|                 | <b>Standard Operating Procedure</b> |                             |        |
|-----------------|-------------------------------------|-----------------------------|--------|
|                 | Procedure Name:                     | Multiple Crane Lifts        |        |
|                 | Author:                             | Steve Smallman              |        |
|                 | Approved By:                        | Albie Wheeler               |        |
| Version         | 1.0                                 | With Effect from            | 1/1/12 |
| Review Date     | 1/1/13                              | Document Number             | SOP 15 |
| Risk Assessment | Name                                | RA SOP 15 Multi Crane Lifts |        |
|                 | Date                                | 6/8/12                      |        |

## 1. Aim of procedure

To identify and formalise the risks and control processes involved in Multiple Crane Lifts

## 2. Scope of application

This procedure applies to all Wheeler Cranes personnel engaging in multiple crane lifts, regardless of the location of the lift and size and ownership of the cranes involved. Where working jointly with other crane companies, this procedure may be suspended however, a joint risk assessment and safe work method statement must be prepared to ensure that personnel from all parties are working to the same standards.

#### 3. References

AS 2550.1

AS 2550.5

Draft Code of Practice - Cranes - Safework Australia

# 4. Pre-requisites

Crane Drivers undertaking this work must hold:

- A National Certificate of Competency/High Risk Work Licence for the size and type of crane used
- A vehicle drivers licence of a suitable class for the crane used.
- A Wheeler Cranes Verification of Competency as a crane driver

Dogmen undertaking this work must hold a National Certificate of Competency/High Risk Work Licence as a dogman, and Wheeler Cranes Verification of Competency.

Riggers controlling this work must hold a National Certificate of Competency/High Risk Work Licence as an advanced or intermediate rigger and Wheeler Cranes Verification of Competency.

|                 | <b>Standard Operating Procedure</b> |                             |        |
|-----------------|-------------------------------------|-----------------------------|--------|
|                 | Procedure Name:                     | Multiple Crane Lifts        |        |
|                 | Author:                             | Steve Smallman              |        |
|                 | Approved By:                        | Albie Wheeler               |        |
| Version         | 1.0                                 | With Effect from            | 1/1/12 |
| Review Date     | 1/1/13                              | Document Number             | SOP 15 |
| Risk Assessment | Name                                | RA SOP 15 Multi Crane Lifts |        |
|                 | Date                                | 6/8/12                      |        |

### 5. Procedure

Wheeler Cranes personnel will:

- 1. Plan the operation with special attention to:
  - a. Mass of the load.
    - i. Where mass is determined from a drawing, an allowance must be made for manufacturing tolerances.
    - ii. Prior to lift, the load is to be inspected for build ups or accumulations of deposits, left over oils or water accumulated from rain. Where such accumulations of remnants are present, the assessed mass of the load must be adjusted.
    - iii. Mass of lifting equipment and suspended rope (where material) will be calculated as part of the load.
  - b. Type of lifting attachments. Non-positive (magnet/vacuum) attachments will be avoided.
  - c. Distribution of load and proportion of load on each crane.
  - d. Ensuring the lifts are made in the vertical plane, or within the range of angles specified by the crane manufacturer.
  - e. Means of ensuring the load proportion is maintained throughout the lift, or for when and in what manner load proportions will be adjusted.
  - f. Relative hoist operation speeds, including reeving of hooks. To enable synchronisation of operations, similar capacity and performing cranes should be used.
  - g. Methods to be used to maintain synchronisation between cranes.
  - h. Cranes will be selected so that their WLL at the operating radius exceeds:
    - i. For 2 cranes calculated share of load +20%
    - ii. For 3 cranes calculated share of load +33%
    - iii. For 4 or more cranes calculated share of load +50%
  - i. Need for pick and carry operations, the surfaces and axes of movement.
  - Determine the need for engineering or geotechnical certification of load bearing surfaces.
- 2. Determine the need to document the plan. Where the lift is complex, prepare a lift plan using a standard lift study and any additional drawings necessary to ensure the lift, rigging, placement of cranes slew and travel paths are nominated.
- 3. Assign cranes that meet the lift criteria specified in the planning.
- 4. Select personnel with appropriate qualifications and experience to undertake the lift.
- 5. Determine communication methods and test those communication methods prior to commencing the lift.
- 6. Assess the wind and weather to ensure the safe operation of the multiple crane lift.

|                 | <b>Standard Operating Procedure</b> |                             |        |
|-----------------|-------------------------------------|-----------------------------|--------|
|                 | Procedure Name:                     | Multiple Crane Lifts        |        |
|                 | Author:                             | Steve Smallman              |        |
|                 | Approved By:                        | Albie Wheeler               |        |
| Version         | 1.0                                 | With Effect from            | 1/1/12 |
| Review Date     | 1/1/13                              | Document Number             | SOP 15 |
| Risk Assessment | Name                                | RA SOP 15 Multi Crane Lifts |        |
|                 | Date                                | 6/8/12                      |        |

- 7. Assign one person, not a crane operator with a minimum qualification of Intermediate Rigger to be in charge of the lift. This person will be solely responsible for giving instruction to crane operators during the course of the lift.
- 8. Assign sufficient personnel to assist the rigger in charge observe all critical points of the lift and to report to and act under the control of the rigger in charge.
- 9. Carry out pick and carry operations with caution to retain alignment of cranes and vertical lifting. This will ensure that cranes are not pulling against each other.
- 10. Any person may issue a stop command at any point during the lift. On issuance of a stop command all personnel will immediately cease operations unless there is a clearly evident, direct threat to the safety or welfare of any person.

6. Approval

Albie Wheeler Managing Director 13/9/12

| CV C            | <b>Standard Operating Procedure</b> |                             |        |
|-----------------|-------------------------------------|-----------------------------|--------|
|                 | Procedure Name:                     | Multiple Crane Lifts        |        |
|                 | Author:                             | Steve Smallman              |        |
|                 | Approved By:                        | Albie Wheeler               |        |
| Version         | 1.0                                 | With Effect from            | 1/1/12 |
| Review Date     | 1/1/13                              | Document Number             | SOP 15 |
| Risk Assessment | Name                                | RA SOP 15 Multi Crane Lifts |        |
|                 | Date                                | 6/8/12                      |        |

# 7. Acknowledgement

| Name | Signature | Name | Signature |
|------|-----------|------|-----------|
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |
|      |           |      |           |