	Unit ID: 1103
Domain	**CRANE OPERATION - CORE**
Title:	**Sling complex loads and communicate during crane operations**
Level: 4	**Credits: 20**

Purpose

This unit standard is intended for those who carry out crane operations. People holding credit for this unit standard are able to: Plan and prepare for work; inspect and evaluate lifting gear; sling complex loads; communicate during crane operations; and clean up work area.

Special Notes

1. Entry information:

   Prerequisite
   - Unit 1079 – *Comply with health, safety and environmental rules and regulations pertaining to crane operations.*

2. Expected worksite production target are to be met.

3. Assessment evidence may be collected from a real workplace or a simulated workplace in which crane operations are carried out.

4. Characteristics of complex and irregular loads may include but are not limited to unequal weight distribution; eccentric loading; irregular shape and proportions, with or without set lifting points.

5. Maintenance may include but is not limited to cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance and repair activities.

6. Safe working practices include but are not limited to day-to-day observation of safety policies and procedures, and compliance with emergency procedures.

7. Performance of all elements in this unit standard must comply with all relevant legal and workplace requirements, contractual agreement and/or manufacturers' specifications.

8. Regulations and legislation, including subsequent amendments, relevant to this unit standard may include but are not limited to the following:
   - Labour Act, No. 11 of 2007
   - Regulations relating to the Health and Safety of employees at work, 1997

   and all industry specific regulations, legislations, code of practice, or code of conduct.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority. All approved unit standards, qualifications and national assessment arrangements are available on the Namibia Training Authority website www.nta.com.na.

Elements and Performance Criteria

Element 1: Plan and prepare for work

Range

Inspection and preparation of work area and equipment may include but is not limited operational capability of lifting equipment such as correct safe working load of slings; and compliance with statutory regulations.

Performance Criteria

1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, explained, clarified and applied to the allocated task.

1.2 Safety requirements, including personal protective clothing and equipment are obtained from the site safety plan, workplace policies and procedures, and applied to the allocated task.

1.3 Traffic control requirements are obtained and implemented according to workplace requirements.

1.4 Plant, tools, fuel, lubricants, equipment, attachments and accessories selected to carry out tasks are checked for consistency with the requirements of the job, their usability and any faults rectified or reported prior to commencement of work.

1.5 Environmental protection requirements are identified from the project environmental management plan and applied to the allocated task.

1.6 Work area and equipment is inspected and prepared according to workplace procedures.

Element 2: Inspect and evaluate lifting gear

Range

Lifting gear may include but is not limited to lifting beams; spreader bars; slings; shackles; eye bolts; natural, synthetic and wire ropes; chains; and web slings.

Performance Criteria

2.1 Types of lifting gear are identified and described in relation to their purpose and use.

2.2 Weights of various loads are determined, lifting equipment selected, and applicable sling and lifting gear applied to the load in accordance with best industry practice and workplace procedures.

2.3 Lifting gear is inspected and evaluated in accordance with best industry practice, manufacturer's specifications and workplace procedures.

Element 3: Sling complex loads

Range

Factors may include but are not limited to the effect of weather; site conditions; centre of gravity; nature and stability of the load.

Appropriate knots may include but are not limited to bowline, clove hitch and sheet bend.

Performance Criteria

3.1 Factors affecting the safe operation are determined and confirmed.

3.2 Complex loads are prepared and slung in accordance with best industry practice and workplace procedures.

3.3 Package and dunnage are selected and applied to crane lift situations in accordance with best industry practice and workplace procedures.

3.4 Appropriate knots in natural and synthetic ropes are tied.

Element 4: Communicate during crane operations

Range

Communication may include but is not limited to radiotelephone; two-way radio; other electronic devices; and verbal communication.

Performance Criteria

4.1 Hand signals for cranes and lifting appliances are applied in accordance with recognised practice.

4.2 Audible communication is done in accordance with best industry practice and workplace procedures.

Element 5: Clean up work area

Performance Criteria

5.1 Work area is cleared and materials disposed of or recycled in accordance with project environment management plan.

5.2 Plant, tools and equipments are cleaned, checked, maintained, serviced and stored in accordance with manufacturers' recommendations and standard work practices.

5.3 Inspection, faultfinding, and reporting is carried out according to manufacturer's requirements and workplace procedures.

Registration Data

Subfield:	Lifting, shifting, securing loads
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