

# Cable Location

Issue date: 08/04/08

Review date: 20/02/11

<b>SWMS number:</b> SMS-06-SW-1024	<b>SWMS Name:</b> Cable Location			<b>SWMS Team:</b> Signal Review Team
<b>Custodian (Position):</b> Signal Services & External Resources Manager	<b>Assumptions:</b> Site specific risks are addressed and assessed in pre- work briefing			
<b>Approving Authority (Position):</b> Safety and Quality Manager Commercial / Renewals	<b>Equipment/Plant/Tools:</b> <ul style="list-style-type: none"><li>Cable Detecting Equipment. Cable Locator, Transmitter</li><li>Isolation tag. Earth Stakes</li><li>Hammers</li><li>Insulated Hand tools. LV Rescue kit. Equal potential Equipment.</li><li>Lead Chromate free Paint Products</li><li>Non-Conductive Wooden / Plastic Stake</li></ul>	<b>Records/Reporting:</b> <ul style="list-style-type: none"><li>Worksite Protection Plan</li><li>Pre-work Brief</li><li>Site Specific Management Plan</li><li>Hazardous Substance Register, MSDS</li><li>Services searches</li><li>field drawing the cable route</li></ul>	<b>Permits/licences required:</b> Nil	<b>Content reviewed by Technical expert (SME) and RailCorp safety professional</b> (position including Div/Group) Signal Services & External Resources Manager & SEQ Coordinator Asset Management Group Commercial / Renewals
<b>Applicable Standards, Codes of Practice and guidance:</b> <ul style="list-style-type: none"><li>OH&amp;S Act 2000</li><li>OH&amp;S Regulation 2001</li><li>Rail Safety Regulation 2003</li><li>RailCorp Network Rules &amp; Procedures</li><li>RailCorp Safety Management System.</li><li>MSDS for all chemicals and hazardous Substances used on site</li><li>Live LV working procedures.</li><li>EC14 – Guide to Electrical Workers' Safety Equipment</li></ul>				<b>Inspection requirements:</b> Nil

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Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed in accordance with (name associated documentation)
1	Supervisor undertakes site pre-work briefing and gives local induction.	Staff not Listening to Pre-Work Brief	B -	Identify all hazards, Staff to ensure they are properly Briefed as to risks involving Worksite.	D	Team Leader / Work Group Leader / All Staff	Pre-Work Briefing SMS-06-FM-0163
2	Supervisor verifies competence of personnel doing the task and currency of permits for work.	Expired Competency Cards & Permits, Unqualified type of Personnel for the Task.	B -	Visual Inspection of Personnel Competency Cards & Currency of Permits	D	Team Leader / Work Group Leader	Safety Training & Competence SMS-11-SR-0128
3	Review SWMS and confirm it is current.	Use of a SWMS that is out of date	C -	Ensure SWMS is current and up to date.	D	Team Leader / Work Group Leader	SWMS & SWI's SMS-06-PR-0023
4	Verify that plant and equipment for the task is fit-for-purpose.	Plant & Equipment kept in poor working condition	C +	Conduct a Daily Plant Checklist	D	All Staff	Plant SMS-06-GD-0225
5	Locate all service locations - water, gas, or electricity cables (supply or communication).	Trip, slip, fall injuries when moving around site.	B+	Inspect site prior to conducting service search to identify trip, slip, fall hazards – remove or isolate Hazard. If not possible, and the hazard is low then brief persons on site of hazard and control requirements.	C+		Refer to the appropriate service utility owners, work instructions and service search diagrams to confirm service locations. Services Search Checklist SMS-06-FM-0384
		Electrical contact due to Potential Difference / EPR.	A	Regard earth sheath as energised. LV insulating gloves must be worn prior to contact cable. Stand- by person to be present at all times. Worker performing the work and stand by person to be trained in CPR & live LV rescue procures.	D	Qualified and authorised in Locating procedures. Worker & stand by person to be trained in CPR & live LV rescue procures.	Pre work Briefing SMS-06-FM-0163 Work Around Elect. Equip. SMS-06-GD-0268 Work/Live LV Equipment SMS-06-EN-0590
6	Connect Transmitter	Electric Shock from Transmitter	C-	Ensure transmitter leads are connected before turning transmitter on	D	Qualified and authorised in Locating procedures	Work Around Elect. Equip. SMS-06-GD-0268

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		Installing earth stakes	A	When applying an earth at either the remote end, or the transmitter end keeping the earth away from sources that may generate voltages that rise above earth i.e. high voltage power poles rails, substations underground services etc.	D		Work Around Elect. Equip. SMS-06-GD-0268 Services Search Checklist SMS-06-FM-0384
7	Nominate all service locations using appropriate method. <ul style="list-style-type: none"> <li>High-visibility paint.</li> <li>Temporary ground peg.</li> </ul>	Exposure to Lead Chromate.	C+	Use only lead Chromate free paint products.	D		Hazardous Substances SMS-06-GD-0199
		Skin contact with marking paint.	C-	Avoid direct contact with skin. Use general-purpose gloves. Wash hands before eating / smoking.	D		Hazardous Substances SMS-06-GD-0199 PPE SMS-06-GD-0323
		Lung / eye exposure to organic paint and paint fumes.	B+	Apply spray paint in well-vented area and spray away from persons. If vapours accumulate then use respirator. Wear eye protection.	D		Respirator in-accordance with AS 1716, PPE SMS-06-GD-0323
		Struck by flying container parts due to contents being highly flammable	B+	Store securely and at below 50 C.	D		Hazardous Substances SMS-06-GD-0199
		Injury from contact with underground services - water, gas, or electricity cables (supply or communication).	A	Use non-conductive wooden / plastic stake. Stake not to be driven any deeper into the ground than as indicated on the cable locator.	D		Services Search Checklist SMS-06-FM-0384 Pre work Briefing SMS-06-FM-0163
		Hand injury – pinch / crush	B-	If hammering, use general-purpose gloves to reduce injury severity and to increase grip potential.	C-		PPE SMS-06-GD-0323
		Trip, slip, fall injuries when looking up.	B+	Stand in safe and stable place. Stand still when viewing OHW services.	C-		Workplace Risk Management SMS-06-PR-0104
<input type="checkbox"/>	Site specific hazards						

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**NOTE: Each work group or team member must sign off on the SWMS to acknowledge they have been briefed about or instructed in the SWMS**

Team member name (Please print)	Team Member signature	Instructor/ Briefer name	Date	Team member name (Please print)	Team Member signature	Instructor/ Briefer name	Date

RailCorp Level 2 Risk Matrix - Regional & Local (Workplace)			Likelihood/Frequency							Definition for Use - Regional & Local level (Workplace)
			Event Frequency	Less than once every 1000 years	Once every 100 to 1,000 years	Once every 10 to 100 years	Once every 1 to 10 years	More than once per year up to and including 10 times per year	More than 10 times per year	
			Historical (Likelihood)	Unheard of in the rail industry	Has occurred once or twice in the rail industry	Has occurred many times in the rail industry, but not in NSW	Has occurred once or twice in NSW	Has occurred frequently in NSW	Has occurred frequently at specific locations	
			Workplace Predictive (Likelihood)	Not expected to occur	May occur only in exceptional circumstances	Could occur at some time but not likely	You would expect it to occur at least once in the next 10 years performing similar activities	You would expect it to occur at least once this year performing similar activities	You would expect it to occur at least once this month performing similar activities	
Consequence				F1	F2	F3	F4	F5	F6	
			Incredible	Improbable	Remote	Occasional	Probable	Frequent		
>10 Fatalities	C6	Disastrous	B-	B+	A	A	A	A	A	<p>Used for workplace hazards and safety risks that do not consider the whole of the network. Indicatively this matrix is appropriate for use where the hazards under consideration are up to 10% of the total network exposure. This includes regional and local workplace risk assessments.</p> <p>As an example, the Level 2 scale would be used when examining the risk of slips, trips and falls on specific RailCorp platforms within a region or at a particular station, or the risk of fire within a depot.</p> <p>There are 3 options for descriptors which can be used to determine the frequency category. One set of descriptors is provided for frequency, one for historical likelihood, and one for predictive likelihood in the workplace. Choose the most appropriate.</p> <p>To score the risk, follow the steps:</p> <p>1. Identify the magnitude of the credible consequence if the risk were to occur. If applicable, risks should be considered in terms of the safety (this matrix), commercial and environmental impact (using other matrices).</p> <p>2. Identify the likelihood of this level of consequence occurring. (This is done after considering the effectiveness of the current controls in place)</p> <p>3. Score the risk using the combination of likelihood and consequence ranking.</p> <p>Note: Where there are a range of credible consequences which may lead to a different level or risks and/or where the controls may be different. It may be useful to score the risk more than once.</p>
2-10 Fatalities	C5	Catastrophic	C+	B-	B+	A	A	A	A	
1 Fatality (2-10 Major Injuries)	C4	Critical	C-	C+	B-	B+	A	A	A	
1 Major Injury	C3	Major	D	C-	C+	B-	B+	A	A	
1 or more Minor Injuries	C2	Minor	D	D	C-	C+	B-	B+	B+	
First aid treatment, or illness/injury not requiring treatment	C1	Negligible	D	D	D	C-	C+	B-	B-	