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August 8, 1996
RC-96-0206

Mr. C. P. Tan
NRR/DE/ECGB
Via: Mr. A. R. Johnson
Project Manager
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

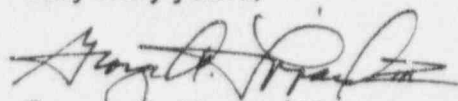
Dear Mr. Tan:

Subject: VIRGIL C. SUMMER NUCLEAR STATION
FIFTEENTH YEAR PHYSICAL SURVEILLANCE OF THE V. C. SUMMER UNIT 1
CONTAINMENT BUILDING--SURVEILLANCE REPORT

Attached is the Virgil C. Summer Nuclear Station Fifteenth Year Physical Surveillance of the Unit 1 Containment Building. This report is being sent per your request.

Should you have any questions concerning this report, please call Mr. G. P. Parsons, Design Engineering, at (803) 345-4633.

Very truly yours,



George A. Lippard III

MJZ/GAL/nkk
Attachment

c: (w/o Attachment)
NRC Resident Inspector
DMS (RC-96-0206)
RTS (TSP 960001)
File (813.20)

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PL: AL Johnson

PSCPrecision
Surveillance
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TitleFIFTEENTH YEAR PHYSICAL SURVEILLANCE OF THE
V. C. SUMMER UNIT I CONTAINMENT BUILDINGSub-
Title

SURVEILLANCE REPORT

BY

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ENGINEERING DEPARTMENT

ABSTRACT

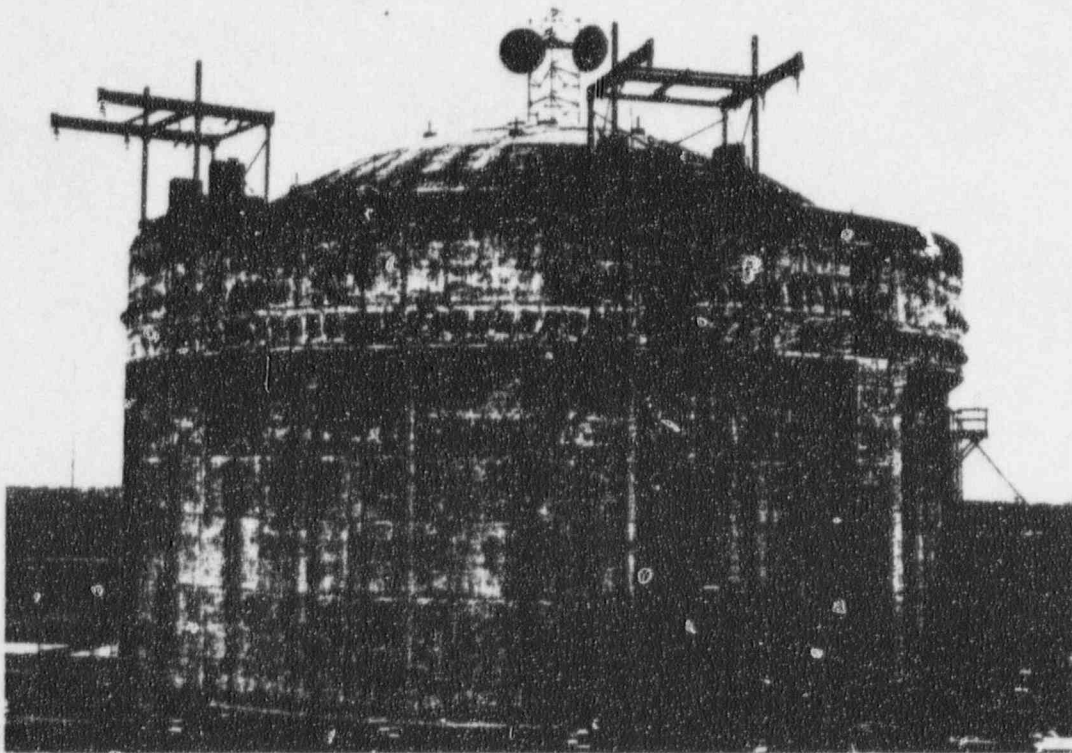
This report presents the findings of the Fifteenth Year Physical Tendon Surveillance of the V. C. Summer Unit I Containment Building post tensioning system. Based upon evaluation of the results of this surveillance, it is determined that no abnormal degradation is evident.

REVISION CONTROL LOG

Rev.	Revision Date	By	Approved By	Pages Affected
△				
△ 0	7/15/96	PCS	RDT	1-vi, 1-37, A1-A165, B1-B5, C1-C16, D1-D34, E1-E10, F1-F279.
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PHYSICAL TENDON SURVEILLANCE
OF THE
V.C. SUMMER GENERATING STATION
CONTAINMENT STRUCTURE



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15TH YEAR PHYSICAL SURVEILLANCE OF THE
V.C. SUMMER NUCLEAR STATION
CONTAINMENT BUILDING



SUMMARY

The purpose of this report is to present the results of the 15th year in-service inspection of the V.C. Summer Nuclear Plant Containment Building Post Tensioning Systems. The results of this investigation are discussed in detail in the body of this report and are summarized as follows:

1. The sheathing filler (grease) samples tested had acceptable levels of water soluble ions, (Chlorides, Nitrates, and Sulfides) and water content.
2. No tendons exhibited water either during removal of the grease can, or around the tendon anchorage.
3. No cracks were found on any anchorage components and the corrosion levels at all ends were found to be acceptable.
4. No additional broken or missing wires were found on any of the inspected tendons except V-8 and H-30CB. Both of these tendon exhibited one missing or protruding buttonhead with no visible degradation. No buttonheads were present in the grease can and it can be assumed that these occurred at installation.
5. The hydraulic jacks used for liftoffs and detensioning were found to be in a properly calibrated status throughout the surveillance.
6. The liftoff force for all tendons was found to be acceptable and in excess of the minimum prestress force limits.
7. The wire samples tested were found to be acceptable for diameter, ultimate strength and corrosion level.
8. All tendons were resealed and regreased to an acceptable level.

Based on the data gathered during the In-Service Inspection of the fifteenth year Physical Surveillance and reported herein, the conclusion is reached that no abnormal degradation of the Containment Building Post Tensioning System has occurred for the V.C. Summer Nuclear Power Plant.



15TH YEAR PHYSICAL SURVEILLANCE OF THE
V.C. SUMMER NUCLEAR STATION
CONTAINMENT BUILDING



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V.C. SUMMER NUCLEAR STATION
CONTAINMENT BUILDING



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15TH YEAR PHYSICAL SURVEILLANCE OF THE
V.C. SUMMER NUCLEAR STATION
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15TH YEAR PHYSICAL SURVEILLANCE OF THE V.C. SUMMER NUCLEAR STATION CONTAINMENT BUILDING



INTRODUCTION

This report details the 15th year physical surveillance of the Containment Building Post Tensioning System at the V.C. Summer Nuclear Plant. The Containment Building Surveillance Program is a systematic means of assessing the quality and structural performance of the post tensioning system. The 15th year tendon surveillance is the fifth in the series.

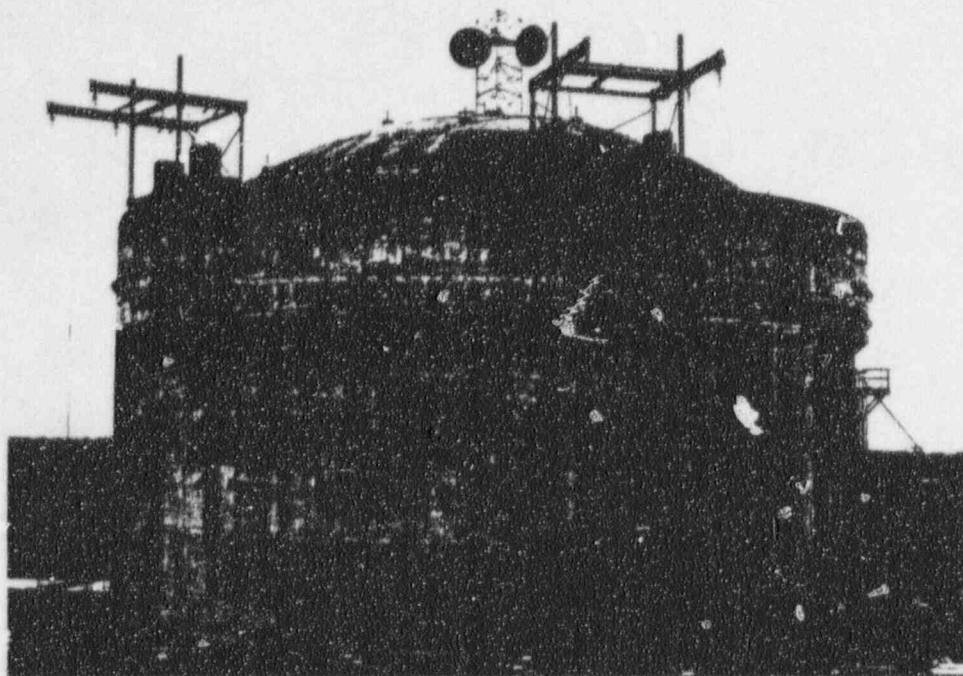
The tendon surveillance program consists of a periodic inspection of the physical condition of a randomly selected group of surveillance tendons. This program provides confidence in the condition and functional capability of the system, and an opportunity for timely corrective measures if adverse conditions are detected. Physical tendon surveillance consists of sheathing filler inspection, anchorage inspection, tendon liftoff, inspection and tensile testing of removed wire samples, with the tendons being resealed after completion of all inspections.

The tendon surveillance of the V.C. Summer Containment Building began on March 28, 1996, and was completed on April 25, 1996. Wire testing was completed on May 3, 1996 with the grease results received on May 24, 1996. The surveillance was conducted in accordance with South Carolina Electric and Gas Company's Specification SP-228-044461-000, Rev. 10, Regulatory Guide 1.35 Proposed Revision 3 and PSC Surveillance Manual, a copy of this manual is included in Section 9, Appendix F of this report.

A group of three dome, three vertical and three horizontal tendons were selected for physical inspection with one tendon from each group selected for detensioning and wire removal. All surveillance tendons were selected by South Carolina Electric and Gas.



15TH YEAR PHYSICAL SURVEILLANCE OF THE
V.C. SUMMER NUCLEAR STATION
CONTAINMENT BUILDING



The tendon surveillance of the V.C. Summer Containment Building began in March 1996 and was completed in April 1996. The surveillance was performed using access scaffolds suspended from the upper steel supports on top of the containment structure. Hoists carried the rams used to perform the physical surveillance force measurement.

Internal scaffold platforms, complete with independent safety lines for both the scaffold unit and personnel (similar to picture below), suspended from installed steel members meant that no full height scaffold towers were required, greatly reducing cost and increasing flexibility.

The term "pictures", used in this report refers to computer copied photographs.

