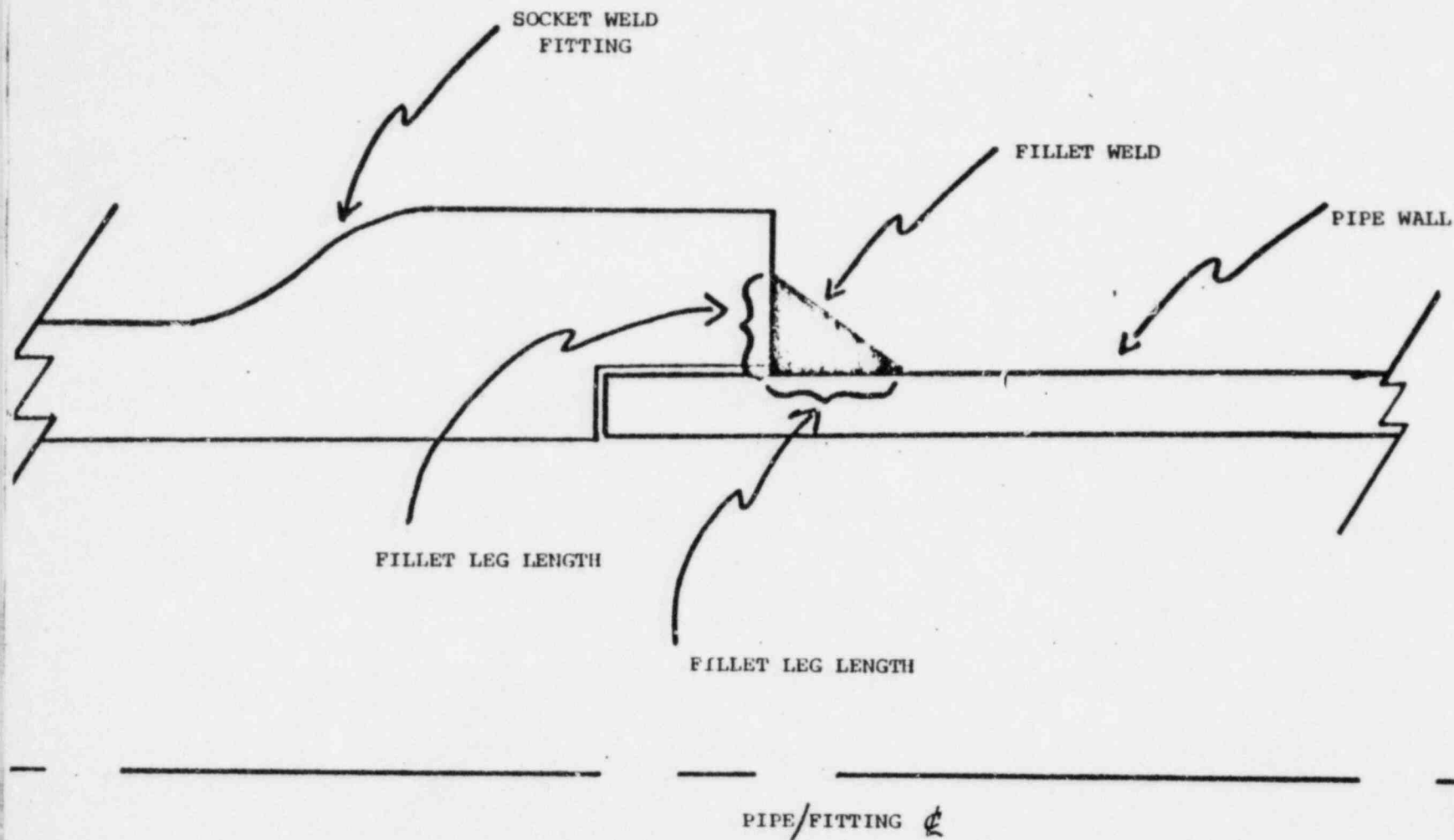
J. P. Novarro
Project Manager
Shoreham Nuclear Power Station

JJM:jv

cc: Mr. John G. Davis, Director
Office of Inspection & Enforcement

bcc: Dist. List 14
M. J. Mullarkey
D. Papa
A. B. Cernomski
C. L. Albertini
Eng. File/SR2...A21.200

ATTACHMENT I



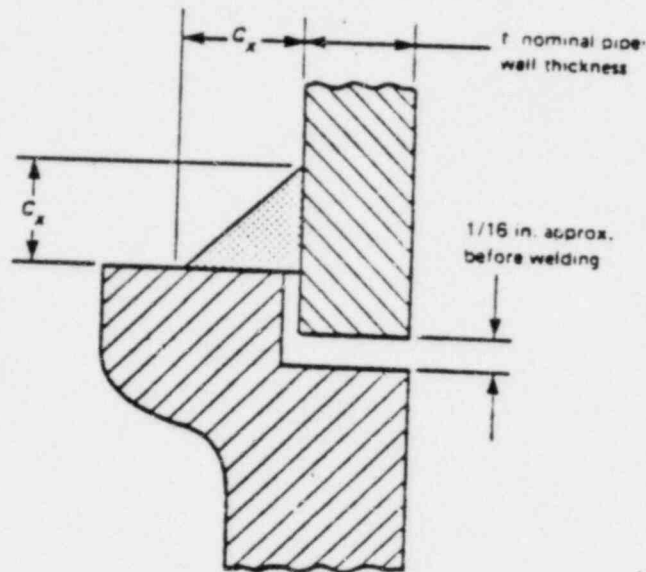
t_n = nominal pipe wall thickness

FILLET LEG LENGTH $\geq 1.09 \times t_n$

ATTACHMENT II

NB-4435-NB-4452

SECTION III, DIVISION 1 — SUBSECTION NB



$$C_x \text{ min.} = 1.09t \text{ but not less than } 1/8 \text{ in.}$$

Minimum Welding Dimensions for Socket-Welding Fittings

FIG. NB-4427-1 FILLET WELD DIMENSIONS (CONT'D)

(c) The material is compatible with the material to which it is attached.

(d) The welding material is certified in accordance with the requirements of NB-2130, NB-2430, and NB-4120.

(e) The welds are postweld heat treated when required by NB-4622.1.

NB-4436 Installation of Attachments to Piping Systems After Testing

Permanent attachments meeting the requirements of NB-4433 and temporary or minor permanent attachments meeting the requirements of NB-4435 may be welded to the piping system after performance of the pressure test provided that:

(a) the welds do not require PWHT under NB-4622.7;

(b) the cross-sectional area of the material attached shall not exceed 6 sq in. (3870 mm²) at the surface of the pressure boundary material;

(c) welds shall be restricted to fillet welds not exceeding 3/8 in. (10 mm) throat thickness and to full penetration welds attaching materials not exceeding 1/2 in. (13 mm) in thickness;

(d) welds shall be examined as required by NB-5000.

NB-4440 EXAMINATION OF WELDS

All welds shall be examined in accordance with the requirements of NB-5000.

NB-4450 REPAIR OF WELD METAL DEFECTS

NB-4451 General Requirements

Unacceptable defects in weld metal detected by methods required by NB-5000, or by the tests of NB-6000, shall be eliminated or the indication reduced to an acceptable limit and repaired when necessary.

NB-4452 Elimination of Surface Defects

Weld metal surface defects may be removed by grinding or machining and not repaired by welding, provided that the requirements of (a), (b), and (c) below are met.

(a) The remaining thickness of the section is not reduced below that required by NB-3000.

(b) The depression, after defect elimination, is blended uniformly into the surrounding surface.

(c) The area is examined after blending by a magnetic particle or liquid penetrant method, meeting the requirements of NB-5000, to ensure that the