

Operation of Scarifier

Issue date: 10/04/08
Review date: 18/02/11

SWMS number: SMS-06-SW-1057	SWMS Name: Operation of Scarifier	SWMS Team: Track Review Team	
Custodian (Position): Track Works Manager Commercial / Renewals	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) Track Works Manager & SEQ Coordinator Asset Management Group Commercial / Renewal	
Approving Authority (Position): Safety and Quality Manager, Commercial / Renewals	Plant/Equipment/Tools: <ul style="list-style-type: none"> • Star Pickets • Fencing • Detonators • Radios • Flags • Horn • Gemco Scarifier • Machine guards • Drills • Water Cart 	Records/Reporting: <ul style="list-style-type: none"> • Worksite Protection Plan • Pre-Work Brief • Daily Plant Checklist • Site Induction • Induction Records • Plant and Equipment Checklist • Operation of Scarifier Procedure • Material Safety Data Sheets Permits/licences required: <ul style="list-style-type: none"> • Relevant Safeworking Certifications • Operators Tickets 	
Applicable Standards, Codes of Practice and guidance: <ul style="list-style-type: none"> • RailCorp Safety Management System • Rail Management Centre – Track Machine Reference Guide • OH&S Regulations 2001 • OH&S Act 2000 • Rail Safety Act 2002 • Rail Safety Regulation 2003 • RailCorp Network Rules & Procedures • WorkCover NSW Plant Guide 	Inspection requirements: <ul style="list-style-type: none"> • For Plant and Equipment inspections refer to Daily Plant Checklists accompanying the machine. 	Service schedule: Team Leader MIMS or METRE Ref: Nil Training/Qualifications required: <ul style="list-style-type: none"> • Construction Industry Induction • Track Safety Awareness and Electrical Awareness or • Rail Industry Safety Induction (RISI) • Applicable Plant and Safeworking competencies • Track Vehicle Operator Competency Training 	PPE required: <ul style="list-style-type: none"> • Steel Capped Lace-Up Safety Boots • High Visibility Orange Vest • Hard Hats • Heavy Duty Safety Glasses • Protective Clothing • Hearing Protection (as required) • Gloves (as required) • Dust Masks (as required) <p>During all Site Works a FIRST AIDER MUST be present Site Book kept on site at all times</p>

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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 the briefing being given	B-	Identify all hazards. Staff to ensure that 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 and Permits, Unqualified personnel for the task	B-	Visual Inspection of Personnel Competency Cards and 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 and Equipment kept in poor working condition	C+	Conduct a Daily Plant Checklist	D	All Staff	Plant SMS-06-GD-0225
5	Worksite Protection	Hit by Train	A	Handsignaller Demarcation fencing	C+	PW04	Network Rules & Procedures Workplace Risk Management SMS-06-PR-0104
		Machine hit by Train	A	worksite Protection Plan	C+	PW04	
		Personnel not aware of RailCorp Safety Procedures	A	Site Induction Pre work Briefing	C-	PW04	Pre-Work Briefing SMS-06-FM-0163
6	Machine set up / Machine Operation	Entanglement: Persons hair, clothing, neck tie, jewellery, cleaning brushes, rags or other materials can become entangled with moving parts of the plant or materials in motion	A	Operating Procedures for machine Guards on rotary drills JHA Plant maintained according to manufacturers specifications Use qualified competent and ticketed operators	C+	Certified Operator / Pw01	Plant SMS-06-GD-0225

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		Slips, Trips and Falls: Uneven or slippery surfaces Poor housekeeping Obstacles in the path of operating plant	B+ C- B+	Identify hazards in pre work briefing Site surveillance to rectify and poor housekeeping Clear obstacles	C- D C-		Workplace Risk Management SMS-06-PR-0104 Workplace Inspection SMS-16-FM-0069 Plant SMS-06-GD-0225
6	Machine set up / Machine Operation (continued)	Fall from height: Lack of proper work platform Lack of proper ladder or stairs Lack of guard rails or suitable edge protection Greasy or slippery surface on machine when checking on rail	B+ B+ A B+	Provide adequate work platform Provide ladders or stairs to WorkCover guidelines JHA as above Care to ensure step surfaces are clean Keep firm handhold	D D C- D	Team Leader Supervisor	Scaffolding SMS-06-GD-0282 Ladder / Step Ladders SMS-06-SW-0264 Scaffolding SMS-06-GD-0282
		Electrical Hazards: Contact with live Electrical Conductors Plant in close proximity to electrical conductors Lack of isolation / "Out of Service" procedures	A A A	Power out permit, Height Restrictors on plant Power out permit, Height Restrictors on plant Follow correct Electrical Isolation procedures, Use qualified Electrician	C+ C+ C-	Supervisor, Operator Operator, Dogman Electrician, Supervisor	Work Around Elect. Equip. SMS-06-GD-0268 Electrical Permits SMS-06-EN-0577 Plant SMS-06-GD-0225

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		Striking Services	B+	Services searches completed and use in pre work brief Services marked	D	Project Manager Supervisor Team Leader	Services Search, Dial Before you Dig
		Hazardous Chemicals	C+	Register of hazardous chemicals and MSDS on site	D		Hazardous Substances SMS-06-GD-0199
		Dust	B+	Wear dust mask Wet area down with a water cart	D	All Staff	PPE SMS-06-GD-0323
		Noise	B+	Limits in accordance with EPA	D		Noise Management SMS-06-GD-0273
		Radiation	B+	Use of PPE Limit exposure	D	Team Leader Supervisor All Staff	PPE SMS-06-GD-0323
		Personal Injury: Contact with sleeper being removed/ installed	B+	Operator to be aware of height of shoulder / embankment / workers on site	D	Operator Dogman	Plant SMS-06-GD-0225
6	Machine set up / Machine Operation (continued)	Contact with flying object	B+	Guards in good operating condition	D		Plant SMS-06-GD-0225
		Contact with moving parts of plant during operation	B+	Create Danger/Exclusion zone around operation machine (6m)	D	Supervisor	
		Lack of capacity of the plant to be slowed, stopped or immobilised	B+	JHA Qualified and ticketed operator	D	Operator (trained / ticketed)	
		Plant tipping or rolling	C+	Keep person clear of operating plant Warning beepers	D	Supervisor	

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	Debris from plant operation	B+	Guards in place Keep other workers clear	D			Plant SMS-06-GD-0225 Hazardous Substances SMS-06-GD-0199
	Contact with moving parts when changing attachments	A	Operator competency Keep other workers clear JCB handbook	C-	Operator Supervisor		
	Contact with high pressure fluid from plant failure	B+	Daily plant checks	D	Operator Supervisor		
	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

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		
Consequence	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	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.		
	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	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.		
		F1	F2	F3	F4	F5	F6	To score the risk, follow the steps:		
>10 Fatalities	C6	Disastrous	B-	B+	A	A	A	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).		
2-10 Fatalities	C5	Catastrophic	C+	B-	B+	A	A	2. Identify the likelihood of this level of consequence occurring. (This is done after considering the effectiveness of the current controls in place)		
1 Fatality (2-10 Major Injuries)	C4	Critical	C-	C+	B-	B+	A	3. Score the risk using the combination of likelihood and consequence ranking.		
1 Major Injury	C3	Major	D	C-	C+	B-	B+	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.		
1 or more Minor Injuries	C2	Minor	D	D	C-	C+	B-			
First aid treatment, or illness/injury not requiring treatment	C1	Negligible	D	D	D	C-	C+	B-		