

Inspect Substation Equipment

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

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

Inspect Substation Equipment

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

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	

Inspect Substation Equipment

Issue date: 04/10/07

Review date: 04/10/10

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

Inspect Substation Equipment

Issue date: 04/10/07

Review date: 04/10/10

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
Consequence		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
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:

- 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).
- Identify the likelihood of this level of consequence occurring. (This is done after considering the effectiveness of the current controls in place)
- 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 of risks and/or where the controls may be different. It may be useful to score the risk more than once.

Inspect Substation Equipment

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

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.