

STANDARD OPERATING PROCEDURE

Transporting Steel Plate in a Work Area

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TRANSPORTING STEEL PLATE IN A WORK AREA

						
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The following is a step-by-step procedure on how to complete a specific task or meet a facility specific requirement. Standard Operating Procedures (SOPs) are written for all identified critical tasks. By virtue of the hazard or complexity associated with critical tasks it is paramount that the SOP be followed as written. SOPs contain a listing of high-level hazards associated with the task, for detailed hazard analysis reference the applicable Task Hazard Assessments. SOPs do not replace the requirements contained in the company Standards, Codes, and Processes nor does it replace the need to comply with required legislation. Section 8.0 references documentation that the worker shall understand before work commences.

1.0 PURPOSE

- To establish a company standard to safely and effectively carry out work as it applies to transporting steel plates in a work area.

2.0 SCOPE AND APPLICATION

- This document applies to all company Heavy Construction Mining operations. Ensure all site-specific requirements are being met or exceeded before performing the task.

3.0 HAZARDS AND CONTROLS

- Unsecure rigging and attachment failure resulting in personal injury and/or property damage.
 - Thoroughly inspect all rigging and attachment components prior to use (e.g., lifting eyes, hooks, shackles, and cables, Forklift Jib etc.).
 - Ensure all rigging, including shackles, hooks and lifting eyes are rated and/or exceed the lifting capacity required for the load to be lifted.
 - Remove any existing twists or kinks in cables prior to hooking up and lifting.
- Pinch points and line of fire hazards.
 - Workers must inspect the travel path/area and remove all debris, unnecessary tools, and parts from the pathway.
 - Never leave a suspended load unattended.
 - Ensure the load is stable prior to unhooking the rigging.
 - Use spotters in congested areas.
 - No body parts shall be under a suspended load.
 - Do not place hands or fingers between cables and the load.
 - Use taglines to control the load.
- Miscommunication between spotter and operator causing injury or equipment damage.
 - Spotter must be competent in task.
 - Review hand signals with the spotter.
 - Stop if you lose sight of your spotter.

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- Personal injury from handling sharp edges
 - Double palmed gloves must be worn.
 - Be cautious of hand and body placement; inspect area for sharp edges before handling.

4.0 CHECKLIST

- Attend all preparatory meetings (IE: daily PSI; job scope; review of JSA's and SOPs for the job).
- Complete FLRA cards before starting the work.
- Ensure all personnel involved in the task are aware of the hazards and the controls to be used, as identified in the SOP's; JSA's; and FLRA's.
- Conduct a pre-job inspection of all equipment to be worked on and tools to be used.
- Standard of Training required for working on this job: On-the job training.**

5.0 DEFINITIONS

5.1 Company

Refers to North American Construction Group Ltd. (NACG) and all directly or indirectly owned subsidiary companies, including joint ventures.

5.2 Company Personnel

Refers to the Company's employees, officers, directors, agents, associates, consultants/contractors, temporary employees, and third-party processors.

5.3 HSE

Refers to the Health, Safety & Environment department.

5.4 Forklift Jib

Refers to an attachment that is a commonly used for forklifts. Forklift jibs are designed to slide and secure easily onto forklift tines. They usually have a hook at the end of the jib for quick attachment to the load.

5.5 Tag Line

Refers to soft lines that are used in low-to-midlevel lifting to help guide or direct lifted loads. Attaching a tagline to a suspended load allows employees on the ground to safely guide the load into position.

5.6 Pinch Point

Refers to any point where it is possible for a body part to be caught between moving and stationary portions of equipment and/or load.

5.7 Line of fire Hazard

Refers to the travel path of a moving object or the release of hazardous energy that can intersect with an individual's body. Three major categories of line of fire situations are caught-in or between, struck-by, and released energy.

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6.0 PROCEDURE

- 1) Complete a hazard assessment for task. Notify supervision if unsure or if there are any hazards outside of the worker's control.
- 2) Inspect all equipment and tooling before use. Tagout and remove from service any defective or damaged equipment or tooling. Notify supervision.
- 3) Use a picker truck, forklift, or loader/excavator with a plate clamp to lift the steel from the rack and lay it on dunnage on the ground.
- 4) Use C-clamps to secure the plate to the forks. Pick up the plate with the forklift and take it to the work area.
- 5) If using a flat deck, place on at least 4x4 dunnage so the forks or slings will pass under. All loads must be secure prior to transport, regardless of the distance to be travelled.
- 6) If using a forklift mounted jib:
 - o Ensure that the jib on the forklift is centred over the plate's lifting eye or centre. This minimizes horizontal movement of the plate when lifted.
 - o Place the jib hook through the lifting on the plate eye or use a plate clamp and ensure the safety latch on the hook closes.
 - o If the lifting eye is too small to accommodate the jib hook, attach a shackle to the lifting eye and place the jib hook through the shackle. Note: Ensure that the pin is secured tightly into the shackle. If the pin is not tight, the swaying motion of the plate during transport could cause the pin to unscrew from the shackle.
 - o Once the rigging is complete, stand clear of the plate and signal the forklift operator to lift and transport.
- 7) At the destination, ensure the plate is adequately secured or laid flat on blocks or a worktable before releasing it from the forklift. Never leave plate unsecured in a vertical position. The plate could fall causing injury or damage. Plate should only be stored vertically in an approved storage rack.
- 8) When a jib or other approved plate-handling device is not available, two lifting cables and two shackles of the appropriate rated lifting capacity may be used as follows:
 - o Ensure the cables and shackles to be used are in good condition and rated capacity for the plate to be lifted.
 - o Drape the first cable over the fork(s) of the forklift and use the shackle to secure both eyes of the cable to the plate's lifting eye or the plate clamp. This cable is the "load" cable. If necessary, use softeners on the outer edges of the forks to prevent damage to the lifting cable.
 - o Use a second lifting cable and shackle to secure the "load" cable to the forklift. This prevents the "load" cable from sliding off the end of the forks in the event that the forks are inadvertently tilted.
 - o To secure the "load" cable, pass one end of the second cable around the carriage of the forklift (the bar that the forks attach to) and secure both eyes of the second cable to either leg of the "load" cable with the second shackle.

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- Once the rigging is complete, stand clear of the plate and signal the forklift operator to lift the plate and transport.
- 9) With clamps, attach a tag line to each side. With a person on each side, but well clear of the forklift and plate, walk along to control the plate's swing or rotation. If at any time you find you are being pulled over, let go and notify the operator as well as other spotter.

7.0 NOTES

If this task is to be done by a method different than described in this SOP, the work must **STOP** and the alternate method must be **DOCUMENTED** with an adequate hazard assessment tool such as a JSA. The document must be **APPROVED** by a supervisor before such procedures are implemented.

8.0 REFERENCES

- Alberta Occupational Health and Safety Act, Regulation and Code – {Part 2, Hazard Assessment, Elimination and Control}
- Alberta Occupational Health and Safety Act, Regulation and Code – {Part 19, Powered Mobile Equipment}
- 950C-C-008 Cranes, Hoists and Rigging Code
- 950C-C-028 Hazardous Energy Isolation Code
- 950C-C-039 Mobile Equipment Code
- 950C-C-041 Operator Distraction Code
- 962C-SOP-008 Signaling Equipment

9.0 APPENDICES

- Appendix A – Examples of Lifting Aids and Clamps

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Appendix A Examples of Tools and Lifting Aids

Forklift Jib



C Clamp



Sheet Metal Clamp



Lifting Eye

