## CONTROLLER SIMULATED SURGE ARRESTER OPERATION TEST REPORT

<table>
<thead>
<tr>
<th>Client:</th>
<th>Schweitzer Engineering Laboratories, 2350 NE Hopkins Court, Pullman, WA 99163-5603, USA</th>
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<td>Test Date:</td>
<td>4 &amp; 5 July 2003</td>
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### Nameplate Data:
- **Controller:**
  - Manufacturer: Schweitzer Engineering Laboratories
  - Model: SEL-651R
  - Part No.: 0651R01AA821123A0+17
  - Serial No.: Cooper-7

- **Recloser:**
  - Manufacturer: Cooper Power Systems
  - Model: Kyle Recloser Type WVE-27
  - Impulse level (BIL): 150 kV<sub>peak</sub>
  - Rated voltage: 38 kV<sub>rms</sub>
  - Rated current: 560 A<sub>rms</sub> continuous, 8 kA<sub>rms</sub> interrupting
  - Dielectric: Non-PCB fluid
  - Serial No.: 009750

### Test Witness:
- Greg Bow and Kenneth G. Workman, Schweitzer Engineering Laboratories

### Test Standard:

### Atmospheric Conditions:
- Temperature: 20.7 °C
- Relative humidity: 41%
- Barometric pressure: 756.5 mmHg

### Test Current:
- 7 kA<sub>peak</sub>

### Test Configurations (in accordance with the above standard):
- A - surges applied to the source bushing with the recloser open
- B - surges applied to the source bushing with the recloser closed
- C - surges applied to the load bushing with the recloser closed
- D - surges applied to a properly rated transformer with the recloser open
- E - surges applied to a properly rated transformer with the recloser closed

### Test Results:
The controller and recloser operated normally following the Simulated Surge Arrester Operation Test performed in accordance with the test procedures as per the above standard. The controller complied with requirements of IEEE Std C37.60-2003, Clause 6.13.2.

### Remarks:
The controller passed the test.

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**Prepared by:**

[Signature]

Milan Vasko
Senior Electrical Engineer

**Approved by:**

[Signature]

A.J. Vandermaar, P.Eng.
Manager, High Voltage Laboratory

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Test Report № 14460-26

Manufacturer: Schweitzer Engineering Labs
Pullman, WA 99163-5603,
USA

Project №: #14460-26  Test Dates: 3 July 2003

Tested Device: Recloser Control Unit
Type: SEL-651R
Product №: 0651RO1AAA821123AO+17
Serial №: Cooper - 7
Tested Recloser: Kyle Recloser Type "WVE-27",
27 kV, 8 kA, 630 A,
Serial № 009750

Tests performed:
• Transformer Magnetizing Current tests at 22.0 kV, 23.0 A_{RMS}, 20 x CO operations
• Line Charging Current tests at 22 kV, 5.63 A_{RMS}, 20 x CO operations

Witnesses:
Mr. Gregory A. Bow  Schweitzer Engineering Labs Co.
Mr. Ken Workman  Schweitzer Engineering Labs Co.

Remarks: Identification of the Tested Recloser and Recloser Control Unit was based on the nameplate information. The tests were performed under conditions similar to those specified in ANSI/IEEE Standard C37.60-1981, Section 6.13 and ANSI/IEEE C37.60, Draft 15a (Unapproved), published in November 2002, Section 6.3.2.2.2.

Tested by:  Reviewed by:

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