

Cable Jointing

Issue date:08/04/08

Review date: 20/02/11

SWMS number: SMS-06-SW-1025	SWMS Name: Cable Jointing			SWMS Team: Signal Review Team
Custodian (Position): Signal Services & External Resources Manager	Assumptions: Site specific risks are addressed and assessed in pre- work briefing			
Approving Authority (Position): Safety and Quality Manager Commercial / Renewals	Equipment/Plant/Tools: <ul style="list-style-type: none">Excavator / BackhoeAppropriate handtools,Cutting KnivesGas Bottle, Heating Torch, Flame Proof Shield (non-conductiveTrench Battering, ShoringSpill KitLadders, Ladder StepsElectrical Isolation Tags	Records/Reporting: <ul style="list-style-type: none">Worksite Protection PlanPre-work BriefSite Specific Management PlanServices searchesEnvironmental Protection Plan	Permits/licences required: <ul style="list-style-type: none">Excavator / Backhoe Operator CertificateExcavation PermitICTTC135AAuthorised Fibre Optic Cable Operator	Content reviewed by Technical expert (SME) and RailCorp safety professional (position including Div/Group) Signal Services & External Resources Manager & SEQ Coordinator Asset Management Group Commercial / Renewals
Applicable Standards, Codes of Practice and guidance: <ul style="list-style-type: none">OH&S Act 2000OH&S Regulation 2001Rail Safety Regulation 2003RailCorp Network Rules & ProceduresRailCorp Safety Management System.MSDS for all chemicals and hazardous Substances used on siteCable Jointing Specification 1062WorkCover Code of Practice Excavation 2000National Code of Practice for Manual Handling [NOHSC:2005 (1990)AS 1674.1 – Safety in welding processesAS 4839 portable oxy-fuel gas systemsAS 1716 Respiratory protective devices				
		MIMS or METRE Ref: Nil		Personal Protective Equipment required: <ul style="list-style-type: none">Safety BootsHigh Visibility VestsHardhatsProtective ClothingSafety Glasses And as specified below. <ul style="list-style-type: none">Gloves, Kevlar Cut Resistant GlovesType G1 or A Organic Vapour Respirator.SunscreenDuring all Site Works a FIRST AIDER MUST be Present

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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 other services	Injury due to contact with hazardous services	A	Refer to valid cable search for internal and external (DBYD). Inspect for any overhead wires / hazards.	D	All Staff	Excavation & Earthworks SMS-06-GD-0378
		Ultra Violet injuries		Use P.P.E i.e. Sunscreen, Hat, Sunglasses. take breaks	D		Workplace Risk Management SMS-06-PR-0104 PPE SMS-06-GD-0323
6	Excavate joint bay	Contact by machine	A	Establish eye contact with operator and have him/her stop the machine if you have to work inside the operating reach of the machine and wear hard hat. Secure work site to prevent unauthorised access.	D	Team Leader / Work Group Leader / All Staff / Plant Operator	Plant SMS-06-GD-0225
		Entrapment due to trench collapse	A	Shore or batter unstable trench. No persons allowed in unstable trench. Minimise plant movement around trench area.	C-	Team Leader / Work Group Leader	Excavation & Earthworks SMS-06-GD-0378
		Fuel Spillage	B+	Turn off plant being fuelled.	D	Plant Operator	Hazardous Substances SMS-06-GD-0199 Plant SMS-06-GD-0225
				Spill kit on site			
				Turn off mobile phone's			
				No smoking			

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7	Joint "Copper" cable			First aid kit with burns kit.			
		Knife cut	B+	Only cutting knives with a protective guard device as a minimum can be used.	C+	ICTTC135A All Staff	PPE SMS-06-GD-0323
				Use kevlar cut resistant gloves if required for extra cut protection. Where possible cut away from yourself			
		Eye injury	C-	Wear mandatory eye protection.	D	All Staff	PPE SMS-06-GD-0323
		Exploding gas bottle	A	Visually check the equipment	C	Cable Jointer	Hazardous Substances SMS-06-GD-0199 Site Incident Response Procedures SMS-15-PR-0245
				Audibly check the equipment after switching on the gas at the bottle			
				Hose to be of sufficient length to ensure that the gas bottle is not in the pit.			
				Ensure test date is current.			
				Flash back arresters are to be on both the torch and cylinder.			
				All cylinders are to be stored upright and secured.			
				No hand held gas cylinders to be used.			
		Burns	A	Full-length heavy drilled cotton trousers and shirts to be worn. Burns kit available in first aid kit.	C	All Staff	PPE SMS-06-GD-0323 First Aid SMS-06-PR-0039

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		Electrical contact/ flashover	A	A cable must be de-energised. Wear low voltage insulated gloves when attaching earth's to sheathed / removing sheath arrests. <i>Use of lock out / tag system to be reviewed.</i> When a flame / torch is used adjacent to an energised cable then consider a flame proof shield (non-conductive) can be placed over adjacent cables.	D	ICTTC135A Cable Jointer	PPE SMS-06-GD-0323 Work Around Elect. Equip. SMS-06-GD-0268
7	Joint "Copper" cable (Cont.....)	Back / muscle injury	A	Access cable pit via installed ladder steps or portable secure ladder. Joint the cables outside of pit where possible. Ensure the joint bay is roomy enough i.e., depth & width to promote an upright posture when seated. Use suitable seat. 'Rest' elbows on knees for relief, this should take the strain off the lower back. Don't do any heavy manual labour immediately after jointing. Stretch at regular intervals.	C+	Cable Jointer	Manual Handling Guide SMS-06-GD-0001
8	Joint Optic Fibre Cable	Injury from Optic fibre impregnation	B-	Authorised operator only to perform fibre optic related tasks. Safety glasses to be worn. Dispose of off-cuts immediately into approved (labelled / secure) sharps container. Dispose contents of sharps container into haz-mat container.	D	Cable Jointer	ICTTC065B PPE SMS-06-GD-0323

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		Eye Injury-Laser	B+	An optic fibre, which has the potential to be energised, must be de-energised before being worked on. When de-energised it must be tested de-energised and tagged as isolated. A lockout is to be issued and held by the supervisor on site. Never look directly into the end of an optic fibre	D		PPE SMS-06-GD-0323
8	Joint Optic Fibre Cable (Cont.....)	Skin Irritation	B+	Avoid prolonged or repeated skin contact. Wash hands with soapy water after use and before eating, smoking etc.	D	Team Leader / Work Group Leader / Cable Joiner	PPE SMS-06-GD-0323
		Respiratory Irritant Exposure Injury	C+	Use in well-vented area. If inhalation is likely during use then use a type G1 or A organic vapour respirator.	D		
<input type="checkbox"/>	Site Specific Hazard						

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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						
			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
				F1	F2	F3	F4	F5	F6
Consequence			Incredible	Improbable	Remote	Occasional	Probable	Frequent	
>10 Fatalities	C6	Disastrous	B-	B+	A	A	A	A	
2-10 Fatalities	C5	Catastrophic	C+	B-	B+	A	A	A	
1 Fatality (2-10 Major Injuries)	C4	Critical	C-	C+	B-	B+	A	A	
1 Major Injury	C3	Major	D	C-	C+	B-	B+	A	
1 or more Minor Injuries	C2	Minor	D	D	C-	C+	B-	B+	
First aid treatment, or illness/injury not requiring treatment	C1	Negligible	D	D	D	C-	C+	B-	

Definition for Use - Regional & Local level (Workplace)

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.

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.

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.

To score the risk, follow the steps:

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).
2. Identify the likelihood of this level of consequence occurring. (This is done after considering the effectiveness of the current controls in place)
3. Score the risk using the combination of likelihood and consequence ranking.

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.