

Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, N Y 10003
Telephone (212) 460-2644

February 2, 1972

Mr. James P. O'Reilly, Director
Division of Compliance, Region 1
U. S. Atomic Energy Commission
970 Broad Street
Newark, New Jersey 07102

Dear Mr. O'Reilly:

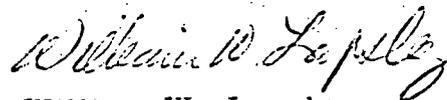
Your letter of January 5, 1972 requests Con Edison comments relative to certain questions, on the ten inch accumulator check valves, resulting from a visit to the Indian Point Unit 2 site by Mr. Tillou of your staff.

As a result of receiving your letter, we have repeated our investigation and evaluation of the proper testing to be applied to these valves after the weld build-up.

The attachment to this letter is offered in response to the statements made in the enclosure to your letter.

Please advise if further information is required in this matter.

Very truly yours,



William W. Lapsley

attach.
wjc/cm

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AEC Statement #1

"...the casting repairs are being accomplished using the Courter Company Welding Procedure No. 8, "Butt and Socket Welding of Stainless Steel Pipe", with no change or supplement to authorize its use in accomplishing exterior overlay casting repairs when the interior is filled with 100° F water".

Con Edison Reply

ASTM Designation A-488, Paragraph 8 (a) suggests a form (Report Form 1) for recording the details of the welding procedure to be qualified. These details are contained in Courter Procedure No. 8. WEDCO's letter of Instructions M-1039 dated 11/22/71 for the weld metal overlay of the eight valves delineated the changes to the applicable welding procedure including the addition of liquid penetrant examination of each layer.

We consider that the WEDCO's letter, identifying the changes to the Courter Welding Procedure, includes all the items changed that ASTM Designation A-488 suggests be recorded and serves to satisfy Paragraph 9 of ASTM Designation A-488. Furthermore, the procedure was approved for this application with consideration of the fact that the system would be filled with water at time of welding. The presence of water inside the valve does not result in any change to the welding procedure as specified for this application. Water on the inside surface could not come in contact with the weld metal and influence weld quality. Preheating is not required and any cooling effects as a result of the water would not be detrimental. In fact, without preheat, the initial conditions without water in the valve would be essentially identical to conditions with water in the valve, i.e. the same thermal gradient across the wall would exist with or without water for a significant amount of weld deposit. We, therefore, believe the intent of ASTM A-488 has been fully satisfied.

AEC Statement #2

"...the... procedure for repair of the Safety Injection System accumulator check valves does not provide for a hydrostatic test to ANSI B16.5 requirements, following the repairs".

Con Edison Reply

During our first review of the examination requirements, hydrostatic test of the valves was considered. The following facts established our basis for not performing an additional hydrostatic test:

1. The valve manufacturer satisfactorily performed a hydrostatic shell test after final machining of the valves in accordance with MSS-SP-66.
2. The valves were installed in position and successfully passed a system hydrostatic test.

3. The valve body configuration, that successfully passed the two hydrostatic tests, was reinforced to provide additional assurance of the strength of the casting. In view of the limited amount of material being added, further hydrostatic testing was not considered necessary. All these points are still considered to be applicable.

AEC Statement #3

"...the...repair procedure for the Safety Injection System accumulator check valves does not provide for a radiographic inspection at the conclusion of the welding repairs".

Con Edison Reply

Code Case N-9, cited in your letter, is an interpretation for material conforming to ASTM Designation A-451. The valves in question were manufactured by Darling and the castings were produced by ESCO. We have determined the castings, conforming to ASTM A-351 Standard Specification for Ferritic and Austenitic Steel Castings for High Temperature Service, were static castings. Code Case N-9 covers Centrifugally Cast Austenitic Stainless Steel Pipe and does not apply.

The weld metal overlay of the valves was not regarded as a repair to a defect at the time the examination requirements were established. However, radiography was considered at that time but was not regarded as an effective inspection tool, in view of the limited amount of material being added, and would not be practical due to access restrictions. The quality of the weld metal deposited and the adjacent parent material was carefully monitored by performing liquid penetrant inspections of each layer of deposited weld metal. This provided assurance that any discontinuities reaching the surface were removed. Liquid penetrant testing of each layer is a more effective quality control procedure than radiography in view of the thinness of the deposit relative to the valve wall thickness.

Upon review, after receiving your question on radiography, we are still satisfied with the adequacy of the nondestructive testing performed. This decision is based on the following:

1. The very limited thickness of weld metal deposited.

bcc: L. Kornblith, Jr., CO
R. H. Engelken, CO
P. A. Morris, DRL
J. B. Henderson, CO
J. G. Keppler, CO
CO Files
DR Central Files
PDR
Local PDK
NSIC
DTIE

