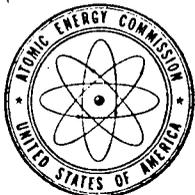


DR Central File



UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

TELEPHONE
(312) 858-2660

September 13, 1972

Wisconsin Public Service Corporation
ATTN: Mr. E. W. James, Vice President
Power Generation and Engineering
P. O. Box 1200
Green Bay, Wisconsin 54305

Docket No. 50-305

Gentlemen:

Thank you for your letter of July 28, 1972, in response to our letter dated June 29, 1972, containing comments and information with respect to our request for verification that valves important to nuclear safety installed or to be installed at your facility meet the minimum wall thickness requirements of the applicable codes, standards and specifications.

With respect to the comments and information provided in your letter, we agree that a certain amount of confidence can be placed on the antecedent, random quality verification efforts associated with the valves common to your facility. However, our letter of June 29, 1972, requests verification of required valve wall thicknesses in terms of either actual mechanical wall thickness measurement results or demonstration of adequate wall thicknesses by suitable alternate means. While our letter identifies ultrasonic measurement as an acceptable alternate means, and we stated that techniques other than ultrasonic measurement may be acceptable, it is intended that an actual measurement technique would be devised as an alternate rather than an evaluation of the valve manufacturing quality control and verification mechanisms which you discussed in your July 28 letter.

In our June 29, 1972, letter we referenced "valves important to nuclear safety" and did not discriminate between forged and cast valves with the intent that a wall thickness verification program would apply to both manufacturing processes. However, by way of additional information, forged valves need not be included in wall thickness verification programs provided that: (1) documentation is available at the site to confirm that valve dimensions were checked after final machining of



Miss appl.

September 13, 1972

machined areas, and/or (2) valve drawings are available at the site to demonstrate that any internal machining operation could not have encroached upon the minimum wall thickness of the pressure-retaining boundary of the valve body.

In view of the foregoing, we request that you reexamine our June 29, 1972, letter and provide us in writing, within 30 days, with additional information on your plans so that we may further evaluate this matter.

Your cooperation with us is appreciated.

Sincerely yours,

Boyce H. Grier
Regional Director

bcc w/ltr dtd 7/28/72:

J. G. Keppler, RO
R. H. Engelken, RO
H. D. Thornburg, RO
J. B. Henderson, RO
P. A. Morris, RO
A. Giambusso, L
RO Files
DR Central Files
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Local PDR
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WISCONSIN PUBLIC SERVICE CORPORATION



P.O. Box 1200, Green Bay, Wisconsin 54305

July 28, 1972

Mr. Boyce H. Grier, Regional Director
U.S. Atomic Energy Commission
Directorate of Regulatory Operations
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Grier:

Reference: Your letter of June 29, 1972
Concerning Docket No. 50-305

The following is in response to the referenced letter to Mr. James from Mr. Grier of June 29, 1972. All valves within the reactor coolant boundary have been furnished by Westinghouse. This response is to define that suitable means were used to assure that valves important to nuclear safety met the minimum wall thickness requirements of the specified codes or standards.

The Westinghouse Quality Assurance philosophy for the procurement of components for all Westinghouse projects, which includes Kewaunee, has consistently strived to assure that the equipment is adequately designed and manufactured to all applicable equipment specifications, codes and standards and will perform satisfactorily and reliably in service.

To meet this objective, Westinghouse deals with qualified suppliers who have been evaluated by surveys and past performance to assure their capability to meet Westinghouse procurement specification requirements. Westinghouse implements a formal Quality Assurance program with these suppliers in the form of audits and product surveillance to assure the contract requirements are met. Statistical sampling is employed on in-process and final inspections to verify and develop confidence that the requirements are met.

The Westinghouse Quality Assurance System for valves amplifies this philosophy. Typically, Quality Assurance reviewed the equipment specifications for all valves to make sure the required quality requirements are incorporated into the contract. Prior to the ASME Code requirements, Westinghouse placed the compliance of QCS-1 on the suppliers. Pre- and post-award meetings are held with the suppliers to assure they understand and develop their manufacturing and inspection plan to meet the Westinghouse requirements. Quality Assurance reviews and comments on all supplier procedures affecting the quality of the valves to make sure the procedures and tests meet the contract requirements. The written quality plan identifies by check list the specific tests and examinations to be performed and provides for the Westinghouse

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representative to witness on a statistical basis these tests. The Quality Assurance representative documents the acceptance of the product by the issuance of the Westinghouse Quality Control Release. The Quality Release is transmitted to the utility site and demonstrates the Westinghouse Quality Assurance involvement and acceptance of the product.

Pioneer Service & Engineering and Wisconsin Public Service have reviewed and evaluated the Westinghouse Quality Assurance Program on valves and have verified its implementation and acceptance by continually monitoring the Westinghouse and suppliers' performance by visits to the supplier plants and audits of Westinghouse program.

As Westinghouse purchases valves in a multi-project purchase system, the audit related to one individual project in a vendor will apply to all associated projects on that purchase order. Further periodic review by independent examiners, Westinghouse and customers, including WPS, increase the possibility that system or vendor deficiencies will be detected. Remedial action will then be taken by/through Westinghouse to correct the deficiency. Thus, this method of monitoring increases the sampled lot and enhances the system's control of the various vendors.

The Westinghouse PWRSD Quality Assurance System for valves has been developed and, based on experience, yearly revised to keep current with changes, practices of the valve suppliers, their procurement specifications, and to assure that the manufactured valve has met all of the procurement requirements.

In the area of supplier and product surveillance, particular attention has been directed to verification tests. Westinghouse has consistently required retest of body hydro, seat leak and operator tests. On a statistical sampling basis, based on a multi-project and multi-purchase order basis, they have verified the dimensional characteristics of wall thickness measurements, end to end distance and weld prep configuration.

This surveillance program was initiated with the placement of the multi-project purchase orders with the vendors and these purchase orders included the Kewaunee valves. As a case in point, the effectiveness of the program is such that 18 months ago, through routine checking and surveillance of Westinghouse suppliers, Westinghouse was alerted to a potential thin wall problem at one of their suppliers. Further investigation confirmed the problem and also verified that the problem was limited to specific sizes and types of valves. As a result of these findings, Westinghouse took the following action immediately and simultaneously:

1. Identified each and every valve of the sizes involved for serial number and quantities at each site, casting foundry, and a 100% review of casting radiography.
2. A plan was established to go to each site to which suspect valves had been shipped to ultrasonically measure the valves for wall thickness. The Kewaunee Plant did not receive any of these suspect valves.

3. Westinghouse started an investigation with all of their valve suppliers to determine if this was a "generic" industry type problem. From the investigation Westinghouse determined that the problem was not generic but was isolated to the one supplier and the specific valves.
4. At the same time that this investigation was being conducted, Westinghouse surveyed all the suppliers to determine what wall thickness documentation was available beyond the requirements of the applicable codes, standards, and procurement specifications. The survey indicated that all suppliers routinely check the dimensional characteristics of their design including wall thickness. This is done primarily as receiving and in-process inspection prior to assembly. However, unless a deviation from standard is detected, the measurements were not recorded. This is a typical industrial practice. In fact, no deviations from required wall thickness were found at the other suppliers.

Shortly after the Westinghouse investigation was underway, AEC letters were issued asking about the availability of wall thickness documentation on valves. Westinghouse, seeing the need for more documented evidence that the wall thickness was checked and acceptable, instructed its Quality Assurance representatives to specifically verify the wall thickness and specifically list this information on the Quality Control Release. In the case of the manufacturers of the questioned valves, the minimum reading measurement was recorded on the Quality Control Releases.

In summary, WPS is confident that the Westinghouse Quality Control program has been capable of detecting non-conformances such as the current "wall thickness concern." The program has proven its effectiveness and has been audited by WPS and corrective action has been taken without prompting by an outside agent. WPS is satisfied that the valves received at the site meet the purchase order requirements including the codes and standards referenced in the equipment specification.

The facts of this letter are documented within Westinghouse and are the basis upon which we suggest that all reactor coolant pressure boundary valves greater than one inch do not need measuring at the Kewaunee site.

Very truly yours,



E. W. James, Senior Vice-President
Power Generation & Engineering

EWJ:sna

will be covered with an earthen mound to approximately twelve (12) feet above grade.

2. After achieving the shut-down storage condition, regular site radiation monitoring and other provisions for protecting the general public will be provided.

Provision has been made for writing off the \$7,000,000 cost of shut-down as a negative salvage value. This cost is then reflected in the values for depreciation.