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RECIP.NAME RECIPIENT AFFILIATION
GRIER,B.H. Region 1, Philadelphia, Office of the Director

MA/1

SUBJECT: Interim deficiency rept re unsupported anchors between concrete floors & equipment base plates,initially reported 801107.Caused by unfilled annular space between pipe shim & anchor.Use of Shims around anchors will be discontinued.

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PP&L

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December 9, 1980

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

SUSQUEHANNA STEAM ELECTRIC STATION
INTERIM REPORT OF A DEFICIENCY
RELATING TO SHIMMING OF BASE PLATES
ERs 100450/100508 FILES 840-4/900-10
PLA-586

Dear Mr. Grier:

This letter serves to provide the Commission with an interim report of a deficiency regarding the use of pipe shims around anchors between concrete floors and equipment base plates.

The deficiency was originally reported by telephone to NRC Region I Inspector Mr. L. Narrow by Mr. R. A. Schwan of PP&L on November 7, 1980. During that conversation, Mr. Narrow was advised that the condition was under evaluation for reportability under the provisions of 10CFR50.55(e).

The deficiency has been documented by Bechtel under MCAR 1-64 issued on November 4, 1980; and PP&L has subsequently concluded that the condition is reportable under 10CFR50.55(e). The attachment to this letter contains the description of the problems, the approach to resolution along with the basis for reportability.

Since the details of this report provide information relevant to the reporting requirements of 10CFR21, 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 the deficiency in February, 1981.

Very truly yours,

NW Curtis

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

Attachment
FLW:mcb

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

[redacted]
Office of Management Information & Program Control
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Robert M. Gallo
U. S. Nuclear Regulatory Commission
P. O. Box 52
Shickshinny, Pennsylvania 18655

ATTACHMENT TO PLA-586

DESCRIPTION OF THE POTENTIAL PROBLEMS

Bechtel Engineering became aware that pipe shims have been used around anchors between concrete floors and base plates. These were used for setting and leveling of the base plates of various types of supports. The majority of the existing base plates have been already grouted, however, the annular space between pipe shim and the anchor is not filled (See Figure '1'). The grout thickness (and also the height of the pipe shim) generally ranges between one and two inches. As the anchors are unsupported within the height of pipe shims, their shear capacities may be significantly reduced.

Further communication by Bechtel Engineering with Bechtel Field Engineering indicated that this condition exists typically on the following types of floor mounted supports:

a. Large and small pipe supports
b. Instrument supports
c. Electrical supports

In addition to the above condition, on a few floor mounted pipe supports, it was observed that a nut was placed within the pipe shim and tack welded. (See Figure '2') This condition may have an adverse impact in developing and verifying required installation torque/prestress in the anchors.

APPROACH TO RESOLUTION OF THE PROBLEMS

On discovery of the problems, Bechtel Field Engineering was instructed by Bechtel Engineering to discontinue use of pipe shims around anchors.

An inspection program is planned to identify and determine the scope of this problem. Based upon the information obtained, adequacy of anchors will be accordingly evaluated.

For the resolution of the problem, the following options are being considered.

a. Developing an analytical method for engineering evaluation.
b. Removing pipe shims, where base plates are not grouted.
c. Filling the annular space with an approved material.

STATUS OF PROPOSED RESOLUTIONS

Bechtel field personnel are currently developing a field procedure for undertaking the inspection program necessary to resolve the use of pipe shims around anchors. The inspection is scheduled to commence in December 1980. Additionally, the field has established the feasibility of filling the void shown in Figure 1 with grouting material.

Bechtel Engineering is in the process of evaluating this condition by analytical method.

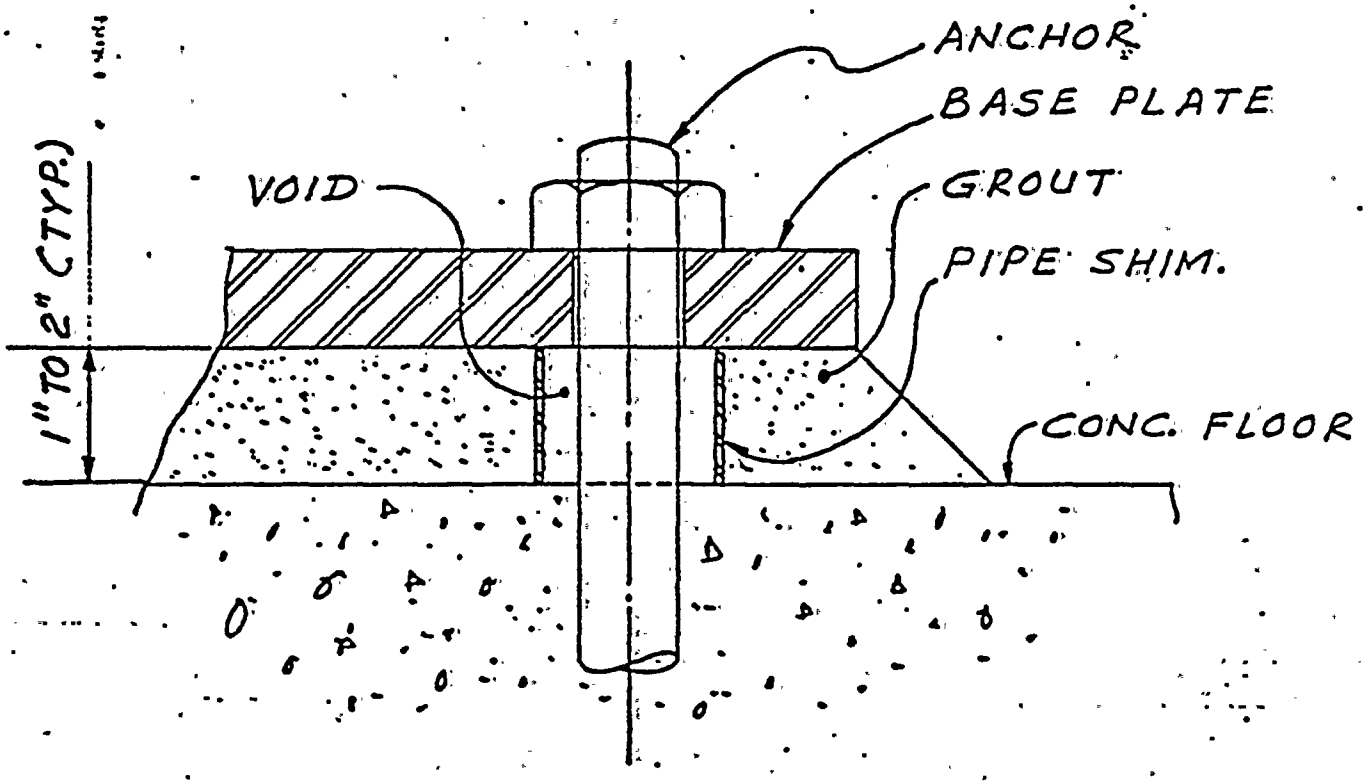
An inspection and remedial program is presently being planned which will deal with the tack welding of leveling nuts inside pipe shims (Figure 2).

REPORTABILITY

PP&L Engineering has determined these problems to be reportable to NRC under 10CFR50.55(e) for the following reasons.

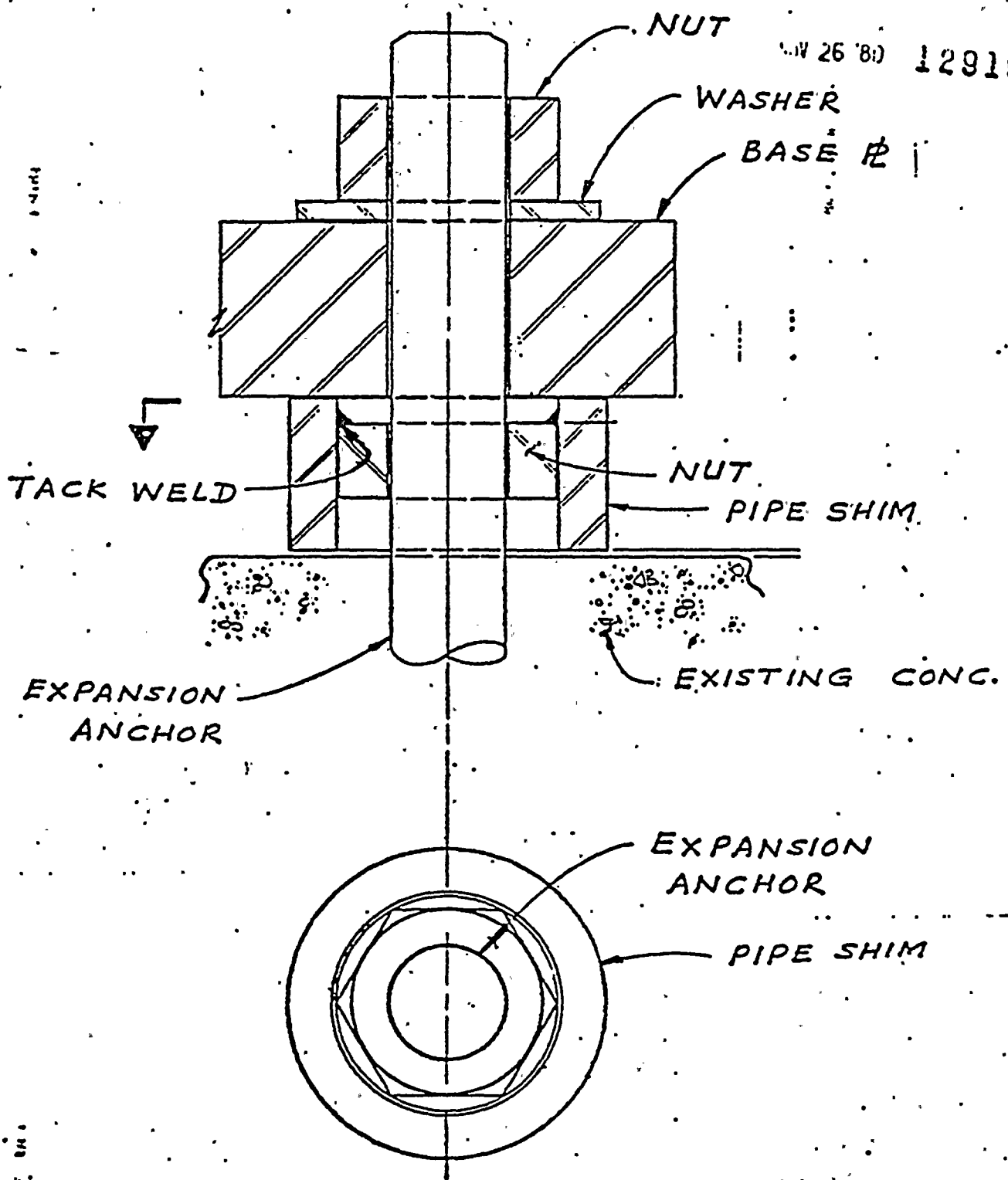
a. The conditions, had they gone unnoticed, might have adverse impact on the safe operation/shutdown of the plant as these anchors support safety related systems and/or piping.

b. Based upon the available information, these conditions may require extensive evaluation and/or repair to meet structural requirements.



SHIMMING OF BASE PLATES

FIGURE 1



SECTION

FIGURE 2