

SWMS number: SMS-06-SW-1101	SWMS Name: Switching			SWMS Team: Electrical Distribution Review Team
Custodian (Position): Electrical Services Manager, Commercial Renewal	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">• Appropriate plant & hand tools.• Lighting Towers• Barriers, Witches Hats & Fencing• Switching equipment Operating Handles• Mobile's, GRN,S & Landline's• Testing & earthing devices• 	Records/Reporting: <ul style="list-style-type: none">• Worksite Protection Plan• Pre-work Brief• Electrical Test Tags• Electrical Operating Centre (93794911)• WHVI's 1500V Instruction Switching Diagrams, Log Books• Electrical Permits• Equipment Earths test date• Daily Plant Checklist	Permits/licences required: <ul style="list-style-type: none">• Electrical Permit Holder• Authorised Electrical Person• Traffic Controller Certificate	Content reviewed by Technical expert (SME) and RailCorp safety professional (position including Div/Group) Electrical Services Manager & SEQ Coordinator Asset Management Group Commercial Renewals
Applicable Standards, Codes of Practice and guidance: <ul style="list-style-type: none">• OH&S Act 2000• OH&S Regulation 2001• Rail Safety Regulation 2003• RailCorp Network Rules & Procedures• RailCorp Safety Management System.• MSDS for all chemicals and hazardous Substances used on site• Electrical Safety Instructions• SAA Wiring Rules• EC14 – Guide to Electrical Workers' Safety Equipment• WorkCover NSW Plant Guide• National Code of Practice for Manual Handling [NOHSC:2005]				Inspection requirements Nil

Switching

Issue date: 08/04/08

Review date: 21/02/11

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	Evaluate the environment	Uneven ground	C-	Level up ground. Clear pathways	D	All Staff	Environmental Plan Uneven Surfaces SMS-06-FM-0163
		Undergrowth	C-	Clear only excess undergrowth as required	D	Team Leader / Work Group Leader / All Staff	PPE- SMS-06-GD-0323 Working Outdoors SMS-06-PR-0104 Irritation from Dust SMS-06-SW-0535 Needle Sticks SMS-06-FM-0163 Electrical Equipment SMS-06-GD-0268
		Water obstacle/ drain	C-	Redivert water, pump away or install drain	D		
		Dust	C-	Water down area, keep vehicular traffic down	D		
		Ultra violet injuries	B-	PPE Sunscreen, hat sunglasses	D		
		Venomous bite & stings	C-	Remove undergrowth. Take care opening, lifting items.	D		
		Needles	C-	Inspect work area. Remove undergrowth. Take care opening, lifting items.	D		
		Insufficient Light	B+	Light up work area	D		
		Trains	B+	Relevant Work Site Protection and Protection officer for site	D	Protection Officer	Network rules and Regulation's, Safety Management SMS-01-PO-0126

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		Roadways	C-	Relevant Work Site Protection and Protection officer for site	D	Traffic Controller	Traffic Plans, Work-on/near Roads SMS-06-GD-0372
6	Familiarise with switching.	Switching Incorrect equipment.	B-	Obtain correct switching documentation	D	Authorised Person Team Leader / Work Group Leader	Electrical Equipment DSMS-06-GD-0268 ESI'S Operating Diagrams
6	Familiarise with switching (Cont.....).		C-	Check equipment eg. Earths test date is current and in good working order.	D		
7	Check Communication's	Poor Communication's	C+	Seek acceptable communication's & Test	D	Team Leader / Work Group Leader	Network Rules & Procedures NPR721
8	Site set up	Manual Handling	C+	Correct technique / site specific PPE	D	Team Leader / Work Group Leader / All Staff	Manual Handling SMS-060GD-0001 Pre work Briefing SMS-06-FM-0163 PPE- SMS-06-GD-0323 Plant & Equipment Safety SMS-11-GD-0243
		Plant moving	C+	Site specific PPE	D		
				Lookouts			
				Pre Work Brief			
		Adjacent equipment	C-	Permits and authorised work	D	Team Leader / Work Group Leader	Electrical Permits SMS-06-EN-0577 Electrical Equipment SMS-06-GD-0268
				Lookouts			
9	Switching of Equipment	Falling Objects	B-	PPE	D	All Staff	ETN PPE- SMS-06-GD-0323 Electrical Equipment SMS-06-GD-0268 ESI'S, EOC 93794911
		Switching of incorrect equipment.	B+	Visual inspection and confirmation required.	D	Authorised Person Team Leader / Work Group Leader	
		Electrical Shock	C+	PPE, Barriers erected.	D	All Staff	
		Incorrect operation of equipment.	B+	As per local instruction.	D	Authorised Person Team Leader / Work Group Leader	
10	Earthing Equipment	Earth live	A	Test dead and apply earths in unhesitating movement.	D	Authorised Person Team Leader /	ESI'S, Electrical Equipment

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		Earthing of Incorrect Equipment	A	Check equipment before earthing and on completion.	D	Work Group Leader	SMS-06-GD-0268
<input type="checkbox"/>	Additional Site specific Hazards						

Legend

PWB – Pre Work Brief
 ESI's – Electrical Safety Instructions
 EOC – Electrical Operating Centre (93794911)
 PPE – Personal Protective Equipment
 RDELE – Renewals Distribution Electrical
 SWMS – Safe Work Method Statement
 IR – Insulation Resistance
 WHVI's – Working High Voltage Instruction's
 GRN – Government Radio Network

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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	<p>Definition for Use - Regional & Local level (Workplace)</p> <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> <ol style="list-style-type: none">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. <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	
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-	