

# Undertake construction activities in workshop - yard

Issue date 10/04/08

Review date: 20/02/11

<b>SWMS number:</b> SMS-06-SW-1090	<b>SWMS Name:</b> Undertake construction activities in workshop - yard			<b>SWMS Team:</b> Signal Review Team
<b>Custodian (Position):</b> Signal Services & External Resources Manager	<b>Assumptions:</b> Site specific risks are addressed and assessed in pre- work briefing			
<b>Approving Authority (Position):</b> Safety and Quality Manager Commercial / Renewals	<b>Equipment/Plant/Tools:</b> <ul style="list-style-type: none"><li>Forklift / Lifting Devices</li><li>Cold Galvanising, Rust-proofing Paints</li><li>Oxy / Acetylene Welding Equipment</li><li>Arc Welding Equipment &amp; Safety Shields</li><li>Sand Paper</li><li>Warning Tape or Labels</li><li>Drills, grinders, Power Saws, Lathe, Soldering (Electric &amp; Gas), Labelling Guillotine, Engraver, Drop-saw,</li><li>Barriers, Fencing, Warning Tape or Labels</li><li>Watercart (During Total Fire Ban)</li></ul>	<b>Records/Reporting:</b> <ul style="list-style-type: none"><li>Pre-work Brief</li><li>Electrical Tool Test</li><li>Fuel and Hydraulic Oil , Chemical, Gases MSDS</li><li>Hazardous Substance Register</li><li>Daily Plant Checklist</li><li>Environmental Protection Plan</li><li>Hot Work Permit (During Total Fire Ban)</li><li>Forklift Service Records or Log Book</li></ul>	<b>Permits/licences required:</b> <ul style="list-style-type: none"><li>Forklift / Lifting Devices Certificates</li><li>Hot Work Permit</li></ul>	<b>Content reviewed by Technical expert (SME) and RailCorp safety professional</b> (position including Div/Group) Signal Services & External Resources Manager & SEQ Coordinator Asset Management Group Commercial / Renewals
<b>Applicable Standards, Codes of Practice and guidance:</b> <ul style="list-style-type: none"><li>OH&amp;S Act 2000</li><li>OH&amp;S Regulation 2001</li><li>Rail Safety Act 2003</li><li>RailCorp Network Rules &amp; Procedures</li><li>Signalling Maintenance Procedures</li><li>Technical Maintenance Plan</li><li>Signal Engineering Standards</li><li>Air Reticulation Systems SC09-20-00-00-SP</li><li>RailCorp Safety Management System</li><li>MSDS for all chemicals and</li><li>Hazardous substance used</li></ul>				<b>Inspection requirements</b> Nil

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		MIMS or METRE Ref: Nil		
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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	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	Preparation for Task, moving heavy items around depot / workshop	Back injury, Hand and Foot crush injuries, Moving heavy items of material & equipment around depot/ workshop	B+	Move heavy items with Forklift or other approved lifting device Ensure item being lifted is secure, fastened as required Instruct Staff to be careful when near Forklift / Lifting Devices or to keep clear. Use guide ropes if required. Personnel should identify safe access areas before commencing any activity.	C-	Competent Forklift Operator All Staff	Lifting Equipment SMS-16-FM-0089
Risk of electric shock shall be assessed and appropriate control measures implemented before commencing work							
6	Prepare material and work area for task	Cuts to Staff from sharp edges or corners	B+	Remove or protect sharp edges on materials To prevent injury, use Approved work gloves	C-	All Staff	PPE SMS-06-GD-0323
		Trip hazards from untidy work areas	B-	Ensure work shop and access paths are regularly cleaned up and bins used for rubbish and scrap	C-	All Staff	House Keeping SMS-16-FM-0069
7	Cutting, Drilling, Grinding Soldering (Electric & Gas), Labelling Guillotine, Engraver, Drop-saw, Power Tools	Eye injuries or cuts from flying metal pieces and cutting blades	A	Ensure all equipment fitted with correct guards and that protective face shields are worn by operator and people nearby	C-	All Staff	PPE SMS-06-GD-0323

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		Electric shock from powered equipment / tools	A	Ensure all powered equipment is regularly checked, serviced and tagged fit for use	C+	All Staff	Plant SMS-06-GD-0225 Equipment Operating Manual
		Oxy Acetylene Welding cutting and Brazing					
		Explosions from leaking hoses and damaged equipment	A	Visually check equipment MSDS on chemicals Long Flint igniters	C+	Certified persons to operate	AS-4839 (Safe use of Oxy-fuel Gas Sys)
		Breathing difficulties from fumes	B+	Ensure well ventilated area MSDS on chemicals	C-		SMS manual
7	Cutting, Drilling, Grinding Soldering (Electric & Gas), Labelling Guillotine, Engraver, Drop-saw, Power Tools (Cont.....)	Arc Welders					
		Fumes from Chemicals during Arc Welding	B-	Ventilation Extinguishers Hot work permit if fire ban	C-	Certified persons to operate	AS-1674.2 , AS/NZS-3195
		UV Radiation from Electric Arc	B+	Use of PPE - Shields and signage	C-		AS-1674.2 , AS/NZS-3195
8	Surface treatment of finished product such as – Painting, Cold Galvanising, Rust-proofing	Injury from grinders during surface preparation	B+	Use of PPE – Eye protection and Hand protection MSDS on chemicals. Instruct workers on safety precautions for use	C-	All Staff	PPE SMS-06-GD-0323 Operating Manual
		Injury from sanding dust and fumes	B+	Use of PPE – Masks, Gloves, MSDS on chemicals. Instruct workers on safety precautions for use	C-	All Staff	PPE SMS-06-GD-0323
9	Construct and pre-wire equipment rack	Eye injuries or cuts from flying metal pieces and cutting blades	B+	Use of PPE – Eye protection and Hand protection	C-	All Staff	PPE SMS-06-GD-0323
		Injuries from sharp edges of metal racks	B+	Use PPE, Gloves, Smooth rough surface edges, use protective rubber strip on edges	C-	All staff	SMS manual

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		Injury//burns from motorised hand tools/fuel spills	B+	Ensure Firefighting equipment is available/ensure staff are aware of Emergency Procedures , ensure emergency spill kit is available	C-	All staff	SMS manual
		Injuries from Hand tools/Knives	A	Use of PPE – Kevlar Gloves, tools approved/recommended by manufacturer, cable stripper instead of knives	C+	All Staff	PPE SMS-06-GD-0323 Manufacturer specs/recommendations

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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							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	
Consequence				F1	F2	F3	F4	F5	F6	
			Incredible	Improbable	Remote	Occasional	Probable	Frequent		
>10 Fatalities	C6	Disastrous	B-	B+	A	A	A	A	A	<p>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.</p> <p>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.</p> <p>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.</p> <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	A	
1 Fatality (2-10 Major Injuries)	C4	Critical	C-	C+	B-	B+	A	A	A	
1 Major Injury	C3	Major	D	C-	C+	B-	B+	A	A	
1 or more Minor Injuries	C2	Minor	D	D	C-	C+	B-	B+	A	
First aid treatment, or illness/injury not requiring treatment	C1	Negligible	D	D	D	C-	C+	B-	A	