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 UHRIG, R. E. Florida Power & Light Co.
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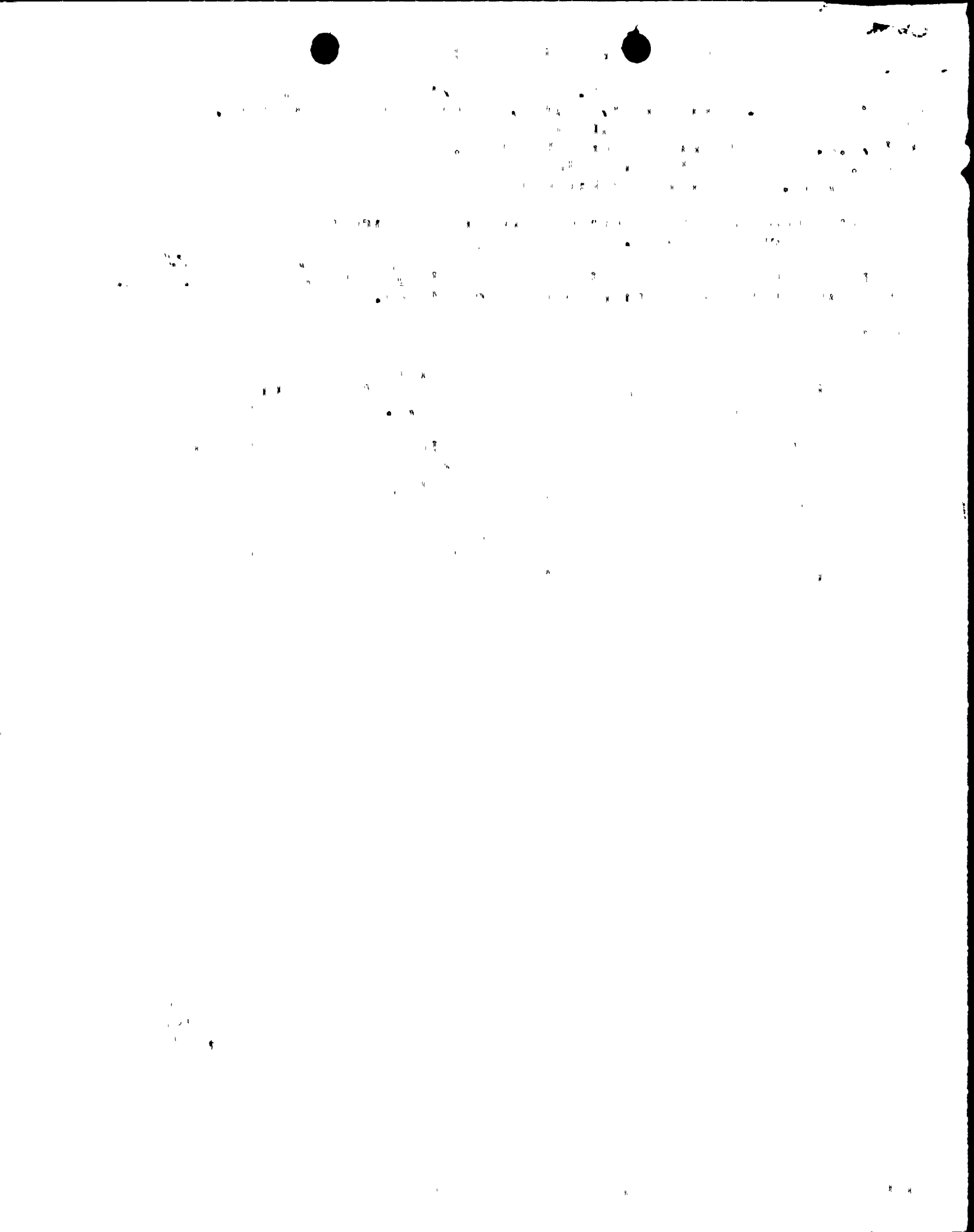
SUBJECT: Forwards test objectives & results of fire stop test performed by SWRI.

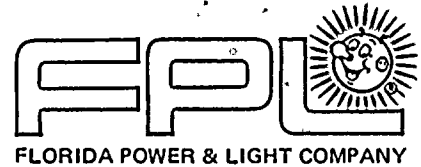
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JB





August 13, 1982
L-82-355

Office of Nuclear Reactor Regulation
Attn: Mr. Darrell G. Eisenhut, Director
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Eisenhut:

Re: St. Lucie Unit #2
Docket No. 50-389
Electrical Penetration
Fire Stop Test Results

Attached please find a copy of the test objectives and results of a fire stop test that was performed on our electrical penetration fire stops. This supplements the information that we have previously submitted on fire protection for St. Lucie Unit 2.

If you have any questions, please contact us accordingly.

Sincerely,

R. E. Uhrig
Vice President
Advanced Systems and Technology

REU/JES/cab

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DEPARTMENT OF
FIRE TECHNOLOGY

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FIRE ENDURANCE AND HOSE STREAM TESTS OF ELECTRICAL PENETRATION FIRE STOPS

by

Jesse J. Beitel

FINAL REPORT

SWRI PROJECT NO. 01-6940

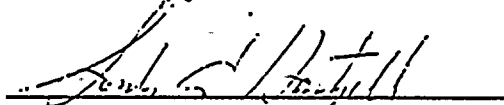
FP&L NO.: FLO-2998.278-L

for

FLORIDA POWER AND LIGHT COMPANY
EBASCO SERVICES INCORPORATED, AGENT
TWO WORLD TRADE CENTER
NEW YORK, NEW YORK 10048

JUNE 1982

Reviewed by:



Gordon E. Hartzell, Ph.D.
Director
Department of Fire Technology

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I. OBJECTIVE

A. General

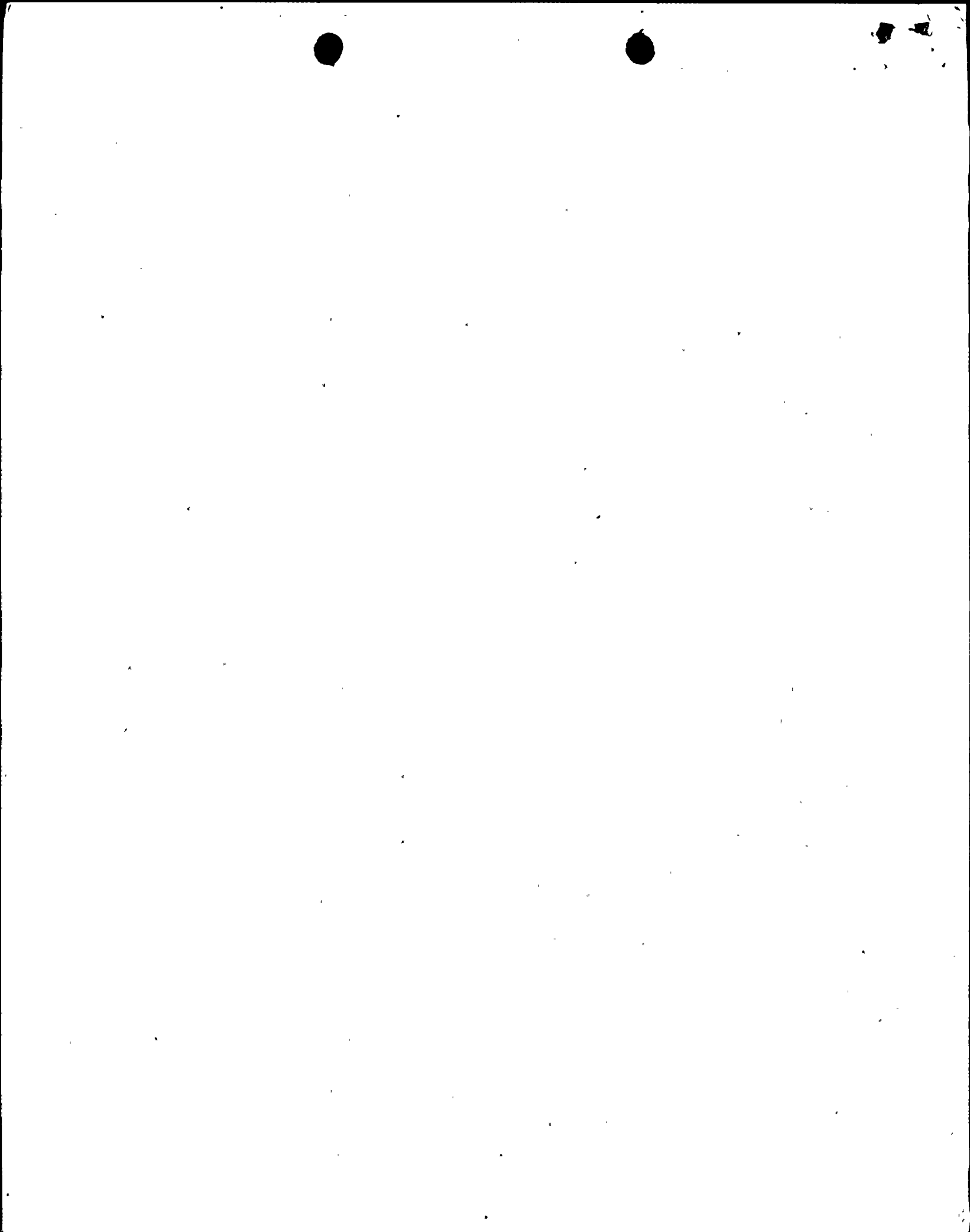
The objective of this program was to conduct fire endurance and hose stream evaluations on two electrical floor penetration fire stop assemblies.

B. Specific

The specific work tasks were outlined in the Ebasco statement of work. A copy of this work statement is provided in Appendix A.

Specifically, the work statement called for fire endurance and hose stream tests on two electrical floor penetration fire stop assemblies as specified in the statement of work. Electrical Floor Penetration No. 1 (Test No. 1) was a symmetrical fire stop assembly while Electrical Floor Penetration No. 2 (Test No. 2) was asymmetrical, requiring both sides of the fire stop (i.e., penetrations 2a and 2b) to be exposed to the fire.

The basic test procedure specified in the work statement was IEEE Standard 634-1978, IEEE Standard Cable Penetration Fire Stop Qualification Test, with additional thermocouple requirements as specified in the statement of work. The tests were, therefore, not conducted under ANI guidelines, NML Appendix A-14, or any NUREG guidelines.



IV. CONCLUSIONS

According to Section 6.1 of IEEE 634-1978, a penetration seal is acceptable if:

1. There is no passage of flame or gases hot enough to ignite cables or fire stop material on the unexposed side;
2. The maximum temperature attained on the unexposed surface of the fire stop seal is 700°F; and,
3. The fire stop seal withstands the hose stream test.

Based on this criteria and the test procedures previously described, Electrical Floor Penetration Nos. 1, 2a and 2b are acceptable.

