SWMS – Civil inspections and maintenance on Trip Gear Magnets.

Issue date: 04/10/07
Review date: 04/10/10

SWMS number:
SMS-06-SW-0766

SWMS Name:
Civil inspections and maintenance work on Trip Gear Magnets.

SWMS Team:
Livio Radman
Justin Howard
Dragan Sukara
Mick Meehan

Custodian (Position):
Business Systems Officer,
Illawarra Region.
Peter Sharpe.

Assumptions:
Fine weather, daylight hours, rail tracks operational with OHW power live.
Staff have had Regional Induction.
Staff briefed in SWMS: Civil inspections and maintenance in the danger zone of the railway track.

Approving Authority (Position):
General Manager,
Infrastructure Maintenance.

Applicable Standards, Codes of Practice and guidance:

- Workcover Code of Practice, for the storage and handling of Dangerous Goods, 2005.
- National Code of Practice for Manual Handling NOHSC:2005 (1990).
- Workcover Code of Practice: Moving plant on construction sites.
- Workcover Code of Practice: Noise Management, and Protection of hearing at work.
- Workcover Guide: Safe working at heights.

Plant/Equipment/Tools:

- Hand tools.
- Power drill.
- Ladder.

Inspection requirements

- Electrical equipment has current test tag.
- Daily plant check.
- Pre work check of tools.

Records/Reporting:
Inspection work.
Routine Track Patrol, and detailed walk inspection report forms.

Maintenance work.
Scope of work, and production report form.

Service schedule:
SSC 096 –Track magnets routine maintenance examination.
SSC 097 - Track magnets routine maintenance examination.

MIMS or METRE Ref:
P01C01 – Repair track magnets.
P01001 – Track magnets general examination.
P01002 – Track magnets fastening examination.
P01003 – Track magnets remove and install.

Permits/licences required:

Where required:-

- Minor Plant operator competency as required.

Training/Qualifications required:

- Applicable competency for the task being carried out. Obtained from the Railcorp Infrastructure Engineering Manuals, TMC 101 Track Service Schedules
- Railcorp Infrastructure Engineering - Track Installation and Maintenance Manual TMC 231 chapter 17.

Content reviewed by Technical expert (SME) and RailCorp safety professional (position including Div/Group)

- Maintenance Engineer Civil – Asset Management, Metropolitan Infrastructure, West Region.
- Safety Officer - Asset Management, Metropolitan Infrastructure, Illawarra.

PPE required:

- Steel Cap Boots
- Safety Glasses
- Safety Vest
- Hard Hat
- Gloves as required.
- Hearing protection PPE.

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.	Visual inspection.	The effect of the magnetic field emitting from magnets on pacemakers, and other medically implanted devices.	B+	Insitu warning signs. Staff with medically implanted devices to remain greater than 3 metres from the magnets. Staff with hearing aids are not to place hearing aid with 125mm of a magnet.	C-	Team Member.	
		Damage to electronic and communication equipment, and magnetic data strips on cards.	D	Keep all equipment and cards 600mm from magnets. Staff should remove watches and wallets before working with magnets.	D	Team Member.	
		Slips, trips, and falls.	B+	Identify, and avoid identified hazards. Staff have local knowledge. Do not run. Don't walk along the Rail. Only walk on track when essential. Correct footwear.	B-	Worksite supervisor Team member	SMS -06-SW-0527. Safety footwear.
		Struck by train.	A	Worksite protection is appropriate. Stand still and use mobile phones from a safe place.	B-	Worksite supervisor	Network Rules and procedures.
		Contact with toxins from spiders, wasps, snakes, ticks, etc.	C-	Inspect before commencing work. Wear Gloves.	C-	Team Member.	SMS-06-SW-0530. Protective gloves.
		Needle stick injury.	B-	Identify possible needle stick locations. Wear gloves. Dispose of needles with needle stick kit.	C+	Worksite supervisor.	SWI: Needle stick kit. SMS-06-SW-0530. Protective gloves.
		Fall from heights.	B+	Identify, and avoid identified hazards. Staff have local knowledge. Stay safe distance from drops, eg cutting edges, culverts etc.	B-	Worksite supervisor Team member	

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)
		UV exposure	B+	Apply 30 plus sunscreen at required intervals, after referring to MSDS. Wear long sleeve shirt if required. Wear broad brim hat if required.	C+	Team Member.	SMS-06-SW-0537. Sunscreen.
		Struck by object thrown from train	C+	Stop work when trains approach on adjacent track, and observe passage of train.	C-	Team Member.	
		Injuries from other work activity in the vicinity.	B+	Contact other worksite supervisor before entering worksite and obtain induction before entering.	B-	Worksite supervisor.	
2.	Remove graffiti from signs or magnets.	Damage to lungs or airways from chemical fumes Burns from caustic nature of cleaner. Fall from heights using ladder.	B-	Use correct MSDS for chemical being used. Use PPE as directed by MSDS. Ladder SWI.	C-	Team Member.	MSDS: Applicable to chemical being used. SMS-06-GD-0240. Working at heights. SWI: Fixed ladders.
3.	Secure any loose signs or magnets.	Muscle strain due to manual handling. Fall from heights.	B	Correct manual handling techniques. Ladder SWI.	C	Team Member.	SMS-06-GD-0001. Guide to Manual Handling. SMS-06-GD-0240. Working at heights. SWI: Fixed ladders.
4.	Removing build up of iron filings and other metal contaminants from magnets.	Cuts abrasions, sharp objects Particles in eyes	B	Wear gloves and safety glasses.	C	Team Member.	SMS-06-SW-0530. Protective gloves. SMS-06-SW-0529. Eye protection.

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5.	Transport of magnets to and from site.	The effect of the magnetic field emitting from magnets on pacemakers, and other medically implanted devices. Injury to fingers or hands as opposite pole magnets pull together. Damage to electronic and communication equipment, and magnetic data strips on cards. Muscle strain due to manual handling.	B+	Staff with medically implanted devices not to handle magnets, and to remain greater than 3 metres from the magnets. Staff with hearing aids are not to place hearing aid with 125mm of a magnet. Keep opposite pole magnets apart. Blue and yellow magnets must not be transported or stored within 10 metres of each other. Keep all equipment and cards 600mm from magnets. Staff should remove watches and wallets before working with magnets. Correct manual handling techniques.	C-	Team Member.	SMS-06-GD-0001. Guide to Manual Handling.
6.	Mark out and drill bolt holes in timber sleepers for magnet installation.	Hearing damage from drill. Injury from manual handling of drill. Injury from loose clothing caught in drill.	B-	Hearing protection PPE. Eye protection PPE. Correct manual handling techniques. SWI for drill. No loose clothing to be worn.	C-	Team Member.	SMS-06-GD-0531. Hearing protection. SMS-06-SW-0529. Eye protection. SWI: Applicable to tool being used.
7.	Clean the concrete sleeper where the base plate will be fitted.	Injury to eye from loose particles	B-	Eye protection PPE.	C-	Team Member.	SMS-06-SW-0529. Eye protection.
8.	Fasten the base plate and magnet to the timber sleeper.	Muscle strain due to manual handling.	B-	Correct manual handling techniques.	C-	Team Member.	SMS-06-GD-0001. Guide to Manual Handling.
9.	Fasten the base plate and magnet to the concrete sleeper.	Muscle strain due to manual handling. Burns to skin or damage to lungs from adhesive.	B-	Correct manual handling techniques. PPE according to MSDS. Use applicable MSDS.	C-	Team Member.	MSDS: Applicable to chemical being used.
10	Pack up worksite	Work incomplete.	C+	Carry post work inspection.	D	Worksite supervisor.	

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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.