# . . . ATTACHED IS A PART 21 REPORT FROM IE MAIL UNIT - ROOM 359EAN

PART 21 IDENTIFIC	ATION ID. 7	9-164-001	CO PANY N	A'E Suth Caroline
DATE OF LETTER	3/10/80	DOCKET NO		Electron + Goa
DATE DISTRIBUTED	.3/27/8	original	REPORT	SUPPLE/ENTARY
DISTRIBUTION:				

REACTOR(R)	FUEL CYCLE &	SAFEGUARDS(S)
NRR/DOR, DIRECTOR NRR/DPM DIRECTOR AD/ROI (2) AD/RCI REGIONS	AD/FRIST NASS/FCAS PEGICIS IE FILES PDR	AD/SG-IE AD/ROI REGIONS NRR/DOR,DIRECTOR NMSS/SG SS-881
IE FILES (2) CENTRAL FILES (CHPOT) PDD	LPDR CENTRAL FILES-SS-396 CENTRAL FILES(CHRON) (015)	PDR LPDR TERA
LPDR EPR	TEFA LOEBAPA MB 5715	CENTRAL FILES (2) CENTRAL FILES (CHRON)
LOED/IPA NO 5715 ACTION: PRELIMINARY EVUALATION OF THE	ATTACHED REPORT INDICATES L	CENTRAL FILES - SS-395 LOEB/MPA MB 5715 EAD RESPONSIBILITY FOR

FOLLOW-UP AS SHOV !! BELOW !!

\_\_\_\_

EX			MYSS	OTHER
RCI ROI SG				
The	`	POOR ORIGIN	IAL	

EEV. 2/26/80

8004220049

SOUTH CAROLINA ELECTRIC & GAS COMPANY POST OFFICE BOX 764 COLUMBIA, SOUTH CAROLINA 29218

E. H. CREWS, JR. VICE-PRESIDENT AND GROUP EXECUTIVE ENGINEERING AND CONSTRUCTION

March 10, 1980

79-164-001

Mr. James P. O'Reilly Office of Inspection and Enforcement United States Nuclear Regulatory Commission Region II 101 Marietta Street, N. W. Suite 3100 Atlanta, GA 30303

> Subject: Virgil C. Summer Nuclear Station, Unit 1 Reportable Significant Deficiency Bergen-Patterson Mechanical Shock Arrestor Assemblies Nuclear Engineering File: 3.1051

Dear Mr. O'Reilly:

On March 4, 1980, Mr. Jack Skolds of NRC Region II was notified orally of a reportable significant deficiency.

Bergen-Patterson Pipe Support Corporation (B-P) has previously identified these potential problems with mechanical shock arrestor assemblies to the NRC.

Immediately upon our notification from Southwest Fabricating and Welding Company, with confirming letters from B-P and upon receipt of the IEC, Supplement A, inspections were begun by SCE&G. Initially it did not appear that the design of any of the shock arrestors would be affected by the deficiency as reported by B-P. Continuing investigation has now identified one shock arrestor of the B-P design which could possibly cause a substantial safety bazard defined by 10CFR21. We are reporting this as a significant deficiency under 10CFR50.55(e). Detailed information is found in Attachment I.

Since corrective action has been determined and is in progress, SCE&G considers this the final report on this item. If any questions arise, please let us know.  $\Lambda$ 

tfuly yours, Frews, Jr.

FBB:rm

Enclosure

Mr. James P. O'Reilly Page 2 March 10, 1980

\* -

.

CC: Division of Inspection and Enforcement Washington, DC

> Messrs: H. T. Babb D. R. Moore H. Radin V. C. Summer M. B. Whitaker, Jr. O. S. Bradham A. A. Smith M. Eddins J. Skolds C. Steck (SFV' W. F. Becksted (B-P) NPCF/Dixon File



#### ATTACHMENT I

## 1. Name of Reporting Individual

18. 1

Fred B. Brabham - P. O. Box 764, Columbia, SC 29218

2. Identification of Basic Component

Mechanical Shock Arrestor Assemblies as supplied by Bergen-Patterson Pipe Support Corporation.

### 3. Identification of Firm Supplying Component

Bergen-Patterson Pipe Support Corporation 48 Winnisquam Avenue Laconia, NH 03246

## 4. Nature of Defect and Description of Substantial Safety Hazard

Bergen-Patterson (B-P), through Southwest Fabricating and Welding Company, and NRC IEC 79-25 (to include Supplement A) has identified three (3) potential problems (A, B, & C below) with B-P Part No. 2540 Strut Assembly used in conjunction with Pacific Scientific Mechanical Shock Arrestors.

- A. -In the larger sizes (15, 50 and 120), an installation interference between the mechanical arrestors and rear brackets has been encountered. This problem was addressed to B-P thru Nonconformance Notices, and was resolved by B-P with no substantial reduction of the designed load of these rear brackets.
- B. Two larger sizes (50 and 120) are affected by the following problem:

If the threaded portion of the B-P strut extension which mates with the Pacific Scientific Shock Arrestor is improperly installed, due to improper installation instructions, it could exert pressure on the rear dust cover of the snubber. Any distortion of the dust cover might allow foreign material to enter the snubber, potentially restricting free movement. Extreme distortion can exert pressure on the internal mechanism creating resistance to free movement. Restriction to the designed free movement of the snubbers could possibly lead to failure of the design function, as identified by B-P. These specified snubbers are located in the Turbine Building, and failure would not cause a system interaction which would result in a substantial safety hazard.



C. An additional problem, as identified by B-P and NRC IEC 79-25, Supplement A, involved the 2540-120 Shock Arrestor Strut Assemblies which fail to meet the designed load of 120,000 lbs. Through B-P testing, these assemblies have a maximum acceptable load of only 112,000 lbs.

SCE&G's investigation revealed that only one (1) of the three to be used at V. C. Summer Station would be loaded in excess of 112,000 lbs. (MSH-058), and could, therefore, possibly affect the ability of the plant to safely shutdown.

## 5. Dates Information of Defects were Obtained

January 2, 1980 - NRC IEC No. 79-25

February 4, 1980 - NRC IEC No. 79-25, Supplement A

January 7, 1980 - Southwest Fabricating and Welding Company to GAI, dated January 3, 1920, with attached B-P letters: B-P's letters to Southwest, CCN: 2863/32/0099, CCN: 2537/32/0100 and CCN: 2537/32/0101, all dated December 28, 1979.

September 25, 1978 - NCN 505 (SIH-209) March 7, 1979 - NCN 610 (FWH-119) April 18, 1979 - NCN 716 (RHH-185) July 19, 1979 - NCN 901 (MSH-102) July 19, 1979 - NCN 902 (MSH-092) July 19, 1979 - NCN 903 (MSH-058) July 21, 1979 - NCN 906 (MSH-095) August 14, 1979 - NCN 940 (RHH-282)

Addressing rear bracket interferences

October 18, 1979 - NCN 1062 (Generic for all dust cover interferences)

## 6. Number and Location of Defects

#### Referenced Problem A

Three (3) Shock Arrestor Assemblies are on the Reactor Coolant System (RCH-057, -066, -082) and are installed in Non-Safety sections of the system in the Reactor Building.

Two (2) Shock Arrestor Assemblies are on the Safety Related Component Cooling System (CCH-025, -143) and are located in the Auxiliary Building.

Two (2) Shock Arrestor Assemblies are on the Safety Related Reactor Building Spray System (SPH-088, -089) and are located in the Auxiliary Building.



One (1) Shock Arrestor Assembly is on the Safety Related Safety Injection System (SIH-209) and is located in the Reactor Building.

One (1) Shock Arrestor Assembly is on the Safety Related Feedwater System (FWH-119) and is located in the Reactor Building.

Two (2) Shock Arrestor Assemblies are on the Safety Related Residual Heat Removal System (RHH-185, -282) and are located in the Reactor Building.

One (1) Shock Arrestor Assembly is on the Safety Related Main Steam System (MSH-095) and is located in the Intermediate Building.

## Reference Problem B

Four (4) Shock Arrestor Assemblies are on the Non-Safety Reheat Steam System (RSH-019, -025, -031, -038) and are located in the Turbine Building.

#### Reference Problem C

Three (3) Shock Arrestor Assemblies of this size (120) are to be used and all are on the Safety Related Main Steam System.

Two of the Assemblies (MSH-092 & MSH-102) are located in the Intermediate Building and one assembly (MSH-058) is located in the Auxiliary Building on Main Steam Loop A.

## 7. Corrective Action

## Referenced Problem A

The larger size assemblies (120) are in the process of being replaced by B-P. The smaller sizes have been modified.

#### Referenced Problem B

Each identified assembly has been visually examined to determine if any distortion of the rear dust cover is evident. In addition, each unit has been manually stroked throughout its entire range of travel to verify free movements. B-P has now supplied parts to prevent distortion.

### Referenced Problem C

The Main Steam System for the three (3) assemblies have been analyzed and has been determined that only one (1) assembly could be overloaded (MSH-058). The bracket of the assembly, which is the overloaded component, will be re-designed and supplied by B-P.

POOR ORIGINAL

Advice

None

8.