

Asbestos Cable Troughing Removal

Issue date: 20/10/10
Review date: 14/09/13

SWMS number: SMS-06-SW-0972	SWMS Name: Asbestos Cable Troughing Removal	SWMS Team: Civil Construction Review Team	
Custodian (Position): Services Manager Civil	Assumptions: Site specific risks are addressed and assessed in pre- work briefing	Content reviewed by Technical expert (SME) and RailCorp safety professional (position including Div/Group) Services Manager Civil and Safety facilitator, Safety Support Services Division.	
Approver (Position): Civil Electrical Works Manager Infrastructure Renewals	Plant/Equipment/Tools: <ul style="list-style-type: none"> • Crane, Lifting Equipment, Excavator, Backhoe, Trolley • Plastic Bags / Sheets, Sealing Duct Tape, Labels Marked Asbestos Containment, Plastic Lined Bins with Edges sealed with Duct Tape • Soil Testing Equipment • Straps, Ties, Construction Equipment • Barricades, Demarcation Fencing, Signs, Markers, Plywood, Safety Tape • Silt Fencing, Hay Bales, Bungs, Sediment Cloth • Hand railing, Lighting Towers / Day makers, Stand Lights • No-Spill Fuel Cans, Spill Response Kit 	Records/Reporting: <ul style="list-style-type: none"> • Worksite Protection Plan • Pre-work Brief • Electrical Test Tags • Sit Specific Management Plan • Hazardous Substance Register • MSDS • Daily Plant Checklist • Services searches • Environmental Protection Plan • Electrical Permits • Asbestos Removal Work Plan. SMS-06-FM-0117 Permits/licences required: <ul style="list-style-type: none"> • Asbestos Removal Contractor Licence, (If Area more than 200 Square Metres of Bonded Sheet) • Dogman Certificate • Crane / Excavator / Backhoe Operator Certificate • Electrical Permit Holder 	
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 • RailCorp Safety Management System. • MSDS for all chemicals and hazardous Substances used on site • WorkCover Guidelines Code of Practice for Safe Removal of Asbestos. • Working near Overhead Power Lines • National Code of Practice for Manual Handling [NOHSC:2005] • EC14 – Guide to Electrical Workers' Safety Equipment • WorkCover NSW Plant Guide • AS 2550.5-2002 Cranes, hoists and winches - Safe use - Mobile cranes 	Inspection requirements Nil	Service schedule: Nil	PPE required: <ul style="list-style-type: none"> • Safety Boots • High Visibility Vests • Hardhats • Protective Clothing • Safety Glasses or Face Shield <p>And as specified below.</p> <ul style="list-style-type: none"> • Breathing Protection Type P2 Masks • Gloves • During all Site Works a FIRST AIDER MUST be Present Training/Qualifications required: <ul style="list-style-type: none"> • Construction Industry Induction • RISI (Rail Industry Safety Induction) <p>And as specified below.</p> <ul style="list-style-type: none"> • Asbestos Awareness

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1	Delivery Of Materials	Manual handling injuries	B-	Correct manual handling procedures. "back-safe" training. Plant to move heavy and/or bulky items. As per Risk assessment.	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Manual Handling SMS-06-GD-0001
		Personnel struck by machinery	B+	Implement restriction zones (6m). Use reversing beepers. Use ticketed operators. Plan work to avoid site congestion. Competent Operator	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Plant SMS-06-PR-0225
		Struck by load	B+	Keep clear of suspended loads, ticketed operators. Exercise due care	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Plant SMS-06-PR-0225
		Failure of lifting equipment from overloading	B+	Competent operators to assess loads carefully prior to lifting equipment to be properly maintained and marked	C+	Workcover Ticketed Operator And Dogman SMS-11-GD-0243 Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Lifting Equipment SMS-16-FM-0089 Plant SMS-06-PR-0225
		Plant roll-over	B+	Ensure that outriggers or stabilisers in position prior to lifting	C-	Ticketed Operator Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Plant SMS-06-PR-0225
		Unstable loads	B+	Ensure materials are secured during transit. Don't exceed safe working load of plant.	C-	Workcover Ticketed Operator SMS-11-GD-0243 Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Plant SMS-06-PR-0225
2	Track Access	Fall down embankment	B+	Keep clear of unprotected edges, use dedicated access, erect safety barriers where required. Additional/artificial lighting	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Working At Heights SMS-06-GD-0240
		Contact with live o/h wiring or other services	A	Maintain regulated clearances on wires at all times. Isolate power when in side Safe approach distance (SAD).	C+	Qualified Permit Holder QEL29/MEI61 Team Leaders Work Group Leaders All Staff	Electrical Equipment Sms-06-Gd-0268 Electrical Permits SMS-06-EN-0577

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		Personnel struck by machinery	B+	Implement restriction zones (6m). Use reversing beepers. Use ticketed operators. Plan work to avoid site congestion. Competent Operator	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Plant SMS-06-PR-0225
		Contact/ slip on oil/fuel leakage or loss	C-	Plant to be inspected daily. Use correct methods for filling machinery. Maintain spill response kits on-site.	D	Ticketed Operator Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 ENVIRONMENTAL PROTECTION PLAN Plant SMS-06-PR-0225
3	Remove Strapping From Existing Asbestos Troughing	Asbestos fibres	B+	PPE TO BE WORN (overalls, gloves, eye protection, breathing protection masks to be p2). Implement exclusion zone. Signs to be used to indicate Asbestos Works in Progress, Hygienist With Monitor and Final Clearances	C-	Team Leader Work Group Leader All Staff	Hazardous Materials SMS-06-GD-0228 Asbestos Removal Work Plan. SMS-06-FM-0117 PPE- SMS-06-GD-0323
		Flying objects	C+	Implement exclusion zone wear eye protection	D	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 PPE- SMS-06-GD-0323
		Cuts, scratches and abrasions	C-	Gloves to be worn as necessary.	D	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 PPE- SMS-06-GD-0323
4	Remove Asbestos Lids	Asbestos fibres	B+	Troughing to be wet down and kept wet till bagged and sealed. PPE to be worn (overalls, gloves, eye protection, breathing protection masks to be p2). Implement exclusion zone. Signs to be used to indicate Asbestos Works in Progress, Hygienist With Monitor and Final Clearances	C-	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Hazardous Materials SMS-06-GD-0228 Asbestos Removal Work Plan. SMS-06-FM-0117 PPE- SMS-06-GD-0323
		Contact with services	B+	Locate services prior to starting work. Service searches to be on site and signed off mark and/or isolate services as appropriate maintain regulated clearances on electrical services	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Electrical Equipment SMS-06-GD-0268
		Muscle strain	B-	Correct manual handling procedures. "back-safe" training. Plant to move heavy and/or bulky items. As per Risk assessment.	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Manual Handling SMS-06-GD-0001

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5	Removal Of Redundant Cables	Asbestos fibres	B+	Cables to be wet wiped when relocating from inside troughing and any dust inside troughing to be captured and treated as asbestos and bagged	C-	Team Leader Work Group Leader All Staff	Hazardous Materials SMS-06-GD-0228 Asbestos Removal Work Plan. SMS-06-FM-0117 PPE- SMS-06-GD-0323
		Muscle strain	B-	Correct manual handling procedures. "back-safe" training. Plant to move heavy and/or bulky items. As per Risk assessment.	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Manual Handling SMS-06-GD-0001
		Personnel struck by machinery	B+	Implement restriction zones (6m). Use reversing beepers. Use ticketed operators. Plan work to avoid site congestion. Competent Operator	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Plant SMS-06-PR-0225
		Contact with live o/h wires	A	Maintain regulated clearances on wires at all times. Isolate power when in side Safe approach distance (SAD).	C+	Qualified Permit Holder QEL29/MEI61 Team Leaders Work Group Leaders All Staff	Electrical Equipment SMS-06-GD-0268 Electrical Permits SMS-06-EN-0577
		Head injuries	B-	Briefing. Hard hats must be worn. Keep clear if machines operating, signage	C-	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 PPE- SMS-06-GD-0323
		Fall down embankment	B+	Be aware, keep clear of unprotected edges, use dedicated access, additional/artificial lighting	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Working At Heights SMS-06-GD-0240
6	Securing Remaining Cables	Contact with services	B+	Locate services prior to starting work. Service searches to be on site and signed off mark and/or isolate services as appropriate maintain regulated clearances on electrical services	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Electrical Equipment SMS-06-GD-0268
		Muscle strain	B-	Correct manual handling procedures. "back-safe" training. Plant to move heavy and/or bulky items. As per Risk assessment.	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Manual Handling SMS-06-GD-0001

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7	Removal Of Asbestos Trough	Asbestos fibres	B+	Troughing to be wet down and kept wet till bagged and sealed. PPE to be worn (overalls, gloves, eye protection, breathing protection masks to be p2). Avoid breaking sheets, if broken and to be left for next shift/possession the broken parts should be sealed with Erma clad or similar. Tray of truck to be lined with plastic joints sealed with duct tape	C-	Team Leader Work Group Leader All Staff	Hazardous Materials SMS-06-GD-0228 Asbestos Removal Work PLAN. SMS-06-FM-0117 PPE- SMS-06-GD-0323
		Muscle strain	B-	Adequate number of men lift troughing into allocated area to be wrapped and sealed in plastic in bundles large enough to be lifted into truck by two men bundles to be loaded onto tray of truck then plastic from tray to be folded over and sealed	C+	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Manual Handling SMS-06-GD-0001
		Personnel struck by machinery	B+	Implement exclusion zones. Use ticketed operators. Plan work to avoid site congestion	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Plant SMS-06-PR-0225
		Contact with services	B+	Locate services prior to starting work. Service searches to be on site and signed off mark and/or isolate services as appropriate maintain regulated clearances on electrical services	C+	Team Leaders Work Group Leaders All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Electrical Equipment SMS-06-GD-0268
		Contact with live o/h wires	A	Maintain regulated clearances on wires at all times. Isolate power when in side Safe approach distance (SAD).	C+	Qualified Permit Holder QEL29/MEI61 Team Leaders Work Group Leaders All Staff	Electrical Equipment SMS-06-GD-0268 Electrical Permits SMS-06-EN-0577
		Head injuries	B-	Briefing. Hard hats must be worn. Keep clear if machines operating, signage	C-	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 PPE- SMS-06-GD-0323
8	Load Asbestos Into Bins	Asbestos fibres	B+	Bin to be lined with plastic and joints to be sealed with duct tape PPE' to be worn (overalls, gloves, eye protection, breathing protection masks to be p2). Plastic lining from bin to be folded over and sealed with duct tape. Bins to be marked as containing asbestos.	C-	Team Leader Work Group Leader All Staff	Hazardous Materials SMS-06-GD-0228 Asbestos Removal Work Plan. SMS-06-FM-0117 PPE- SMS-06-GD-0323

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		Contact with live o/h wires (high voltage)	A	Maintain regulated clearances on wires at all times. Isolate power when in side Safe approach distance (SAD).	C+	Qualified Permit Holder QEL29/MEI61 Team Leaders Work Group Leaders All Staff	Electrical Equipment SMS-06-GD-0268 Electrical Permits SMS-06-EN-0577
		Exposure to contaminated material	A	Test spoils for contaminants. Disposal in accordance with relevant OH&S guidelines.	C-	Competent Person Team Leaders Work Group Leaders All Staff	Environmental Protection Plan, Hazardous Substances SMS-06-GD-0199
9	Final Clearances	All Asbestos Remaining	A	Hygienist Report Monitor Readings	C-	Competent Person Team Leaders Work Group Leaders All Staff	As per Workcover Requirements

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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

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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
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.