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National Grid

Schedule of Site Commissioning Tests

SCT 16.9
Issue 2
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System Monitor Bay Equipment and Interface Unit

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NATIONAL GRID

SCHEDULE OF SITE COMMISSIONING TESTS

SCT 16.9 SYSTEM MONITOR BAY EQUIPMENT AND INTERFACE UNIT

Station:

HV Circuit:

LV Circuit:

Contractor:

Contract Number:

National Grid Contract Number:

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SYSTEM MONITOR BAY EQUIPMENT AND INTERFACE UNIT

1 INTRODUCTION

The tests included on this SCT are applicable to System Monitor (SM) installation (SM bay equipment used in conjunction with SM interface, see Figure A). SM bay equipment can be of different manufacturer and it shall be commissioned in accordance with manufacturers' instructions. After the SM Installation has been commissioned, detailed commissioning results of the SM bay equipment should be attached to this SCT.

2 SCOPE

This SCT deals with the commissioning of the SM interface in conjunction with the SM bay equipment. It is anticipated that interface and the SM bay equipment will be commissioned at the same time.

3 TEST EQUIPMENT REQUIRED

	Manufacturer and Type	Serial Number	Calibration Date	Date next Calibration due
Digital Multimeter				
Clip on CT				
Injection test set				
500 V D.C. Insulation Tester				
Other equipment (specify)				

4 PRECAUTIONS AND REQUIREMENTS

- 4.1 Before starting tests on new or disturbed Secondary Circuits it must be ascertained that testing will not conflict with or present safety hazards to any other testing or construction work.
- 4.2 Note that Circuit Breaker Fail Protection could be activated by secondary injection. The agreement of National Grid site engineers must be obtained before secondary injection is carried out.
- 4.3 All tests must be fully completed and signed off, in the relevant sheets of the SCT, by nominated engineers, before all commissioning tests will be considered complete.

5 OFF-LOAD TESTS

While below tests are carried out, also ensure that Tables 5.6 and 5.7 are completed.

5.1 Preparations

5.1.1 Record the SM Manufacturer.

5.1.2 SM power supply.

5.1.3 SM serial number.

5.1.4 Perform continuity tests and inspect earthing integrity of both SM interface and SM Bay Equipment.

5.1.5 Perform visual inspection against drawing of all new wiring, refer to the SCT 21. Note drawing numbers.

5.1.6 Using 500 V D.C. tester, perform wiring insulation tests on all new site wiring, refer to the SCT 20.4.1. **Do not perform this on the SM equipment inputs.**

5.1.7 Remove all VT fuses and links on the interface unit.

5.1.8 Ensure that all 110 V D.C. fuses and links on the interface unit are removed and are of the correct rating – see drawing.

5.1.9 Ensure that all links on the digital interface block on the interface unit are open.

5.1.10 Ensure that all transducer inputs are shorted on the interface unit on the plant side and that on the equipment side that terminal block links are open.

5.1.11 Insert 110 V D.C. auxiliary supply fuses and links feeding the SM equipment auxiliary supply and check for correct start up in accordance with the manufacturers manual.

5.2 SM Bay Equipment Tests

5.2.1 Use the manufacturer's manual to test the SM Bay Equipment.

5.2.2 Attach the detailed test results to this SCT.

5.3 Injection Tests – Current Circuits

WARNINGS:

Although SM bay equipment have a good maximum fault current withstand, this is short term, and continuous current injection should normally be limited to 1 A rms (National Grid design continuous maximum is 2.4 A). Note that consideration should be given to other equipment in the current loop by taking into account their current withstand.