Safe Work Method Statement – Installation of Temporary Electrical Services

Job details

Job description	Installation of Temporary Electrical Services.	SWMS Number	201074-SE-SWM-0050
Author(s)	Mike Bentley	Project	CBESS
Review team	Alex Yates, Adrian Hunt	Location	Office Area
SWMS approved by		Area	
Skills / Qualifications / Licences required	Electricians and Trades assistants		
Plant / Equipment required	Ladders, Scaffold, EWP, Small Power Tools, Hand Tools, Testing Equipment, Light Vehicle.		
Permits required	Permits as per site requirements		
Required Legislation Standards and COPs	**WA –** Work Health and Safety Act 2020, Work Health and Safety (General) Regulations, Work Health and Safety (Mines) Regulations, Work Health and Safety (Petroleum and Geothermal Energy Operations) Regulations 2022, Mines Safety and Inspection Act 1994, Energy Safety Act 2006, Energy Safety Regulations 2006, Petroleum and Geothermal Energy Resources Act 1967, Electricity Act 1945, Electricity Regulations 1947, Electricity Licensing Regulations 1991, Environmental Protection Act 1986, Environmental Protection Regulations 1987. COP - Managing the risk of falls at workplaces, Hazardous manual tasks		
Applicable Australian Standards	AS/NZS 4836:2011 Safe working on or near low-voltage electrical installations and equipment, AS 2067:2016 Substations and high voltage installations exceeding 1 kV a.c, AS/NZS 3012:2019 Electrical installations - Construction and demolition sites, AS/NZS 3007:2013 Electrical equipment in mines and quarries - Surface installations and associated processing plant, AS/NZS 3017:2022 Electrical installations - Verification by inspection and testing		

PPE (tick required)												
										As required	
	Uniform ☒	Footwear ☒	Eyewear ☒	Gloves ☒	Hard hat ☒	High-Viz ☒	Ear wear ☐	Dust mask ☐	Fall arrest ☐	Other ☒	Other ☐

Potential hazards associated with the works

Category	Hazard	Category	Hazard	Category	Hazard
Working at heights	☒ Ladders ☒ Lifting equipment, scissors / EWP's ☒ Scaffolding ☒ Stairs / platforms ☒ Working at height ☐ Working above others ☐ Multiple work requiring EWP's	**Pressure**	☐ Competitive pressures ☐ Compressed gases / air ☐ Fluid ☐ High pressure steam ☐ Hydraulic ☐ Water	**Workplace**	☐ Asbestos ☐ Confined space / void space ☐ Falling objects ☒ General access ☒ Housekeeping ☐ Illumination / lighting ☐ Noise, i.e. Exposure / nuisance ☐ Poor ventilation ☐ Protrusions ☐ Restricted visibility ☐ Restricted work area ☒ Slip & trip hazards ☒ Unauthorised personnel ☐ Unlabelled controls ☐ Vibration ☐ Wet / slippery ☐ Wind / storm activity ☐ Fog / mist / smoke ☐ Working in isolation ☒ Dust / particulates
Working with Electricity	☐ Static electricity/Induction ☐ Sub-stations / switch rooms ☒ Underground cables ☐ Contact with electrical equipment ☒ Electrical cables ☐ High voltage equipment ☐ Overhead cables ☒ Non-compliant earths (tagged/tested)	**Human factors**	☒ Rushing ☒ Complacency ☒ Fatigue ☐ Unclear work direction ☐ Stress / Anxiety / Frustration ☒ Lack of knowledge ☐ Poor communications ☒ Negative attitudes		
Radiation	☐ Infra-red ☐ Microwaves ☒ Ultra-violet light, i.e., sun ☐ X-ray ☐ Laser	**Using mobile plant**	☐ Traffic / pedestrian interaction / collision ☐ Uneven terrain ☐ Unlicensed / untrained operators ☐ Vehicle instability ☒ Vehicle access		
Mechanical	☐ Abrasive blasting / grinding ☐ Auto-start equipment ☐ Conveyors ☒ Equipment failure ☐ Hand and power tool ☐ Impact and crushing areas ☒ Pinch / cutting points ☐ Residual / stored energy ☐ Uncontrolled movement ☐ Unguarded moving parts ☐ Welding or cutting	**Manual handling (ergonomic)**	☒ Awkward / unbalanced load ☒ High / low reach ☐ High force / heavy loads ☐ Lighting ☐ Over exertion / fatigue ☐ Poor design / layout / surface ☐ Repetitive movements	**Chemical**	☐ Chemicals / reagents ☐ Fumes / vapour / mist (e.g. SF6) ☐ Flammable gases ☐ Handling flammable materials ☐ Hazardous chemical exposure ☐ Solid chemical ☐ Splashes / burns ☐ Spills to ground or work area
		Environment	☐ Air contamination ☐ Soil contamination ☐ Storm-water contamination ☐ Waste (effluent/hazardous	**Thermal**	☐ Cold – ambient temperature ☒ Heat – ambient temperature ☐ Hot materials/fluids ☐ Hot surfaces

Job Steps List the steps required to perform the job in the sequence they are carried out	Reference List the references for the required job step such as work instructions, client requirements etc.	Hazards For each job step list the hazards that could cause injury when the task is performed	Initial Risk Rating	Control List the control measures required to eliminate or minimise the risk of injury arising from the identified hazards	Residual Risk Rating
Plan and Prepare Works to be Completed					
Permit to work confirmation – PTW can be issued on a daily basis or at the beginning of the Job – to be determined on site. Permit to work will include the required area permit and a Vicinity permit if required and any other site specific permit requirements.	Site specific PTW requirements	• No confirmation of permit to work • Permit not signed and approved • Permit not understood by work group	5	• Permit applied for and issued by Client • All work crew to read, understand and sign onto permit • Work crew to have clear understanding of restrictions and area for work	2
JHA creation	201074-SE-PLN-001 SCEE CBESS Safety Management Plan (SMP)	• Unclear work instruction • Minimal development team • JHA not developed at the work front • No reference documents used • JHA not signed off	5	• Ensure work crew is involved in development process of the JHA • JHA to be developed at the actual work site / work front. • JHA to be developed by the work crew tasked with completing the works • JHA to be completed in consultation with supervisor • Ensure reference documents are available and to be used • JHA to be signed by all of the work crew • JHA to be signed off by supervisor	2
Pre start and work instruction	201074-SE-PLN-001 SCEE CBESS Safety Management Plan (SMP)	• Unclear instruction • Limited participation • Information not relevant to work group	5	• Set times for pre start meeting • Sign onto prestart meeting sheet to confirm presence and understanding • Supervision to run prestart meeting to ensure clear instructions • Individual participation to be encouraged • Explain work activity and related permits – hazard discussion • Requirement for participants to complete Take 5 communicated • Radio communications channel are to be confirmed for the relevant area for that day (if applicable) • Correct PPE to be worn – gloves, glasses, hard hat, etc. as listed above.	2

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Carry out the job					
Installation of Temporary Electrical Services					
Installation of Electrical Services	201074-SE-PLN-001 SCEE CBESS Safety Management Plan (SMP) SCEE Work Instruction - Housekeeping Refer relevant Safe Work Method Statement (SWMS)	• Uneven surfaces– slip trips & falls • Manual handling • Sharp edges – cuts abrasions • Electric shock • Falling from heights • Poor communication	**5**	• Good housekeeping • Work area inspection • Assistant to be present during installation works. • Installation works to be completed by experienced persons only • LOCK OUT, TAG OUT procedures followed in accordance with SCEE Electrical isolation procedure. • Testing of installation works to be carried out by experienced persons only. • Correct lifting techniques. Obtain assistance if required, use mechanical aids where necessary • PPE – boots, gloves, glasses, hard hat etc. • Use of approved ladders, scaffolds and EWP's etc. • All operators to be VOC'd • Positive communications between all persons involved in the works. • Licensed / experienced persons	**4**
Completion of Installation of Electrical Services	201074-SE-PLN-001 SCEE CBESS Safety Management Plan (SMP) SCEE Work Instruction - Housekeeping Refer relevant Safe Work Method Statement (SWMS)	• Loose items • Rubbish • Uneven surfaces– slip trips falls • Manual handling • Sharp edges – cuts abrasions • Poor communication	**5**	• Good housekeeping – ensure all surplus materials and equipment are cleared away as required • Work area inspections • Correct lifting techniques. Obtain assistance if required, use mechanical aids where necessary • PPE – boots, gloves, glasses, hard hat etc. • Positive communications • Licensed persons — area walk-down check • All operators to be VOC'd	**2**
Job Specific Hazards and Controls – Work Crew to Complete this Section					
• Ground Conditions					
• Live/Moving Equipment					
• Obstructions					

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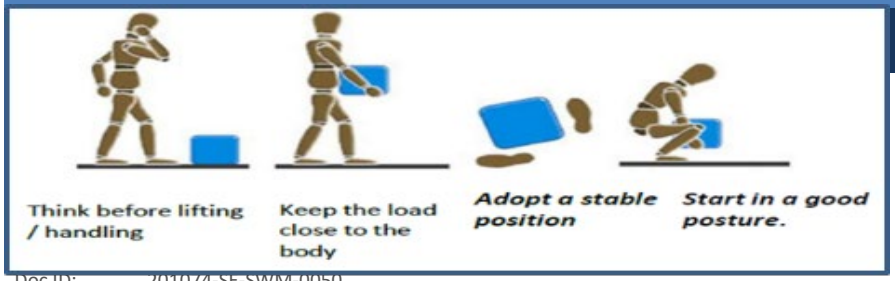
• Weather					
Complete the job					
Work Area Clean Up	SCEE HSE Management Plan SCEE Work Instruction – Housekeeping	• Loose items - Slips trips falls • Manual handling • Surplus / unwanted materials and equipment left on site	5	• Good housekeeping and good ergonomics when lifting • PM task discussions with the group, post activity. • Correct tool storage, consideration of electrical equipment • Removal of all surplus materials / equipment.	2
Environmental impact	SCEE HSE Management Plan	• Rubbish / Waste • Heritage areas • Fire potential	5	• Keep to Designated Areas • Dispose of rubbish at a designated disposal waste site • Follow environmental procedures while working near heritage areas • Post activity checks to check for potential for fire in hot conditions.	2

Manual Handling Techniques/Guide



EMERGENCY PREPAREDNESS

Medical Emergency Response

Danger	- Check for danger
Response	- Check for response
Send	- Send for help
Airways	- Check for blocked airway
Breathing	- Check for breathing

Fire (Electrical)

Rescue
Alarm
Contain Fire
Extinguish (CO^2 or ABE Powder)

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CPR Defibrillation	- CPR 30 compressions 2 breaths - Apply defibrillator (if available)

Pull the pin
Aim at the base of fire
Squeeze the trigger
Sweep base of fire

Electrical Medical Emergency Response	Contact with Electricity Mobile Plant (HV)
• Do not touch person in contact • Warn others to stay clear • Disconnect power source if possible • Call emergency contacts immediately	• Stay calm • Stay within mobile plant (if safe to do so) • Avoid touching anything metal within the cab • Warn other to stay away (minimum 8 meters) • Call emergency contacts immediately
If not possible to isolate energy • Open LV Rescue Kit • Place insulated gloves on • Use insulated LV Hook to break contact between • person and electricity	If unsafe to remain in plant • Do not touch metal when exiting • Try to jump well clear landing with feet together • Jump with both feet together until 8 meters away • Do not touch any metal object within 8 meters of plant
Medical attention must be sought for all electric shocks	

Risk Matrix

Consequence					
	Health & Safety	Environment	Legal & Regulatory	Financial / Commercial	Reputation
Catastrophic	Fatality. Multiple fatalities. Serious safety breach leads to loss of multiple key employees or fatality	Severe damage to environmental / heritage damage	Imprisonment of officers, loss of Electrical Contractors Licence	Not meeting market set expectations by >30%	Permanent loss of strategic client, Systemic brand damage
Major	Multiple LTIs, permanent disabling injury.	Significant environmental / heritage damage. Costly clean up	Major ASX breach, loss of Electrical Contractors Licence, major breach of legal and/or regulatory requirements	Not meeting market set expectations by 10% -30%	Major brand damage
Moderate	Serious injury, Lost Time Injury (LTI)	Moderate effects on environment / heritage area. External assistance required for clean-up / remediation	Moderate breach of legal and/or regulatory requirements	Not meeting market set expectations by 5%-10%	Moderate brand damage
Minor	Medical treatment injury, restricted work injury	Minor short term damage to environmental / heritage area	Minor breach of legal and/or regulatory requirements	Not meeting market set expectations by <5%	Minor brand damage
Negligible	Minor injury at site, first aid treatment	Limited damage to area of no or low significance. Internal clean up	Minor breach of legal and/or regulatory requirements	N/A	Negligible brand damage

Likelihood					
	Rare	Unlikely	Possible	Likely	Almost Certain
Historical	Unheard of in the industry	Has occurred once or twice in the industry	Has occurred many times in the industry but not in the company	Has occurred once or twice in the company	Has occurred frequently in the company
Frequency (Continuous Operation)	Once every 10 years or more within SCEE	Once every 2 to 10 years within SCEE	Once every 1-2 years within SCEE	Once every year within SCEE	More than once each year within SCEE
Probability (single activity)	Rare	Unlikely to occur	May occur	Will probably occur	Will occur

Legend		
	Operational	Corporate
Low 1 – 3	Acceptable with adequate controls.	Project/Functional Manager is responsible
Medium 4 – 10	Acceptable with adequate controls. Confirm that controls implemented have reduced risk to as low as reasonably practicable. Supervisor sign off on JHA required for tasks with residual risk that remains at this level.	Acceptable with *adequate controls. Responsibility of Operations /Divisional /Functional Manager.
High 11 – 19	Acceptable only if controls have been reduced as low as reasonably practicable. Site manager approval of controls for residual risks that remain at this level.	Only acceptable with #excellent controls. All treatment actions to be explored within 1 – 3 months. Responsibility of COO/CEO/MD.
Extreme 20 – 25	Risk needs to be reduced to a level as low as reasonably practicable. Project Manager and HSE Manager consultation is required for any tasks which have residual risk assessed at this level, divisional GM or higher approval required.	Only acceptable with #excellent controls. All treatment actions to be explored within 1 month. Responsibility of the Board.

adequate controls = only what a reasonable person would be expected to do in the circumstances

#excellent controls = more than what a reasonable person would be expected to do in the circumstances

Risk Matrix

	Rare	Unlikely	Possible	Likely	Almost Certain
Catastrophic	11	16	20	23	25
Major	7	12	17	21	24
Moderate	4	8	13	18	22
Minor	2	5	9	14	19
Negligible	1	3	6	10	15

We the undersigned, confirm that we have been consulted in the preparation of the SWMS nominated above and that the content has been clearly explained is understood and accepted. We also confirm that our qualifications to undertake this activity are current.

We clearly understand the controls in this SWMS must be applied as documented including our responsibilities for the implementation; otherwise work is to cease immediately.

Name	Signature	Date	Name	Signature	Date

Comments: _____