

CAVANAGH

CRANES & TRANSPORT

SPECIALISING IN HEAVY LIFT CRANE TRUCKS

SAFE WORK PROCEDURE

| Initial Details | | | | |
|---|-------------|--|-------------|--|
| Principle contractor: Railcorp | | SITE: Various | | |
| Work Activity: CRANE TRUCK | | | | |
| Type | ON track x | OFF track x | Maintenance | Other |
| Developer/s: | Approver/s: | Signature/s | Date: | Plant identity |
| 1. | 1. | | | Identification number/s |
| 2. | 2. | | | Description/colour |
| 3. | 3. | | | ID: |
| 4. | 4. | | | Colour: |
| 5. | 5. | | | Description: |
| 6. | 6. | | | Other: |
| Risk Assessment | | | | |
| Consequence (select one only): Severe (Death or extensive injuries) Major (Medical treatment) Moderate (First aid treatment) Minor (No treatment, report only) | | Likelihood (select one only): A (The event is expected to occur) B (The event is likely to occur in most circumstances) C (The event could occur sometime) D (The event may occur, but probably never will) | | Residual Risk Score: must achieve M or lower Risk score of red E not acceptable Risk score of red H not acceptable Risk score of orange M perform task at caution Risk score of green L N perform task |

| | | CONSEQUENCES | | | |
|------------|---|--------------|-------|-----|-------|
| | | Severe | Major | Mod | Minor |
| LIKELIHOOD | A | E | E | H | M |
| | B | E | H | M | M |
| | C | H | M | M | L |
| | D | M | M | L | N |

| Referenced Documentation | |
|------------------------------------|--|
| Type and list all Tick appropriate | Description |
| | |
| Aus. Standard X | |
| Rail corps X | OHS ACT 2000, |
| Rail safety Act X | OHS regulation 2001 |
| Work cover X | NSW rail safety act 2008, , |
| Guides X | Work Cover guides |
| Manufacturer X | Safe Work Australia industry guides |
| OHS act X | AS1418 Cranes, Hoists and Winches (Crane Code) |
| Code practice X | AS4380 Cargo Restraint Systems |
| Safe Work Aus. X | 1891 Industrial Fall Arrest |
| | Australian standard AS2549 |
| OHS Legis. X | Working near overhead power lines COP |
| Other | Construction Moving plant on construction site |
| | COP, Industry fact sheet Safe work |
| | |

| Personal Protective Equipment | |
|--|---|
| Type | Description |
| Gloves | Yes |
| Safety glasses | Yes Australian Standard approved |
| Goggles | Yes performing impact work refer JSA for Task Australian Standard approved |
| Face shield | Yes performing impact work refer JSA for Task Australian Standard approved |
| Safety footwear | Yes Lace up boots |
| Enclosed footwear | Yes |
| Hard hat | Yes Australian Standard approved |
| Ear plugs / muffs | Yes Australian Standard approved |
| High visibility vest / clothing | Yes Railcorp approved |
| Wet weather clothing | Yes if required for inclement weather |
| Job specific clothing | Yes long sleeve shirt and long pants |
| Sunscreen | Yes |
| Lifeline / body harness | Yes for all heights above 1 metre refer JSA for Task Australian standard approved |
| Intrinsically safe equipment | Any devices required to conform to JSA |
| Other | |
| Licence required for this plant & attachment | Truck licence x EWP licence x Crane ticket x |

| Action Plan | | | | | | |
|---|---|--------------------------------|--|--|---|---|
| Activity steps (step 1) | Potential Hazards (step 2) | Initial Risk Score (step 3) | Risk Control Measures (step 4) | Residual Risk Score (step 5) | Person or persons responsible (step 6) | Monitor and review (step 7) |
| List the steps required to perform the activity in the sequence they are carried out. | Against each activity step list the hazards that could occur | E H M L N | What can be done to minimise the risk of incident or injury | Post control measures E H M L N | Document the name of the person or persons responsible for implementing risk controls | Document the dates a procedure was actioned (date1) and when a review of that procedure will be performed (date2) |
| Pre start check | Mechanical failure vehicle un - roadworthy | E | Perform pre start inspection Confirm maintenance schedule Confirm operation of lights Etc Confirm brake air pressure supply Confirm any appliances are attached securely | N | Vehicle operator Plant manager General manager | Start date (01/09/11 Review 01/09/12 Or if required due to incident |
| Arrive on site | Vehicle operators not briefed on site safety and specific site hazards or general OH&S procedures | E | All operators to have approved work cover general induction authority All operators to have current RISI card All operators to attend site induction and follow instructions from possession officer All operators to sign onto prestart brief and possession officer brief | N | Vehicle operator Possession officer Railcorp representative | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| Accessing the site/track | Accessing the correct site | E | Identify hazards in pre-work briefing and protection officer briefing. Ensure worksite protection is in place Follow movement instruction from possession officer | L | Vehicle operator Possession officer Railcorp representative | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| Work site protection | Rail corridor or live power area not to be assessed unless directed by possession | E | Security gates or boom gates only to be operated by approved Railcorp personnel Confirm first aid on site | L | Vehicle operator Possession officer Railcorp representative | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |

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| | officer | | | | | |
| Traffic on road & parking | Plant struck by traffic Strike pedestrians | E | Confirm traffic plan is in place Confirm spotter / controller is aware of plant | N | Vehicle operator Traffic control company | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |
| Work site protection | Electrocution | E | All staff and contractors must sign on to power out permits and sign out at end of shift | N | Vehicle operator Possession officer Railcorp representative | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |
| Plant placement on track. Engagement of Hi Rail equipment | Mechanical failure of Hi Rail Plant becoming bogged or unmovable Plant de-railing | E | Perform site inspection and survey access site. Confirm access ramp is suitable in length and width for safe Confirm possession officer supplies clearance to go on track In the event of breakdown or plant becoming bogged follow instructions from site or possession officer | L | Vehicle operator Possession officer Railcorp representative | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |

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| On track | struck by train | E | Protection officer to implement controls as per Network rules and procedures. Follow protection officer directions at all times Work to be performed during “possessions “ only | L | plant operator Protection officer | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| On track movement | Obstacles in path of operating plant | E | Clear all obstacles Ensure only allowed site personnel are in presence of plant When moving sound horn once to move forward When moving sound horn three times to reverse Engage amber flashing light Confirm reversing buzzer/beeper operating | L | plant operator Possession officer | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| Track movement | no points to be traversed without possession officer clearance | E | Protection officer to be present at all times when traversing points | L | plant operator Possession officer | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| Track movement | plant hit by train or other plant | E | Workplace protection plan and possession officer to pilot machine | L | plant operator Possession officer | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| plant movement | contact with other plant Contact with trains | E | Confirm hi rail to be listed in TOC manual Confirm spotter in operation Move plant slowly | L | Vehicle operator Possession officer Railcorp representative | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |

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| Plant movement | strike services | E | Confirm services search conducted by principal contractor Confirm services marked by client | L | Vehicle operator Possession officer Railcorp representative Principal contractor | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |
| Crane plant set up attachment | Mechanical failure | H | Confirm attachment prestart check performed Confirm maintenance records Confirm plant manager inspection sign off | L | Plant operator | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |
| Crane operation | contact with live electrical conductors/overhead projections Overreaching Tipping working with SWL | E | Confirm power out permit Height restrictions on plant Confirm no plant or equipment to be within 900mm of live overhead when packed and being transported Do not exceed (SWL) | L | Plant operator Crane operator | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |
| crane operation | tipping working within (SWL) Safe Working load | E | Confirm crane operating in (SWL) Confirm all operators have current operator approval Confirm operation as per manufacturer instructions | L | Plant operator | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |

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| Crane operation | contact with live electrical conductors/overhead projections Overreaching Tipping working SWL | E | Confirm power out permit Height restrictions on plant Confirm no plant or equipment to be within 900mm of live overhead when packed and being transported Do not exceed (SWL) | L | Plant operator Crane operator | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |
| Crane operation | contact with live electrical conductors/overhead projections Overreaching Tipping working with SWL | E | Cont. Slew restrictors to be used if fitted to crane. Note: Touch-Touch potential from different earthing measures on structures . Confirm all operators are wearing gloves and the boom hook is isolated from chains via a nylon sling to stop touch potential | L | Plant operator Crane operator | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |
| load security on plant bed | un planned load movement | E | Confirm all loads are secured for travel Prior to moving plant | L | Plant operator Crane operator | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |
| load security on plant bed | unplanned load movement on release | E | Confirm load security prior to releasing straps/dogs/chains Confirm maintenance check of slings/dogs/chains after each load | L | Plant operator Crane operator | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |

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| (SWL) | plant damage | E | Ensure all lifting equipment is tagged and (SWL) is not exceeded Maintain lift register | L | Plant operator Crane operator | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| Crane operation | Struck by debris | E | Confirm working area clear of contact Confirm crane is not overloaded | L | Plant operator Crane operator | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| Crane operation | Contact with high pressure fluid from plant failure | E | Confirm daily plant checklist completed Confirm correct PPE is in use (gloves)(safety glasses) | L | Plant operator Crane operator | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| Plant working | Contact with moving plant during tasks | E | Confirm danger/exclusion zone is in operation and being monitored around plant | L | Plant operator Spotters Possession officer Contractor Traffic control | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| Plant working | Exposure to noise | M | Confirm noise control in accordance with EPA guidelines, also Work cover Code of Practice Non tonal (quackers) to be used | L | Plant operator Spotters Possession officer Contractor Traffic control parties Railcorp staff | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |

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| Plant working | Explosions from gas ignition, dust ignition & flammable liquid ignition | E | All precautions from induction and pre start meeting to be followed | L | Plant operator Spotters Possession officer Contractor Traffic control parties Railcorp staff | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| Plant work environment | Exposure to dust conditions | M | Confirm area wetting program in place Dust mask or other PPE to be used | N | Plant operator Spotters Possession officer Contractor Traffic control parties Railcorp staff | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| Plant work environment | Exposure to hazardous chemicals | E | Confirm all chemicals on site have available MSD sheets Confirm all manifest quantity chemicals are under supervision from qualified staff | L | Plant operator Spotters Possession officer Contractor Traffic control parties Railcorp staff | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |
| Plant work environment | Personal injury I.e. cutting, striking, stabbing, crushing, puncturing | E | Operators to stay vigilant and be aware of all activities occurring on site | L | operators | Start date (01/09/11 Review 01/09/12 Or if required due to incident or procedure change |

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| Plant work environment | Exposure to ultra violet rays (sun) | E | Confirm all operators have long sleeve shirts, long pants & hat protection Sunscreen is applied every 4 hours Limit exposure where possible (seek shelter) consume constant supply of water | N | operators | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |
| Plant work environment | Fatigue | E | Use all break times provided Operators to abide with Railcorp manage fatigue policy (SMS-20-SR-1443) | L | operators | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |
| On site task | Manual handling | H | Where possible using mechanical lifting Where required use team lifting with one controller of lift Confirm load movement involves moving feet do not twist at the waist, pre plan route. | L | Operator assistants | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |
| On site task | Spillages of oils, waters and fuels | H | Notify safety officer and/or possession officer | L | operator | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |
| On site task | Human error | H | Human errors are to be identified (as far as practical) | L | Plant operator Spotters Possession officer Contractor Traffic control parties Railcorp staff | Start date (01/09/11) Review 01/09/12 Or if required due to incident or procedure change |

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| On site task | lighting | H | Confirm work site lighting is suitable for safe operation | L | Operator Safety officer Protection officer | Start date (01/09/11)Review 01/09/12 Or if required due to incident or procedure change |
| Completion of task Plant left on worksite | Plant unplanned movement Plant damaged | H | Turn off engine Engage park brake Select 1 st gear Position steering to a safe direction Remove keys | N | Operator | Start date (01/09/11)Review 01/09/12 Or if required due to incident or procedure change |
| Other site tasks | Site specific hazards | H | To be addressed at a local level by competent representative of contract or engager. | L | Contractor Other party | Start date (01/09/11)Review 01/09/12 Or if required due to incident or procedure change |

Control monitoring

| Incidents reported reference No and description | Date | Reported by & task being performed | Control failure | New control | Authority to approve |
|---|------|------------------------------------|-----------------|-------------|----------------------|
| | | | | | |
| | | | | | |
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Procedure review date January 1st 2014

Procedure review to be performed by Safety manager & Plant manager

| Procedural change notification | New control procedure | date |
|--------------------------------|-----------------------|------|
| | | |
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| Equipment change / addition / removal (alter truck and/or equipment) | New control procedure if required | date |
|--|-----------------------------------|------|
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I have read and understand how I am to carry out the activities listed in this SWMS.

CRANE TRUCK

| DATE | PRINT NAME | SIGN NAME |
|------|------------|-----------|
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