

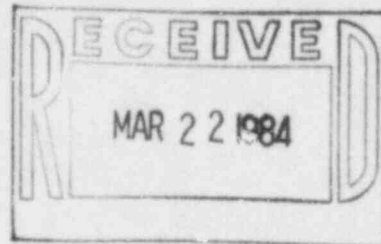


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March 16, 1984

W3K84- 0631  
Q-3-A35.07.103



Mr. John T. Collins  
Regional Administrator, Region IV  
U. S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 1000  
Arlington, Texas 76012

REFERENCE: Telecon C. N. Hooper (LP&L) and D. Tomlinson (NRC IV) on  
February 17, 1984

Dear Mr. Collins:

SUBJECT: Waterford SES Unit No. 3  
Docket No. 50-382  
Significant Construction Deficiency No. 103  
"RADFLEX Wall Penetrations"  
First Interim Report

In accordance with the requirements of 10CFR50.55(e), we are hereby providing two copies of the Interim Report of Significant Construction Deficiency No. 103, "RADFLEX Wall Penetrations". This item was previously reported as PRD No. 156.

Very truly yours,

*T. F. Gerrets*  
T. F. Gerrets

Corporate Quality Assurance Manager

TFG:CNH:SSTG

Attachment

cc: Director  
Office of Inspection & Enforcement  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
(15 copies)

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cc: Director  
Office of Management  
Information and Program Control  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

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Washington, D.C. 20036

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INTERIM REPORT OF  
SIGNIFICANT CONSTRUCTION DEFICIENCY NO. 103  
"RADFLEX WALL PENETRATIONS"

INTRODUCTION

This report is submitted pursuant to 10CFR50.55(e). It describes RADFLEX sealant material utilized in wall penetrations installed at Waterford 3 by B&B Insulation, Inc.

To the best of our knowledge, this deficiency has not been reported to the USNRC pursuant to 10CFR21.

DESCRIPTION

On January 20, 1984, B&B Insulation, Inc., issued Technical Bulletin TB-101-1030 which stated:

"During the installation of RADFLEX\* under certain conditions of temperature during the fill, or where heat was used on the material during installation, a slight shrinkage of the fill may occur. Most notable, when temperature of material at the time of installation is greater than 20°F from ambient temperature after cure, a small space, varying from less than .125 inches on small penetrations (4" or less) to as much as .75 inches on very large penetrations (greater than 30"), may occur.

Inspection of the seal shall be accomplished without damage to the flexible boot, except that where suspect voids are found; the fill patch may be removed.

WALL SEALS

1. Visually check appearance of the boot's shape. If lower side of boot is excessively sagging (below the tangent plane of the sleeve), proceed to step three.
2. Physically feel the upper side of the boot. If a notable space feels evident near the uppermost portion of the penetration, proceed to step three.
3.
  - a. Where normal filling of the penetration has occurred by cutting a hole into the boot, remove the patch and visually check for a void at the inner upmost position of the fill. (A fill of less than 100% is not acceptable.)
  - b. Where optional filling (reference IP 1030.112, item 6.2.2.2) of the penetration has occurred by filling through a pre-drilled hole in the sleeve, remove the plug and visually check for a void at the inner, upmost portion of the fill. (A fill of less than 100% is not acceptable.)

4. a. If the fill is found to be satisfactory and if normal filling of the sleeve occurred, implement part 6.4.1 of procedure IP 1030.112 to close the hole in the boot.
- b. If the fill is found to be satisfactory and if optional filling of the sleeve occurred, replace the metal plug.
- c. If the fill is found NOT to be satisfactory in either case, proceed to item five.
5. Install additional RADFLEX\* using a mechanical or pneumatic caulking gun. Attach a .125 inch ID (or larger, if appropriate) tube to the caulking gun of a sufficient length to reach the far side of the penetration. Pump an additional amount of RADFLEX\* into the void sufficient to fill the penetration. The material temperature should be not more than 10°F above ambient temperature. Using duct tape, temporarily close the opening until the RADFLEX\* has cured. Then implement part 4 a or b as appropriate to close out the inspection and/or repair.
6. Existing Quality Control procedures for documentation of RADFLEX\* installation shall apply.

#### FLOOR SEALS

Since normal practice of installation includes the fill of the top extended sleeve, any amount of shrinkage that has occurred should not reduce the amount of fill to create a void within the substrate area. Floor seals are not, therefore, subject to this inspection."

#### SAFETY IMPLICATIONS

RADFLEX\* penetration sealant has been utilized throughout the plant to accommodate thermal expansion of system piping during all modes of operation and test, and provides radiation shielding for penetrations between areas with varying dose rate levels. Also, RADFLEX\* is provided in penetrations to prevent the transmission of heat and smoke to adjoining areas in the event of fire. Shrinkage of the RADFLEX\* fill (as much as .75" for penetrations greater than 30") could result in activity levels in certain areas higher than originally anticipated, and the inability to maintain the fire resistant integrity of the barrier penetrated.

CORRECTIVE ACTION

Nonconformance Report W3-7259 has been initiated to track and document this deficiency.

All RB-8 seals will be included in this NCR, where they are installed in wall penetrations. The RB-8 is a RADFLEX\* seal.

The inspection procedure outlined in the references B&B Tech Bulletin (TB-101-1030) is acceptable with these exceptions. Small voids (.250 inches or less) will be undetectable with boots in place. Both boots will be removed on all RB-3 and RB-4 seals to facilitate adequate inspection. On all RB-8 seals, the single boot will be removed for inspection.

The consistency of the RADFLEX\* material, when fully set, will allow removal of the boots for inspection without loss of or significant distortion of material.

A Final Report will be submitted on April 30, 1984.

\* B&B Trademark