

Scottish Power Limited Safety Rules
(Electrical & Mechanical) 4th Edition (Issue 4ii)
Operative from May 2017

This version of the 4th Edition Electrical & Mechanical Safety Rules has undergone an extensive review taking into consideration organisation changes and considerations with regards to the application of these Safety Rules within each of the UK Operational Businesses.

All businesses with responsibility for the application and implementation of these Safety Rules have been involved in the review process, and the final version has been agreed by the appropriate Executive Team Members within ScottishPower.

Comments on these Safety Rules, or difficulties in their application should be brought to the attention of the UK Health & Safety Director, through the Chairperson of the Safety Rules Committee.

Secretary

Company Safety Rules Committee

May 2017

Amendments from issue 4

Page Number	Change
15	Table of safety distances now refer to phase to phase voltage bands. Safety distances unchanged.
62	Update to Resuscitation Procedure

SCOTTISH POWER LIMITED - SAFETY RULES HANDBOOK

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1. FOREWORD

The ScottishPower Safety Rules (Electrical and Mechanical) 4th Edition are approved by the Health and Safety Governance Committee. The Safety Rules are provided to ensure that persons working on or near to Plant and Apparatus, to which these Safety Rules apply, are safeguarded from hazards arising from the electrical and mechanical system.

The Safety Rules, which are mandatory, apply throughout ScottishPower, and subsidiary companies, except where authorised by the Health and Safety Governance Committee.

The Safety Rules are made up of:

- General Provisions
- Basic Safety Rules together with sections dealing with:
 - Procedures for Safety Documents and Keys,
 - Responsibilities of Persons, and
 - Definitions.

The Safety Rules are supported by mandatory:

- Company Safety Instructions,
- Specialised Procedures,
- Safety Rule Codes of Practice / Business Safety Instructions
- Other guidance documents and instructions.

Also included in the Safety Rule Handbook is the statement setting out the Policy, Philosophy and Principles, which are the basis for the Safety Rules. This statement does not form part of the Safety Rules but it is included for the general information of those persons involved with the application of the Safety Rules.

The Safety Rules are the control measures to manage the risks to persons working or testing on, or near to, the Company's electrical and mechanical Systems.

It is the duty of all Persons, who may be involved with the control of, the preparation of and carrying out of, work or testing on the electrical and mechanical System to which these Safety Rules apply, to make themselves thoroughly familiar with the Safety Rules and appropriate support documents.

In addition to the specific responsibilities and requirements imposed by the Safety Rules, all Persons have a general duty to be conversant with, and have a due regard to, statutory and Company requirements relating to and governing General Safety and any activities with which they have an involvement.

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2. SPECIFIC INTERPRETATIONS

The following specific interpretations shall be applied throughout the Safety Rules:

Shall

Where 'shall' is used in these Safety Rules with no qualification, this indicates a mandatory requirement with no discretion permitted and no judgement to be made.

Shall, where practicable

Where 'shall' is qualified only by the word 'practicable', a slightly less strict standard is imposed. It means that where it is possible to achieve in the light of current knowledge and invention, but bearing in mind the hazards associated with work or testing to be undertaken, then the requirement must be met. One is not allowed to avoid the requirement on the grounds of difficulty, inconvenience or cost.

Shall, where reasonably practicable

Where 'shall, where reasonably practicable' is used to qualify a requirement then a judgement must be made as to what is reasonable, taking into account the magnitude of the risk on the one hand and the cost, time and trouble, or effort necessary for averting the risk on the other hand.

Safety Rules

Reference to the term Safety Rules will mean 'ScottishPower Safety Rules (Electrical and Mechanical) 4th Edition' (Issue 4)

Bold Type

Where words or terms appear in bold type in the Safety Rules, their meaning as defined in Part D – Definitions, shall be applied.

Safe System of Work

A Safe System of Work is a procedure, which results from systematic examination and risk assessment of a task in order to identify all hazards, defining safe methods of work to ensure that those hazards are eliminated or minimised, so far as is reasonably practicable, with effective control measures put into place to manage the residual risk.

3. SCOPE

The Safety Rules are designed to implement the Group Health and Safety Policy with respect to work or testing on, or near to, the Company's electrical and mechanical System in order to provide Safe Systems of Work.

These Safety Rules shall be applied to the Company's electrical and mechanical Systems. Application of the Safety Rules ensure that, for all persons working or testing either on, or adjacent to, the Company's System, preventative and protective measures are established and maintained at all Locations to achieve Safety from the System.

In addition to the requirements of these Safety Rules the wider impact of General Safety must be considered as part of the overall assessment of health and safety risk.

4. RESPONSIBILITIES

4.1 UK Health & Safety Director

The UK Health & Safety Director has the responsibility for approving and/or amending the Safety Rules following ratification by the Health and Safety Governance Committee.

4.2 Directors

Directors responsible for managing the businesses will make arrangements to implement the Safety Rules and ensure that senior managers fully implement the Safety Rules and supporting procedures, and audit compliance.

These Directors will report any deficiencies in the Safety Rules to the UK Health & Safety Director who will amend the Safety Rules as necessary.

These Directors will make arrangements for General Safety and ensure that through policy, organisation and arrangements, each Person fully understands their role and responsibilities.

4.3 Persons

The following Persons have specific responsibilities as defined in Part D - Definitions and in Part C - Responsibilities of Persons:

- Competent Persons
- Nominated Supervisors
- Authorised Persons
- Senior Authorised Persons
- Control Persons
- Selected Persons

4.4 All Persons

All Persons shall ensure that the requirements of the Safety Rules are met at all times.

In addition to fulfilling the requirements of the Safety Rules, all Persons have the responsibility to ensure that all General Safety requirements are met at all times.

All Persons are required to take positive steps, whether Safety Rule or General Safety related, to understand the risks, challenge any requirements to ensure that they fully understand the work or testing being undertaken and ensure that a Safe System of Work has been established.

Where any anomalies exist, these anomalies shall be resolved before work commences or continues. Any concerns regarding the application of the Safety Rules or Safe Systems of Work shall be reported to the Person's line manager.

A copy of these Safety Rules and, as appropriate, related documents and procedures shall be made available to all Authorised and Competent Persons as determined by the person responsible, within each ScottishPower Business, for the authorisation process under these Safety Rules.

5. POLICY, PHILOSOPHY AND PRINCIPLES OF THE ELECTRICAL AND MECHANICAL SAFETY RULES

5.1 Policy

5.1.1 Under the Health and Safety at Work etc. Act 1974 and other legislation ScottishPower have an obligation to provide safe places of work and Safe Systems of Work. These Safety Rules, their associated Codes of Practice, and Company Safety Instructions form part of such a Safe System of Work on the Company's electrical and mechanical Systems for the generation, transmission and distribution of electricity at High and Low Voltages.

5.1.2 These Safety Rules are not sufficient on their own to provide a complete Safe System of Work; rather they address safety of the individual from hazards inherent within the electrical and mechanical Systems. Additional precautions will be required in any specific circumstance to address Danger arising from the working environment and not associated with the System. Such precautions will be arrived at following an assessment of the risks in any particular circumstance.

5.1.3 Employees and contractors, whilst at work, are required to take reasonable care to avoid injury to themselves and others by their work activities and to co-operate with the Company in meeting statutory requirements. This includes complying with these Safety Rules, associated Codes of Practice, Company Safety Instructions and other mandatory supporting procedures.

5.2 Philosophy

5.2.1 The Company's electrical and mechanical items of Plant and Apparatus are interconnected to form electrical and mechanical Systems. These Systems, because of their ultimate purpose, which is to generate, transmit or distribute electricity at High and Low voltages, contain inherent Dangers. The Systems are designed so that when they are in their normal operating mode, they may be operated without Danger if routine procedures and suitable equipment are correctly used.

5.2.2 When work or testing other than operation has to be carried out affecting the Plant and Apparatus and it is necessary to change from the normal operating mode or depart from routine operating procedures, it is then necessary to specify Safety Rules to achieve safety from the inherent Dangers.

5.2.3 These Safety Rules are based on a philosophy that the Safety Rules briefly and clearly specify those actions which must be implemented and identify those practices which should be followed, to establish conditions in which persons, who have to carry out work or testing on the Plant and Apparatus, will be safeguarded from the inherent Dangers and to make them Safe from the System.

5.2.4 Whenever work or testing is carried out affecting Plant and Apparatus, which is part of the System, two types of Danger, may arise:

- (i) The first type is Danger inherent in the System arising from the design function of the Plant and Apparatus, and this philosophy requires that the Safety Rules, when implemented, will achieve the safety of persons at work from these inherent Dangers at the commencement and during the course of work or testing;
- (ii) The second type is Danger arising from the working environment at and in the vicinity of the work or testing point and not associated with the System. The Safety Rules are not designed to specify the means of establishing safety from the second type of Danger, which may arise whenever work or testing is done, for example from methods of work or testing, or means of access, but the Safety Rules allocate responsibility for achieving safety from this type of Danger. These general safety issues shall be identified by persons completing risk assessments (see section 5.2.9).

5.2.5 To carry out work or testing affecting Plant and Apparatus within a System, the procedure to be observed may be divided into the following stages:

- (i) Making available the Plant and Apparatus concerned for the work or testing required;
- (ii) Establishment of conditions to safeguard persons from the inherent Dangers of the System;
- (iii) Execution of the work or testing required;
- (iv) Clearance of the Plant and Apparatus on completion or termination of the work or testing;
- (v) Restoration of the Plant and Apparatus to its normal conditions within the System.

5.2.6 To achieve safety within the stages specified above, the Safety Rules require that defined Persons be given responsibilities for:

- (i) Establishing safe conditions for either themselves or other persons to work or testing on the Plant and Apparatus;
- (ii) Checking that safe conditions have been established for work or testing on Plant and Apparatus, which has been Isolated from the System, or, when work or testing has to be done on Plant and Apparatus, which remains energised, identifying the appropriate specialised or Approved procedures which are to be applied;
- (iii) Authorising the commencement of work or testing and, on cessation of the work or testing, to cancel the authorisation;
- (iv) Receiving the authorisation to commence work or testing, thereafter to supervise safety during the course of the work or testing and when the work or testing is concluded to inform the Person responsible for giving the authorisation.

Except where work or testing is of a minor nature or is being carried out under the terms of a specialised or Approved procedure, the authorisation shall be given and received in writing.

5.2.7 The Safety Rules for achieving the safety of persons working or testing from the inherent Dangers of the System are limited therefore to specifying:

- (i) The actions necessary to ensure safety during each of the stages above in which Dangers may arise from the design function of the Plant and Apparatus;
- (ii) The responsibilities of Persons for ensuring safety during each of the stages above from Dangers, which may arise from the design function of the Plant and Apparatus;
and, in relation to the general Dangers arising whenever work or testing is performed, the Safety Rules are limited to:
- (iii) Identifying the Person responsible for achieving safety from these general Dangers.

5.2.8 The Safety Rules will be supported by the ScottishPower Safety Rule Electrical and Mechanical Safety Codes of Practice and Business Safety Instructions to specify procedures for implementing the Safety Rules effectively and efficiently and to ensure that the Safety Rules are applied in a consistent manner throughout the Company.

5.2.9 Risk Assessment – The underpinning philosophy is that no Person should be asked to undertake a task or activity he is not competent to complete safely and without exposing himself or others to unacceptable occupational health risks.

Competence can be described as the combination of training, skills, experience and knowledge that a person has and their ability to apply them to perform a task safely. All Persons must know the limits of their competence and if there is any doubt about an individual's competence to carry out a task or activity then General Provision 4 (GP4) below should be invoked.

NB Asset Management and Business Risks are outside this scope.

ScottishPower's Philosophy: ScottishPower have broken down risk assessment into four main categories:

1. Area Risk Assessment

Risks and hazards identified by examining the work place, e.g.:

- i. substations
- ii. power stations
- iii. wind farms
- iv. pedestrian areas
- v. water catchment areas

This list is not exhaustive.

2. Activity Risk Assessments/Activity Risk Control (ARC)

This is an assessment to identify all risks that are associated with a work activity or job role and determine what controls are required.

3. Task Based Risk Assessment

Persons planning work activities are responsible for ensuring that tasks, not already identified through ARC or Area Risk Assessments, are risk assessed with controls for significant risks recorded and implemented.

4. Dynamic Risk Assessment

This is an assessment that requires persons to identify significant risks which are not already controlled by the Area, Activity or Task risk assessments, or risks that develop as a result of changing circumstances as work progresses

5.3 Principles

5.3.1 To fulfil the requirements of the philosophy, the following principles have been adopted in formulating the Safety Rules:

- (i) The Safety Rules are concerned only with achieving safety for persons;
- (ii) When work or testing is to be carried out on High Voltage Apparatus, the primary means of achieving safety is by isolation from the System(s) followed by earthing, except when working on Live Apparatus. For these exceptions the means of achieving safety is by the application of specialised procedures;
- (iii) In the case of Low Voltage Apparatus, the primary means of achieving safety is, where reasonably practicable, by isolation from the System(s). Where isolation is not reasonably practicable, safety is achieved by the application of Approved procedures;
- (iv) When work or testing is to be carried out on mechanical Plant, the primary means of achieving safety is by isolation from the System(s) followed by draining, venting and purging as appropriate, except when the work or testing requires the Plant to be energised. For these exceptions the means of achieving safety is by the application of Approved procedures;
- (v) The fundamental means of protecting persons is the application and maintenance of the primary means of achieving safety specified in 5.3.1(ii), (iii) and (iv) supported by appropriate actions to maintain the effectiveness of the primary means, e.g. locking off isolating devices;

- (vi) The nomination of Persons to carry out defined requirements under the Safety Rules is formal, although part of their normal responsibilities;
- (vii) The application of the Safety Rules shall ensure that a safe situation exists across all control area boundaries and operational interfaces, be they totally or partially within the jurisdiction of the Company.
- (viii) To achieve Safety from the System, that is, from Dangers, which may arise from the design functions of the Plant and Apparatus, each of the five stages referred to in the philosophy, will involve one or more of the following functions:
 - (a) 'Control' - which includes: before work or testing commences, instructing actions to implement precautions and consenting to the issue of a Safety Document; after completion of work or testing, consenting to the cancellation of the Safety Document and instructing actions to restore Plant and Apparatus to service;
 - (b) 'Making Safe/Restoration of Plant and Apparatus' - which includes: before work or testing commences, taking action to make Plant and Apparatus safe for work or testing and issuing a Safety Document; after completion of work or testing and the cancellation of the Safety Document, taking actions to restore the Plant and Apparatus to service;
 - (c) 'Work' or 'Testing' - which includes: receipt of a Safety Document, execution of the required work or testing to its completion or termination and, after the work or test area has been cleared, clearance of the Safety Document.

5.3.2 The above three functions cover separate responsibilities, which are distinct from each other and are treated distinctively in the Safety Rules.

5.3.3 The Safety Rules do not state the number of Persons necessary to discharge the three functions. However, in order to implement the Safety Rules efficiently, it will frequently be necessary for two or more Persons to perform the three separate functions because of technical and geographical complexities in the Company's System.

5.3.4 The Safety Rules do not preclude one individual from personally performing all three functions and, for a particular task, one Person could carry out the control function, prepare Plant and Apparatus to his own instructions, Consent to and issue a Safety Document to himself, execute the work or testing, clear and cancel the Safety Document and restore the Plant and Apparatus to service.

SAFETY RULES GENERAL PROVISIONS

GP1 GENERAL SAFETY

GP1.1 In addition to the requirement of establishing **Safety from the System** specified in these Safety Rules, **General Safety** shall be established and maintained at all times.

GP1.2 The appropriate **Person** at the **Location** shall satisfy himself that safety precautions have been taken to establish **General Safety** at, and in the vicinity of the place of work, before work or testing starts.

GP1.3 During the course of work or testing the **Person** in charge of the **Working Party** shall ensure that all members of the **Working Party** maintain **General Safety**. In addition, they shall also ensure that other work areas are not adversely affected by their activities.

GP2 SAFETY RULES, CODES OF PRACTICE, INSTRUCTIONS AND PROCEDURES

GP2.1 Safety Rules and the requirement of supporting documents are mandatory.

GP2.2 Relevant Safety Rules and supporting documents issued by other persons in control of premises or sites are similarly mandatory.

GP3 SPECIAL INSTRUCTIONS

Work on or testing of **Plant** and **Apparatus** to which these Safety Rules cannot be applied, or for special reasons should not be applied, shall be carried out in an **Approved** manner which shall be confirmed in writing.

GP4 OBJECTIONS ON SAFETY GROUNDS

Any **Person** receiving instructions in the application of these Safety Rules shall report to the **Person** issuing those instructions any objections on safety grounds to carrying them out. Any such objections shall then be dealt with in an **Approved** manner.

GP5 REPORTING OF ACCIDENTS AND DANGEROUS OCCURRENCES

Persons shall comply with the **Company's** procedures for the reporting of accidents and dangerous occurrences. All **System** related accidents and dangerous occurrences shall be reported as soon as safe to do so to the appropriate **Control Person**.

PART A THE BASIC SAFETY RULES

A1 APPLICATION OF SAFETY RULES

A1.1 The fundamental protection for persons working on or testing **Plant** and **Apparatus** from which **Danger** could arise if such work or testing were carried out with the **Plant** and **Apparatus** in its normal operating mode is the achievement of **Safety from the System**. **Safety from the System** shall be achieved by the fulfilment and maintenance of the safety precautions, procedures and responsibilities specified in these Safety Rules. These Safety Rules shall be applied, therefore, to enable work on and testing of **Plant** and **Apparatus** to take place without **Danger** from the **System**.

A1.2 **Plant** and **Apparatus** shall be added to and removed from the **System** only in accordance with an **Approved** procedure, which will also determine when these Safety Rules shall apply.

A2 APPROACH TO EXPOSED HIGH VOLTAGE CONDUCTORS / INSULATORS

A2.1 OBJECTS

A2.1.1 When exposed **High Voltage** conductors are not **Isolated**, the only objects, which shall be caused to approach them, or insulators supporting them, within the **Safety Distances** specified in A2.3, shall be **Approved** measuring devices or insulated devices.

A2.1.2 When exposed conductors are **Isolated** but could be subject to **High Voltage**, the only objects which shall be caused to approach them, or insulators supporting them, within the **Safety Distances** specified in A2.3, shall be **Approved** measuring devices, insulated devices or **Earthing Devices**.

A2.2 PERSONS

A2.2.1 **Persons** shall not allow any part of their body to approach exposed conductors designed for, and operated at, **High Voltage**, or insulators supporting such conductors, within the **Safety Distances** specified in A2.3, unless the conductors have been **Isolated**, **Earthed** and **Danger** has been excluded.

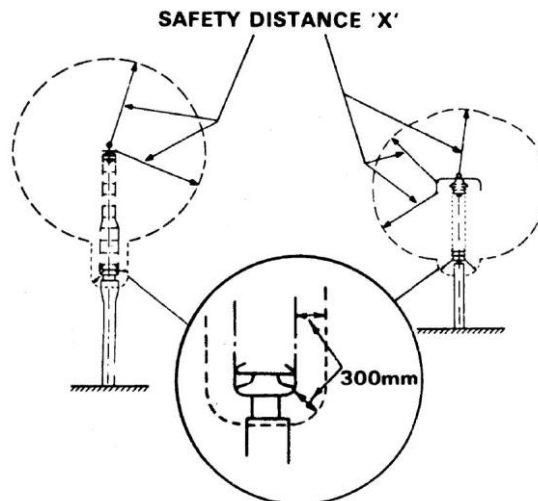
A2.3 SAFETY DISTANCES (ALTERNATING CURRENT VOLTAGES ONLY)

Rated System Voltage kV phase to phase	Safety Distance "X" From Live HV Conductors (metres)
Up to and including 33	0.8
Greater than 33 up to and including 66	1.0
Greater than 66 up to and including 132	1.4
Greater than 132 up to and including 275	2.4
Greater than 275 up to and including 400	3.1

Note- **HV** direct current voltage clearances are designated for each geographical location. Refer to site specific operational procedures to obtain these clearances.

A distance of 300 mm shall also be maintained from that portion of the insulators supporting exposed **HV** conductors which is outside the appropriate **Safety Distance** from the conductors.

TYPICAL 400 AND 132 kV POST INSULATORS ILLUSTRATING **SAFETY DISTANCE FROM LIVE HIGH VOLTAGE CONDUCTORS**:



A3 SAFETY PRECAUTIONS FOR WORK ON OR ADJACENT TO PLANT AND HIGH VOLTAGE APPARATUS

A3.1 When work is to be carried out on or adjacent to **Plant** and/or **HV Apparatus** and the means of achieving **Safety from the System** is by limiting the work or the

work area, instructions clearly defining the limits shall be given. When it is considered necessary to confirm instructions in writing, a **Limited Work Certificate** shall be issued.

A3.2 When limiting the work or the work area is insufficient to achieve **Safety from the System**, it shall be achieved by the application of the following precautions and, before work commences, a **Permit for Work** shall be issued:

- (i) The **Plant** and/or **HV Apparatus** on which the work is to take place shall be defined;
- (ii) The **Plant** and/or **HV Apparatus** shall be **Isolated**. When **Isolating Devices** are used they shall, where practicable, be immobilised and **Locked**. **Caution Notices** shall be affixed at all **Points of Isolation**;
- (iii) For work on **HV Apparatus**, **Primary Earths** shall be applied within the **Isolated** zone and, where reasonably practicable, immobilised and **Locked**;
- (iv) The contents of the **Plant** and/or **HV Apparatus** shall be adjusted to a level, which avoids **Danger** and where drains could give rise to **Danger** they shall be **Locked** in the appropriate position;
- (v) Where **Danger** could rise from pressurisation, the **Plant** and/or **HV Apparatus** shall be **Vented** and where vents could give rise to **Danger** they shall be **Locked** in the appropriate position;
- (vi) Where internal access is required, the **Plant** and/or **HV Apparatus** shall be **Purged** if the residue of contents could cause **Danger**;
- (vii) Where **Danger** could arise from the release of stored energy, action shall be taken to contain or dissipate this energy safely.

A3.3 When work is to be carried out on **Plant** and/or **HV Apparatus**, it may be essential to restore motive power supplies for certain **Approved** work during the period the **Permit for Work** is in force. When motive power is to be restored, action shall be taken to ensure that **Safety from the System** is maintained prior to and after removing the isolation, which allows this restoration to take place. When a **Permit for Work** is to be issued which allows motive power supplies to be restored, an **Approved** written procedure shall specify the requirements to maintain **Safety from the System**.

A3.4 When work is to be carried out on **HV Apparatus**, which has been **Isolated** and **Earthed**, and **Danger** from induced voltages, impressed voltages or inadvertent backfeed could arise during the course of work, **Drain Earths** shall be applied. Any **Drain Earths** shall be issued with the appropriate **Permit for Work** and an **Approved** procedure, which may include the use of an **Earthing Schedule**, shall be implemented to control the application and removal of the **Drain Earths**.

A3.5 Testing of a minor nature essential to the completion of work may be carried out under the terms of a **Permit for Work**, provided that **Safety from the System** is maintained.

A4 SAFETY PRECAUTIONS FOR TESTING PLANT AND HIGH VOLTAGE APPARATUS

A4.1 When testing is to be carried out on **Plant** and/or **HV Apparatus** and the means of achieving **Safety from the System** is by limiting the testing or testing area; instructions clearly defining the limits shall be given. When it is considered

necessary to confirm instructions in writing, a **Limited Work Certificate** shall be issued.

A4.2 When limiting the testing or testing area is insufficient to achieve **Safety from the System**, it shall be achieved by the application of the following precautions and the issue of a **Sanction for Test** before testing is allowed to commence:

- (i) The **Plant** and/or **HV Apparatus** on which the testing is to take place shall be defined;
- (ii) The **Plant** and/or **HV Apparatus** shall be **Isolated**. When **Isolating Devices** are used to achieve **Safety from the System** they shall, where practicable, be immobilised and **Locked**. **Caution Notices** shall be affixed at all such **Points of Isolation**. Essential testing supplies, which are necessary for the testing to take place, may be restored and shall be defined on the **Sanction for Test**;
- (iii) For testing of **HV Apparatus**, **Primary Earths** shall be applied within the **Isolated System** when necessary to achieve **Safety from the System**. These earths, when used, may be removed or replaced to facilitate testing, provided **Safety from the System** is maintained and shall be identified on the **Sanction for Test**. Where **Primary Earths** are used to achieve **Safety from the System**, they shall, where reasonably practicable, be **Locked**;
- (iv) The contents of the **Plant** and/or **HV Apparatus** shall be adjusted to a level which avoids **Danger** and where drains could give rise to **Danger** they shall be **Locked** in the appropriate position;
- (v) Where **Danger** could arise from pressurisation, the **Plant** and/or **HV Apparatus** shall be **Vented** and where vents could give rise to **Danger** they shall be **Locked** in the appropriate position;
- (vi) Where internal access is required, the **Plant** and/or **HV Apparatus** shall be **Purged** if the residue of contents could cause **Danger**;
- (vii) Where **Danger** could arise from the release of stored energy, action shall be taken to contain or dissipate this energy safely.

A4.3 When testing is to be carried out on **HV Apparatus**, which has been **Isolated** and **Earthed**, and **Danger** from induced voltages, impressed voltages or inadvertent backfeed could arise during the course of testing, **Drain Earths** shall be applied. Any **Drain Earths** shall be issued with the **Sanction for Test** and an **Approved** procedure, which may include the use of an **Earthing Schedule**, shall be implemented to control the application and removal of the **Drain Earths**.

A4.4 Work of a minor nature essential to the completion of testing may be carried out under the terms of a **Sanction for Test**, provided that **Safety from the System** is maintained.

A5 SAFETY PRECAUTIONS FOR WORK ON OR TESTING OF LOW VOLTAGE APPARATUS

A5.1 When work or testing is to be carried out on or so near **LV Apparatus** that **Danger** may arise, precautions shall be taken to achieve **Safety from the System**.

A5.2 The **LV Apparatus** shall be **Isolated** unless it is unreasonable for the **Apparatus** to be not **Live**. When **Isolating Devices** are used, they shall, where reasonably practicable, be immobilised and **Locked**.

A5.3 When work or testing is to be carried out on **Isolated LV Apparatus**, **Caution Notices** shall, where reasonably practicable be affixed at all **Points of Isolation**.

A5.4 The work on or testing of **Isolated LV Apparatus** shall be carried out under:

- (i) Oral instructions where these are considered sufficient, or
- (ii) A **Limited Work Certificate**, which shall be issued when it is considered that oral instructions are insufficient, or
- (iii) A **Permit for Work**, or
- (iv) **Personal Supervision**

A5.5 When it is unreasonable for the **LV Apparatus** to be not **Live**, a suitable and sufficient risk assessment shall be completed to determine whether it is reasonable for the **Apparatus** to remain **Live** while the work or testing is carried out. If it is not reasonable for the **Apparatus** to remain **Live** then the **Apparatus** shall be **Isolated** and A5.3 and A5.4 shall apply.

A5.6 When working on or testing of **Live LV Apparatus** normally operating above 250V suitable precautions shall be taken to prevent injury. Such work or testing shall be carried out under:

- (i) An **Approved** live working procedure, or
- (ii) A **Limited Work Certificate**, which shall specify the method of dealing with hazards identified.

A5.7 When working on or testing **Live LV Apparatus** not exceeding 250V suitable precautions shall be taken to prevent injury. Such work or testing shall be carried out under:

- (i) Normal routine instructions, or
- (ii) Oral instructions where these are considered sufficient, or
- (iii) An **Approved** live working procedure, or
- (iv) A **Limited Work Certificate**, which shall be issued when it is considered that oral instructions are insufficient, or
- (v) **Personal Supervision**.

A6 OPERATION OF PLANT AND APPARATUS

A6.1 The operation of **Plant** and/or **Apparatus** to achieve **Safety from the System** shall not involve prearranged signals or the use of time intervals.

A7 DEMARCATION OF WORK OR TEST AREAS

A7.1 The work or testing area shall be defined clearly and, where necessary, protected physically to prevent **Danger** to persons in the work or test area from **System** derived hazards adjacent to the work or testing area.

A8 IDENTIFICATION OF PLANT AND APPARATUS

A8.1 Work or testing shall only be permitted to commence on **Plant** and/or **Apparatus**, which is readily identifiable or has fixed to it a means of identification, which will remain effective throughout the course of the work or testing.

PART B PROCEDURES FOR SAFETY DOCUMENTS AND KEYS

B1 GENERAL

B1.1 Part B of the Safety Rules gives the procedures associated with the **Safety Documents** and **Keys**. **Persons** involved in these procedures must understand and enact their respective roles correctly.

B1.2 The Safety Rules concern themselves with the principles of achieving safety from the inherent **Dangers of Plant** and **Apparatus**. The detailed manner in which the objectives, responsibilities and requirements of Part B of the Safety Rules are to be met shall be subject to local management safety procedures.

B1.3 Included in Part B is a procedure, which enables more than one **Working Party** to work under an appropriate **Safety Document** and also a procedure for the transfer of **Safety Documents**. For the purposes of both procedures the **Safety Documents** are divided into two categories:

- (i) **Safety Documents** which, because of the nature of the work or testing, are required to be retained personally by the recipient who takes over complete charge of the work or testing and any persons working under the terms of the document. When such a **Safety Document** is transferred a **Senior Authorised Person** will give the reissue procedure **Personal Supervision**, except when section B2.3.3 or B4.3.3 applies.
- (ii) **Safety Documents** which are retained in safe custody by **Nominated Supervisors** but which are on display and under which, once work has commenced, other **Working Parties** may be set to work provided certain conditions are met. In these cases the continuation of safe working is effectively transferred through working patterns by a system of locks applied to and removed from **Card Safes** by **Competent Persons** in charge of **Working Parties** and by their complying with specified conditions.

B2 PERMIT FOR WORK

B2.1 PREPARATION

B2.1.1 On completion of the safety precautions taken to achieve **Safety from the System**, and prior to the issue of the **Permit for Work**, the **Authorised Person(s)** responsible shall complete and sign a record of the safety precautions taken.

B2.1.2 The appropriate **Keys** shall be placed in a **Key Safe**, which shall be **Locked** by a **Key Safe Key**. Where safety precautions have been taken at remote **Locations**, the appropriate **Keys** shall be **Locked** in a **Key Safe** at the remote **Locations** and the **Key Safe Key** retained in safe custody.

B2.1.3 The **Senior Authorised Person** shall, where appropriate, secure the local **Key Safe** by using the **Control Key**.

B2.1.4 When the **Senior Authorised Person** considers it necessary, a report shall be obtained from a **Selected Person** on any additional precautions to remove or prevent **Danger**.

B2.1.5 Any additional precautions required to be taken during the course of work to maintain **Safety from the System** shall be stated by the **Senior Authorised Person** in Section 2 of the **Permit for Work**. These shall include any precautions arising from a **Selected Person's** report or from an **Approved** written procedure for the restoration of motive power supplies.

B2.1.6 The **Senior Authorised Person** shall complete Sections 1 and 2 of the **Permit for Work**, obtaining from the appropriate **Control Person(s)** the details and confirmation of safety precautions taken. The **Senior Authorised Person** at the time of signing Section 2 shall inform the appropriate **Control Person(s)** of the relevant details of the **Permit for Work** in order that he may record these details and **Consent** to the issue of the **Permit for Work**. The name of the appropriate **Control Person(s)** shall be recorded in Section 2.

B2.2 ISSUE AND RECEIPT

B2.2.1 A **Senior Authorised Person** shall complete Section 3 of the **Permit for Work**.

B2.2.2 When **Drain Earths** are required the number of **Drain Earths** issued shall be recorded on the **Permit for Work**. The application of **Drain Earths** shall be in accordance with an **Approved** procedure, which may include the use of an **Earthing Schedule**.

B2.2.3 The number of **Circuit Identification** flags and wristlets issued shall be recorded on the **Permit for Work**.

B2.2.4 The **Senior Authorised Person** shall sign Section 3 of the **Permit for Work** and shall issue it together with a **Key Safe Key** from the **Key Safe**, except where the **Key Safe** is at a remote **Location**. He shall also issue those items listed on the **Permit for Work** and, if required, an **Approved** written procedure for the restoration of motive power supplies.

B2.2.5 When a **Permit for Work**, which allows the restoration of motive power supplies, is issued, those **Keys** necessary to meet the terms and conditions of the **Permit for Work** shall be issued to the recipient of the document.

B2.2.6 The recipient of the **Permit for Work** shall sign Section 4 of the document and take it into safe custody together with the appropriate items issued with and listed on the document.

B2.2.7 When a **Permit for Work** is issued,

- (i) On **HV Apparatus**, or
- (ii) Has associated with it restoration of motive power supplies, or
- (iii) A **Senior Authorised Person** has decided that the transfer procedure shall be given **Personal Supervision** by a **Senior Authorised Person**.

The recipient of such a **Permit for Work** shall retain it and the **Key Safe Key** in his possession, except where the **Key Safe** is at a remote **Location**. Whilst work under the **Permit for Work** is in progress, further **Competent Persons** may work under that **Permit for Work** only after they have been properly instructed by the **Nominated Supervisor** who has sufficient knowledge of the work to be done and of

the **Permit for Work** and have personally reported to the recipient of that **Permit for Work**. The recipient of the **Permit for Work** shall satisfy himself that they understand the limits of the work and requirements imposed by the **Permit for Work** before giving authorisation for them to commence work under his charge within his **Working Party**. These **Competent Persons** shall report to the recipient of the **Permit for Work** the state of the work for which they are responsible when it is completed or discontinued.

B2.2.8 When a **Permit for Work** is not retained in the personal possession of the recipient, other **Competent Persons** may work under the terms of an existing **Permit for Work** provided the following conditions are complied with:

- (i) Before work commences, the initial recipient of the **Permit for Work** shall first have placed and secured the **Permit for Work** and the **Key Safe Key** in a **Card Safe** for the duration of his **Working Party's** period of work by applying his lock to the **Card Safe** and retaining the key in safe custody;
- (ii) Before work commences, the **Permit for Work** and **Key Safe Key** shall have been additionally secured in the **Card Safe** by a **Nominated Supervisor** lock, which shall remain in position until such time as the **Permit for Work** is required for cancellation or suspension. The key for the **Nominated Supervisor's** lock shall be retained in safe custody together with the **Card Safe** by the **Nominated Supervisor** throughout the whole course of the work under that **Permit for Work**;
- (iii) Each other **Competent Person** in charge of a **Working Party** shall, before commencing work, be properly instructed by a **Nominated Supervisor** who has sufficient knowledge of the work to be done and the **Permit for Work**. The **Nominated Supervisor** shall ensure that the **Competent Person** reads and understands the **Permit for Work**;
- (iv) Each other **Competent Person** in charge of a **Working Party** shall then sign a declaration that he has read and understands the limits of the work and the requirements imposed by the **Permit for Work** and shall apply his lock on the **Card Safe**, retaining the key of the lock in safe custody;
- (v) On completion of work by a **Working Party**, the **Competent Person** in charge shall, before removing his lock from the **Card Safe**, ensure that his **Working Party** has been instructed to discontinue work and has been withdrawn. He shall also, where appropriate, ensure the clearance of all tools, gear and loose material and the replacement of all guards and access doors for his particular part of the work.

He shall then sign a declaration that these actions have been completed.

B2.3 TRANSFER

B2.3.1 A **Permit for Work** shall be retained personally by the recipient in any of the following circumstances:

- (i) When it has been issued for work on **HV Apparatus**;
- (ii) When restoration of motive power supplies is involved;
- (iii) When the **Senior Authorised Person** who completed Section 2 of the **Permit for Work** requires it to be transferred under the **Personal Supervision** of a **Senior Authorised Person**.

B2.3.2 When work is to be continued by a **Competent Person** other than the recipient, then before work is resumed, such a **Permit for Work** shall be transferred to the new recipient in the following manner:

- (i) Part 1 of the **Transfer Record** shall be completed by the recipient of the **Permit for Work** who shall then surrender it to a **Nominated Supervisor** for retention in safe custody together with any documents, **Keys** and, as appropriate, items listed on the **Permit for Work**;
- (ii) When the transfer procedure is to be enacted, a **Nominated Supervisor** shall hand to the **Competent Person** who is to become the recipient, the **Permit for Work**, associated documents, **Keys** and appropriate items. A **Senior Authorised Person** shall then discharge the same responsibilities to the new recipient of the **Permit for Work** as if the **Permit for Work** was being issued initially. The new recipient shall then complete his section of Part 3 of the **Transfer Record** in the presence of the **Senior Authorised Person**;
- (iii) The **Senior Authorised Person** shall complete his section of Part 3 of the **Transfer Record** confirming **Personal Supervision** and completion of the transfer.

B2.3.3 When the transfer procedure for a personally held **Permit for Work** has been initiated as in B2.3.2(i) and the **Competent Person** who signed Part 1 of the **Transfer Record** is required to continue work, the **Nominated Supervisor** may reissue the **Permit for Work** in accordance with a local management instruction. In this case the **Nominated Supervisor** shall hand to the **Competent Person** the **Permit for Work**, associated documents, **Keys** and appropriate items, and the **Competent Person** shall then sign Part 3 of the **Transfer Record** in order to re-assume responsibility of the recipient.

B2.3.4 All other **Permits for Work**, which are not held personally by their recipients shall only be transferred by the locking procedure associated with **Card Safes**. If it is necessary to suspend work under such a **Permit for Work**, that **Permit for Work** shall be transferred to a **Senior Authorised Person** in accordance with B2.4.

B2.4 SUSPENSION AND SUBSEQUENT REISSUE

B2.4.1 When it is found necessary to temporarily discontinue work, a **Permit for Work** may be suspended by transferring it together with all documents, **Keys** and other appropriate items to a **Senior Authorised Person** who will retain them all in safe custody, Parts 1 and 2 of the **Transfer Record** shall be completed by the appropriate **Persons**.

B2.4.2 When work is to be resumed, the safety precautions achieving **Safety from the System** shall first be confirmed by the **Senior Authorised Person** who is to reissue the **Permit for Work**.

B2.4.3 The **Permit for Work** shall then be transferred by the **Senior Authorised Person** to the recipient together with all documents, **Keys** and other appropriate items and Part 3 of the **Transfer Record** shall be completed by the appropriate **Persons**. The **Senior Authorised Person** affecting the transfer shall discharge the same responsibilities to the recipient of the **Permit for Work** as if the **Permit for Work** was being issued initially.

B2.5 CLEARANCE AND CANCELLATION

B2.5.1 When work has been completed or when a **Senior Authorised Person** requires the **Permit for Work** to be cancelled, a **Competent Person** shall sign Section 5 confirming that all persons working under the **Permit for Work** have been withdrawn from and warned not to work on the **Plant** and/or **Apparatus** described in Section 1, certifying whether or not the work site has been cleared of all tools, gear, **Drain Earths** and loose material and whether or not all guards and access doors have been replaced. The **Permit for Work**, together with any **Keys** issued with it, any **Earthing Schedule** and **Approved** written procedure for the restoration of motive power supplies and **Selected Person's** report, shall be handed over to the **Senior Authorised Person**. Any **Circuit Identification** flags, wristlets and **Drain Earths** issued shall be accounted for or handed over.

B2.5.2 The **Senior Authorised Person** shall cancel the **Permit for Work** by signing Section 6, certifying whether or not the **Plant** and/or **Apparatus** may be returned to service and indicating any restrictions. The **Senior Authorised Person** shall advise the **Control Person(s)** of the cancellation and any restrictions imposed.

B3 SANCTION FOR TEST

B3.1 PREPARATION

B3.1.1 On completion of the safety precautions taken to achieve **Safety from the System** and prior to the issue of the **Sanction for Test**, the **Authorised Person(s)** responsible shall complete and sign a record of the safety precautions taken.

B3.1.2 The appropriate **Keys** shall be placed in a **Key Safe**, which shall be **Locked** by a **Key Safe Key**. Where safety precautions have been taken at remote **Locations**, the appropriate **Keys** shall be **Locked** in a **Key Safe** at the remote **Locations** and the **Key Safe Key** retained in safe custody.

B3.1.3 The **Senior Authorised Person** shall, where appropriate, secure the local **Key Safe** by using the **Control Key**.

B3.1.4 When the **Senior Authorised Person** considers it necessary, a report shall be obtained from a **Selected Person** on any additional precautions to remove or prevent **Danger**.

B3.1.5 Any additional precautions identified at the commencement of testing to maintain **Safety from the System**, including those arising from a **Selected Person's** report, shall be stated by the **Senior Authorised Person** in Section 2(ii) of the **Sanction for Test**.

B3.1.6 The **Senior Authorised Person** shall complete Sections 1 and 2 of the **Sanction for Test**, obtaining from the appropriate **Control Person(s)** the details and confirmation of safety precautions taken.

B3.2 ISSUE AND RECEIPT

B3.2.1 The **Senior Authorised Person** shall complete Section 3 of the **Sanction for Test**.

B3.2.2 When **Drain Earths** are required the number of **Drain Earths** issued shall be recorded on the **Sanction for Test**. The application of **Drain Earths** shall be in accordance with an **Approved** procedure, which may include the use of an **Earthing Schedule**.

B3.2.3 The number of **Circuit Identification** flags and wristlets issued shall be recorded on the **Sanction for Test**.

B3.2.4 The **Senior Authorised Person** shall inform the appropriate **Control Person(s)** of the relevant details of the **Sanction for Test** in order that he may record these details and **Consent** to the issue of the **Sanction for Test**. The name of the appropriate **Control Person(s)** shall be recorded in Section 3.

B3.2.5 The **Senior Authorised Person** shall sign Section 3 of the **Sanction for Test** and shall issue it, together with a **Key Safe Key** from the **Key Safe**, except where the **Key Safe** is at a remote **Location**. He shall also issue, as appropriate, those items listed on the **Sanction for Test**.

B3.2.6 Those keys, which allow operation of **Plant** and/or **Apparatus** and the restoration of testing supplies defined on the **Sanction for Test**, shall be handed over to the recipient of the **Sanction for Test**.

B3.2.7 The recipient of the **Sanction for Test** shall sign Section 4 of the document and take it into safe custody together with appropriate items issued with and listed on the document.

B3.3 TRANSFER

B3.3.1 When testing is to be continued by an **Authorised Person** other than the recipient of the **Sanction for Test**, it may be transferred to that **Person** by the recipient under the **Personal Supervision** of a **Senior Authorised Person** who shall discharge the same responsibilities to the new recipient of the **Sanction for Test** as if the **Sanction for Test** was being issued initially; or the **Sanction for Test** shall be cleared and cancelled and a new **Sanction for Test** issued.

B3.3.2 After the recipient has transferred the **Sanction for Test** together with any documents, **Keys** and, as appropriate, items listed on the **Sanction for Test** to the new recipient, Parts 1 and 3 of the **Transfer Record** shall be signed by the old and new recipients respectively.

B3.3.3 The **Senior Authorised Person** shall complete his section of Part 3 of the **Transfer Record** confirming **Personal Supervision** and completion of the transfer.

B3.4 CLEARANCE AND CANCELLATION

B3.4.1 When testing has been completed or when a **Senior Authorised Person** requires the **Sanction for Test** to be cancelled, an **Authorised Person** shall sign Section 5 confirming that all persons testing under the **Sanction for Test** have been withdrawn from and warned not to continue testing on the **Plant** and/or **Apparatus** described in Section 1, certifying whether or not the site of testing has been cleared of all tools, gear, **Drain Earths** and loose material and whether or not all guards and access doors have been replaced. Also all exceptions to the condition of the **System** under test compared to the condition at the time of **Sanction for Test** issue shall be

fully specified. The **Sanction for Test**, appropriate **Keys**, any **Selected Person's** report and **Earthing Schedule** with the correct number of **Drain Earths**, **Circuit Identification** flags and wristlets shall be returned to the **Senior Authorised Person**.

B3.4.2 The **Senior Authorised Person** shall cancel the **Sanction for Test** by signing Section 6 and inform the **Control Person(s)** of its cancellation and the operational state of the **Plant** and/or **Apparatus** concerned.

B4 LIMITED WORK CERTIFICATE

B4.1 PREPARATION

B4.1.1 On completion of such safety precautions, which are considered to be necessary to achieve **Safety from the System**, the **Authorised Person** responsible shall complete and sign a record of the safety precautions taken.

B4.1.2 Where appropriate, **Keys** shall be placed in a **Key Safe**, which shall be **Locked** by a **Key Safe Key**. The **Senior Authorised Person** shall, in such cases, secure the **Key Safe** by using the **Control Key**.

B4.1.3 When the **Senior Authorised Person** considers it necessary, a report shall be obtained from a **Selected Person** on any additional precautions to remove or prevent **Danger**.

B4.1.4 Any additional precautions to be taken during the course of work or testing to maintain **Safety from the System** shall be stated by the **Senior Authorised Person** in Section 3(ii) of the **Limited Work Certificate**. These shall include precautions arising from a **Selected Person's** report.

B4.1.5 The **Senior Authorised Person** shall complete Sections 1 and 2 and 3 of the **Limited Work Certificate** obtaining, when appropriate, from the **Control Person(s)** the details and confirmation of safety precautions taken. The **Senior Authorised Person** at the time of signing Section 3 shall inform such **Control Person(s)** of the relevant details of the **Limited Work Certificate** in order that he may record these details and **Consent** to the issue of the **Limited Work Certificate**. The name of the appropriate **Control Person(s)** shall be recorded in Section 3.

B4.2 ISSUE AND RECEIPT

B4.2.1 When the work or testing associated with a **Limited Work Certificate** could affect operating **Plant** and/or **HV Apparatus**, the agreement of the **Control Person(s)** to the issue of the **Limited Work Certificate** shall be obtained and recorded in Section 4.

B4.2.2 A **Senior Authorised Person** shall sign Section 4 of the **Limited Work Certificate** and shall issue it together with any **Keys** and, where necessary, a **Selected Person's Report**.

B4.2.3 The recipient of the **Limited Work Certificate** shall sign Section 5 of the document and take it into safe custody together with the appropriate items issued with and listed on the document.

B4.2.4 When a **Limited Work Certificate** is issued,

- (i) For work or testing in close proximity to, but outside the **Safety Distance** from, exposed **High Voltage conductors**, or
- (ii) Because a **Senior Authorised Person** has decided that the transfer procedure shall be given **Personal Supervision** by a **Senior Authorised Person**,

the recipient of such a **Limited Work Certificate** shall retain it and any **Keys** in his possession. Whilst work or testing under the **Limited Work Certificate** is in progress, further **Competent Persons** may carry out work or testing under that **Limited Work Certificate** only after they have been properly instructed by the **Nominated Supervisor** who has sufficient knowledge of the work or testing to be done and of the **Limited Work Certificate** and have personally reported to the recipient of that **Limited Work Certificate**. The recipient of the **Limited Work Certificate** shall satisfy himself that they understand the limits of the work or testing and the requirements imposed by the **Limited Work Certificate** before giving authorisation for them to commence work or testing under his charge within his **Working Party**. These **Competent Persons** shall report to the recipient of the **Limited Work Certificate** the state of the work or testing for which they are responsible when it is completed or discontinued.

B4.2.5 When a **Limited Work Certificate** is not retained in the personal possession of the recipient, other **Competent Persons** may carry out work or testing under the terms of an existing **Limited Work Certificate** provided the following conditions are complied with:

- (i) Before work or testing commences, the initial recipient of the **Limited Work Certificate** shall first have placed and secured the **Limited Work Certificate** and any **Key Safe Key** in a **Card Safe** for the duration of his **Working Party's** period of work or testing by applying his lock to the **Card Safe** and retaining the key in safe custody;
- (ii) Before work or testing commences, the **Limited Work Certificate** and any **Key Safe Key** shall have been additionally secured in the **Card Safe** by a **Nominated Supervisor's** lock, which shall remain in position until such time as the **Limited Work Certificate** is required for cancellation or suspension. The key for the **Nominated Supervisor's** lock shall be retained in safe custody together with the **Card Safe** by **Nominated Supervisor** throughout the whole course of the work or testing under that **Limited Work Certificate**;
- (iii) Each other **Competent Person** in charge of a **Working Party** shall, before commencing work or testing, be properly instructed by a **Nominated Supervisor** who has sufficient knowledge of the work or testing to be done and the **Limited Work Certificate**. The **Nominated Supervisor** shall ensure that the **Competent Person** reads and understands the **Limited Work Certificate**;
- (iv) Each other **Competent Person** in charge of a **Working Party** shall then sign a declaration that he has read and understands the limits of the work or testing and the requirements imposed by the **Limited Work Certificate** and shall apply his lock on the **Card Safe**, retaining the key of the lock in safe custody;
- (v) On completion of work or testing by a **Working Party**, the **Competent Person** in charge shall, before removing his lock from the **Card Safe**, ensure that his **Working Party** has been instructed to discontinue work or testing and

has been withdrawn. He shall also, where appropriate, ensure the clearance of all tools, gear and loose material and the replacement of all guards and access doors for his particular part of the work or testing. He shall then sign a declaration that these actions have been completed.

B4.3 TRANSFER

B4.3.1 A **Limited Work Certificate** shall be retained personally by the recipient in any of the following circumstances:

- (i) When it has been issued for work or testing in close proximity to, but outside the **Safety Distance** from, exposed **High Voltage** conductors;
- (ii) When the **Senior Authorised Person** who completed Section 3 of the **Limited Work Certificate** requires it to be transferred under the **Personal Supervision** of a **Senior Authorised Person**.

B4.3.2 When work or testing is to be continued by a **Competent Person** other than the recipient, then before work or testing is resumed, such a **Limited Work Certificate** shall be transferred to the new recipient in the following manner:

- (i) Part 1 of the **Transfer Record** shall be completed by the recipient of the **Limited Work Certificate** who shall then surrender it to a **Nominated Supervisor** for retention in safe custody together with any documents, **Keys** and, as appropriate, items listed on the **Limited Work Certificate**;
- (ii) When the transfer procedure is to be enacted, a **Nominated Supervisor** shall hand to the **Competent Person** who is to become the recipient of the **Limited Work Certificate**, associated documents, **Keys** and appropriate items. A **Senior Authorised Person** shall then discharge the same responsibilities to the new recipient of the **Limited Work Certificate** as if the **Limited Work Certificate** was being issued initially. The new recipient shall then complete his section of Part 3 of the **Transfer Record** in the presence of the **Senior Authorised Person**;
- (iii) The **Senior Authorised Person** shall complete his section of Part 3 of the **Transfer Record** confirming **Personal Supervision** and completion of the transfer.

B4.3.3 When the transfer procedure for a personally held **Limited Work Certificate** has been initiated as in B4.3.2(i) and the **Competent Person** who signed Part 1 of the **Transfer Record** is required to continue work, the **Nominated Supervisor** may reissue the **Limited Work Certificate** in accordance with an **Approved** procedure. In this case the **Nominated Supervisor** shall hand to the **Competent Person** the **Limited Work Certificate**, associated documents, **Keys** and appropriate items, and the **Competent Person** shall then sign Part 3 of the **Transfer Record** in order to re-assume responsibility of the recipient.

B4.3.4 All other **Limited Work Certificates**, which are not retained personally by their recipients, shall only be transferred by the locking procedure associated with **Card Safes**. If it is necessary to suspend work or testing under such a **Limited Work Certificate**, that **Limited Work Certificate** shall be transferred to a **Senior Authorised Person** in accordance with B4.4.

B4.4 SUSPENSION AND SUBSEQUENT REISSUE

B4.4.1 When it is found necessary to temporarily discontinue work or testing, a **Limited Work Certificate** may be suspended by transferring it together with all documents, **Keys** and other appropriate items to a **Senior Authorised Person** who will retain them all in safe custody. Parts 1 and 2 of the **Transfer Record** shall be completed by the appropriate **Persons**.

B4.4.2 When work or testing is to be resumed, the safety precautions achieving **Safety from the System** shall first be confirmed by the **Senior Authorised Person** who is to reissue the **Limited Work Certificate**.

B4.4.3 The **Limited Work Certificate** shall then be transferred by the **Senior Authorised Person** to the recipient together with all documents, **Keys** and other appropriate items and Part 3 of the **Transfer Record** shall be completed by the appropriate **Persons**. The **Senior Authorised Person** effecting the transfer shall discharge the same responsibilities to the recipient of the **Limited Work Certificate** as if the **Limited Work Certificate** was being issued initially.

B4.5 CLEARANCE AND CANCELLATION

B4.5.1 When work or testing has been completed or when a **Senior Authorised Person** requires the **Limited Work Certificate** to be cancelled, a **Competent Person** shall sign Section 6 confirming that all persons working or testing under the **Limited Work Certificate** have been withdrawn from and warned not to continue working or testing on the **Plant** and/or **Apparatus** described in Section 1, certifying whether or not the site has been cleared of all tools, gear and loose material and whether or not all guards and access doors have been replaced. The **Limited Work Certificate**, together with any **Keys**, documents or other items issued with it, shall be handed over to the **Senior Authorised Person**.

B4.5.2 The **Senior Authorised Person** shall cancel the **Limited Work Certificate** by signing Section 7, certifying whether or not the **Apparatus** may be returned to service and indicating any restrictions. The **Senior Authorised Person** shall, where appropriate, advise the **Control Person(s)** of the cancellation and any restrictions imposed.

B5 SAFETY DOCUMENT INSTRUCTIONS

B5.1 Work or testing under the authority of a **Safety Document** shall be limited to that specified in the document and only **Safety Documents** as defined in these Safety Rules shall be used.

B5.2 A **Permit for Work** shall be prepared, issued, cancelled and suspended by a **Senior Authorised Person** and, where appropriate, its transfer shall be given **Personal Supervision** by a **Senior Authorised Person**.

B5.3 A **Permit for Work** shall be received, cleared, and, where appropriate, transferred by a **Competent Person**.

B5.4 When a **Permit for Work** is in force, which allows the motive power supplies to be restored, no other **Safety Document** shall be in force on the same items of **Plant** and/or **HV Apparatus**.

B5.5 A **Sanction for Test** shall be prepared, issued, cancelled and its transfer given **Personal Supervision** by a **Senior Authorised Person**.

B5.6 A **Sanction for Test** shall be received, cleared and, where appropriate, transferred by an **Authorised Person**.

B5.7 When a **Sanction for Test** is in force on **Plant** and/or **HV Apparatus**, no other **Safety Document** shall be in force on the same items of **Plant** and/or **HV Apparatus**.

B5.8 A **Limited Work Certificate** shall be prepared, issued, cancelled and suspended by a **Senior Authorised Person** and, where appropriate, its transfer shall be given **Personal Supervision** by a **Senior Authorised Person**.

B5.9 A **Limited Work Certificate** shall be received, cleared and, where appropriate, transferred by a **Competent Person**.

B5.10 When, during transfer or suspension, a **Safety Document** is in the control of a **Senior Authorised Person** who finds that it is necessary to obtain access to a **Key Safe** using the **Key Safe Key** associated with that **Safety Document**, he shall, before doing so, cancel that **Safety Document**.

B6 SAMPLE FORMS OF SAFETY DOCUMENTS

The following sample forms are intended for the purposes of this document only. The formal Safety Documents used in each Business shall be approved by the Company Safety Rules Committee.

LIMITED WORK CERTIFICATE

No
No(s)*

KEY SAFE(S)

- 1** (i) **LOCATION:**
-
- (ii) **PLANT/APPARATUS IDENTIFICATION:**
-
- (iii) **WORK/TESTING TO BE DONE:**
-
-
-

2 **CONDITION OF PLANT/APPARATUS:**

.....

- 3** (i) **LIMITS OF WORK/TESTING OR WORK AREA OR OTHER PRECAUTIONS TAKEN TO ACHIEVE SAFETY FROM THE SYSTEM:**
-
-
-
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-
-
-
-
-
-
-
-
-
-
-

Caution Notices have been affixed at all **Points of Isolation**

- (ii) **FURTHER PRECAUTIONS TO BE TAKEN DURING THE COURSE OF WORK/TESTING TO AVOID SYSTEM DERIVED HAZARDS:**
-
-
-
-
-
-
-
-
-
-

I have confirmed with the **Control Person(s)*** that the precautions in Section 3(i) have been carried out and that the **Control Person(s)** will maintain these until this **Limited Work Certificate** is cancelled. I certify that the precautions in Section 3 are adequate to provide **Safety from the System** in respect of the work/testing in Section 1.

Signed being a **Senior Authorised Person** Time Date

- 4** **ISSUE:** (i) **Key Safe Key** (Nos)*(ii) **Safety Keys** (No off)*(iii) **Selected Person's Report** (No)*
- Control Person(s)** agreeing to the issue of this **Limited Work Certificate***
- Signed Name (Block Letters)Authorisation No
- being the **Senior Authorised Person** responsible for the issue of this **Limited Work Certificate**.
- Time Date

- 5** **RECEIPT:** I understand and accept my responsibilities under the ScottishPower Safety Rules as recipient of this **Limited Work Certificate** and acknowledge receipt of the items in Section 4.
- Signed Name (Block Letters)Authorisation No
- being an **Authorised Person**.
- Time Date

TRANSFER RECORD

This **Limited Work Certificate** shall only be transferred under the **Personal Supervision** of a **Senior Authorised Person**.

PART 1		PART 3				
Authorised Person surrendering Document (Signature)	Time & Date	† Authorised Person receiving Reissued Document		Senior Authorised Person Reissuing Document		Time & Date
		Signature	Name (block letters) & Authorisation Number	Signature	Name (block letters) & Authorisation Number	

† I understand and accept my responsibilities under the ScottishPower Safety Rules as recipient of this **Limited Work Certificate** and acknowledge receipt of the items in Section 4.

6 CLEARANCE: I certify that all persons working/testing under this **Limited Work Certificate** have been withdrawn from, and warned not to continue working/testing on, the **Plant/Apparatus** in Section 1. All gear, tools and loose material have been removed and guards and access doors have been replaced except for:**

.....

Signed
 being the **Authorised Person** responsible for clearing this **Limited Work Certificate**. Time..... Date

7 CANCELLATION: I certify that all items issued under Section 4 have been accounted for and the **Control Person(s)***
 have been informed of the cancellation and of any restrictions on returning the **Plant/Apparatus** to service.

Signed Name (Block Letters) Authorisation No
 being the **Senior Authorised Person** responsible for cancelling this **Limited Work Certificate**.
 Time Date

**Insert Nil or No Exceptions if there are no exceptions.

*Insert N/A if Not Applicable

8 OTHER INFORMATION:

PERMIT FOR WORK

No
No(s)*

KEY SAFE(S)

- 1 (i) **LOCATION:**
-
- (ii) **PLANT/APPARATUS IDENTIFICATION:**
-
- (ii) **WORK TO BE DONE:**
-
-

- 2 (i) **PRECAUTIONS TAKEN TO ACHIEVE SAFETY FROM THE SYSTEM:** State points at which **Plant/Apparatus** has been **Isolated** and specify position(s) of **Earthing Devices** applied. State actions taken to avoid **Danger** by draining, venting, purging and containment or dissipation of stored energy.

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Caution Notices have been affixed at all **Points of Isolation**

- (ii) **FURTHER PRECAUTIONS TO BE TAKEN DURING THE COURSE OF WORK TO AVOID SYSTEM DERIVED HAZARDS:**

.....

.....

.....

.....

.....

I have confirmed with the **Control Person(s)** that the precautions in Section 2(i) have been carried out and that the **Control Person(s)** will maintain these until this **Permit for Work** is cancelled. I certify that the precautions in Section 2 are adequate to provide **Safety from the System** in respect of the work in Section 1.

Signed being a **Senior Authorised Person** Time..... Date.....

- 3 **ISSUE:** (i) **Key Safe Key** (Nos)* (ii) **Earthing Schedule** (No)* (iii) **Portable Drain Earths** (No off)* (iv) **Selected Person's Report** (No)* (v) **Circuit Identification Flags** (No off)* (vi) **Circuit Identification Wristlets** (No off)* and Colours/Symbols*

Signed..... Name (Block Letters) Authorisation No..... being the **Senior Authorised Person** responsible for the issue of this **Permit for Work**. Time..... Date.....

- 4 **RECEIPT:** I understand and accept my responsibilities under the ScottishPower Safety Rules as recipient of this **Permit for Work** and acknowledge receipt of the items in Section 3.

Signed..... Name (Block Letters) Authorisation No..... being an **Authorised Person**.

Time..... Date.....

*Insert N/A if Not Applicable, the number(s), the quantity, or NIL as appropriate. March 2014

TRANSFER RECORD

This **Permit for Work** shall only be transferred under the **Personal Supervision** of a **Senior Authorised Person**

PART 1		PART 3				
Authorised Person surrendering Document (Signature)	Time & Date	† Authorised Person receiving Reissued Document		Senior Authorised Person Reissuing Document		Time & Date
		Signature	Name (block letters) & Authorisation Number	Signature	Name (block letters) & Authorisation Number	

† I understand and accept my responsibilities under the ScottishPower Safety Rules as recipient of this **Permit for Work** and acknowledge receipt of the items in Section 3.

5 CLEARANCE: I certify that all persons working under this **Permit for Work** have been withdrawn from, and warned not to work on the **Plant/Apparatus** in Section 1. All gear, tools, **Drain Earths** and loose material have been removed and guards and access doors have been replaced except for: **

.....

Signed
 being the **Authorised Person** responsible for clearing this **Permit for Work**. Time Date

6 CANCELLATION: I certify that all items issued under Section 3 have been accounted for and the **Control Person(s)**
informed of the cancellation and of any restrictions on returning the **Plant/Apparatus** to service.

Signed Name (Block Letters) Authorisation No
 being the **Senior Authorised Person** responsible for cancelling this **Permit for Work**. Time Date

** Insert Nil or No Exceptions if there are no exceptions.

7 OTHER INFORMATION:

PERMIT FOR WORK
WITH RESTORATION OF MOTIVE POWER

No
No(s)*

KEY SAFE(S)

- 1 (i) LOCATION:
- (ii) PLANT/APPARATUS IDENTIFICATION:
- (iii) WORK TO BE DONE:

- 2 (i) PRECAUTIONS TAKEN TO ACHIEVE **SAFETY FROM THE SYSTEM**: State points at which **Plant/Apparatus** has been **Isolated** and specify position(s) of **Earthing Devices** applied. State actions taken to avoid **Danger** by draining, venting, purging and containment or dissipation of stored energy.
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.....
.....
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Caution Notices have been affixed at all **Points of Isolation**

- (ii) MOTIVE POWER SUPPLIES AVAILABLE FOR RESTORATION
.....
.....
.....

I have confirmed with the **Control Person(s)**
that the precautions in Section 2(i) have been carried out and that, subject to the requirements of the **Approved** Restoration of Motive Power (ROMP) procedure, the **Control Person(s)** will maintain these until this **Permit for Work** is cancelled. I certify that the precautions in Section 2(i) together with the precautions in Section 2(ii) and the **Approved** ROMP procedure are adequate to provide **Safety from the System** in respect of the work in Section 1.

This **Permit for Work** must only be transferred under the **Personal Supervision** of a **Senior Authorised Person**.

Signed being a **Senior Authorised Person** Time Date

- 3 ISSUE: (i) **Key Safe Key** (No)* (ii) **Earthing Schedule*** (iii) **Portable Drain Earths** (No off)*
- (v) **Selected Person's** Report (No)* (v) **Approved ROMP Procedure** (No)
- (vii) **Other items***

Signed Name (Block Letters)

being the **Senior Authorised Person** responsible for the issue of this **Permit for Work**. Time Date

- 4 RECEIPT: I understand and accept my responsibilities under the ScottishPower Safety Rules as recipient of this **Permit for Work** and acknowledge receipt of the items in Section 3.

Signed Name (Block Letters)

being a **Competent Person** in the employ of Firm/Department. Time Date

*Insert N/A if Not Applicable, the number(s), the quantity, or NIL as appropriate. March 2014

TRANSFER RECORD

PART 1		PART 2		PART 3		
Person surrendering Document	Time & Date	Senior Authorised Person receiving suspended Document (Sign & Print Name)	Time & Date	† Person receiving reissued Document (Sign & Print Name)	Senior Authorised Person reissuing Document (Sign & Print Name)	Time & Date

† Signature of **Person** receiving re-issued Document in accordance with conditions detailed in Section 4.

5 CLEARANCE: I certify that all persons working under this **Permit for Work** have been withdrawn from, and warned not to work on the **Plant/Apparatus** in Section 1. All gear, tools, **Drain Earths** and loose material have been removed and guards and access doors have been replaced except for: *

.....

Signed being the **Competent Person** responsible for clearing this **Permit for Work**.
 Time Date

6 CANCELLATION: I certify that all items issued under Section 3 have been accounted for and the **Control Person(s)**
informed of the cancellation and of any restrictions on returning the **Plant/Apparatus** to service.

Signed Name (Block Letters)
 being the **Senior Authorised Person** responsible for cancelling this **Permit for Work**.
 Time Date

*Insert N/A if Not Applicable, the number(s), the quantity, or NIL as appropriate.

7 OTHER INFORMATION:

SANCTION FOR TEST

No
No(s)*

KEY SAFE(S)

- 1 (i) **LOCATION:**
- (ii) **PLANT/APPARATUS IDENTIFICATION:**
- (iii) **TESTING TO BE DONE:**
- 2 (i) **PRECAUTIONS TAKEN TO ACHIEVE SAFETY FROM THE SYSTEM WHICH SHALL NOT BE ALTERED:** State the points at which **Plant/Apparatus** has been **Isolated** which shall not be restored for testing purposes. State position(s) of **Earthing Devices** applied which shall not be removed for testing purposes.

Caution Notices have been affixed at all **Points of Isolation**

- (ii) **THE CONDITION OF THE ISOLATED PLANT/APPARATUS:** State position(s) of **Earthing Devices** that may be removed for testing purposes. State **Points of Isolation** that may be restored for testing supplies. State actions to avoid **Danger** by draining, venting, purging and containment or dissipation of stored energy. State also further precautions to be taken during the course of testing to avoid **System** derived hazards.

Caution Notices have been affixed at all **Points of Isolation**

- 3 **ISSUE:** I have confirmed with the **Control Person(s)** that the precautions in Section 2(i) have been carried out and that the **Control Person(s)** will maintain these until this **Sanction for Test** is cancelled. I have also confirmed with the **Control Person(s)** that for the purpose of testing the **Plant/Apparatus** detailed in Section 1, control is transferred to the recipient named in Section 4 (or subsequent recipient if document transferred) with the authority to change the conditions in Section 2(ii).
- (i) **Key Safe Key** (Nos)* (ii) **Safety Keys** (No off)* (iii) **Earthing Schedule** (No)*
- (iv) **Portable Drain Earths** (No off)* (v) **Selected Person's Report** (No)* (vi) **Circuit Identification Flags** (No off)*
- (vii) **Circuit Identification Wristlets** (No off)* and Colours/Symbols*
- Signed Name (Block Letters) Authorisation No
being the **Senior Authorised Person** responsible for the issue of this **Sanction for Test**.
Time Date
- 4 **RECEIPT:** I understand and accept my responsibilities including those of the **Control Person** (with authority limited to changing the conditions in Section 2(ii)) under the ScottishPower Safety Rules as recipient of this **Sanction for Test** and acknowledge receipt of the items in Section 3.
- Signed Name (Block Letters) Authorisation No
being an **Authorised Person** in charge of testing.
Time Date

*Insert N/A if Not Applicable, the number(s), the quantity, or NIL as appropriate. March 2014

TRANSFER RECORD

This **Sanction for Test** shall only be transferred under the **Personal Supervision** of a **Senior Authorised Person** at the **Location** where testing is being carried out, in the presence of the **Authorised Person** surrendering it and the **Authorised Person** receiving it.

PART 1		PART 3				
Authorised Person surrendering Document (Signature)	Time & Date	† Authorised Person receiving Reissued Document		Senior Authorised Person Reissuing Document		Time & Date
		Signature	Name (block letters) & Authorisation Number	Signature	Name (block letters) & Authorisation Number	

† I understand and accept my responsibilities including those of the **Control Person** (with authority limited to changing the conditions in Section 2(ii) under the ScottishPower Safety Rules as recipient of this **Sanction for Test** and acknowledge receipt of the items in Section 3.

5 CLEARANCE: I certify that all persons working under this **Sanction for Test** have been withdrawn from, and warned not to continue testing on, the **Plant/Apparatus** in Section 1. All gear, tools, **Drain Earths** and loose material have been removed and guards and access doors have been replaced and that the condition of the **Plant/Apparatus** is as received, except for:**

.....

.....

.....

.....

Signed
 being the **Authorised Person** responsible for clearing this **Sanction for Test**. Time..... Date.....

6 CANCELLATION: I certify that all items issued under Section 3 have been accounted for and the **Plant/Apparatus** detailed in Section 1 returned to the control of **Control Person(s)** in the condition detailed in Section 5.

Signed Name (Block Letters) Authorisation No
 being the **Senior Authorised Person** responsible for cancelling this **Sanction for Test**. Time..... Date

** Confirm removal of test connections and test prods if applicable. Confirm any **Primary Earths** detailed in Section 2(ii) that have not been restored. State any other exceptions. Insert Nil or No Exceptions if there are no exceptions.

7 OTHER INFORMATION:

PART C RESPONSIBILITIES OF PERSONS

C1 GENERAL

C1.1 It is the duty of all **Persons** who may be concerned with work or testing on **Plant** and **Apparatus** to which these Safety Rules apply to implement the Safety Rules and have regard to the supporting mandatory and guidance documents.

C1.2 The responsibilities placed upon **Persons** for the successful implementation of the Safety Rules may include all or only part of those detailed in this section, depending upon the role of the individual.

C1.3 The written authorisation given to **Persons** who require it to perform their appropriate role in implementing the Safety Rules shall indicate the extent of the authorisation.

C1.4 Persons involved in achieving **Safety from the System** to allow work or testing to commence on **Plant** and **Apparatus**, and its subsequent restoration to service, will be concerned in separate identifiable areas of responsibility. Broadly these are:

- (i) 'Control' - which includes, before work or testing commences, instructing actions to implement precautions and consenting to the issue of a **Safety Document** and, after completion of work or testing, acknowledging the cancellation of the **Safety Document** and instructing actions to restore **Plant** and **Apparatus** to service.
- (ii) 'Making Safe/Restoration of **Plant** and **Apparatus**' - which includes, before work or testing commences, taking actions to make **Plant** and **Apparatus** safe for work or testing and issuing a **Safety Document** and, after completion of work or testing and the cancellation of the **Safety Document**, taking actions to restore the **Plant** and **Apparatus** to service.
- (iii) 'Work' or 'Testing' - which includes receipt of **Safety Document**, execution of the required work or testing to its completion or termination and, after the work or testing area has been cleared, clearance of the **Safety Document**.

C2 COMPETENT PERSONS

C2.1 The responsibilities of **Competent Persons** include those specified below. They must ensure that these responsibilities, which form part of the Safety Rules, are implemented.

C2.1.1 Competent Persons shall comply with these Safety Rules when carrying out work or testing whether instructions are issued orally or in writing.

C2.1.2 Competent Persons shall use Safe Systems of Work or testing, safe means of access and personal protective equipment and clothing, which is provided for their safety.

C2.1.3 Competent Person(s) shall cease work or testing if during the course of work or testing a hazard, which could give rise to **Danger**, arises or is suspected. This situation shall be reported immediately by the **Competent Person** to his Supervisor.

C2.1.4 Competent Persons, when recipients of **Safety Documents** or when in charge of additional **Working Parties** under **Safety Documents**, shall:

- (i) Understand the contents and any subsequent actions arising from those contents. This shall apply also to a **Selected Person's** report, an **Earthing Schedule**, any written instruction or procedure regarding the method of work or testing, or an **Approved** written procedure for restoration of motive power supplies;
- (ii) During the course of the work or testing adhere to, or instruct others under their charge to adhere to, any conditions, instructions or limits specified on a **Safety Document**. This shall also apply to a **Selected Person's** report, an **Earthing Schedule**, any written instruction or procedure regarding the method of work or testing, or an **Approved** written procedure for restoration of motive power supplies;
- (iii) As appropriate, retain the **Safety Document** and associated documents and **Keys** in safe custody and correctly implement any written procedure to achieve this;
- (iv) When in charge of work or testing, provide **Immediate Supervision** or **Location Supervision**. Alternatively provide **Personal Supervision** as determined by a **Senior Authorised Person**. During the course of the work or testing, decide whether the work or testing being given **Immediate Supervision** or **Location Supervision** shall be given **Personal Supervision**, depending whether those persons working or testing to the requirements of the **Competent Person** understand the conditions, instructions or limits specified on the **Safety Document**;
- (v) Warn all persons as quickly as possible to withdraw from and not to work or test on the **Plant** and **Apparatus** concerned until further notice if during the course of work or testing a hazard, which could give rise to **Danger**, arises or is suspected. This situation shall be reported immediately by the **Competent Person** to the **Person** who issued the **Safety Document** or to another **Senior Authorised Person**.

C2.1.5 Competent Persons going to work or test under a **Safety Document** personally held by another **Competent Person** shall inform that other **Competent Person** of their presence and intended work or testing.

C2.1.6 Competent Persons clearing a **Safety Document** shall only do so after all persons working or testing under the **Safety Document** have been withdrawn from, and warned not to work or test on, the **Plant** and **Apparatus** concerned. Where appropriate, they shall ensure that all tools, gear and loose material have been removed, guards and access doors replaced, the work site left tidy and the appropriate exceptions noted in the clearance section of the **Safety Document**. Where appropriate, they shall also account for or return the correct number of **Drain Earths**, **Circuit Identification** flags and wristlets and associated **Keys** and documents.

C2.1.7 Competent Persons, when participating in the procedure for the transfer or suspension of a **Safety Document**, shall ensure that:

- (i) All persons working or testing under the **Safety Document** have been withdrawn from and warned not to work or test on the **Plant** and **Apparatus**

- concerned, that all associated documents, **Keys** and appropriate items are surrendered or accounted for to the **Nominated Supervisor** when transferring a **Safety Document**, or to a **Senior Authorised Person** when suspending a **Safety Document** and that the appropriate section of the **Transfer Record** is signed;
- (ii) As the new recipient following the reissue of a transferred or suspended **Safety Document**, such reissue is enacted only under the **Personal Supervision** of a **Senior Authorised Person** and, as the recipient, the appropriate section of the **Transfer Record** is signed;
 - (iii) If re-assuming as recipient under the terms of sections B2.3.3 or B4.3.3, Part 3 of the **Transfer Record** is signed.

C3 NOMINATED SUPERVISORS

C3.1 In addition to responsibilities of **Competent Persons**, **Nominated Supervisors** shall have the responsibilities specified below:

C3.1.1 Before setting **Working Parties** to work, implement the necessary measures to establish **General Safety** at and in the vicinity of the workplace and instructing **Competent Persons** in charge of the **Working Parties** in respect of **General Safety** provisions that must be maintained throughout the work or testing.

C3.1.2 When setting further **Persons** to work or test under a personally retained **Safety Document**, instructing them to report to the recipient of the **Safety Document** in order that they may join the existing **Working Party**. The **Nominated Supervisor** shall record the names of all **Persons** instructed in this way together with the identification of the **Safety Document**, in accordance with local management instructions.

C3.1.3 Retaining in safe custody personally retained **Safety Documents**, **Keys** and associated items which are surrendered for transfer, and, when work or testing is required to recommence, handing the relevant **Safety Document**, **Keys** and associated items to the **Competent Person** who is the new recipient and instructing the **Competent Person** to report to the **Senior Authorised Person** to enact the transfer procedure. If the **Competent Person** who signed part 1 of the **Transfer Record** is to re-assume responsibility as recipient under B2.3.3 or B4.3.3, the **Nominated Supervisor** shall, after handing over the **Safety Document**, **Keys** and associated items, ensure that the **Competent Person** signs Part 3 of the **Transfer Record**.

C3.1.4 Before work or testing commences under a **Safety Document**, which is not in the personal possession of the recipient, additionally securing the **Card Safe**, which contains the **Safety Document** and **Key Safe Key** with a **Nominated Supervisor's** lock. **Nominated Supervisors** have a collective responsibility for retaining **Card Safes** and **Keys** for **Nominated Supervisor's** locks in safe custody.

C3.1.5 Instructing **Competent Persons** in charge of additional **Working Parties** to work or test under **Safety Documents** held in **Card Safes**, and ensuring that each **Competent Person** in charge of an additional **Working Party** reads the relevant **Safety Document**, signs a declaration that he understands the limits of the work or testing and the requirements imposed by the **Safety Document**, and applies his lock

to the **Card Safe**. The **Nominated Supervisor** shall confirm completion of this procedure by initialling the **Competent Person's** entry on the declaration form.

C4 AUTHORISED PERSONS

C4.1 In addition to responsibilities as a **Competent Person**, **Authorised Persons** shall have some or all of the following responsibilities within the limits imposed by their Certificate of Authorisation.

C4.1.1 When participating in achieving **Safety from the System**, correctly implementing specified procedures before work or testing commences. These shall include:

- (i) Carrying out the instructions of the **Control Person** to apply safety precautions. Reporting back without unnecessary delay and signing a record of the completion of these actions;
- (ii) Meeting the requirements of Part B of these Safety Rules;
- (iii) In the case of overhead lines, advising the **Control Person** of the **Circuit Identification**.

C4.1.2 As the recipient of a **Sanction for Test**:

- (i) Meeting the requirements of Part B of these Safety Rules;
- (ii) Being present during the testing and being responsible for all matters of safety concerned with the test;
- (iii) Giving instructions for the removal and re-application of those safety precautions, which may be disturbed whilst at the same time maintaining **Safety from the System**;
- (iv) Implementing the control function as dictated by the test programme and consulting, as necessary, with **Control Persons** of other **Systems** to agree any actions, which may be required to maintain **Safety from the System**.

C4.1.3 For work on or testing of **LV Apparatus** normally operating above 250V determining whether this is to be carried out by a **Competent Person** under oral instruction, under a **Limited Work Certificate, Permit for Work, Approved** live working procedures or under **Personal Supervision**.

C4.1.4 For work on or testing of **LV Apparatus** normally operating below 250V determining whether this is to be carried out in accordance with normal routine instructions, by a **Competent Person** under oral instruction, under a **Limited Work Certificate, Permit for Work, Approved** live working procedures or under **Personal Supervision**.

C5 SENIOR AUTHORISED PERSONS

C5.1 In addition to responsibilities as an **Authorised Person**, **Senior Authorised Persons** shall have some or all of the following responsibilities within the limits imposed by their Certificate of Authorisation.

C5.1.1 Correctly implementing specified procedures to ensure that all safety precautions, which achieve **Safety from the System**, are completed. These procedures shall include the process of:

- (i) Confirming through the **Control Person** that safety precautions at remote **Locations** are complete;
- (ii) Meeting the requirements of Part B of these Safety Rules;
- (iii) Checking with the **Control Person(s)** to confirm that the safety precautions, which have been taken, are adequate for the work or testing to be done.

C5.1.2 Prior to the issue of a **Safety Document** deciding, where appropriate:

- (i) Whether **Drain Earths** are required and, if so, ensuring that the correct number of **Drain Earths** are issued together with an **Earthing Schedule** if applicable;
- (ii) Whether **Plant** and **Apparatus** shall be **Vented, Purged** and its contents adjusted to a level, which avoids **Danger**, and any action to be taken to contain or dissipate stored energy;
- (iii) Whether to call upon a **Selected Person** to provide a report specifying any additional precautions to be taken and deciding the action to be taken to implement any recommendations made;
- (iv) Under what conditions the safety precautions applied are to be removed during the course of the work or testing and, where appropriate, specifying the manner in which they may be removed and re-applied such that **Safety from the System** is maintained;
- (v) That **Safety from the System** has been achieved or will be achieved when the requirements of the **Safety Document** are completely implemented;
- (vi) Whether to dictate the transfer procedure;
- (vii) That the contents of the **Safety Document** to be issued are correct and unambiguous;
- (viii) To implement the procedure to ensure safe custody of a **Safety Document** and associated **Keys** when it is not to be issued immediately;
- (ix) To obtain the **Consent** of the **Control Person(s)**;
- (x) Whether **Personal Supervision** is required.

C5.1.3 When issuing, or reissuing after transfer or suspension, a **Safety Document**:

- (i) Informing when relevant the **Control Person(s)**;
- (ii) Ensuring that the contents of the **Safety Document, Earthing Schedule** and any **Selected Person's** report or **Approved** written procedure for the restoration of motive power supplies to be issued with the **Safety Document** are fully explained to the recipient and satisfying himself that the recipient understands those contents;
- (iii) Issuing the **Safety Document** together with, as appropriate, any **Keys, Selected Person's** report, **Earthing Schedule, Drain Earths, Approved** written procedure for the restoration of motive power supplies, correct **Circuit Identification** flags and wristlets and deciding whether the work or testing to be done under a **Permit for Work** or **Limited Work Certificate** shall be given the **Supervision** of the recipient.

C5.1.4 When providing **Personal Supervision** of the transfer of a **Safety Document**, discharging the same responsibilities to the new recipient as if the **Safety Document** was being issued initially.

C5.1.5 When a **Safety Document** is to be suspended:

- (i) Receiving the **Safety Document** under the transfer procedure;
- (ii) Ensuring that the **Safety Document, Key Safe Key** and any associated documents and **Keys** are placed in safe custody in a manner which secures the safety precautions during the period of suspension.

C5.1.6 When work or testing is to be resumed and the **Safety Document** is to be reissued following suspension:

- (i) Checking and confirming that the recorded safety precautions for the **Safety Document** are as stated and still valid;
- (ii) Transferring the **Safety Document** to a **Competent Person**, discharging the same responsibilities to the recipient as if the **Safety Document** was being issued initially.

C5.1.7 When cancelling a **Safety Document**:

- (i) Satisfying himself that the requirements of the clearance section of the **Safety Document** have been correctly implemented;
- (ii) Checking that all the items issued with the **Safety Document** have been returned or accounted for;
- (iii) Satisfying himself as to the operational state of the **Plant and Apparatus**;
- (iv) When relevant, immediately informing the **Control Person(s)** of the cancellation and confirming to him the operational state of the **Plant and Apparatus**.

C5.1.8 When the means of achieving **Safety from the System** is by limiting the work or testing or the area in which they are to be carried out, deciding to issue a **Limited Work Certificate** in those situations where oral instructions may be insufficient.

C5.1.9 When work or testing is to be done outside the **Safety Distance** from exposed **High Voltage** conductors, deciding whether to issue a **Limited Work Certificate** because of the close proximity of the limit of the **Safety Distance**.

C5.1.10 Deciding, in those cases where it is not otherwise specified, the category of **Person** who shall provide **Personal Supervision** in situations where it is required.

C6 CONTROL PERSONS

C6.1 The responsibilities of **Control Persons** within their sphere of operation, which arise from the implementation of these Safety Rules, are as follows.

C6.1.1 Sanctioning the release of **Plant and Apparatus** from service.

C6.1.2 Before giving **Consent** to the issue of a **Safety Document**, implementing specified procedures, which ensure the application of safety precautions, which achieve **Safety from the System**. These procedures shall include the process of:

- (i) Implementing the control function for the **Location** in accordance with management instructions;
- (ii) Consulting with **Control Persons** of other **Systems** to agree, initiate and record those actions necessary to establish and maintain safety precautions on **Plant and Apparatus**, which is interconnected across control boundaries;

- (iii) Instructing **Authorised Persons** to carry out the necessary operations to establish the safety precautions, which achieve **Safety from the System** and then obtaining confirmation that each instruction has been carried out;
- (iv) Checking with the **Senior Authorised Person** to confirm that the safety precautions, which have been taken, are adequate for the work or testing to be done.

C6.1.3 Checking that the contents of the **Safety Document** to be issued correctly define the **Plant** and **Apparatus**, which is to be released for work or testing together with the safety precautions taken.

C6.1.4 Checking, prior to giving **Consent** to the issue of a **Safety Document**, the accuracy of **Circuit Identification** as reported from **Locations** remote from the **Location** where a **Safety Document** is to be issued.

C6.1.5 **Consenting** to the issue and acknowledging the cancellation of **Permits for Work, Sanctions for Test** and, where appropriate, **Limited Work Certificates**.

C6.1.6 Implementing the necessary procedures to ensure that the safety precautions established to achieve **Safety from the System** are maintained during the period the **Safety Document** is in force.

C7 **SELECTED PERSONS**

C7.1 A **Selected Person** is responsible for using his appropriate technical knowledge and experience for making a report and recommendations to overcome hazards which may prevent work or testing being performed safely on **Plant** and **Apparatus** which has otherwise been made safe.

C7.2 If, prior to the issue of a **Safety Document** or during the progress of work or testing, it is considered necessary to carry out a check on **Plant** and **Apparatus** or working areas for hazards, the **Selected Person** shall carry out any tests and examinations he considers necessary. A written report shall be prepared by the **Selected Person** who will be responsible for ensuring that its recommendations, when implemented, will ensure safe working conditions relating to the hazards.

PART D

DEFINITIONS

D1: Apparatus	All equipment in which electrical conductors are used, supported, or of which they may form a part, and for which the Company has a maintenance responsibility.
D2: Approved	By a Director responsible for managing the main businesses, or their nominated senior manager.
Authorised Person	See Persons .
D3: Card Safe	A device of an Approved type for the display and secure retention of a Safety Document and the associated Key Safe Key .
D4: Caution Notice	A notice in Approved form prohibiting unauthorised interference.
D5: Circuit Identification	Colours or symbols used to identify overhead line circuits.
D6: Company (The)	Scottish Power Limited.
Competent Persons	See Persons .
D7: Consent	Confirmation by the Control Person before the issue of a Safety Document that the Plant and Apparatus concerned has been released for work or testing and is correctly identified on the Safety Document , that his responsibilities in respect of safety precautions with which he is associated have been discharged and that procedures have been enacted which will maintain these safety precautions until the Safety Document is cancelled.
Control Person	See Persons .
Control Keys	See Keys .
D8: Danger	A risk to health, or of bodily injury.
D9: Danger Notice	A notice in Approved form reading ' Danger '.
Drain Earth	See Earthing Device .
D10: Earthed	Connected to earth by means of an Earthing Device .

D11: Earthing Device

An **Approved** means of providing a connection between a conductor and earth, being one of the following:

- (i) **Portable Earth** - An **Earthing Device** made up of flexible leads;
- (ii) **Primary Earth** - An **Earthing Device** applied at a position defined in a **Safety Document**; (also referred to as Circuit Main Earth in other Companies)
- (iii) **Drain Earth** - An **Earthing Device** applied for the purpose of protection against induced voltages, impressed voltages or inadvertent backfeed. (also referred to as Additional Earth in other Companies)
- (iv) **Jumper Earth** – An overhead line phase conductor jumper that has been disconnected at one end and that end solidly bolted to earthed metalwork thus earthing the phase conductor.

D12: Earthing Party

A party consisting of an **Authorised Person** in charge, accompanied by one or more **Authorised Persons** whose duty is to apply, and remove, red pennants and **Drain Earths** on overhead line conductors, on towers, poles and high structures.

D13: Earthing Schedule

A schedule indicating the **Drain Earth** and earth bond requirements for each stage of the work or testing.

D14: General Safety

The control and management of risks posed by hazards in the working environment which are not covered by the ScottishPower Safety Rules (Electrical and Mechanical)

This includes the provision of safe access to and from the place of work, a safe place of work, Safe Systems of Work and the use of correct equipment and protective clothing.

D15: High Voltage (HV)

A voltage exceeding 1000 volts ac or 1500 volts dc.

Immediate Supervision

See **Supervision**.

D16: Isolated

Disconnected from associated **Plant** and/or **Apparatus** by an **Isolating Device(s)** in the isolating position, or by adequate physical separation or sufficient gap.

D17: Isolating Device

A device for rendering **Plant** and **Apparatus Isolated**

Jumper Earth

See **Earthing Device**

D18: Keys	Being one of the following: <ul style="list-style-type: none"> (i) Control Key - A key capable of operating the control lock of a Key Safe; (ii) Safety Key - A key unique at the Location capable of operating a lock which will cause an Isolating Device, Earthing Device, vent or drain to be Locked; (iii) Key Safe Key - A key unique at the Location capable of operating a lock, other than the control lock, on a Key Safe.
D19: Key Safe	A device of an Approved type for the secure retention of keys.
Key Safe Key	See Keys .
Limited Work Certificate	See Safety Documents .
D20: Live	Electrically charged.
D21: Location	Any place at which work or testing under the Safety Rules is carried out.
Location Supervision	See Supervision .
D22: Locked	A condition of Plant and/or Apparatus that cannot be altered without the operation of a locking device which is of a standard acceptable to the Manager in charge of the Location . <ul style="list-style-type: none"> (i) Safety Lock – A lock used exclusively for Approved purposes (such as for locking-off the points at which the circuit can be energised) that lock being different from all other standard locks used at that Location.
D23: Low Voltage (LV)	A voltage not exceeding 1000 volts ac or 1500 volts dc.
Permit for Work	See Safety Documents .
Personal Supervision	See Supervision .

D24: Persons

Being one of the following:

- (i) **Competent Person** - A **Person** who has sufficient technical knowledge and/or experience to enable him to avoid **Danger** who may receive, transfer and clear specified **Safety Documents** when nominated by an appropriate officer of the **Company**;
- (ii) **Authorised Person** - A **Competent Person** nominated by an appropriate officer of the **Company** to carry out duties specified in writing;
- (iii) **Senior Authorised Person** - An **Authorised Person** nominated by an appropriate officer of the **Company** to carry out duties specified in writing, including the preparation, issue and cancellation of specified **Safety Documents**;
- (iv) **Control Person** - A **Person** nominated by an appropriate officer of the **Company** to be responsible for controlling and co-ordinating safety activities necessary to achieve **Safety from the System**;
- (v) **Nominated Supervisor** - A **Competent Person** nominated by an appropriate officer of the **Company** to set **Working Parties** to work or test and to supervise certain Safety Rules procedures at the **Location**.
- (vi) **Selected Person** - A **Person** qualified by technical knowledge and experience and selected by an appropriate officer of the **Company** to carry out tests and examinations and make recommendations regarding additional special precautions to be taken to safeguard persons.

D25: Plant

Fixed and moveable items, other than **Apparatus**, which may or does form part of the **System**.

D26: Point of Isolation

The point at which:

HV Plant or **Apparatus** has been **Isolated** and where practicable, the isolation point immobilised and **Locked**. **Caution Notice** shall be affixed.

LV Plant or **Apparatus** has been **Isolated** and where reasonably practicable, the isolation point immobilised and **Locked**. **Caution Notice** shall, where reasonably practicable, be affixed.

Portable Earth

See **Earthing Device**.

Primary Earth

See **Earthing Device**.

D27: Purged

A condition of **Plant** and/or **Apparatus** from which any dangerous contents have been scavenged.

D28: Safety Distance	The distance from the nearest High Voltage exposed conductor not Earthed or from an insulator supporting a High Voltage conductor which must be maintained to avoid Danger .
D29: Safety Documents	Being one of the following: <ul style="list-style-type: none"> (i) Limited Work Certificate - A Safety Document of a format indicated in these Safety Rules, which defines the limits within which work or testing may be carried out and specifies necessary precautions; (ii) Permit for Work - A Safety Document of a format indicated in these Safety Rules specifying the Plant and/or Apparatus to be worked on, the work to be carried out and the actions taken to achieve Safety from the System; (iii) Sanction for Test - A Safety Document of a format indicated in these Safety Rules specifying the Plant and/or Apparatus to be tested, specifying the conditions under which the testing is to be carried out and confirming actions which have been taken to achieve Safety from the System.
D30: Safety from the System	That condition which safeguards persons working on or testing Plant and/or Apparatus from the Dangers which are inherent in the System .
Safety Key	See Keys .
Sanction for Test	See Safety Documents .
Selected Person	See Persons .
Senior Authorised Person	See Persons .
D31: Supervision	Being one of the following: <ul style="list-style-type: none"> (i) Immediate Supervision or Location Supervision - Supervision by a Person who is continuously available at the Location where work or testing is in progress and who attends the work or test area as is necessary for the safe performance of the work or testing; (ii) Personal Supervision - Supervision by a Person such that the supervising Person is at all times during the course of the work or testing continually observing and in the presence of the person(s) being supervised, with the ability and competence to directly intervene. Supervision at ground level for Person(s) positioned at height is considered Personal Supervision when the supervisor at ground level maintains verbal and visual communication with the Person(s) being supervised.

D32: Switching	The operation of circuit breakers, disconnectors/isolators or other methods of making or breaking an electrical circuit, the removal/insertion of fuses and/or the application and removal of Primary Earths .
D33: System	Items of Plant and Apparatus which are used separately or in combination in any process associated with the generation, transmission or distribution of electricity.
D34: Transfer Record	A document of a format shown in these Safety Rules used to record the transfer of a Limited Work Certificate, Permit for Work or Sanction for Test .
D35: Vented	Having an outlet open to the atmosphere and so arranged that pressure can equalise to atmospheric pressure.
D36: Working Party	Persons under the Supervision of a Competent Person (who themselves shall be a member of the Working Party) and includes a Competent Person when working alone.

COMPANY SAFETY INSTRUCTIONS

CSI 1 EARTHING OF HIGH VOLTAGE APPARATUS

CSI 1.1 The Safety Rules state that for work or testing on **HV Apparatus, Primary Earths** shall be applied within the **Isolated** zone. The instructions given below indicate how this principle shall be implemented.

CSI 1.1.1 PRIMARY EARTHS

- (i) With the exception of certain work or testing on metal enclosed switchgear circuit, busbar and voltage transformer spouts as detailed in CSI 1.1.4 below, **Primary Earths** shall remain in position until the associated **Permit(s) for Work** has been cancelled.
- (ii) Where reasonably practicable, **Primary Earths** shall be applied between the point of work or testing and the **Point(s) of Isolation**. Where this is not reasonably practicable, an **Approved** procedure shall be implemented.
- (iii) Where **Primary Earths** are applied all phases shall be **Earthed** except where work or testing is to be carried out on phase segregated **Apparatus** when **Primary Earths** may be applied only to the phase being worked on as detailed in CSI 1.1.6 below.
- (iv) Where reasonably practicable a circuit breaker or specially provided earth switch shall be used to make the first earth connection.
- (v) When a movable circuit breaker is used, the automatic trip feature shall be rendered inoperative before closing where practicable. After closing, where reasonably practicable any means of opening the circuit breaker shall be **Locked**.
- (vi) When a fixed circuit breaker is used, the tripping functions shall be rendered inoperative after closing and the circuit breaker **Locked** in the closed position.
- (vii) Whenever it is reasonably practicable, local closing of a circuit breaker to provide an earth shall be avoided.

CSI 1.1.2 DRAIN EARTHS

When work or testing is done on **HV Apparatus** under the terms of a **Permit for Work** or **Sanction for Test**, **Drain Earths** shall be applied where induced voltages, impressed voltages, or inadvertent backfeed may cause **Danger** at the point(s) of work or testing. They shall be applied and removed, as necessary, during the course of the work or testing as specified on the **Earthing Schedule** or within the **Safety Document** if applicable.

CSI 1.1.3 PORTABLE EARTHS

- (i) Whenever reasonably practicable, before commencing to apply **Portable Primary Earths**, an **Approved** voltage indicator shall be used to verify that the conductor to be **Earthed** is not **Live** at **System** voltage. The voltage indicator shall be tested immediately before and immediately after use.
- (ii) **Portable Earths** shall be applied to and removed from conductors using an **Approved** device.

- (iii) **Portable Earths** shall only be applied in any cell or cubicle when all exposed conductors are **Isolated** from the **System**.
- (iv) Except when carrying out insulated working on cables, when a **Portable Earth** is to be applied, the earth end of each earthing connection shall be attached to metal, which is electrically bonded to earth before the conductor end clamp is applied. When multiple earthing connections are to be used in such a manner that two or more earth end clamps will be in close proximity to each other, the earth end clamps of all these earthing connections shall be attached before any of the conductor end clamps are applied.
- (v) Except when carrying out insulated working on cables, when a **Portable Earth** is to be removed, the conductor end clamp connection shall be removed before the earth end clamp. When multiple earthing connections have been used such that two or more conductor end or earth end clamps are in close proximity to each other, the conductor end clamps of all these earthing connections shall be removed before any of the earth end clamps. At no time shall the conductor end clamp of a **Portable Earth** be allowed to remain connected when its earth end clamp has become detached. If such a disconnected **Portable Earth** is the only earth on that conductor at that point, an additional **Portable Earth** shall be connected between earth and that conductor before the detached **Portable Earth's** conductor end clamp is removed. In all cases, before the earth end clamp is re-connected, the conductor end clamp shall first be removed.
- (vi) Where bundle conductors are being **Earthed**, each individual conductor shall be **Earthed** unless they are solidly bonded electrically at or near the point of earthing.

CSI 1.1.4 HIGH VOLTAGE METAL ENCLOSED SWITCHGEAR WITH SPOUTS

- (i) When work is to be done on circuit or voltage transformer spouts or on the busbar spouts of a single panel switchboard and the only reasonably practicable position where a **Primary Earth** can be applied is at the spouts to be worked on, this **Primary Earth** may be removed to allow the necessary access for work or testing. Work or testing on each spout may then proceed after proving that each spout is at or about zero potential by means of an **Approved** voltage indicator being applied immediately before it is worked on. The voltage indicator shall be tested immediately before and immediately after use.
- (ii) Where work or testing is to be done on the busbar spouts of a multi-panel switchboard. An **Earthing Device** shall be applied to the busbars at one of the panels. Work or testing on each spout may then proceed after proving that each spout is at or about zero potential by means of an **Approved** voltage indicator being applied immediately before it is worked on. The voltage indicator shall be tested immediately before and immediately after use.
- (iii) When withdrawable **Apparatus** has been removed from its service position in preparation for work or testing, it shall be immediately

electrically discharged to earth, after which **Primary Earths** or **Drain Earths** need not be applied.

CSI 1.1.5 BREAK OF CONNECTION IN A CONDUCTOR

- (i) Before a break is made in a conductor or a connection is made across a break, **Danger**, which could arise from voltage difference, shall be excluded. If **Danger** cannot otherwise be excluded, then the conductors shall be **Earthed** on both sides of and in close proximity to the point where a break or connection is to be made.

CSI 1.1.6 PHASE SEGREGATED APPARATUS

- (i) Work or testing may be carried out on one phase of phase segregated **Apparatus** with **Primary Earths** applied only to that one phase provided that all three phases are **Isolated**. Examples of phase segregated **Apparatus** are 400kV metal enclosed SF6 gas insulated switchgear and generator terminal connections both with conductors in individual single-phase **Earthed** metal enclosures.

CSI 1.1.7 JUMPER EARTHS

- (i) Where overhead line phase conductors terminate at tension towers, the continuity of the circuit is provided by “jumpers”. Where these “jumpers” are of the bolted type, they can be un-bolted from the phase conductor at one end and the “jumper” clamp then bolted to the tower steelwork to create a connection to earth. These earth connections may be used as **Primary Earths**.

CSI 2 PRECAUTIONS RELATING TO LOOSE GRANULAR MATERIALS

CSI 2.1 When work or testing is to be carried out on **Plant** and/or **Apparatus** in close proximity to volumes of coal, coke, ash or other granular substances, measures shall be taken to ensure that there shall be no **Danger** from collapse of the substance.

CSI 2.2 Before entry is permitted to any bunker, precautions shall be taken to ensure that persons cannot be trapped.

CSI 3 VENTING OF PLANT AND APPARATUS

CSI 3.1 When **Plant** and/or **Apparatus** is to be **Vented** before work or testing commences, the venting shall be carried out in a controlled manner to ensure that:

- (i) There is no **Danger** to persons from any emission from the vent;
- (ii) The venting process is completed and atmospheric pressure is established internally in the **Plant** and/or **Apparatus**.

CSI 3.2 Precautions shall be taken to maintain the established safe conditions during the work or testing.

CSI 4 PURGING OF PLANT AND APPARATUS

CSI 4.1 When **Plant** and/or **Apparatus** is to be **Purged**, the purging shall be carried out in a controlled manner to ensure that:

- (i) There is no **Danger** to persons from any emission during the purging process;
- (ii) The purging process is completed and normal atmospheric conditions exist internally in the **Plant** and/or **Apparatus**.

CSI 4.2 Precautions shall be taken to maintain the established safe conditions during the work or testing.

CSI 5 WASHING LIVE HIGH VOLTAGE INSULATORS

CSI 5.1 The work shall only be carried out using **Approved** equipment under the **Personal Supervision** of an **Authorised Person** and in accordance with local management safety procedures.

CSI 5.2 The **Authorised Person** shall inform the **Control Person** of the start and completion of work.

CSI 6 TESTING INSULATORS ON LIVE HIGH VOLTAGE OVERHEAD LINES

CSI 6.1 The testing shall be carried out under the terms of a **Limited Work Certificate** and under the **Personal Supervision** of a **Senior Authorised Person** at each tower.

CSI 6.2 The testing shall be carried out only by **Persons** who have received appropriate training and are appointed in writing to be **Authorised Persons** for **Live** insulator testing.

CSI 6.3 Not more than three **Persons** shall climb the tower at any one time. One of these **Persons** shall be responsible for seeing that the other two **Persons** do not infringe the **Safety Distance**. The second **Person** shall apply the testing equipment. The third **Person** shall take observations either at conductor level or ground level.

CSI 6.4 No tool other than **Approved** testing equipment shall be taken up the tower.

CSI 6.5 Step bolts may be used for climbing the towers providing that at all times the **Safety Distances** are maintained to any part of the climber's body, or anything being carried. Where the appropriate **Safety Distance** cannot be maintained whilst using step bolts, climbing shall be within the body of the tower or on the face at right angles to the conductors. In the cases of tee-off, tension or terminal towers, angle towers greater than 30° and any unusual or complex arrangements, a **Senior Authorised Person** shall indicate the route to be climbed and provide or specify additional means of identification of circuits or screening if necessary.

CSI 6.6 In assessing **Safety Distance**, due note shall be taken of conductor and insulator movement due to wind conditions.

- CSI 6.7** Testing shall be carried out only in suitable weather conditions. Testing shall not be carried out when humidity is above 70% and shall be discontinued if a thunderstorm approaches.
- CSI 6.8** Auto-reclosing equipment on circuit breakers controlling the circuit concerned shall be rendered and remain inoperative while the **Limited Work Certificate** is in force. **Caution Notices** shall be affixed to the auto-reclosing equipment. The **Control Person** shall not reclose the circuit in the event of it tripping until he has obtained the agreement of the **Senior Authorised Person** giving **Personal Supervision**.
- CSI 6.9** The **Senior Authorised Person** giving **Personal Supervision** shall inform the **Control Person** when commencing and finishing the actual testing.
- CSI 6.10** If during the progress of the testing the line is found to be not **Live**, the **Senior Authorised Person** giving **Personal Supervision** shall immediately communicate with the **Control Person**.

SPECIALISED PROCEDURES

INSTRUCTIONS FOR WORK ON LIVE HIGH VOLTAGE APPARATUS CONNECTED TO THE SYSTEM

SP 1 WORK ON LIVE 132kV, 275kV AND 400kV OVERHEAD LINES USING INSULATED HAND TOOLS

This Specialised Procedure is not currently used within ScottishPower.

SP 2 WORK ON LIVE 132kV, 275kV AND 400kV OVERHEAD LINES USING THE PERSONAL CONTACT METHOD OF WORK

This Specialised Procedure is not currently used within ScottishPower.

SP 3 WORK ON LIVE HIGH VOLTAGE OVERHEAD LINES UP TO AND INCLUDING 33kV USING THE HOT STICK METHOD

SP3.1 Authorisation

- (i) No **HV** Hot Stick working shall be carried out except in accordance with **Approved** procedures.
- (ii) All staff engaged on **HV** Hot Stick working shall have received appropriate training and shall possess written authorisation for **HV** Hot Stick working from the **Company**.
- (iii) **HV** Hot Stick working shall only be undertaken under the **Personal Supervision** of an **Authorised Person** who shall have received training in the procedures and is authorised in writing by the **Company** to act in this capacity. He shall be present throughout the whole of the **HV** Hot Stick working.
- (iv) No tools or equipment shall be used for **HV** Hot Stick working except those which have been **Approved**.

SP 3.2 Hot Stick Tools and Equipment

- (i) **HV** Hot Stick working tools and equipment shall be kept in a clean and dry condition and before use shall be inspected by the **Authorised Person** in charge of the **HV** Hot Stick working to ensure that they are clean and dry and in sound condition. If any defect is suspected in a **HV** Hot Stick working tool or piece of equipment it shall not be used.
- (ii) A clear mark shall be maintained on every **Approved HV** Hot Stick working tool and piece of equipment, where appropriate, indicating the limit of the safe handling position which shall not be less than the **Safety Distance** specified below.

Up to and including 33 kV 0.8m*

*The 0.8m is to be the minimum effective length of insulation of the **Approved** tools.

SP 3.3 General Safety Precautions

- (i) Work shall not commence until the **Authorised Person** in charge of the **HV** Hot Stick working has advised the appropriate **Control Person** of the nature and **Location** of the work to be carried out, and authorisation to proceed has been given by the **Control Person**.

The **Authorised Person** in charge of the work shall report to the **Control Person** before commencing.

If the circuit on which work is being carried out becomes de-energised due to the operation of protective equipment, the **Control Person** shall not sanction the circuit to be re-energised without reference to the **Authorised Person** in charge of the **HV Hot Stick** working.

On completion of the **HV Hot Stick** working, the **Control Person** shall be informed that all personnel and tools have been withdrawn from the point of work.

- (ii) If the circuit to be worked on is controlled by an automatic reclosing device, work shall not commence until, where it is practicable to do so, the reclosing features have been rendered inoperative.
- (iii) No **HV Hot Stick** working shall commence in unfavourable weather. If in the course of the work unfavourable weather conditions develop, work shall be suspended.
- (iv) If it is necessary to suspend **HV Hot Stick** working for any reason, the line and equipment shall be left in a safe condition and the **Control Person** informed.
- (v) Before work commences all conductors and associated pole top, line and tower fittings, steelwork and insulators shall be thoroughly examined at the point of work, through binoculars if necessary, so as to minimise the possibility of failure of these parts during **HV Hot Stick** working. This examination shall also extend to include the adjacent spans and pole or tower on both sides of the point of work.
- (vi) Before displacing **Live** conductors, adequate precautions shall be taken to avoid **Danger** and to ensure the safety of the public. Minimum clearances shall also be maintained between the line and other **Apparatus** and objects.
- (vii) No vehicle, or person other than a member of the team, shall be allowed in the near vicinity of the point of work while work is in progress without the sanction of the **Authorised Person** in charge of the **HV Hot Stick** working.
- (viii) Before any wood pole is climbed it shall be sounded, and the condition of the foundations and the effectiveness of any stays examined. No pole badly impaired by decay or damage, or the stability of which may be affected by the condition of the foundation or any stays, shall be climbed until it has been supported by **Approved** means. The pole shall then be climbed by only one **Person**.
- (ix) Where a **Person** is working on a pole, no work shall be carried out which may affect the stability of the pole.
- (x) Before any pole is climbed and during the course of **HV Hot Stick** working the **Authorised Person** in charge shall take steps to avoid **Danger** from steelwork being **Live** or becoming **Live**.
- (xi) No **Person** shall climb, move or work in such a position as to bring any part of his body, clothing or any working tool other than an **Approved** insulated **HV Hot Stick** working tool or equipment, within the **Safety Distance** specified below.

Up to and including 33kV 0.8m*

and where appropriate a marker tape shall be placed on the pole as an indication.

*The 0.8m is to be the minimum air clearance.

SP 4 WORK ON LIVE HIGH VOLTAGE OVERHEAD LINES UP TO AND INCLUDING 33kV USING THE RUBBER GLOVE METHOD

SP 4.1 Authorisation

- (i) No **HV** Rubber Glove working shall be carried out except in accordance with **Approved** procedures.
- (ii) **HV** Rubber Glove working shall only be carried out by **Authorised Persons** who have received training in the procedures and are **Authorised** in writing by the **Company** to carry out the procedures. One member of the team shall be nominated as the **Authorised Person** in charge before work starts and he shall be present throughout the whole of the **HV** Rubber Glove working.
- (iii) No tools or equipment shall be used for **HV** Rubber Glove working except those which have been **Approved**.

SP 4.2 HV Rubber Glove Tools and Equipment

- (i) **HV** Rubber Glove working tools and equipment shall be kept in a clean and dry condition and before use shall be inspected to ensure that they are clean and dry and in sound condition. If any defect is suspected in an **HV** Rubber Glove working tool or piece of equipment it shall not be used. The **Authorised Person** in charge of **HV** Rubber Glove working shall be responsible for ensuring that these actions have been carried out before work starts.

SP 4.3 General Safety Precautions

- (i) Work shall not commence until the **Authorised Person** in charge of the **HV** Rubber Glove working has advised the appropriate **Control Person** of the nature and **Location** of the work to be carried out, and authorisation to proceed has been given by the **Control Person**.

The **Authorised Person** in charge of the work shall report to the **Control Person** before commencing work and again as soon as practicable after its completion. When unexpected delays are experienced during the course of **HV** Rubber Glove working the **Control Person** shall be informed.

If the circuit on which work is being carried out becomes de-energised due to the operation of protective equipment, the **Control Person** shall not sanction the circuit to be re-energised without reference to the **Authorised Person** in charge of the **HV** Rubber Glove working.

On completion of the **HV** Rubber Glove working, the **Control Person** shall be informed that all personnel and tools have been withdrawn from the point of work.

- (ii) If the circuit to be worked on is controlled by an automatic reclosing device, work shall not commence until, where it is practicable to do so, the reclosing features have been rendered inoperative.
- (iii) No **HV** Rubber Glove working shall commence in unfavourable weather. If in the course of the work unfavourable weather conditions develop, work shall be suspended as soon as reasonably practicable.

- (iv) If it is necessary to suspend **HV Rubber Glove** working for any reason, the line and equipment shall be left in a safe condition and the **Control Person** informed.
- (v) Before work commences all conductors and associated pole top, line and tower fittings, steelwork and insulators shall be thoroughly examined at the point of work, through binoculars if necessary, so as to minimise the possibility of failure of these parts during **HV Rubber Glove** working. This examination shall also extend to include the adjacent spans and pole or tower on both sides of the point of work.
- (vi) Before displacing **Live** conductors, adequate precautions shall be taken to avoid **Danger** and to ensure the safety of the public. Minimum clearances shall also be maintained between the line and other **Apparatus** and objects.
- (vii) No work, which may affect the stability of the line or pole being worked on, shall start until the line and/or pole has been secured by **Approved** means.
- (viii) No vehicle other than the Insulated Aerial Device or person other than a member of the team, shall be allowed in the near vicinity of the point of work while work is in progress without the sanction of the **Authorised Person** in charge of the **HV Rubber Glove** working.
- (ix) **HV Rubber Glove** working shall only be carried out from an **Approved** Insulated Device.
- (x) Until the application of shrouding to all **Apparatus**, including that providing second points of contact, using **Approved** protective equipment is complete, the **Authorised Person(s)** applying the shrouding shall ensure that:
 - (a) No part of his body or clothing other than his rubber gloved hands or sleeved arms; and
 - (b) No tools or equipment other than those specifically **Approved** for the purpose encroach within the limits of approach stated below

Limits of approach up to and including 33kV 300mm.

No other **HV Rubber Glove** working shall commence until the application of shrouding to all **Apparatus**, including that providing second points of contact, within the immediate working area has been completed.

- (xi) During the course of **HV Rubber Glove** working all **Apparatus** providing second points of contact within the immediate working area shall remain shrouded with **Approved** protective equipment except for the conductor or **Apparatus** being worked on. The amount of shrouding removed shall be the minimum required to allow work to proceed.
- (xii) During the course of work all members of the **HV Rubber Glove** working team shall maintain effective communication with each other.
- (xiii) Before shrouding is removed, the **Authorised Person(s)** shall ensure the limits of approach stated in sub-paragraph 4.3 (x) are not infringed.

SP 5 OPENING AND CLOSING OF HIGH VOLTAGE METAL ENCLOSED SWITCHGEAR SHUTTERS BY HAND UP TO AND INCLUDING 33 kV

Foreword

Safety Rule A2.2.1 states that, '**Persons** shall not allow any part of their body to approach exposed conductors designed for, or operated at **High Voltage** or

insulators supporting such conductors with the **Safety Distances** specified in A2.3, unless the conductors have been **Isolated, Earthed** and **Danger** has been excluded.'

HV metal enclosed switchgear shutters may require to be opened or closed by hand for a variety of operational requirements, without Isolation and Earthing. These shutter operations, however, often do not allow compliance with Safety Rule A2.2.1.

Principle 5.3.1(ii) states that, 'when work or testing is to be carried out on **High Voltage Apparatus**, the primary means of achieving safety is by isolation from the **System(s)** followed by earthing, except when working on **Live Apparatus**. For these exceptions the means of achieving safety is by the application of specialised procedures.'

In order to allow **HV** metal enclosed switchgear shutters to be opened or closed by hand without **Isolation** this specialised procedure shall be applied.

SP 5.1 Authorisation

- (i) All staff engaged on opening or closing **HV** metal enclosed switchgear shutters shall have received training and shall possess written authorisation for appropriate switchgear **HV** operations from the **Company**.
- (ii) Only **Persons** authorised for appropriate switchgear **HV** operations shall open or close **HV** metal enclosed switchgear shutters.

SP 5.2 General Safety Precautions

- (i) **HV** operations shall not commence until the **Authorised Person** has advised the appropriate **Control Person** of the **HV** operations to be carried out, and authorisation to proceed has been given by the **Control Person**.

The **Authorised Person** shall report to the **Control Person** as soon as practicable after completion of the **HV** operations.

If the circuit on which work or testing is being carried out becomes de-energised due to the operation of protective equipment, the **Control Person** shall not sanction the circuit to be re-energised without reference to the **Authorised Person** completing the **HV** operations.

- (ii) Opening and closing of **HV** metal enclosed switchgear shutters need not be instructed or confirmed by the **Control Person** as a separate operation except when the operation is to establish **Safety from the System**.
- (iii) Prior to opening or closing **HV** metal enclosed switchgear shutters the **Authorised Person** shall ensure that no part of his body (including hair) or loose items from clothing enters the **HV** metal enclosed switchgear spouts to be opened or closed.
- (iv) No part of the **Authorised Person's** body, unapproved tools or equipment is permitted to enter the **HV** metal enclosed switchgear spouts without the issue of a **Safety Document** and in accordance with an **Approved** procedure.

RESUSCITATION PROCEDURE



Resuscitation Council (UK)



Adult Basic Life Support

