

Electricity Specification 400A4

Issue 2 November 2023

Auditing of HV Live Line Working



Amendment Summary

| ISSUE NO. DATE | DESCRIPTION |
|--|---|
| <p>Issue 2 November 2023</p> | <p>Amendment to auditing experience in section 3.2 and Section 1 – Preliminaries of the audit form. Further detail added for emergency planning in appendix A2 and section for risk assessment considerations. Condensed Part 2 & 3 of the audit form. Changed Section 5, of the audit form, to conclusions and recommendation only and moved other items to risk assessment considerations.</p> <p>Prepared by: D M Talbot</p> <p>Approved by: Policy Approval Panel and signed on its behalf by Paul Turner, PAP Chairperson.</p> |

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1 Scope

This specification covers the requirements for auditing of HV live line working on the electricity distribution network (Network) owned by Electricity North West Limited (Electricity North West), as Distribution Licensee. HV live line working comprises the Live Line Techniques and Instructions covered in CP423.

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2 Definitions

Definitions are as CP423.

3 Technical Requirements

3.1 General

Every live line team working on the overhead line Network shall be audited by an external auditor once per year (minimum). Each live line team shall be audited as a whole, and each team member shall be audited individually. The audit shall include observing and making relevant notes on:

- (a) Site survey: the attitude of the team whilst getting to site and liaising with the landowner, etc.
- (b) Setting up the Insulated Aerial Device (IAD) prior to working.
- (c) Inspection and cleaning of Personal Protective Equipment (PPE), rubber goods and the IAD.
- (d) Performance of the three-man team (i.e. two in the bucket and the observer/team leader on the ground).
- (e) Post-work storage of tools and equipment.
- (f) Documentation.

Electricity North West's Live Line Procedures are included in CP423. The internal audit procedure, which has been extracted (and edited accordingly) from CP423 Live LL Technique 024, is included for reference in [Appendix A](#).

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Because of the nature of HV live line work, it is essential that skills are practised regularly in order to maintain the required level of competence. Therefore, the HV live line jobs tasks selected shall change from audit to audit.

A report covering the above items shall be delivered in pdf format no later than four weeks after the audit.

3.2 Auditors

The auditors shall have auditing experience of HV live line working and relevant experience of live line working using similar techniques to those in CP423.

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4 Documents Referenced

| DOCUMENTS REFERENCED | |
|----------------------|--|
| CP423 | Overhead Line – Linesman's Manual – Live Line Working. |
| CP430 Part 1 | Overhead Line – Linesman's Manual - Wood Pole. |

5 Keywords

Audit; Live Line

Appendix A – Safety Audit Procedure (CP423 LL Technique 024)

A1 General

Periodic Safety Audits are essential for ensuring a managed system of work.

External Safety Audits shall be carried out on all Live Line teams at 12 month intervals. A full report shall be provided by the external Auditors detailing any observations, breaches of the procedures or safety rules that the Auditor finds.

Three internal audits on each live line team shall be carried out within a year at approximately 3 month intervals. The audit sheets contained in this module shall be completed and returned to the Live Line Manager immediately on completion of the audit. The team carrying out the audit shall report any observations, breaches of these procedures or safety rules.

The audits are carried out to ensure that:

- (a) Work procedures are being adhered to.
- (b) That only approved tools and equipment are being used.
- (c) That those tools and equipment are appropriate and adequate for the task.
- (d) Whether the sequence of undertaking the task requires modification.
- (e) That there is not a conflict with other procedures or safety rules.
- (f) Whether there is a requirement for additional training.

A2 Specific Rubber Glove Safety Audit Parameters

The following items shall be addressed during a Safety Audit:

- (a) IAD
 - (i) Set up - warm up; stability checks; inspection, chassis earthed/barricaded or other precautions.
 - (ii) Operation - smooth, deliberate, slow.
 - (iii) L.O.A. - clearances maintained.
 - (iv) Material handling - capacity/stability.
 - (v) Competence - understanding of limitations and safe working, use of safety lanyard/fall arrest.
- (b) PPE/Tools/Equipment
 - (i) Correct storage.
 - (ii) Condition/inspection.

- (iii) "In Test".
- (iv) Class/capacity.
- (v) Competence - understanding of limitations and use of PPE, tools and equipment safe working,
- (c) Job Planning
 - (i) Hazards identified (controlled/eliminated).
 - (ii) Site Risk Assessment and Job Planning (SRAJP) Meeting (coherent/sequential).
 - (iii) Any contingency plans for site emergencies.
 - (iv) Deviations discussed and recorded.
- (d) Task
 - (i) Adherence to procedures.
 - (ii) Methodical and sequentially applied steps.
 - (iii) Understanding/application of principles (shrouding/LOA).
 - (iv) Effective communication.
- (e) Performance
 - (i) Efficient execution of work.
 - (ii) Capabilities/limitations.

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A3 General Safety Audit Parameters

In addition to those elements which are specific to "rubber glove" working, an on site safety audit shall also identify inadequacies of a general nature as follows:

- (a) Personal
 - (i) Do the employees have safety rule books and authorisation cards in their possession?
 - (ii) Is there a current copy of the formal documented procedures/modules available?
 - (iii) Are employee's training and authorisations valid:
 - First aid/resuscitation?
 - Live working?
- (b) Site Conditions
 - (i) Satisfactory means of access to site and point of work.

- (ii) Vehicles parked safely.
- (iii) Signs, warning lights, barriers in position.
- (iv) Materials stored properly and tidily.
- (v) Excavations tidy and safe.
- (vi) Rubbish removal arrangements.
- (c) Other PPE (as applicable)
 - (i) Chainsaw protective clothing available/worn.
 - (ii) Ear defenders worn.
 - (iii) Correct clothing worn.
 - (iv) Retro-reflective clothing worn.
- (d) Gas cylinders & equipment
 - (i) Cylinders stored and ventilated correctly.
 - (ii) Pipes and connections in good condition.
 - (iii) Gas tools clean and in good condition.

A4 System Management Safety Audit

- (a) Vehicle & IAD
 - (i) Suitability.
 - (ii) Optional extras.
- (b) Tools/Equipment/PPE
 - (i) Compliance with Technical Standards.
 - (ii) Options/alternatives.
 - (iii) Recommendations.
- (c) Procedures
 - (i) Clarity/coherence.
 - (ii) UK Standard.
 - (iii) Compliance with accepted technical standards.
 - (iv) Safety.

- (v) Compliance with Legislation.
- (vi) Conflicts/omissions.
- (vii) Need for additional procedures.

Live Line Safety Audit Sheet

LOCATION: _____ **REF:** _____

AUDITED BY: _____ **DATE:** _____

TEAM MEMBERS

| NAME | AUTHORISATION VALID | DEDICATED OBSERVER |
|------|---------------------|--------------------|
| | | |
| | | |
| | | |
| | | |

JOB DESCRIPTION: _____

Section 1 – Preliminaries.

SWITCHING PROGRAMME NUMBER: _____ ADHERED TO: Y/N

CIRCUIT(S) SET TO LIVE LINE WORKING? Y/N _____

CONTROL NOTIFIED? Y/N TIME: _____

ANY CONTINGENCY PLANS FOR SITE EMERGENCIES Y/N

WEATHER CONDITIONS SUITABLE? Y/N _____

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CONSIDERATIONS FOR RISK ASSESSMENT

COMPLIANCE WITH NRSWA, MEASURES TAKEN TO PROTECT PUBLIC, SITE TIDY,
 NATURAL HAZARDS IDENTIFIED, ADEQUATE ILLUMINATION, FIRST AID KIT AVAILABLE,
 CORRECT FIRE EXTINGUISHER AVAILABLE, FLAMMABLE LIQUIDS STORED CORRECTLY,
 BARRIER CREAM AND SKIN CLEANSER.

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Section 2 – Insulated Aerial Device

Part 1

| DESCRIPTION | Y/N | COMMENTS |
|---|-----|----------|
| Covers in place on arrival/departure | | |
| Insulated components – clean, good condition and in test date | | |

Part 2

| DESCRIPTION | Y/N | COMMENTS |
|--|-----|----------|
| High Voltage Live Line Working - Insulated Aerial Device Check Sheet been completed and signed (LL Technique 018 Appendix A) | | |
| Chassis Earthed and/or barricaded | | |
| IAD Set up correctly & stable (chocks where required). | | |

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Section 3 – Equipment

| ITEM | INSPECTED (✓/✗) | CONDITION | TEST DATE | COMMENTS |
|--|--------------------|-----------|-----------|----------|
| PERSONAL PROTECTIVE EQUIPMENT. | | | | |
| Rubber gloves | | | | |
| Protector gloves | | | | |
| Rubber sleeves | | | | |
| Full harness worn | | | | |
| Safety lanyard used and anchored | | | | |
| Unused equipment correctly stored | | | | |
| SHROUDING. | | | | |
| Line hose | | | | |
| Blankets | | | | |
| Hoods | | | | |
| Rigid shrouds | | | | |
| Other covers | | | | |
| Unused equipment correctly stored | | | | |
| TOOLS AND EQUIPMENT | | | | |
| FRP rods | | | | |
| Insulating by pass jumpers | | | | |
| Strap hoists | | | | |
| Associated hot stick tools & accessories | | | | |

| | | | | |
|-----------------------------------|--|--|--|--|
| Unused equipment correctly stored | | | | |
|-----------------------------------|--|--|--|--|

| ITEM | INSPECTED (✓/✗) | CONDITION | TEST DATE | COMMENTS |
|---|--------------------|-----------|--------------|----------|
| Are all approved tools and equipment in clean and good condition. | | | | |
| Hydraulic tools & couplings not leaking | | | | |
| Unused equipment correctly stored | | | | |
| IPA correctly stored | | | | |
| Silicone cloth available | | | | |
| Tarpaulin/tool stand available/in use | | | | |

Section 4 – Procedures

| DESCRIPTION | (✓/✗) | COMMENTS |
|---|-------|----------|
| Dedicated observer present and vigilant? | | |
| Effective communication system in operation? | | |
| SRAJP Meeting held with all crew and sheet completed? | | |
| Major hazards identified? | | |
| Job sequence follows job plan on SRAJP Meeting sheet? | | |
| Deviations from original plan identified and recorded? | | |
| Second points of contact shrouded, relocated or removed? | | |
| Limits of approach maintained? | | |
| Appropriate tools being used? | | |
| Tools & equipment being used correctly? | | |
| Tools & equipment raised/lowered correctly? | | |
| IAD operating within designed parameters (material handling)? | | |

Section 5 – Conclusion/Recommendations

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CONCLUSIONS.

RECOMMENDATIONS.

SIGNED _____

DATED _____

NAME _____