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ACTION:

PRELIMINARY EVALUATION OF THE ATTACHED REPORT INDICATES LEAD RESPONSIBILITY FOR FOLLOWUP AS SHOWN BELOW:

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PP&L

TWO NORTH NINTH STREET, ALLENTOWN, PA. 18101 PHONE: (215) 770-5151

NORMAN W. CURTIS
Vice President-Engineering & Construction-Nuclear
770-5381

April 21, 1981

Mr. Boyce H. Grier
Director, Region I
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

SUSQUEHANNA STEAM ELECTRIC STATION
INTERIM REPORT OF A DEFICIENCY INVOLVING
DISSIMILAR METAL WELD JOINTS ON SMALL PIPE
ER's 100450/100508 FILES 840-4/900-10
PLA-709

Dear Mr. Grier:

This letter serves to confirm information provided by telephone to NRC Region I Reactor Inspector, Mr. L. Narrow, on February 17, 1981 by Mr. C. I. McVicker of PP&L. Mr. Narrow was advised that dissimilar metals have been joined in socket welds on small pipe. This is in violation of Specification M-204 and is considered potentially reportable under the provisions of 10 CFR 50.55(e).

The attachment to this letter contains a description of the deficiency, its cause, safety implications and the corrective action planned. This information is submitted pursuant to the provisions of 10 CFR 50.55(e).

Since the details of this report provide information relevant to the reporting requirements of 10 CFR 21, this correspondence is considered to also discharge any formal responsibility PP&L may have for reporting in compliance thereto.

We expect to provide a final report on this condition in June, 1981. We trust the Commission will find this information to be satisfactory.

Very truly yours,

N. W. Curtis
Vice President-Engineering & Construction-Nuclear

FLW:sab

cc: Mr. Victor Stello (15)
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U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

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Mr. Gary Rhoads
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P.O: Box 52
Shickshinny, PA 18655

1. DESCRIPTION OF PROBLEM

Bechtel NCR 6479, dated 9/18/80, documented the following conditions:

a) There are 111 Q-listed, small pipe spools containing 187 socket welds which involved the joining of dissimilar metals (carbon to stainless steel). The welds were made using a carbon to stainless weld procedure which was not included in the list of approved welding procedures shown on Drawing M-198. The use of the unapproved welding procedure is in noncompliance with Specification M-204 paragraph 6.2.1.b and with Note 1 on Drawing M-198.

b) Also noted is the fact that 43 of the spools, which had 90 socket welds involving dissimilar metals, were identified as being in systems with design temperatures greater than 212°F. This is contrary to the requirements of Drawing M-198, Note 24, which limits the dissimilar metal weld joints to the systems which have design temperatures of 212°F or less.

2. CAUSE OF DEFICIENCY

a) All welding procedures not listed on Drawing M-198 require approval from Bechtel Project Engineering as noted on the drawing. Welding was performed without this approval as noted in 1(a) above.

b) Bechtel Field Engineering failed to consider design temperature criteria for dissimilar metal welds as required by the Bechtel Construction Specification for welding. Field Engineering failed to comply with restrictions on welding applications as noted in 1(b) above.

3. ANALYSIS OF SAFETY IMPLICATION

Bechtel Project Engineering has determined that the weld procedure used to make the 187 welds in 1(a) is acceptable. Of the 90 welds noted in 1(b) for systems with design temperatures of greater than 212°F, 31 of these welds are acceptable because: 1) the process temperature at the weld will be less than 212°F, or 2) the fatigue stresses at the weld are within allowable valves.

However, due to the fact that the remaining 59 welds are subject to stresses including those induced by temperatures greater than 212°F, the potential for a failure exists. Some of these welds are in safety related systems where failure could lead to an unacceptable leak rate and/or dose rate and represents a deficiency in construction which will require extensive repair to establish the adequacy of the system to perform its intended safety function. Therefore, PP&L considers this deficiency reportable under the provision of 10 CFR 50.55(e).

4. CORRECTIVE ACTION PLANNED

The Bechtel Construction specification for welding (M-198) will be revised to include an all inclusive carbon-stainless weld procedure.

The resolution for the welds in locations which exceed the temperature design requirement of 212°F will be to rework the lines so that no dissimilar socket welds are present.

Further investigation is underway to determine the extent of the subject deficiency. The results will be included in our final report.