

Ref:	NR/L3/OCS/043/3.10
Issue:	1
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National Control Instructions

and

Approved Code of Practice

Section 3.10

Electrical Isolations AC (OLE)

This section contains:

		Issue	Dated
3.10.1	Electrical Isolations		
3.10.2	Christmas Shutdown period		
3.10.3	Blocking the Line to Electric Trains (AC)		
3.10.4	Emergency Isolation		
3.10.5	ADD Activation and other (OLE) damage or defects (AC)		
3.10.6	ADD Isolation		
3.10.7	Traction Units driven off OLE		
3.10.8	Panchex Monitoring System		
3.10.9	Excessive flashing of Electrical Equipment		
3.10.10	Traction Units stopped in Neutral Section		

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3.10 Electrical Isolations AC (OLE)

National Control Instruction

Controllers shall:

- Respond to isolations and incidents involving the OHL as they are reported
- Ensure a timely response by maintenance teams
- Determine the full details and effects of the failure and
- Maintain the safety of the operational railway.

Approved Code of Practice

References

Rule Book: Sections AC1, AC2, AC3

3.10.1 Electrical Isolations

- 3.10.1.1 The responsibility for dealing with electrical isolations rests with the relevant Electrical Control Room staff, in liaison with signalling staff in accordance with the instructions working On or about 25kv AC Electrified Lines RT/ES/2/5/29987 and DC electrified lines instructions. The Electrical Control Room Operators are responsible for all isolations, but will inform the Route Control Manager of the circumstances.
- 3.10.1.2 When emergency electrical isolations are required, the ECR staff, Signalling Staff, and Route Control must liaise with each other. Electrical Isolations will be taken in accordance with the Rule Book GE/RT8000 Module AC1 Part B.
- 3.10.1.3 Electrical Isolations are planned in accordance with Module 6 of RT/E/S/29987 and published in advance in the Weekly Operating Notice. It is the responsibility of the Signalling Staff and Electrical Control Staff to inform the Route Control office of the times when the supply is both isolated and given back.
- 3.10.1.4 Where electrical isolations are required at short notice the Route Control inform the Electrical Control Operator who will take the necessary electrical isolation. The Route Control must inform the signalling staff of the circumstances.
- 3.10.1.5 Should flooding be reported in any electrified area then the signalling staff must immediately inform the Electrical Control Room and keep them advised of developments.

3.10.2 Christmas shut down period

Ref:	NR/L3/OCS/043/3.10
Issue:	1
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Compliance date:	01 June 2008

- 3.10.2.1 If infrastructure maintenance staff are required to perform emergency work on the OLE equipment which requires an isolation during the Christmas shut-down period, the Electrical Control Room Operator will effect the isolation after consultation with the relevant Route Control.
- 3.10.2.2 Signallers and Signalboxes reopening will contact both the relevant Electrical Control Room and the Route Control Manager immediately prior to reopening after the shut-down period, to ascertain whether there is an isolation of the OLE or third rail in force, so that the provisions of the Rule Book Section GE/RT8000, Module AC2, in particular as detailed in section 6.4. and DC Electrified Lines Working Instructions Section D3, in particular paragraphs 3.4.4 can immediately be carried out.
- 3.10.2.3 Control Duty Managers/Route Control Managers must also contact the relevant Electrical Control Rooms immediately when the offices reopen after the shutdown period to ascertain if there are any electrical isolations in force.

3.10.3 **Blocking the Line to Electric Trains (A/C)**

To ensure that any blockage to A/C electric trains is effected in a consistent and safe manner, with the correct Signallers (and/or persons in charge of sidings) being involved in the process.

3.10.3.1 **Pre-planned isolation**

- a) Pre-planned isolations are published in the Weekly Operating Notice. Details of the line(s) concerned, electrical sections/sub-sections that are to be blocked to electric trains are shown, along with the planned times of the blockage(s) making reference to the General Remarks column.
- b) At the appropriate time when it becomes necessary for the line(s) to be blocked to electric trains then the following process must be followed, in accordance with Rule Book Section GE/RT8000 module AC2 Section 6.

3.10.3.2 **Isolation Procedure**

- a) This process below only applies to Control staff who are authorised to receive information in connection with Electrical Isolations:
- b) The process for imposing a blockage to electric trains is as follows:
(See Appendix A of this procedure.)
 - i. The Electrical Control Operator completes part 1 of form AE, in conversation with the appropriate Controller (as detailed in the Rule Book AC2 Section 6) who completes part 1 of form AT. (Certain electrical isolations may require that more than one Controller completes an AT form.)
 - ii. The Controller checks that the details comply with the relevant entry in the Weekly Operating Notice, completes part 2 of the AT form. The Controller then communicates with each of the signallers (and/or

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persons in charge of sidings) concerned, who complete part 1 of their AS form.

- iii. When each signaller (and/or person in charge of a siding) is in a position to do so (i.e.; there are no electric trains either in, or to be run through, the section(s)/sub-section(s) to be blocked and the appropriate reminder appliances have been applied to the protecting signals). The Signaller (and/or the person in charge of a siding) completes part 2 of the AS form, while communicating with the Controller concerned, who records the details on part 3 of the AT form.
- iv. When confirmation has been received from all locations detailed in part 2 of the AT form, and the corresponding entry has been made in part 3 of that form in respect of each such location the Controller completes part 4 of the form AT. This final part of the process is carried out in conversation with the relevant Electrical Control Room Operator who completes part 2 of his form AE.

- c) The blockage to electric trains is now complete.

3.10.3.3 Cancelling a blockage to electric trains (See Appendix B of this procedure.)

- a) When the blockage is no longer required, and the section(s)/sub-section(s) concerned are again safe for the passage of electric trains the Electrical Control Room Operator will advise the relevant Controller who completes part 5 of form AT.
- b) The Controller then completes part 6 of the AT form, and communicates with each of the signallers (and/or persons in charge of sidings) concerned (as listed in part 2 of the same form). They then complete part 3 of their AS form.
- c) The blockage to electric trains is now cancelled.

3.10.4 Emergency Isolation

If it is necessary for the overhead line equipment to be isolated in an emergency, then the current may be switched off immediately. It will be necessary however, for the appropriate procedure above to be carried out as soon as is practicably possible after the emergency isolation has been effected. Controllers should take into account any trains that may become trapped in a tunnel or on a viaduct because of the removal of Traction Current. If necessary, Rapid Response staff may be sent to assist.