

Install 1500 volt equipment.

Issue date: 08/04/08
Review date: 21/02/11

SWMS number: SMS-06-SW-1099	SWMS Name: Install 1500-volt equipment.			SWMS Team: Electrical Distribution Review Team
Custodian (Position): Electrical Services Manager, Commercial Renewals	Assumptions: Site specific risks are addressed and assessed in pre-work briefing			Content reviewed by Technical expert (SME) and RailCorp safety professional (position including Div/Group) Electrical Services Manager & SEQ Coordinator Asset Management Group Commercial Renewals
Approving Authority (Position): Safety and Quality Manager Commercial Renewals	Equipment/Plant/Tools: <ul style="list-style-type: none"> Specific Plant for Task Appropriate handtools, Cable Puller Transmission Oil Insulating Gases Barriers, Witches hats and fencing 	Records/Reporting: <ul style="list-style-type: none"> Worksite Protection Plan Pre-work Brief Electrical Test Tags Site layout documented Services searches Traffic Control Plan Electrical Permits Electrical Safety Instructions 	Permits/licences required: <ul style="list-style-type: none"> Traffic Controller Certificate Electrical Permit Holder 	Personal Protective Equipment required: <ul style="list-style-type: none"> Safety Boots High Visibility Vests Hardhats Protective Clothing Safety Glasses And as specified below. <ul style="list-style-type: none"> Fall Arrest Devices Gloves During all Site Works a FIRST AIDER MUST be Present
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] AS/NZS 1891.4 – 2000 "Industrial fall arrest systems and devices – Selection, use and maintenance" AS 4839 portable oxy-fuel gas systems AS 1674.1 – Safety in welding processes 	Inspection requirements Nil	Service schedule: Nil	Training/Qualification required: <ul style="list-style-type: none"> Construction Industry Induction Track Safety Awareness or RISI (Rail Industry Safety Induction) And as specified below. <ul style="list-style-type: none"> Authorised Electrical Person 	

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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	Evaluate the environment	Uneven ground	C-	Level up ground. Clear pathways	D	Team Leader / Work Group Leader / All Staff	Environmental Plan. Uneven Surfaces SMS-06-FM-0163
		Undergrowth	C-	Clear only excess undergrowth as required	D		PPE- SMS-06-GD-0323 Working Outdoors SMS-06-PR-0104 Irritation from Dust SMS-06-SW-0535
		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		Needle Sticks SMS-06-FM-0163
		Trains	B+	Relevant Work Site Protection and Protection officer for site	D	Protection Officer.	Network rules and Procedures, Safety Management SMS-01-PO-0126
		Roadways	C-	Relevant Work Site Protection and Protection officer for site	D	Traffic Controller, Team Leader / Work Group Leader	Traffic Plan, Work-on/near Roads SMS-06-GD-0372

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6	Locate services	Damage to services	B+	Services searches, diagrams on site	D	Team Leader / Work Group Leader	Services Search Checklist SMS-06-FM-0384	
				Approved water exposure of services			Services Search Checklist SMS-06-FM-0384	
6	Locate services (Cont.....)	Damage to services (Cont.....)	B+	Hand dig to expose services	D	Team Leader / Work Group Leader	Services Search Checklist SMS-06-FM-0384	
7	Clear the work area / site	Electric Shock Unauthorised work	C+	Site layout documented	D	Authorised Person, Team Leader / Work Group Leader	Electrical Permits SMS-06-EN-0577 House Keeping SMS-16-FM-0069 ESI,S	
			A	Permits and authorised work	D			
8	Site set up	Manual Handling	C+	Correct technique / site specific PPE	D	All Staff	Manual Handling SMS-060GD-0001 PPE- SMS-06-GD-0323 Backsafe Training Manual	
		Plant moving	C+	Site specific PPE	D	Team Leader / Work Group Leader / All Staff	PPE- SMS-06-GD-0323 Plant & Equipment Safety SMS-11-GD-0243 Pre work Briefing SMS-06-FM-0163 Work near Mob. Plant SMS-06-GD-0225	
				Lookouts				
				Pre Work Brief				
		Adjacent equipment	C-	Permits and authorised work	D		Electrical Equipment SMS-06-GD-0268	
				Lookouts				
		Dangerous goods	C+	Quarantine area	D		Hazardous Substances SMS-06-GD-0199	
9	Position equipment	Temporary power	C-	See Low Voltage SWMS	D	Team Leader / Work Group Leader	Electrical Equipment SMS-06-GD-0268	
		Other Work Groups	C+	Warn other work groups to stay clear of Worksite	D		Safety Management SMS-01-PO-0126	
		Moving plant	C+	Site specific PPE	D	Team Leader / Work Group Leader / All Staff	PPE- SMS-06-GD-0323 Plant & Equipment Safety SMS-11-GD-0243	
				Lookouts				

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				Pre Work Brief			Pre work Briefing SMS-06-FM-0163 Work near Mob. Plant SMS-06-GD-0225
		Manual operated plant, skates, pipes	C-	Communication within group on task happenings	D		Plant & Equipment Safety SMS-11-GD-0243
		Electric shock	C+	Permits and authorised work	D	Authorised Person, Team Leader / Work Group Leader / All Staff	Electrical Equipment SMS-06-GD-0268
				Touch potential's identified			Electrical Permits SMS-06-EN-0577
				Design distances met			
9	Position equipment	Suspended loads	B+	Identify danger area, moving radius of loads	D	Hiab Operator, Team Leader / Work Group Leader / All Staff	Lifting Equipment SMS-16-FM-0089
		Injury from plant / tools	B+	Tagged tools and inspected plant	D	Team Leader / Work Group Leader	Plant & Equipment Safety SMS-11-GD-0243
		Work aloft	B+	Pre work brief and PPE	D	Competent Person	Working at Heights SMS-06-GD-0240
		Manual handling	C+	Correct technique / site specific PPE	D	Team Leader / Work Group Leader / All Staff	Manual Handling SMS-06-GD-0001
		Cuts and abrasions	B+	PPE as pre work brief	D		PPE- SMS-06-GD-0323
		Oil type used (PCB)	B-	PPE and identification	D		PPE- SMS-06-GD-0323
		Oil contamination / spill	B-	Response kit for size of the work.	D		Hazardous Substances SMS-06-GD-0199
		Gases - Insulating	A	Environmental paperwork and notices	D		
				MSDS and manufacturer instructions			
10	Demolition / removal	Electrical contact	A	Permits, authorised work	D	Authorised Person, Team Leader / Work Group Leader	Electrical Equipment SMS-06-GD-0268 Electrical Permits SMS-06-EN-0577 ESI,S

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10	Demolition / removal	Asbestos materials	A	Identification, MSDS, relevant permits	D	Team Leader / Work Group Leader / All Staff	Hazardous Substances SMS-06-GD-0199
		Oxy equipment -explosion	A	MSDS for gases, plant inspections	D	Oxy-Acetylene Operator, Team Leader / Work Group Leader / All Staff	AS-4839 (Safe use of Oxy-fuel Gas Sys) Storage/Handling of Gases SMS-06-SW-0196 Fire Procedures SMS-06-PR-0329
		Oxy equipment -fire	B+	Extinguishers or water supply ,hot work permit	D		
				Hot work permit	D		
		Oxy equipment - burns	B+	PPE as pre work brief	D	Team Leader / Work Group Leader	House Keeping SMS-16-FM-0069
		Leaving tools behind	C-	Visual inspections	D		
		Materials remaining	C-	Visual inspections	D	Team Leader / Work Group Leader / All Staff	Manual Handling SMS-06-GD-0001
		Manual handling	C+	Correct techniques, site specific measures as Pre Work Brief	D		
				Sequential order for removal, manufacturer instructions			
		Plant moving	C+	Site specific PPE	D		PPE- SMS-06-GD-0323 Plant & Equipment Safety SMS-11-GD-0243 Pre work Briefing SMS-06-FM-0163 Work near Mob. Plant SMS-06-GD-0225
				Lookouts			
				Pre Work Brief			
		Falling objects/ debris	B+	PPE as pre work brief Clear area of non essential personnel	D	Team Leader / Work Group Leader / All Staff	PPE- SMS-06-GD-0323
		Dust	C-	Wet down areas where possible, vacuum area	D		
		Confined spaces	A	Authorised work	D	Confined Spaces Authorised Person.	Confined Spaces SMS-06-GD-0035

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<input type="checkbox"/>	Additional Site specific hazards						

Legend

PWB – Pre Work Brief
ESI's – Electrical Safety Instructions
MSDS – Material Safety Data Sheet
PPE – Personal Protective Equipment
RDELE – Renewals Distribution Electrical
SWMS – Safe Work Method Statement
IR – Insulation Resistance
PCB's - Polychlorinated Biphenyls

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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

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		
Consequence	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	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.		
	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	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.		
		F1	F2	F3	F4	F5	F6	To score the risk, follow the steps:		
>10 Fatalities	C6	Disastrous	B-	B+	A	A	A	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).		
2-10 Fatalities	C5	Catastrophic	C+	B-	B+	A	A	2. Identify the likelihood of this level of consequence occurring. (This is done after considering the effectiveness of the current controls in place)		
1 Fatality (2-10 Major Injuries)	C4	Critical	C-	C+	B-	B+	A	3. Score the risk using the combination of likelihood and consequence ranking.		
1 Major Injury	C3	Major	D	C-	C+	B-	B+	Note: Where there are a range of credible consequences which may lead to a different level of risks and/or where the controls may be different. It may be useful to score the risk more than once.		
1 or more Minor Injuries	C2	Minor	D	D	C-	C+	B-			
First aid treatment, or illness/injury not requiring treatment	C1	Negligible	D	D	D	C-	C+	B-		