

Reclamation of Redundant Signalling Equipment

Issue date: 11/04/08

Review date:19/02/11

SWMS number: SMS-06-SW1017	SWMS Name: Reclamation of Redundant Signalling Equipment			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">• Oxygen Monitor, Catalytic Converters, Electric Fans (Tunnel Areas)• GRN Radios• Barriers, Fencing• Watercart• Vehicle Crane, guide ropes• Tongs, Hand Tools• Fire extinguisher• Oxy cylinders/torches, Flint Gun• Chainsaw, Fuels• Generator, Power Tools, RCD Unit• Spill Reduction Kit, Syphon Hoses & Containers• Approved current testing device	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.• Circuit Diagrams• Working in Confined Areas	Permits/Licences required: <ul style="list-style-type: none">• Height Safety Training Card• Vehicle Crane certificate• Confined Space Training• Rough cutter ticket• Certificate of Competency Chainsaw Safety	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• Safe use of Oxy-fuel Gas Sys - AS-4839• City Region – Tunnel Emergency Evacuation Steps• City Region – Site Safety Rules• AS/NZS 2865:2001 Safe working in	Inspection requirements Nil	Service schedule: Nil	Training/Qualification required: <ul style="list-style-type: none">• Construction Industry Induction	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 Device.• Type 1 Respirators (Tunnel Areas)• Dust Masks• Hearing Protection• Gloves• Welding Helmet, Spats

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a confined space • WorkCover NSW Plant Guide • EC14 – Guide to Electrical Workers' Safety Equipment • National Code of Practice for Manual Handling [NOHSC:2005] • AS 2727-1997 Chainsaws - Guide to safe working practices • AS 2726.1-2004 Chainsaws - Safety requirements - Chainsaws for general use		MIMS or METRE Ref: Nil	<ul style="list-style-type: none"> Track Safety Awareness or RISI (Rail Industry Safety Induction) And as specified below. <ul style="list-style-type: none"> Signal Electrician Signal Sectionman / Ganger 	<ul style="list-style-type: none"> Full Face Guard During all Site Works a FIRST AIDER MUST be Present
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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	Access , Egress and Working on site	General					
		Hit by Train	A	Pre-work Brief including Worksite Protection Plan, Site Induction and Inspection	C+	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		Workplace Risk Management SMS-06-PR-0104
		Injury from vehicles and plant equipment	B+	Provide a Site Plan detailing safe access paths, parking and location of facilities	C-		Plant SMS-06-GD-0225
		Injury from striking Overhead Wiring.	A	Ensure Permit to Work has been obtained.	C+	Authorised OH Line Worker	Electrical Permits SMS-06-EN-0577
		Tunnels					

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		Personnel injury from Fumes/contamination of atmosphere while in Tunnels	B-	Continuous air containing appropriate levels of oxygen is available with an air velocity of no less than 10 m/Min. Atmospheric monitoring while working	C+	All staff	City Region Hazard Summary - Part 2 City Tunnels
		Lack of Communication while in Tunnels	C-	GRN Radios to be used.	D		
5	Access, Egress and Working on site (Cont.....)	Tunnels (Cont....)					
		Injury from Placement and use of equipment in tunnels	C+	Use of PPE – Hearing protection, Hand Protection Operators to be aware of extent safe-working area Equipment fitted with Catalytic Converters. No Petrol driven engines to be used in tunnels. LPG Bottles to be changed outside restricted space. All mobile plant shall have a flashing/rotating light visible from the front and rear. Use of Hydraulic equipment were appropriate	D	All staff	City Region Hazard Summary - Part 2 City Tunnels Lifting Equipment Inspection SMS-16-FM-0089 Plant SMS-06-GD-0225
		Injury from debris or dust while in Tunnels	B-	Exclusions zone for workers not involved in tasks Wear Type 1 Respirators Water down materials Use of PPE – Dust Masks	D	All staff	City Region Hazard Summary - Part 2 City Tunnels PPE SMS-06-GD-0323
6	Removing Redundant Equipment	General Process Hazards					
		Cuts and abrasions	C+	Use of PPE – Gloves , Exercise care	D	All staff	PPE SMS-06-GD-0323

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	Check Status of Equipment to be removed & ensure that its been disconnected from Signal Electrical System	Electric Shock from rails/equipment/plant due to difference in potential	A	Ensure signalling equipment is electrically isolated	C-	Signal Electrician Authorising Officer	Safety Issues for Signalling Personnel TMG J042
		Falling from Elevated platforms or Working at Heights	B+	Use of Fall Arrest Device. Safety checked and inspected device.	C-	Height Safety Training Card	Working at Heights SMS-06-GD-0240 PPE SMS-06-GD-0323
		Injury while Loading / Unloading Equipment	B-	Ensure workers are kept well clear of lift path. Use competent crane operators Use of guide ropes if required	C-	Vehicle Crane certificate Holders	Lifting Equipment Inspection SMS-16-FM-0089
		Signalling System Failure	B+	Check Status of Equipment to be removed & ensure that its been disconnected from Signal Electrical System	C+	Signal Electrician	Signalling Design Standards Signalling Construction Standards
		Injury from Confined Spaces, Suffocation, Poisoning, Electric Shock	B+	Only Certified persons allowed in area.	C+	Confined Space Training	Confined Spaces SMS-06-GD-0035
6	Removing Redundant Equipment	<div><p>WARNING</p></div> <div><p><i>The Following Precautions are to be undertaken for when using Hot Works as in Activities 6 during Total Fire Bans:</i></p><ul style="list-style-type: none">• An Hot Works Permit must be Issued before Work tasks are to be Performed• The Welder or other person in control of the Worksite must take reasonable care to inspect the workplace to identify Potential Fire Hazards• All Fire Hazards are to be removed Prior to commencing Welding Tasks• Fire Fighting Equipment must be on Hand at the Worksite e.g. Watercart, Knapsacks, Fire Extinguishers• (Hot Works in Progress) Warning Signs are to be placed at Appropriate locations<p>Hot Work SMS-06-PR-0329</p></div>					
	Check Status of Equipment to be removed & ensure that its been disconnected from Signal Electrical System (Cont.....)						
		General Welding Hazards					
	Burns from Hot objects		B+	Use of PPE – Welding Helmet, Gloves, Spats	C-	Work Group Leader, Rough cutter ticket	PPE SMS-06-GD-0323 Hot Work SMS-06-PR-0329
	Flashes			Use tongs when handling hot objects			

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		Fire	B+	Ensure fire protection measures based on risk assessment Hot Work Permit (if Fire Ban)	C+		Site Incident Response Procedures SMS-15-PR-0245 Hot Work SMS-06-PR-0329	
		Oxy Acetylene Welders						
		Explosions from leaking hoses and damaged equipment	B+	Visually check equipment MSDS on chemicals Long Flint igniters	C+		AS-4839 (Safe use of Oxy-fuel Gas Sys) Storage/Handling of Gases SMS-06-SW-0196	
		Breathing difficulties from fumes	B-	Ensure well ventilated area MSDS on chemicals	C-			
		Chainsaw Operation						
		Injury from Chainsaw blade and debris	B+	Only operator to be in local vicinity Correct use of chainsaw Use of PPE – Gloves, Eye protection, Hearing protection, Spats	C-	Certificate of Competency Chainsaw Safety,	PPE SMS-06-GD-0323 Operating Manual	
		Vibration Noise	C-	Use of PPE – Gloves and Hearing protection	D	All Staff	PPE SMS-06-GD-0323	
		Generators and Power Tools						
		Injury from Electric Shock from Generators/Power tools	A	Inspect and check equipment parts, electrical cables (Valid Test and Tag Label), RCD Units fitted (General Inverter Type Excluded)	C+	All Staff	Equipment Operating Manual, Work Around Elect. Equip. SMS-06-GD-0268	
6	Removing Redundant Equipment	Generators and Power Tools (Cont.....)						
	Check Status of Equipment to be removed & ensure that its been disconnected from Signal Electrical System (Cont.....)	Injury from fumes, fuels	C+	Appropriate care with placement of fuels/oils Ensure well ventilation from exhausts and fumes, Spill kit on hand	D	All Staff	Hazardous Substances SMS-06-GD-0199 MSDS	
		Oil / Lubricant Spillage (eg....) Trainstops etc.	B-	Inspect Equipment before removal	C-	Work Group Leader ,All Staff	Environmental Protection Authority,	

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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

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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	
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:

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.