



Crane Activity (High Risk)

Work Instruction

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Authority

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History

Revision	Date	Amended By (Name)	Details of Amendment
0.0	06/01/2015	Codie Davies	Document renumbered, supersedes WI-OHS-005
0.1	21/06/2016	Anthony Gollan	Document reviewed to incorporate 5 Star Commitment requirements.
0.2	22/08/2016	Patrick Gabato	Updated format, reference and related documents section.
1.0	30/08/2016	Patrick Gabato	Issued for Use
2.0	12/07/2018	Anthony Gollan	Document reviewed with minor changes
3.0	21/10/2020	Anthony Gollan	Document reviewed
4.0	26/07/2023	Vanessa Placheta	SCEE Electrical Branding and Review

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1 Purpose

The purpose of this work instruction is to provide Southern Cross Electrical Engineering Limited (SCEE) employees with the necessary guidance and information to ensure that while undertaking crane activities they will be done in a safe and efficient manner. This Work Instruction (WI) will comply in conjunction with the **SCEE Safety Management Plan (SMP) SCEE-BS-HS-TEM-0006** while undertaking crane activities. All crane activity is to be carried out in accordance with **AS1418** and **AS2550** as relevant.

Refer: **AS1418**
AS2550
SCEE-BS-HS-TEM-0006 HSE Management Plan

2 Definitions

Term	Definition
C1	Slewing mobile cranes (up to and including 100 tonnes lifting capacity) (includes C6, C2, CN and CV)
C2	Slewing mobile cranes (up to and including 20 tonnes lifting capacity) (includes CN and CV)
C6	Slewing mobile cranes (up to and including 60 tonnes lifting capacity) (includes C2, CN and CV)
CO	Slewing mobile cranes (open/over 100 tonnes lifting capacity) (includes C1, C6, C2, CN and CV)
CB	Bridge and gantry cranes

3 Responsibilities

Role	Responsibility
Project Manager	<ul style="list-style-type: none"> Ensure full compliance with the requirements of this work instruction.
Site Manager	<ul style="list-style-type: none"> Audit and Monitor Compliance with this procedure. Identify remedial corrective actions required to ensure compliance to this work instruction.
HSE Advisor	<ul style="list-style-type: none"> Audit and Monitor Compliance with this work instruction. Identify remedial corrective actions required to ensure compliance to this work instruction.
Supervisor	<ul style="list-style-type: none"> Conduct workplace inspections and enforce compliance with this work instruction.
Employees	<ul style="list-style-type: none"> Comply with the requirements of this work instruction.

4 Flow Chart

N/A

5 Activities

Crane Activity has been identified as a **High Risk Work Activity** by SCEE

The below is to be read in conjunction with SCEE's **5 Star Commitment Procedure SCEE-HS-BS-PRO-0027**. The intent of this procedure is to eliminate the risk of fatalities, injuries and events arising from lifting operations.

Refer: **SCEE-HS-BS-PRO-0027 5 Star Commitment Procedure**

5.1 Risk Assessment and Safe Work Methods

The statutory requirements regarding duty of care to both SCEE and its employees remain the first priority at all times.

This WI shall accompany a Job Hazard Analysis (JHA) and helps ensure that variables relevant to each task are recorded via risk assessment.

Mobile cranes owned by SCEE shall carry the current plant logbook and manufacturer's operation and maintenance manual at all times.

Routine lifts of similar risk level may be controlled by means of a JHA reviewed regularly by the crew/s involved.

The following shall be reviewed and considered in the JHA if applicable:

- Ground conditions;
- Personnel requirements and individual responsibilities;
- Environmental conditions (wind, rain, dust, storms, lightning etc);
- Transportation requirements;
- Stabilisation during transportation;
- Personal protective equipment;
- Access and egress for rigging crews;
- Plant and equipment required;
- Rigging gear required;
- Means of communication; and
- Exclusion zones and barrier/barricade requirements;
- Weight and dimensions of object to be lifted.

Refer: **SCEE-BS-HS-TEM-0008 Job Hazard Analysis (JHA)**

5.2 General Crane Operation

SCEE management shall ensure that crane operations comply with the following; as required:

- Suitably qualified, certified and competent people shall be involved in the planning and implementation of the lifting operations. A Registered Training Organisation (RTO) shall conduct any required competency assessments.
- The operator of a crane shall hold a Licence to Perform High Risk Work endorsed for the category of equipment they are operating. Most SCEE owned cranes fall under the non-slewing mobile crane category CN (e.g. Franna). Personnel may also hold C1, C2, C6 or CO licence which also qualifies them to use a non-slewing mobile crane.
- Operators of HIAB cranes shall have a CV, C1, C2, C6, or CO Licence to Perform High Risk Work.
- Operators of bridge cranes shall have a CB Licence to Perform High Risk Work.
- The manufacturer's operating manuals and load charts (in English) should be readily available to the crane operator;
- Risks associated with all lifting, crane maintenance, assembly activities and environmental conditions are assessed as part of the operators lifting plan process;
- When lifting equipment is operating in the proximity of live electrical conductors, JHA's to control the risk are developed and vicinity permits sourced and adhered to where applicable.
- A procedure is in place to address crane operations when lifting near or over unprotected people, plant, equipment or services, whether controlled by SCEE or others;
- Barricading, warning signs or other means of ensuring safety of personnel protection are in place during crane operations;
- Exclusion zones shall be established for the purposes of excluding personnel not directly involved with the lift or lifting area. The zones shall be established using barriers, barricades or witches hats.
- Controls are in place to prevent objects from lifting equipment and loads falling from height;
- A checklist is used for inspections to be carried out prior to any crane operation taking place.
- If the mobile crane is used to pick and carry loads the loads must be clearly identified at all extremities and the load escorted by a clearly visible rigger or dogman walking in front of the crane. Riggers and/or dogmen shall hold, as a minimum, a Licence to Perform High Risk Work endorsed for Basic Rigging or Basic Dogging.
- All lifting devices and equipment have been visually examined before each lift by a competent person.
- All lifting equipment shall be clearly marked with its Safe Working Load (SWL)
- Lifting equipment shall not be overloaded
- Lifting gear shall be inspected and tagged according to Australian Standards.
- The weight and nature of a load must be determined prior to a lift
- An assessment of the lift has been completed and the lift method and equipment has been determined by a competent person(s).
- Personnel shall never be positioned under a load.

- Clear and uninterrupted communication shall be established between all persons involved in a lift.
- All loads shall be properly secured.

Riggers and dogman shall, whilst travelling with loads:

- Wear high visibility vests or clothing whilst walking with the crane load;
- Be responsible for clearing a safe passage (this includes checking for clearances under such structures as conveyors etc.) for the crane and traffic management;
- Remain clear of the area between the load and the body of the crane; and
- Use taglines to control or secure the load.

Rough terrain cranes shall only be used for pick and carry operations in strict accordance with the crane manufacturer's instructions and shall exercise extreme caution over uneven and potentially unstable ground. An additional safety factor should be applied when referencing the crane mobile load chart to account for sudden movement and load shifts due to ground conditions.

Crane operators and crew shall at all times maintain clear lines of communication. Where ever possible crane operations shall be conducted with a dedicated crane radio channel that cannot be broken by general radio traffic to ensure there is no possibility of outside interference from other personnel or radio signals.

Items of lifting equipment that are subject to wear and frequent replacement (e.g. slings and shackles) or used to transport equipment to and from sites shall be colour coded to confirm compliance with certification and inspection requirements. A register of lifting equipment will be maintained.

5.3 Lifts Involving Multiple Cranes

Multiple cranes shall not be used to lift a load unless a single crane of the required capacity is not readily available. In the event that a multiple crane lift is required, the following conditions shall be met.

- Each cranes capacity shall exceed the cranes share of the load by at least:
 - 20% for a two crane lift;
 - 33% for a three crane lift;
 - 50% for a four or more crane lift; and
- The hoisting shall be supervised by a person holding a Licence to Perform High Risk Work that includes the use of multi hoisting, and who is not an operator of one of the cranes. (Intermediate or Advanced Rigging).
- A lift study must be completed by those involved prior to commencing the lift.

5.4 Interaction with Other Work Groups

This WI and associated JHA aims to ensure that all employees are aware of the need to provide safe interactions and clear communications with other workgroups involved or working near the task.

5.5 Contingency Controls

The Emergency Response Plan incorporated into the [SCEE-BS-HS-TEM-0008 Job Hazard Analysis \(JHA\)](#) must list relevant contact details of Paramedics. The JHA should also indicate the team member who is First Aid Qualified.

Refer: [SCEE-BS-HS-TEM-0008 Job Hazard Analysis \(JHA\)](#)

6 References

Documents, both internal and external, that are referenced within the content of this work instruction, including Australian and International Standards and legislation.

Document ID	Document Title
SCEE-BS-HS-TEM-0008	Job Hazard Analysis (JHA)
	AS1418
	AS2550
SCEE-BS-HS-TEM-0006	Safety Management Plan
SCEE-HS-BS-PRO-0027	5 Star Commitment Procedure

7 Related Documents

Related documents are those that have a relationship with this document, for example if this was the Operational Risk Management procedure related documents would include the work instruction to complete a JHA, the JHA template, Take 5 work instruction and booklet, etc.

Document ID	Document Title
SCEE-BS-HS-SWM-0019	Crane Operations