

1. SCOPE

This document details the application of SOP 392 (Applicable to Long and Crawford J4 11kV switch) issued by the Energy Networks Association.

This SOP is not applied within SPEN and this document has been created for reference.

2. ISSUE RECORD

This is a Reference document. The current version is held on the EN Document Library.

It is your responsibility to ensure you work to the current version.

Issue Date	Issue No.	Author	Amendment Details
May 2017	1	Alan MacGregor	Initial issue

3. ISSUE AUTHORITY

Author	Owner	Issue Authority
Alan MacGregor Lead Engineer, Substations Group	Alastair Ferguson Substations Manager	Martin Hill Head of Engineering Design and Standards Date:

4. REVIEW

This is a Reference document which has a 5 year retention period after which a reminder will be issued to review and extend retention or archive.

5. DISTRIBUTION

This document is not part of a Manual maintained by Document Control and does not have a maintained distribution list.

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7. SOP DETAILS

EQUIPMENT TYPE	Long and Crawford GF3 11kV Fuseswitch
ORIGINATING COMPANY	Aurora Energy Network (NZ)
DATE	17 February 2015
NUMBER INSTALLED IN ENERGY NETWORKS NORTH	1326
NUMBER INSTALLED IN ENERGY NETWORKS SOUTH	0
REASON	During a switching operation to energize a remote transformer through a cable, an explosion occurred in the J4 switch being operated. As a result of this explosion, insulating oil was thrown out from the main cover. Refer to DIN 2013/0026/01.
STATUS IN INITIATING COMPANY	To impose the following immediate operational and access restrictions inside all substations equipped with Long and Crawford and GEC J4 and J3 type switches: <ol style="list-style-type: none">1. Live operation of any 11 kV switchgear is not permitted (including, but not limited to J3 and J4 type switches).2. Entry to the substation is restricted to essential operational activities of short duration only, such as the replacement of low voltage fuses.
SPEN APPLICATION	SOP not applied within SPEN. The EATL report identifies swarf within the tank to be the likely cause of the fault and that this is not a generic problem with Long and Crawford units.
ADDITIONAL INFORMATION	<p>Initial investigation carried out by EA Technology excluded currently known component failure modes on this type of switch. The initial investigation concluded that there was no evidence of long-term degradation within the unit.</p> <p>Further investigations will be carried out by EA Technology to attempt to identify the cause of the initial flashover between the Red phase moving contact and the left hand side of the main tank, having a gap between the arc sites of around 100mm.</p> <p>The SOP will remain in force until further update is issued.</p> <p>Update 17/01/2014 Following further investigations by EA Technology, the conclusions and recommendations in their report are given in the attached document SOP_2013_0392_01 Update 17-01-2014.</p> <p>EA Technology confirmed that they are comfortable with lifting the SOP although clearly the decision is the responsibility of Enemalta, even if there is the possibility that the swarf was a product of manufacturing – this is not considered a generic problem with the L&C units. However Enemalta decided that SOP will remain in force while the recommended actions by EA Technology are being considered. Further update will be issued in due course.</p>

Update 03/12/2015

Enemalta is now permitting live operation using a Remote Operating Device (ROD) kit on all oil filled switchgear including the Long and Crawford units. A ROD kit was provided to all personnel, authorised to perform HV switching. No further update is considered.

UPDATE

REMEDIAL ACTION

None

8. SOP HEADER

Field Name	Field Value		Field Size
Name (SOP)			61
The reason for the Operational Restriction *			30
Nature of the Operational Restriction *			50
Comments *			200
Restricted Access to Substation Flag *	Y		1
Search Criteria *			N/A