

Task Risk Control Sheet

Working on high voltage equipment

RCS No: NR/L3/MTC/RCS0216/DP01
Issue: 2

Key Risks !

- Electric shock
- Burns

Personnel Involved

E&P	✓
S&T	
Track	
Off Track	
Property	

Tools / Equipment Test equipment

Plant None

Key Risks	Controls	Implemented By
SECTION A - WORKING ON OR NEAR HIGH VOLTAGE EQUIPMENT, ENTERING/WORKING IN SUBSTATIONS		
Contact with electricity	• Competent staff shall be trained to: Level A / nominated persons for the preparation and issue of safety documents. Level B / authorised persons for switching and for the receipt of safety documents and control of working parties. Level C / competent persons to access substations and perform routine work and avoid danger. • Work on distribution HV equipment shall be authorised using permit to work or sanction for test in accordance with NR/WI/ELP/21067 • Test equipment with an approved device prior to commencing work so that the equipment is de-energised. • The equipment shall be isolated prior to work. • Points of isolation shall be locked and cautioned, taking into account alternative sources of supply • Adjacent live equipment shall have danger notices attached during the work. • All staff shall be Emergency First Aid trained	Line Manager Authorised & Competent Person
Interruption of supplies to others	• Tasks on equipment within buildings containing distribution HV equipment shall be restricted to avoid unplanned outages of supplies to others	Line Manager
Contact with PCBs	• Establish PCB population • Brief staff on dangers and disposal • Dispose of PCB material appropriately • Wash hands prior to Eating/Smoking	Line Manager Team Leader All Staff

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Key Risks	Controls	Implemented By
SECTION B- ISOLATING AND EARTHING HIGH VOLTAGE SUBSTATIONS		
Application to live equipment	- Train / authorise staff for isolation and earthing in accordance with the instructions appropriate for the site where earths are to be applied - Follow any Isolation and Earthing Instruction - Uniquely identify connections outside buildings - Test to confirm circuit is not live prior to application of earth	Line Manager Nominated Person
Incorrect application / removal sequence	- Brief to remind staff of dangers - Monitor application / removal sequence - Use interlocked earth equipment where fitted	Nominated Person
Use of damaged earths	Inventory and inspection regimes shall be in place for all portable earths	Nominated Person
Damaged poles	- Check state of pole prior to use - Check calibration in date - Use gloves to avoid injury from damaged poles	All Staff
Key Risks	Controls	Implemented By
SECTION C – WORKING ON HIGH VOLTAGE CIRCUIT BREAKERS/TRANSFORMERS and HARMONIC DAMPERS		
Explosion of RMUs Long and Crawford Types T3GF3, T4GF4 and GF3	- Following operation of the fuse switch on fault, 5 yearly maintenance of the affected switchgear shall be planned and implemented - Following operation of the fuse switch on fault, access to the substation with the HV switchgear live is prohibited. - If any sign of burning or arcing are found, the switch shall be maintained including oil change	Line Manager All Staff
Explosion	- Check that there are no limitations on the operation of the type of switchgear to be worked on. - Check that manufacturer's instructions are available on site - Check that any gas insulation is at the correct pressure as per the manufacturer's instructions using a calibrated gauge and gas bottle.	Line Manager Line Manager / All Staff
Entrapment	- Safe communication shall be as stipulated in module G1 Section 11 - Isolate remote operation and discharge spring mechanisms before work. - Check that withdrawal trolleys / hoists are fit for purpose before use	All Staff
Asbestos	- Uniquely identify all circuit breakers - Work activities shall be restricted to avoid release of asbestos fibres. Refer to NR/WI/ELP/00110 - Dispose of asbestos material correctly	Line Manager Line Manager / All Staff
Handling oil	See Task Risk Control Sheet NR/L3/MTC/RCS0216/DP05 - Mineral oil or other fluids	All Staff
Working at height	See Task Risk Control Sheet NR/L3/MTC/RCS0216/GH04 – Working at Height.	Team leader