Washington Public Power Supply System
A JOINT OPERATING AGENCY

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G03-81-1044
May 11, 1981

Nuclear Regulatory Commission, Region V
Suite 202, Walnut Creek Plaza
1990 N. California Boulevard
Walnut Creek, California 94596

Attention: R.H. Engelken, Director
Office of Inspection and Enforcement

Gentlemen:

Subject: WPPSS NUCLEAR PROJECTS 3 AND 5
NRC INSPECTION OF WNP-3 AND WNP-5
DOCKET NUMBERS 50-508, 50-509

Reference: 1). Letter, R.H. Engleken to D.E. Dobson, dated March 31, 1981.

The referenced letter requested that the Supply System address more fully our response concerning excessive offset of an ASME Section III, Class 2 pipe spool. Five concerns were presented:

1). "The justification for deviation from the tolerance requirements of paragraph NC4232.1."

We are not sure of the intent of your question; clearly there is no justification for the deviation from Code tolerances. Hence, spools have been reworked when found not within tolerances.

We believe your question seeks justification as to whether the rework methods are acceptable to bring the spools into Code tolerances and our response is as follows:

NC4232.1 specifies that "Any offset within the allowable tolerance shall be faired to at least a 3 to 1 taper over the width of the finished weld". The allowable tolerances are listed in Table NC4232(a)-1 and is titled, "Maximum Allowable Offset in Final Welded Joints". The title indicates that these tolerances are for the final welded joint. The Code does not specify when or how the joint is to be brought into tolerance. Thus, the Code permits grinding of the weldment after welding to correct out-of-tolerance conditions provided minimum wall is not violated. The fairing requirements shown in NC4232.1 are completed after the joint has been brought into tolerance. Therefore, the rework methods used to correct this non-compliance are acceptable.

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2). "The cause of the misalignment exceeding code allowable tolerances and the extent of known nonconformances of pipes and fittings supplied by this vendor, to the forming tolerances of NC4220."

The material is manufactured to the requirements of ASME Code Section III which imposes the requirements of Section II. Piping materials are manufactured to three tolerances simultaneously:

1. Wall thickness
2. Diameter
3. Ovality

Remembering that it takes two pieces of material to make a weld joint, the fitup process could result in a large mismatch easily exceeding Code allowable tolerances; yet each piece was manufactured within manufacturing tolerances.

To date, only one nonconformance has been written by the vendor (Associated Piping & Engineering Corporation) documenting improperly manufactured material. In this case, several fittings were found to be below minimum wall thickness. AP&E identified and segregated the nonconforming materials prior to use. All other materials have been found to be acceptable.

3). "The actions you have taken to assure that you have identified all pipes and fittings supplied by this vendor, that do not conform to the requirements of NC4220."

AP&E performed an inspection at WNP-3/5 of all accessible welds where a mismatch condition might have existed. (Those spools with a machined counterbore ID were not reinspected.) Deviating spools were returned to AP&E for rework. During normal fabrications, AP&E performs a fitup inspection of accessible welds for mismatch and after completion of the weld a final inspection for correct taper. Additionally, Ebasco representatives at AP&E's facilities are performing inspections to ensure compliance to the Code and the spools are inspected again during receipt inspection at WNP-3/5.

4). "The controls which have been applied to ensure that grinding operations have not encroached on minimum wall thickness".

All spools returned to AP&E for rework have been examined for wall thickness compliance after completion of the rework. During normal fabrication, the fittings and pipe are checked for wall thickness prior to use. When grinding is performed during fabrication, questionable areas are reinspected for minimum wall thickness.

Ebasco has reinspected several hundred spools for minimum wall thickness and have found all measurements well above minimum requirements. During a March 1981 inspection, NRC inspectors also inspected numerous spools for minimum wall thickness and found no deviations. Thus, it appears AP&E controls are satisfactory.

5). "The possibility that localized wall reductions (by grinding) may create a local overstrain condition at the pipe or fitting".

The grinding operations are a blend grinding and would not produce sharp directional transitions nor deep excavations. Thus, a local overstrain condition is extremely unlikely and additional efforts to prevent this potential condition are not warranted.

Very truly yours,

R.S. Leddick

R.S. Leddick
Program Director, WNP-3/5

cc: D. Smithpeter - BPA
Ebasco - New York
WNP-3/5 Files - Richland

R. S. LEDDICK, Being first duly sworn, deposes and says: That he is the Acting Program Director, WNP-3/5, for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that he is authorized to submit the foregoing on behalf of said applicant; that he has read the foregoing and knows the contents thereof; and believes the same to be true to the best of his knowledge.

DATED 8 MAY, 1981.

R S Leddick

R. S. LEDDICK

STATE OF WASHINGTON)
) ss
COUNTY OF GRAYS HARBOR)

On this day personally appeared before me R. S. LEDDICK to me known to be the individual who executed the foregoing instrument and acknowledged that he signed the same as his free act and deed for the uses and purposes therein mentioned.

GIVEN under my hand and seal this 8th day of May, 1981.

Jean DeDavis

Notary Public in and for the State of Washington
Residing at Elma