



ERRONEOUS OPERATIONS - INVESTIGATION, REPORTING AND SUSPENSION OF OPERATIONAL AUTHORISATION

OPERATIONAL SAFETY MANUAL – SECTION 3.3

PR-NET-OSM-010	Erroneous Operations - Investigation, Reporting and Suspension of Operational Authorisation Operational Safety Manual – Section 3.3		Applies to	
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1 Introduction

- 1.1 This **Approved** Procedure sets the process to be followed to investigate any erroneous operation on **Plant, Apparatus or Conductors** forming part of the **System** owned and operated by Scottish and Southern Electricity Networks Distribution (**SSEN-D**), in accordance with the **SSEN-D Operational Safety Rules (OSR)**. It includes operations carried out at **SSEN-D** embedded generation sites.
- 1.2 It is subordinate to the requirements of the SSE Incident Reporting Management and Investigation Standard (MS-SHE-010) and ensures compliance with **SSEN-D OSR** Section 1.8.
- 1.3 An effective investigation requires a methodical, structured approach to information gathering, collation and analysis. The findings of the investigation will form the basis of an action plan to prevent a reoccurrence of the incident and reduce the risk to operators and equipment. Actions arising from an incident investigation can range from simple labelling changes to significant changes in operational training or operating procedures, so it is vital to have obtained all the relevant information.
- 1.4 Ensuring that incidents are reported and investigated rigorously and consistently is key to successful outcomes. Persons required to complete an erroneous operation investigation **Shall** be nominated by a senior manager and **Shall** have sufficient relevant technical knowledge, experience and competence. To ensure a consistent approach, a member of the Networks Operational Safety Team **Shall** be involved in the investigation, assessment, and subsequent conclusions.
- 1.5 Although this **Approved** procedure deals with incidents on **SSEN-D** assets, the format and principles may be used to deal with erroneous operations by **SSEN-D** staff when operating on 3rd Party Networks.

2 References

The documents detailed in Table 2.1 - Scottish and Southern Electricity Networks Documents, and Table 2.2 - SHE Documents, should be used in conjunction with this document.

Table 2.1 - Scottish and Southern Electricity Networks Documents

Reference	Title
FO-NET-OSM-004	Erroneous Operation Investigation Report
PR-NET-OSM-006	Distribution Operational Safety Rules 2022 – Operational Safety Manual – Section 1.1
PR-NET-OSM-028	Switching Terminology and Approved Abbreviations - Operational Safety Manual - Section 4.4

Table 2.2 - SHE Documents

Reference	Title
MS-SHE-010	Incident Reporting Management and Investigation Standard

3 Definition of an Erroneous Operation

- 3.1 For the purposes of this document, an erroneous operation (EOP) is an error, action, or operation on the **SSEN-D** network that was not planned or intended, which may have given rise to **Danger** or damage, and which may have involved non-compliance with the **SSEN-D**

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Operational Safety Rules and **Approved** procedures. It does not include 3rd party damages, but it does include damage to **SSEN-D Apparatus** caused by our own works.

3.2 Examples include:

- **Switching** and Control errors, including testing / commissioning errors
- Non-compliance with the **OSR** and/or **Approved** procedures
- Incorrect operation of **Apparatus** and equipment
- Failure to maintain safety distances from **Live High Voltage (HV) Conductors**
- Incorrect jointing work on a cable or overhead line
- Phasing errors
- Other incorrect actions that have the potential to cause any of the above such as schedule errors in approved schedules or incorrect load calculations etc. where they could result in the **System** being affected

4 Incident Classification

- 4.1 Erroneous operations will be categorised as per the table below and in alignment with the reporting structure held in the SSE Safety, Environmental and Awareness Reporting (SEARs) system.
- 4.2 The erroneous operations are identified within the SEARs system by having the “Networks - Operational Incident” tag within the “Please add any other tags you feel would fit this incident”. This can be added manually but should be automatically identified from wording within in the “Tell us what Happened” field.
- 4.3 Erroneous operation incidents **shall** be classified depending on their actual or potential severity and in accordance with the table below. Class 1 or Class 2 incidents shall be logged in the SEAR system as an Incident, a Class 3 operational errors **shall** be logged as a Hazard.

Table 4.1 - Incident Classification

Category	Definition	Example(s)
Class One /Incident	An incident causing or having the potential to cause injury.	Failure to follow the OSR and Approved Procedures for safety precautions, e.g., Isolation, Earthing or Safety Documentation . Failure to complete supply point testing and leaving a customer with an unsafe supply. Operating equipment incorrectly (e.g., failure to isolate switchgear correctly or failure to apply earths correctly or in positions stated in Switching Schedules or agreed with the system controller). Working on a Live HV cable Failure to maintain safety distances from Live HV Apparatus .
Class Two /Incident	An Incident resulting in unplanned loss of supply to customers, unplanned energisation or de-energisation, unplanned loading or de-loading of equipment or potential equipment damage.	Switching , control or testing errors causing operation of the wrong switchgear or equipment (e.g., opening / closing the incorrect switch).

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Category	Definition	Example(s)
Class Three /Hazard	Other operational errors with no risk to persons or equipment and no loss of supplies.	Phasing errors, incorrect application of Safety isolation, Approved Switching Schedules containing errors, or other action with the potential of a negative impact on safety or the System .

5 Immediate Response to an Erroneous Operation

Following any erroneous operation which occurs in real-time the following procedure will apply:

- 5.1 The operative **Shall** escalate the incident in accordance with the **SSEN-D** 30 Minute Reporting process. During normal working hours this will usually be via their Line Manager, out of hours this will be via the Stand-by Team Manager or Network Management Centre (NMC).
- 5.2 In the case of **HV** erroneous operations the first escalation **Shall** be via the relevant NMC or Control Room:
 - Where there is **Danger**, a risk to **System** security, or significant loss of supplies, the NMC (**HV**), Local Supply Restoration, Stand-by Team Manager or Escalations Manager (**LV**) will check with the operator to determine whether they are able and confident to carry out a minimum number of operations to ensure safety and restore supplies where reasonably practicable. If the operator agrees, then they may complete **Switching** operations to recover the situation. If the operator is not able or willing to continue then the NMC, Local Supply Restoration Manager, Stand-by Team Manager or Escalations Manager must seek assistance from other staff
 - Once any essential **Switching** has been completed then, subject to the provisions of section 6 of this **Approved** procedure, a suitably authorised person will advise the operator that as a safety precaution their authorisation is suspended until further notice
- 5.3 Once informed of an erroneous operation, via the 30-minute process, the Operational Safety Manager (Distribution) will appoint a member of the Networks Operational Safety Team to provide support for any subsequent investigation.

6 Suspension of Authorisation

- 6.1 Suspension of authorisation will normally follow a Class 1 or Class 2 incident immediately after any minimal **Switching** required to maintain safety, restore supplies and / or secure the network.
- 6.2 Immediate suspension of authorisation is not normally appropriate for Class 3 operational errors but may be used where the frequency of similar errors indicates a training or competence issue.
- 6.3 Suspension of authorisation is not a judgement or punishment but intended to minimise the risk of any further error when an individual's concentration may be affected. This is especially important for a single operator under adverse circumstances.
- 6.4 In some circumstances the immediate suspension of full authorisation may be waived subject to agreement between the **Designated Engineer** and the responsible Head of Region, Head of Business Unit.
- 6.5 Circumstances where the waiver may be applied include:

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- Where the surrounding circumstances are exceptional - e.g., a significant event requiring multiple operations or where no other operator is available. In this instance a reduced level of authorisation may be appropriate
- Where it is confirmed, the error has occurred as a result of a situation created by other factors and not caused by the individual involved, e.g., an error on an existing protection diagram

6.6 Although most erroneous operations occur in real-time, occasionally errors are discovered after the event as a consequence of other circumstances. In this case the decision on investigation and/or suspension of authorisation will be made by the Head of Region, Head of Business Unit and the Operational Safety Manager (Distribution). If agreement is not achieved, then a “fail-safe” position **Shall** be adopted, and the individuals’ authorisations **Shall** be suspended pending investigation.

6.7 Authorisations may also be suspended by any **Senior Authorised Person (SAP)** or Authorisation Officer (AO) where they believe that an operator demonstrates insufficient knowledge, disregard of procedures or where they believe that a human factors issue may sufficiently affect the concentration of an operator to the extent that they pose a risk to themselves, others or the Network. In such circumstances the **SAP** or AO **Shall** discuss their concerns with the individual’s Line Manager and the Operational Safety Manager (Distribution) as soon as reasonably practicable.

6.8 Suspension of an individual’s authorisation **Shall** be confirmed in writing by the Operational Safety Manager (Distribution) on behalf of the **Designated Engineer**, by letter.

7 Reinstatement of Authorisation

7.1 In the case of a Class One incident the operator’s authorisation will normally remain suspended until the incident has been investigated and the actions agreed between the Head of Region, Head of Business Unit and the Operational Safety Manager (Distribution).

7.2 In the case of a Class Two incident, where the operator’s authorisation has been suspended, then the Networks Operational Safety Team may agree to reinstate the authorisation once an initial report has been received and the nature of the incident is fully understood.

7.3 Checks should be made before any authorisation is reinstated to establish if there are any human factors which may preclude re-authorisation or if an operator has a recent history of operational errors.

7.4 Reinstatement of all or some Operational authorisations, as appropriate **Shall** be confirmed by the Operational Safety Manager (Distribution) by letter to the individual via their Line Manager.

8 Incident Reporting

8.1 Any erroneous operation **Shall** be initially reported in accordance with the **SSEN-D** 30-minute reporting process and an associated SEAR will automatically be raised. Once made aware the Operational Safety Team will create a unique reference number for the incident within the EOP Database. This will ensure that the report, actions, and any other relevant information may be collated effectively.

8.2 Once an erroneous operation has been escalated to the NMC, Local Supply Restoration Manager, Stand-by Team Manager, the person receiving the escalation **Shall** be responsible for ensuring that the incident is reported to the Incident Reporting Line (30-

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minute report line). The operative's Line Manager **Shall** be responsible for ensuring that the SEAR and any associated actions are updated and closed to ensure a correct record of the incident.

8.3 In accordance with the relevant SSE and **SSEN-D** procedures, the following timescales **Shall** be applied:

- Within 30 minutes a report **Shall** be made to the Incident Reporting Line (30-minute report line), a SEAR will automatically be created on completion of the 30-minute incident report, this will be raised having the "Networks – Operational Incident" tag.
- Within a maximum of 20 working days, an incident report **Shall** be completed and uploaded to the relevant secure folder managed by the Networks Operational Safety Team. Brief details of the incident and any agreed actions from the incident investigation **Shall** be added to the SEAR by the operative's Line Manager allowing it to be closed.
- Any SEAR raised to record an erroneous operation **Shall** contain sufficient information for the viewer to determine:
 - What Networks License area and Region the incident occurred in (i.e., SEPD or SHEPD)
 - If the incident occurred in the field or in the Network Management Centre (i.e., Control Room)
 - If the **system** voltage was **High** or **Low Voltage**
 - If the incident was as a result of pre-existing conditions that were unforeseen by the operator
 - If the waiver referred to in Section 6 of this **Approved** procedure should be applied

8.4 The Networks Operational Safety Team will provide regular bulletins to the wider business containing the key learning points from incidents occurring within the period.

9 Investigation of an Erroneous Operation

9.1 All erroneous operations, including those that have been subject to the waiver detailed in Section 6 of this document, **Shall** be investigated by the relevant Region, Business Unit with support from the Networks Operational Safety Team. Once informed of an erroneous operation, via the 30-minute process, the Operational Safety Manager (Distribution) will appoint a member of the Operational Safety Team to provide support for the investigation.

9.2 The investigation of an erroneous operation **Shall** be the responsibility of the relevant Head of Region, Head of Business Unit and the investigation **Shall** be reported using the Erroneous Operation Investigation Report Form (FO-NET-OSM-004).

9.3 Actions arising from the investigation **Shall** be agreed between the Head of Region, Head of Business Unit and the Operational Safety Manager (Distribution) and implemented without undue delay. In the case where agreement cannot be reached then the matter **Shall** be referred to the **Designated Engineer**.

9.4 Investigations into an erroneous operation may highlight that an incident was attributable to an error or a violation. In situations where a violation has been identified, the erroneous operation report **Shall** be completed, and a copy made available to the Head of Region, Head of Business Unit and the Human Resources (HR) Team. Any reinstatement of operational authorisations **Shall** be agreed between the Head of Region, Head of Business Unit, the Operational Safety Manager (Distribution) and the HR Team. Copies of the

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erroneous operation report may be issued to the subject of the investigation on the written consent of the HR Team.

10 Incidents During Assessment

- 10.1 Where an erroneous operation occurs during a training or authorisation assessment on a training network in a purposely designed training centre, the candidate involved will be deemed to have failed that assessment. In the case of a failed assessment, the candidate **Shall not** be issued or re-issued with the relevant authorisation until the candidate has received further training and been successfully assessed for the authorisation.
- 10.2 The failure **Shall** be reported and managed in accordance with current Training and Development Department policies.

11 Management Reporting

- 11.1 The Operational Safety Manager (Distribution) **Shall** ensure that regular Management Reports are maintained confirming the number, root causes and any other pertinent details relating to erroneous operations. This information **Shall** be made available to the Networks Safety Team, Operational Standard Steering Group, Heads of Regions, and any other persons as required by the **Designated Engineer**.
- 11.2 A regular erroneous operations bulletin, containing shared learning to minimise reoccurrence, **Shall** be developed and issued by the Operational Safety Team.

12 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	New document	PR-PS-341	1.00	A Roper
02	Transfer to new template and updated to bring into line with OSM standard documents.	PR-NET-OSM-010 (Rev1.00)	2.00	Richard Gough
03	Text amendments following group audit actions	PR-NET-OSM-010 (Rev2.00)	2.01	Richard Gough
04				

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Appendix A Flow Chart for Management Reporting of Erroneous Operations

