

# Inspect Substation Equipment

Issue date: 04/10/07  
Review date: 04/10/10

<b>SWMS number:</b> SMS-06-SW-0512	<b>SWMS Name:</b> Inspect Substation Equipment			<b>SWMS Team:</b> Ron Walsh Gary Bugden Danny Bercli
<b>Custodian (Position):</b> Business Systems Officer Metro North Region Michael Swadling	<b>Assumptions:</b> Visual inspection, minor housekeeping or taking of measurements. Includes traction substations, sectioning huts, distribution substations & LV Substations Fine weather, daylight, power on			
<b>Approving Authority (Position):</b> General Manager Infrastructure Division	<b>Plant/Equipment/Tools:</b> <ul style="list-style-type: none"> <li>Binoculars</li> <li>Electrical Meters</li> </ul>	<b>Records/Reporting:</b> <ul style="list-style-type: none"> <li>Substation log book</li> <li>TEAMS 3</li> <li>EOC</li> </ul>	<b>Permits/licences required:</b> <ul style="list-style-type: none"> <li>Nil</li> </ul>	<b>Content reviewed by Technical expert (SME) and RailCorp safety professional</b> (position including Div/Group)  Electrical Maintenance Engineer, Illawarra SEQ Systems Administrator
<b>Applicable Standards, Codes of Practice and guidance:</b> <ul style="list-style-type: none"> <li>ESAA Guide to Electrical Safety Systems</li> <li>WorkCover CoP: Noise Management and Protection of Hearing at Work</li> </ul>				
<b>MIMS or METRE Ref:</b> N/A	<b>PPE required:</b> <ul style="list-style-type: none"> <li>185gsm 100% cotton clothing in accordance with SMS-06-SW-0538</li> <li>Standard PPE as applicable</li> <li>Hard Hat</li> <li>Gloves</li> <li>Eye protection</li> <li>Hearing Protection</li> </ul>			

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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	Carry out Inspection	Contact with Electricity	B-	Maintain electrical clearances or work in accordance with ESNR	C-	Team member	ESNR
		Manual Handling / Muscular Stress	C+	Manual Handling Training	C-	Team Manager	
		Contact with sharp objects	C+	Remove or blunt if possible Gloves	C-	Team member	
		Crush injuries from enclosure doors	C+	Secure moving parts if possible Remain clear of crush zone	C+	Team member	
		Slips and trips at same level	C+	Remove or barricade potential hazards Vigilance	C-	Supervisor	
		Bites & Stings	C+	Inspect and spray following MSDS Gloves	C-	Team member	MSDS for insect spray
		Compressed air from relief valves, damaged pipes, etc	C+	Eye protection Avoid contact with compressed air	C-	Team member	
		Noise from switch gear equipment	C+	Hearing protection where required	D	Team member	
		Fall from Heights	C+	Use hand Rails to ascend/descend stairs	C-	Team member	
		Confined Hazard	C+	Use SMS procedure for Confined spaces	D	Supervisor	
		Contact with chemicals / Hazardous substances	C+	Check MSDS	D	Team member	

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## Appendix A: Service Schedules

ACCBs	ACCBs	Power Transformers	Rectification	AC Auxiliary Power Supplies	Auxiliary Services	Electric Braking	Distribution Transformers	Signal Air Compressors	Distribution Substations	System Substations
E01001 E01007 E01009 E01014 E01021 E01023 E01028 E01033 E01038 E01043 E01048 E01053 E01063 E01068 E01073 E01076 E01077 E01083 E01088 E01093 E01104 E01106 E01108 E01110 E01112 E01120 E01122	E01124 E01126 E01130 E01140 E01143 E01161 E01165 E01167 E01169 E01174 E01182 E01185 E01190	E02001 E02018 E02105 E02048 E02049	E03001 E03075 E03076 E03077 E03085 E03100 E03101	E05003	E06001 E06020 E06023 E06011 E06027 E06012	E07001	E16009 E16010	E18001 E18004 E18007 E18009 E18011	E97010 E97012 E97014 E97023 E97026 E97028 E97030 E97033 E97036 E97047 E97051 E97054 E97056 E97058 E97064 E97072 E97094 E97097 E97099 E97101 E97107 E97110 E97113 E97115 E97117 E97119 E97124	E99001 E99002 E99003 E99004 E99005 E99010 E99011 E99012 E99013 E99014 E99015 E99016

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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	
				F1	F2	F3	F4	F5	F6	
Consequence			Incredible	Improbable	Remote	Occasional	Probable	Frequent		
>10 Fatalities	C6	Disastrous	B-	B+	A	A	A	A	<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		
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-		

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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