

FLORIDA POWER & LIGHT COMPANY
SYSTEM PROTECTION GROUP
NUCLEAR POWER PLANTS
INSTRUCTIONS FOR INSPECTION & TESTS OF LOCKOUT RELAYS

Change No. 1
Pages Effected 2
& Test Form

1.0 APPROVAL:

Approved by R. L. Taylor
Manager - System Protection
Date 6-11 19 75

Reviewed by Turkey Point Plant Nuclear Safety Committee June 5,
19 75.

Approved by J. K. Hayes Plant Supt. July 30, 19 75.

Reviewed by St. Lucie Plant Nuclear Safety Committee June 4
19 75.

Approved by W. J. Harris Plant Mgr. June 16 19 75.

2.0 PURPOSE:

These instructions will provide guidance in the performance of inspection and test activities on Lockout Relays.

3.0 SCOPE:

3.1 Discussion

The relays discussed in this procedure are auxiliary relays used in overall relay protective schemes. The instructions will include procedures for inspection and testing the relays concerned.

3.2 Authority

1. 10 CFR 50, Appendix B
2. Florida Power & Light Company Quality Assurance Program For Nuclear Power Plants.

3.3 Definition

None

3.4 Precautions & Prerequisites

Before performing any operational tests of the relay and associated circuitry, clearance on the breakers or other devices tripped by the relays must be obtained. Obtaining of clearances and other activities such as the lifting of wires which are governed by established plant procedures shall be performed in accordance with those procedures.

FLORIDA POWER & LIGHT COMPANY
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NUCLEAR POWER PLANTS
INSTRUCTIONS FOR INSPECTION & TESTS OF LOCKOUT RELAYS

3.0 SCOPE:

3.5 References

1. Turkey Point Units #3 & 4 Technical Specifications.
2. St. Lucie Plant Unit #1 Technical Specifications.
3. General Electric Instruction Booklet For HEA61 GEH-2058B.
4. General Electric Instruction Booklet For HEA63 HEG-1277.

3.6 Records & Notification

Form # SP-LO

3.7 Equipment Required

1-Analyser

1-Load Box

4.0 RESPONSIBILITIES:

System Protection Supervisor

The System Protection Supervisor shall be responsible for seeing that tests and inspections are performed as specified by this procedure. He shall determine that work completed is acceptable and signify the same by signing and dating the test reports.

5.0 INSTRUCTIONS:

- 5.1 Before operating the Lockout Relay, disable tripping to all devices which are not desirable to trip.

5.2 Half Voltage Trip Test

5.2.1 Set up test equipment as in Figure 1.

5.2.2 Measure the resistance of the trip coil and record it on the test record.

5.2.3 Set Load Box resistance to a value equal to the resistance of the Lockout Relay.

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INSTRUCTIONS FOR INSPECTION & TESTS OF LOCKOUT RELAYS

5.0 INSTRUCTIONS: (CONT'D.)

5.2 Half Voltage Trip Test

5.2.4 Close the "S" switch and observe that the Lockout Relay trips. The voltage applied to the Lockout Relay will be half normal battery voltage. Open the "S" switch as quickly as possible so as not to apply a constant voltage to the coil. The relay must trip at one half normal DC voltage the first time applied.

5.3 Visual Inspection

5.3.1 When the Lockout Relay is in the reset position, the normally open contacts will be inspected to be positively open and the normally closed contacts to be positively closed. All contacts are to be checked to have adequate wipe and to make good electrical contact. These contacts will be reinspected with the Lockout Relay in the tripped position.

5.3.2 The arc suppression circuit shall be visually inspected to be in tact and in working condition.

5.4 Tripping Test And QC Inspection (QC Holdpoint)

5.4.1 Caution: Before performing this test, check that proper precautions were taken to insure that no undesirable tripping occurs. The Lockout Relay contacts shall be reconnected as much as practical to insure that undesirable tripping does not occur. An operational test shall then be performed by closing some contact of a protective device which normally operates the relay. The Lockout Relay shall be observed to have good positive action.

5.4.2 After the operational test is correctly completed and before releasing the Lockout Relay for service, visually inspect the relay for the following:

1. Foreign matter
2. Foreign jumpers or blocking
3. Connections are tight
4. Test switches closed for normal operation
5. Trip fuses returned to normal inservice condition
6. Monitoring light or circuit in service if so equipped.

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5.0 INSTRUCTIONS: (CONT'D.)

5.4 Tripping Test And QC Inspection (QC Holdpoint)

5.4.3 Check Test Report to be complete and results to be within acceptable limits.

5.4.4 After completing these inspections and finding them to be correct, sign and date the test form.

5.5 Records

Records shall be handled as specified in paragraph 5.7 of QI-17-SP-1 of the System Protection Group Quality Assurance Program.

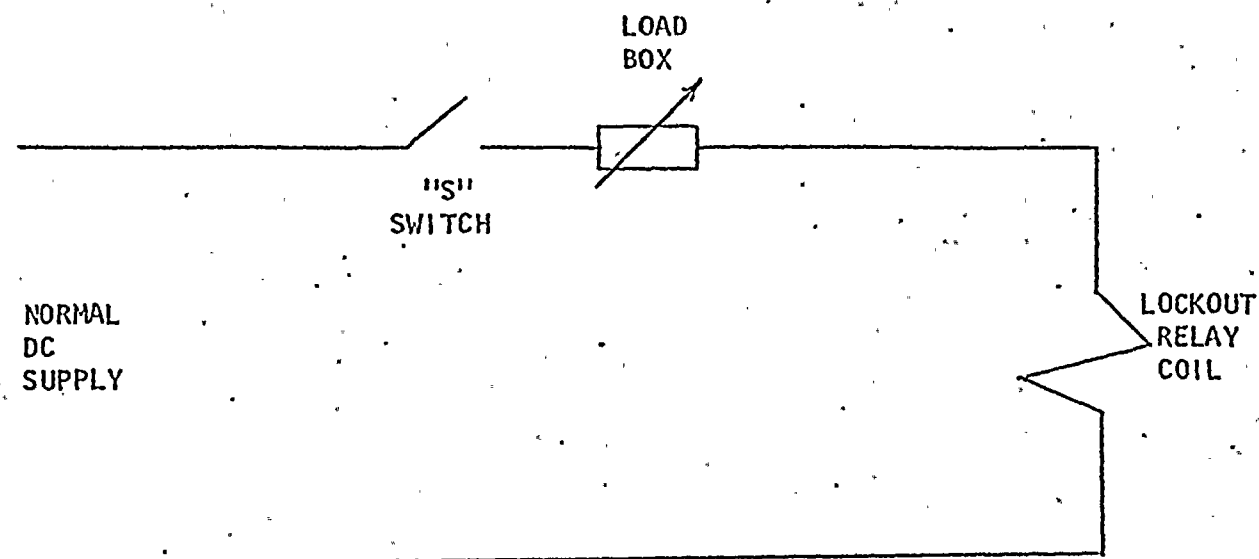


FIGURE 1

LOCKOUT RELAY
TEST REPORT

PLANT _____
 GEN _____
 CUBICLE _____
 TEST BY _____ DATE _____
 TEST APPROVED _____ DATE _____
 TEST DISAPPROVED _____ DATE _____

REFER TO Q1-5-SP-2.5

PROTECTED ZONE OR FUNCTION					
NAME DATE	MODEL NUMBER				
	COIL NUMBER				
	RATED VOLTS				
	AS FOUND HALF VOLTAGE TRIP				
	AS LEFT HALF VOLTAGE TRIP				
	.DC RESISTANCE				

VISUAL INSPECTION: Contacts: _____ Arc Suppression Circuit: _____

IDEN. NUMBER _____

EQUIPMENT USED _____

REMARKS _____

INSPECTED BY _____ DATE _____

