

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			
Approving Authority (Position): Safety and Quality Manager, Commercial / Renewals	Plant/Equipment/Tools: <ul style="list-style-type: none">Star PicketsFencingDetonatorsRadiosFlagsHornGemco ScarifierMachine guardsDrillsWater Cart	Records/Reporting: <ul style="list-style-type: none">Worksite Protection PlanPre-Work BriefDaily Plant ChecklistSite InductionInduction RecordsPlant and Equipment ChecklistOperation of Scarifier ProcedureMaterial Safety Data Sheets	Permits/licences required: <ul style="list-style-type: none">Relevant Safeworking CertificationsOperators Tickets	Content reviewed by Technical expert (SME) and RailCorp safety professional (position including Div/Group) Track Works Manager & SEQ Coordinator Asset Management Group Commercial / Renewal
Applicable Standards, Codes of Practice and guidance: <ul style="list-style-type: none">RailCorp Safety Management SystemRail Management Centre – Track Machine Reference GuideOH&S Regulations 2001OH&S Act 2000Rail Safety Act 2002Rail Safety Regulation 2003RailCorp Network Rules & ProceduresWorkCover NSW Plant Guide				Inspection requirements: <ul style="list-style-type: none">For Plant and Equipment inspections refer to Daily Plant Checklists accompanying the machine.

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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	B+ B+	Provide adequate work platform Provide ladders or stairs to WorkCover guidelines JHA as above	D D	Team Leader Supervisor	Scaffolding SMS-06-GD-0282 Ladder /Step Ladders SMS-06-SW-0264 Scaffolding SMS-06-GD-0282
		Lack of guard rails or suitable edge protection Greasy or slippery surface on machine when checking on rail	A B+	Care to ensure step surfaces are clean Keep firm handhold	C- D		
		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		
		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	Plant SMS-06-GD-0225 Hazardous Substances SMS-06-GD-0199
	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							<u>Definition for Use - Regional & Local level (Workplace)</u> 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: 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. 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.
			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-		