Reference material

Interface Agreement between Signals & Control Systems and Condition Monitoring Systems, C&CS

This legacy document is published as historical reference material. The content described might be of assistance to individuals and organisations performing work on Transport for NSW Rail Assets.

This document refers to organisational and positional roles and responsibilities in place prior to 1 July 2013 and may have been superseded by other documents.

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This document may not be current. Current standards are available for download from the Asset Standards Authority website at www.asa.transport.nsw.gov.au
Interface Agreement

between

Signals & Control Systems
and
Condition Monitoring Systems, C&CS

Version
Draft
Date of Issue
May 2010
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# TABLE OF CONTENTS

1 INTRODUCTION .................................................................................................................4
2 SECTION RESPONSIBILITIES ..........................................................................................4
3 INTERFACES ..........................................................................................................................4
   3.1 General .......................................................................................................................... 4
   3.2 Standards and Procedures ............................................................................................ 4
   3.3 Projects .......................................................................................................................... 4
   3.4 Operational .................................................................................................................... 4
4 SPECIFIC INTERFACES ........................................................................................................5
   4.1 Standards and Procedures ............................................................................................ 5
5 ELECTRIC GROUND FRAME ARRANGEMENT IN-SECTION SIDING .................Error! Bookmark not defined.
6 INSTRUCTIONS .................................................................................................................Error! Bookmark not defined.
1 INTRODUCTION

The interface document identifies the interfaces between Condition Monitoring Systems, Control & Communications Systems and Signals & Control Systems and the responsibility at those interfaces.

The purpose is to establish clear accountabilities and ensure safety issues are well controlled.

2 SECTION RESPONSIBILITIES

Condition Monitoring Systems is responsible for the design of condition monitoring systems such as hot box detection systems, weighbridges, wheel condition monitors, infrastructure monitoring systems, etc.

Signals & Control Systems is responsible for the design and standards for signalling systems.

Signals & Control Systems exists within the Chief Engineers’ Division of RailCorp and Condition Monitoring Systems exists in Communications & Control Systems (C&CS) Division under the Asset Operations Group (AOG).

Where a group is identified as ‘Major responsibility’ that group is the primary approval for the safety of that item.

3 INTERFACES

3.1 General

Interfaces between the section are considered only when an output or requirement from one section directly impacts on the designs of the other.

These interfaces can occur in three general areas, standards, projects (design) and operational.

3.2 Standards an Procedures

Once a standard is approved, its use may occur without reference back to the other section, providing the standard is applicable and complied with.

3.3 Projects

Individual projects may require direct liaison where the scope of the work may impact the other. The result should be a sign off of the arrangements by both groups.

3.4 Operational

Operational interfaces occur where train operating issues affecting condition monitoring systems of signals, has an impact on the other.
## 4 SPECIFIC INTERFACES

### 4.1 Standards and Procedures

<table>
<thead>
<tr>
<th>ITEM</th>
<th>CONDITION MONITORING SYSTEMS RESPONSIBILITIES</th>
<th>SIGNALS &amp; CONTROL SYSTEMS RESPONSIBILITIES</th>
</tr>
</thead>
</table>
| Rail-Rail/Rail-Earth Electrical connections to rail | Isolation 2.5kV  
No touch potential between rail & other conductive item, within reach (2.4m) | Double insulation between equipment and rail |
<p>| Track Circuit Interference | Use single type approved equipment | Type approval of wheel sensors and rail mounted gear |
| Surge Protection | Follow signals standards if near (20m). Signal locations SPG 712. Obtain Signal Design for rail connected surge protection | Design for rail connected surge protection |
| Location relative to Signal Equipment | Clear of existing cables and points equipment | Advice if signals to be moved |
| Power Supply | Seek Signal (or Elec) Design if using signal supply | Provide design when requested |
| EPR | Follow SPG 712 if within 20m of Signal locations | Provide design when requested |
| Rail Cross Section – Mountings | Seek Track approval for mountings | |
| Ballast Profile – clear of sensors | Advice to Track to ballast requirements at sensors | |
| Sleepers - Mounting - Spacing | Seek Track approval for sleeper mountings and spacing | |
| Track Condition | Advice Track of location where track condition is critical | |
| Cables near track - protection - attachment | Comply with SPG 706 &amp; SPG 709 | Provide standards |
| Rail Drilling | Comply with SPG 709 | |
| Sleeper Drilling | Comply with SPG 709 else seek approval from Track | |
| Strain Gauge Closure Rails | Seek approval by Track | |
| Spot welding to rails | Seek approval from Track | |
| Equipment Clearances | Design evidence that meets Track requirements | Seek Track approval |
| Gluing to rails | Define preparation process | |</p>
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</thead>
<tbody>
<tr>
<td>On track equipment</td>
<td>Process for install and removal</td>
<td></td>
</tr>
<tr>
<td>Signage</td>
<td>Obtain approval for signage that may be observed by drivers from Signals</td>
<td>Advice and approval on signage that is visible by driver</td>
</tr>
</tbody>
</table>