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Level 2

Management of reports for safety related events applicable to electrification and plant

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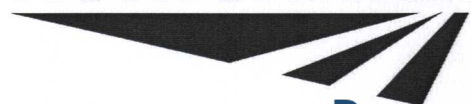
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Issue record

Issue	Date	Comments
E1	April 2006	New standard
2	June 2008	Revised for Phase 2A re-organisation

Compliance

This Network Rail standard is mandatory and shall be complied with by Network Rail and its contractors if applicable from 26 August 2008.

When this standard is implemented, it is permissible for all projects that have formally completed GRIP Stage 4 to continue to comply with the Issue of any relevant Network Rail Standards current when GRIP Stage 4 was reached and not to comply with requirements contained herein, unless the designated Standard Owner has stipulated otherwise in the accompanying Briefing Note.

Reference documentation

See Clause 3

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1 Purpose

This specification describes the reporting requirements for every safety related event involving electrification and plant assets or safety systems that 'fail unsafe'. An event may be characterised as a failure or incident or both and will be assigned a hazard index calculated from a combination of failure rating, incident rating, and location ratings, with an adjustment factor to be applied where fatalities or injuries have occurred.

Network Rail's Board have determined that all safety related incidents with a hazard index of 50 or more shall be reported to them.

2 Scope

This specification applies to the electrification and plant hazards which are listed in Appendix A whenever they feature singly or in combination with a safety related event.

3 Reference documentation

Major hazard report checklist - Network Rail's Board

Reducing risk protecting people - HSE

4 Definitions

Fail Unsafe

A failure of one or more risk controls that result in a residual risk greater than ALARP and which lies in the unacceptable region of HSE's tolerability of risk model.

Such failures may be divided into three broad classes:

- physical failures, which might occur to cable insulation, electrical protection switchgear, or the mechanical integrity of electrification or plant equipment, denoted as EPH1;
- system failures, that might occur with the use of permit-to-work forms such as overhead line Form C, d.c. third rail Conductor Rail Permit, or the failure to follow a Rule Book procedure, denoted as EPH2; and
- safe system of work failures, such as those associated with the isolation, testing and earthing of overhead line or third rail traction current contact systems, or the isolation of electrical distribution plant and equipment, denoted as EPH3.

The consequences of such failures will range from a catastrophic event such as an explosion, fire, death or serious injury at one extreme to the potential for these events to occur at the other.

ALARP

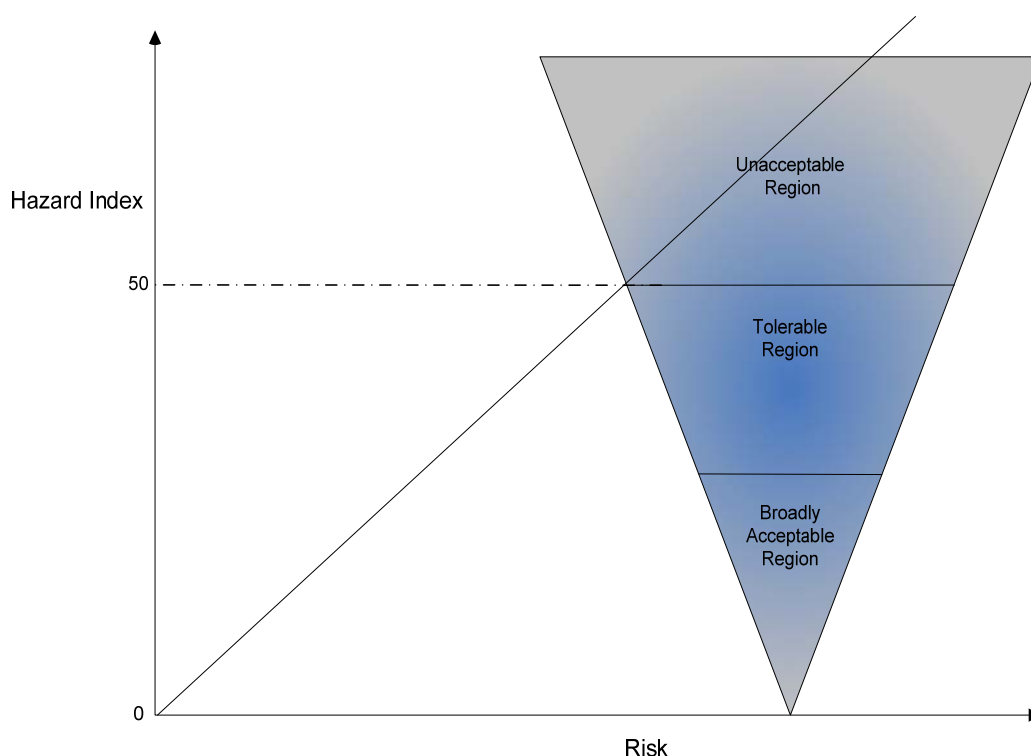
As low as reasonably practical.

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Tolerability of risk model

This comprises three regions that reflect risk: a 'broadly acceptable' region, a 'tolerable' region, and an 'unacceptable' region. The 'tolerable' region extends from a risk level of 1 in 1,000,000 at its upper level boundary with the 'broadly acceptable' region, to 1 in 10,000 for the public and 1 in 1,000 for the rail workforce at its boundary with the 'unacceptable' region.

Any activity, process or practice giving rise to risks falling in the 'unacceptable' region must be ruled out unless the activity or process can be modified to reduce the degree of risk so that it becomes tolerable. Any Hazard Index rating of 50 or greater is deemed to lie in the 'unacceptable region' and therefore requires urgent action to control the risk.



Hazard

The possibility of danger. The potential for harm to arise from an intrinsic property or disposition of something to cause detriment.

Risk

The chance that someone or something that is valued will be adversely affected in a stipulated way by the hazard.

Location Rating (L)

This factor is in the range 1 - 19 and has three component parts; one or more may be added together if relevant: (a) linespeed, (b) proximity to private property or land with public access and (c) isolation or testing irregularity. These are listed in Appendix B.