

Maintenance of Signalling Equipment- Releasing Switches- ESML- XYZ with Annet Locks

Issue date: 11/04/08

Review date: 19/02/11

SWMS number: SMS-06-SW-1004	SWMS Name: Maintenance of Signalling Equipment- Releasing Switches- ESML- XYZ with Annet Locks			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">• Hand ToolsGeneratorPower ToolsRCD UnitCorrect type fire extinguisher• Long Flint Gun• Oxy cylinders/torches• Arc Welder	Records/Reporting: <ul style="list-style-type: none">• Worksite Protection Plan• Pre-work Brief• Electrical Test Tags• Hot Work Permit (During Total Fire Ban)• Fire Brigade• MSDS for chemicals• Electrical inspection record• Equipment Operating Manual	Permits/Licences required : <ul style="list-style-type: none">• Rough Cutters Ticket• Fitter Welder	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 2000• OH&S Regulation 2001• Rail Safety Regulation 2003• RailCorp Network Rules & Procedures• Signalling Maintenance Procedures• Technical Maintenance Plan• Signal Engineering Standards• RailCorp Safety Management System.• MSDS for all chemicals and Hazardous substance used on site• Safety in welding & allied processes (Part 2 – Electrical) AS-1674.2• Approval & Test Specifications for electric arc machines AS/NZS-3195• Safe use of Oxy-fuel Gas Sys - AS-4839• WorkCover NSW Plant Guide• EC14 – Guide to Electrical Workers Safety Equipment				
		MIMS or METRE Ref: Nil		

Maintenance of Signalling Equipment- Releasing Switches- ESML- XYZ with Annet Locks

Issue date: 11/04/08

Review date: 19/02/11

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	Access , Egress and Working on site	Hit by Train	C-	Pre-work Brief including Worksite Protection Plan, Site Induction and Inspection	D	Worksite Protection Officer	Network Rules & Procedures Safety Knowledge Management SMS-18-SR-0098
		Slips, trips and falls	C-	Pre-work Brief to identify potential hazards	D	Worksite Protection Officer	Workplace Risk Management SMS-06-PR-0104
		Injury from vehicles and plant equipment	C-	Provide a Site Plan detailing safe access paths, parking and location of facilities	D	Worksite Protection Officer	Plant SMS-06-GD-0225
6	Routine maintenance activities	Electric Shock from Electrical signalling equipment	C-	Insulated Oil Cans & tools Use of PPE – Gloves, Safety Boots	D	All Staff	Work Around Elect. Equip. SMS-06-GD-0268
		Eye/ hand injuries from	C-	Use PPE – Gloves, Eye protection Exercise care on wet or greasy surfaces	D	All Staff	PPE SMS-06-GD-0323
		Hand / Bodily Injury from Hand tools slippage	C+	Use of PPE – Gloves Do not overtighten, If Item Wornout – Replace	D	All Staff	

Maintenance of Signalling Equipment- Releasing Switches- ESML- XYZ with Annet Locks

Issue date: 11/04/08

Review date: 19/02/11

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)
		Risks caused by overgrown vegetation (Slips, Trips, Sharps, Snakes)	C+	Clear vegetation as required Collect sharps for proper disposal Use of PPE – Gloves,	D	All staff	
		Electric Shock from Power tools and Generators	C+	Inspect and check equipment parts, electrical cables (Valid Test and Tag Label), RCD Units fitted (Honda Inverter Type Excluded)	D	All Staff	Work Around Elect. Equip. SMS-06-GD-0268
		Use of chemicals / hazardous substances	C-	MSDS on chemicals. Use PPE – Gloves, Eye protection as instructed in MSDS	D	All Staff	PPE SMS-06-GD-0323 Hazardous Substances SMS-06-GD-0199
7	Repair of Equipment	General Process Hazards					
		Injury from Electric Shock from Generators/Power tools	C+	Inspect and check equipment parts, electrical cables (Valid Test and Tag Label), RCD Units fitted (Honda Inverter Type Excluded)	D	Fitter Welder	Equipment Operating Manual, Work Around Elect. Equip. SMS-06-GD-0268
		Injury from grinders during surface preparation	C+	Use of PPE – Eye protection and Hand protection MSDS on chemicals. Instruct workers on safety precautions for use	D	All Staff	PPE SMS-06-GD-0323 Operating Manual
		Eye/ hand injuries	C-	Use of PPE – Gloves & eye protection Exercise care on wet or greasy surfaces	D	All Staff	PPE SMS-06-GD-0323
		General Welding Hazards					
		Burns from Hot objects & spatter	C+	Use of PPE – Welding Helmet, Gloves, Spats Use tongs when handling hot objects	D	Rough Cutters Ticket Hot Work Permit (if Fire	PPE SMS-06-GD-0323
		Flashes					

Maintenance of Signalling Equipment- Releasing Switches- ESML- XYZ with Annet Locks

Issue date: 11/04/08

Review date: 19/02/11

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)
		Fire	C+	Ensure fire protection measures based on risk assessment Hot Work Permit (if Fire Ban)	D	Ban) Certified persons to operate	Site Incident Response Procedures SMS-15-PR-0245 Hot Work SMS-06-PR-0329
		Oxy Acetylene Welding cutting and Brazing					
		Explosions from leaking hoses and damaged equipment	C+	Visually check equipment MSDS on chemicals Long Flint igniters	D	Rough Cutters Ticket Hot Work Permit (if Fire Ban)	AS-4839 (Safe use of Oxy-fuel Gas Sys) Storage/Handling of Gases SMS-06-SW-0196
		Breathing difficulties from fumes	C-	Ensure well ventilated area MSDS on chemicals	D	Certified persons to operate	PPE SMS-06-GD-0323
		Arc Welders					
		Fumes from Chemicals during Arc Welding (Galvanised or Painted Surfaces)	C-	Ventilation Extinguishers Hot work permit if fire ban	D	Rough Cutters Ticket Hot Work Permit (if Fire Ban)	AS-1674.2 , AS/NZS-3195
		UV Radiation from Electric Arc	C+	Use of PPE - Shields and signage	D	Certified persons to operate	AS-1674.2 , AS/NZS-3195
8	Tightening & Securing of Signalling equipment	Straining to locate equipment into position	C+	Move equipment as a team or use lifting equipment	D	All Staff	
9	Clean up left over materials and equipment	Materials and equipment causing housekeeping and environmental hazards	C+	Take all rubbish and dispose of properly	D	All Staff	

Maintenance of Signalling Equipment- Releasing Switches- ESML- XYZ with Annet Locks

Issue date: 11/04/08
Review date: 19/02/11

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

Maintenance of Signalling Equipment- Releasing Switches- ESML- XYZ with Annet Locks

Issue date: 11/04/08

Review date: 19/02/11

RailCorp Level 2 Risk Matrix - Regional & Local (Workplace)			Likelihood/Frequency						<u>Definition for Use - Regional & Local level (Workplace)</u> 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.	
			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-		