Cable Route Direct Buried

Issue date: 08/04/08
Review date: 20/02/11

SWMS number:
SMS-06-SW-1022

SWMS Name:
Cable Route Direct Buried

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

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:

- 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
- Workplace communication protocol.
- WorkCover Code of Practice Excavation 2000
- National Code of Practice for Manual Handling [NOHSC:2005 (1990)]

Equipment/Plant/Tools:

- Excavator / Backhoe
- Spill Kit
- Siltation Barriers, Bunded Fencing, Hay Bales
- Workplace sign board. Jersey barrier / post and handrails / solid timber base barrier.
- Motorised cable puller with rollers
- Signalling Cable

Records/Reporting:

- Worksite Protection Plan
- Pre-work Brief
- Site Specific Management Plan
- Excavation Work Permit.
- Environmental Protection Plan
- Services searches
- Work site protection rules NWT 300 – 318.

Permits/licences required:

- Excavator / Backhoe
- Certificate

Inspection requirements
Nil

Service schedule:
Nil

MIMS or METRE Ref:
Nil

Training/Qualification required:

- Construction Industry Induction
- Track Safety Awareness

or
RISI (Rail Industry Safety Induction)

Personal Protective Equipment required:

- Safety Boots
- High Visibility Vests
- Hardhats
- Protective Clothing
- Safety Glasses

And as specified below.

- P2 Dust Masks
- Gloves
- During all Site Works a FIRST AIDER MUST be Present

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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	Locate other Services	1. Injury due to contact with hazardous services	A	Refer to valid cable search for internal and external (DBYD). Inspect for any overhead wires/ hazards.	D	Cable searches & DBYD plans	Excavation & Earthworks SMS-06-GD-0378
		2. Ultra Violet injuries	B	Use PPE, i.e., Cover / protect exposed skin – clothing, suns screen, hat, tinted safety eyewear, take breaks	D	Team Leader / Work Group Leader / All Staff	SSMP, Pre work Briefing SMS-06-FM-0163 Workplace Risk Management SMS-06-PR-0104
6	Clear/doze work area	1. Contact by machine	A	Establish eye contact with operator and have him/her stop the machine if you have to work inside the operating reach of the machine and wear hard hat. Secure work site to prevent unauthorised access.	D	Team Leader / Work Group Leader / All Staff / Plant Operator	Excavation & Earthworks SMS-06-GD-0378 Plant SMS-06-GD-0225 Pre work briefing SMS-06-FM-0163 Safety Communication. SMS-10-SR-0040
		2. Siltation	A	Install appropriate Siltation barriers e.g. bunded fencing, hay bales etc.	D	Team Leader / Work Group Leader	Environmental Manual, Environmental Protection Authority, relevant Authorities

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		4. Fuel Spillage	B+	1. Turn off plant being fuelled. 2. Spill kit on site 3. Turn off mobile phone's 4. No smoking First aid kit with burns kit.	D	Plant Operator, Team Leader, Work Group Leader	Environmental Manual, Environmental Protection Authority, relevant Authorities
7	Excavate trench	1. Entrapment due to Trench Collapse	A	Shore or batter unstable trench. No persons allowed in unstable trench. Minimise plant movement around trench area.	C-	Team Leader / Work Group Leader / All Staff	Excavation & Earthworks SMS-06-GD-0378 TDTW501A
		2. Vehicles fall/drive into trench at night	A	1. Advise people of work to be carried out prior to commencing 2. Use signs in immediate area. 3. Barricade the area with suitable fencing / barrier material and lights.	D	Team Leader / Work Group Leader	
		3. Contact by machine	A	Establish eye contact with operator and have him/her stop the machine if you have to work inside the operating reach of the machine and wear hard hat. Secure work site to prevent unauthorised access.	D	Team Leader / Work Group Leader / All Staff / Plant Operator	Excavation & Earthworks SMS-06-GD-0378 Safety Communication. SMS-10-SR-0040 Pre work briefing SMS-06-FM-0163

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8	Haul and Install cable into trench	1. Muscle Injury	A	1. Clear area before lifting 2. Methods of cable hauling can include: • From drums mounted on truck • Use motorised cable puller with rollers etc. • Manually (if a team greater than 4 is required then the process should be re –assessment to ensure minimum risk to workers). The team effort must coordinated. May have to be done in bites:- area to be walked over whilst pulling cable to be cleared and levelled (least preferred) • Warm up stretch & briefed in manual handling. Leave sufficient cable loop / slack to reduce weight when feeding into trench. Minimum two person lift.		All Staff	SC11 20 00 00 SP. Manual Handling Guide SMS-06-GD-0001 PPE SMS-06-GD-0323
		2. Entrapment due to trench collapse	A	Shore or batter unstable trench. No persons allowed in unstable trench. Minimise plant movement around trench area.	C-	Team Leader, Work Group Leader	Excavation & Earthworks SMS-06-GD-0378
9	Install Cable Cover	1. Muscle Injury	B-	Clear area before lifting. Warm up stretch. Don't over strain. Use manual handling techniques.	D	All Staff	SC11 20 00 00 SP. Manual Handling Guide SMS-06-GD-0001 PPE SMS-06-GD-0323
		2. Dust – excessive	C+	1. Watering of area 2. Only remove excess vegetation 3. Keep vehicular traffic to a minimum. 4. Wear appropriate eye protection and disposable mask site specific.	D	All Staff	PPE SMS-06-GD-0323

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10	Back Fill Trench	1. Siltation	A	Install appropriate Siltation barriers e.g. bunded fencing, hay bales etc.	D	Team Leader, Work Group Leader	Environmental Manual, Environmental Protection Authority, relevant Authorities
		2. Muscle	B-	Clear area before lifting. Warm up stretch. Don't over strain. Use manual handling techniques.	D	All Staff	Excavation & Earthworks SMS-06-GD-0378 Manual Handling Guide SMS-06-GD-0001
☐	Site specific hazards						

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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

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-

Extreme
High
Medium
Low

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 liklihood 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 matricies).

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.