SIGNALING EQUIPMENT

Tammy Siver

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6	APP	Jun 14, 2025	Approved	Peter Hamel	Mark Haupt	Tammy Siver
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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 do it replace the need to comply with the 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 signaling equipment.

2.0 SCOPE AND APPLICATION

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

3.0 HAZARDS AND CONTROLS

- Limited visibility between spotter and equipment.
    - Spotters will wear reflective clothing and remain in a direct line of sight with the equipment operator.
    - Light wands / batons will be used in reduced visibility (i.e. low light).
    - If more than one spotter is required, a primary spotter will be designated. The primary spotter will wear an arm gauntlet identifying them as the primary spotter. Other items may be used to identify the primary spotter; these items must be approved by supervision and documented on their hazard assessment.
    - Secondary spotters must remain in a direct line of sight of the primary spotter.
    - Equipment will STOP immediately if the operator loses sight of primary spotter or ground personnel.
- Line of fire between spotter and equipment.
    - Spotters will not position their body between equipment or vehicles (i.e. when backing light vehicle to equipment trailer, the spotter will not stand between the vehicle and trailer).
    - Equipment will **STOP** immediately if the operator loses sight of the primary spotter.
    - Spotters will follow 962C-SOP-042 Approaching Equipment for equipment safe limits of approach.
    - If any load must be secured or manipulated the equipment operator must lower all implements, engage hydraulic lockout and exit the machine.
- Spotter struck or crushed by material being moved.
    - Spotters will not stand under a suspended load.
    - Loads will not be lifted over spotters.
    - Spotters will stand outside of the swing radius of a load.

- Congested work areas leading to equipment contact.
    - Use flagging and / or barricades to identify work the area and to prevent other equipment or personnel from entering.
    - Use multiple spotters.
    - Use traffic control.
- Unclear communication.
    - Confirm methods of communication (radio, hand signals, horns, etc.) before the task begins.
    - Review hand signals with all participants.
    - Hand signals may have limitations when distance or visibility prevents the operator from seeing the spotter clearly. Use alternative methods such as radios if required.
    - Confirm radio channels before use. Use isolated channels to prevent interruption or request radio silence. Walkie-talkies may also be used.
    - Equipment will **STOP** immediately if the operator loses sight of the primary spotter.
    - Equipment operators will only follow signals from the primary spotter unless a **STOP** signal is issued.
    - Equipment operators will not respond to unclear signals.
- Overhead hazards.
    - Inspect the area prior to the task. Look for overhead hazards and determine the clearance distances required.
    - Where possible, conduct the task away from overhead hazards.
    - Follow site specific rules as well as 950C-C-042 Overhead Hazards – Limits of Approach when working near powerlines. Encroachment permits may be required as well as additional controls such as air horns.
- Uneven, slippery ground conditions.
    - Inspect ground conditions prior to task.
    - Where possible, level ground and remove large lumps. Do not stand in ruts.
    - Add sand to reduce slipping.
    - Spotters must wear traction aids in icy conditions.
    - Spotters must not stand in the line of fire of equipment should it start to slide.
    - Equipment will **STOP** immediately if the operator loses sight of the primary spotter or ground personnel.

4.0 CHECKLIST

- ☐ Attend all preparatory meetings (IE: daily PSI; job scope; review of JSAs 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 SOPs; JSAs; and FLRAs.
- ☐ 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

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

5.2 Company Personnel

Includes 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.

6.0 PROCEDURE

1) Complete a hazard assessment (i.e. FLRA) for task. Notify supervision if unsure of task or if there are hazards outside of the workers' control.
2) Equipment operators and all ground personnel will have a pre-work meeting prior to task to review communication signals and expectations.
3) Inspect the work area and determine path of travel.
4) Designate primary spotter if more than one spotter is being used.
5) Position spotters. Primary spotter will position themselves on the good side of equipment and maintain line of sight with equipment operator at all times. Position additional spotters based on equipment blind spots. Spotters will not stand in the line of fire of equipment or between equipment, vehicles, structures or obstacles.
    a. Note that some tasks, such as moving haul trucks in and out of a shop, may require up to three (3) spotters to cover all equipment blind spots.
6) Primary spotter will provide direction to equipment operator based on previously established communication signals.
7) Equipment operator will follow direction of primary spotter and use slow and controlled movement when moving equipment or loads into position.

6.1 Acceptable Hand Signals

There are many hand signals used in industry and mining. The most important factor in signaling equipment safely is the pre-work meeting where all task-specific hand signals are discussed and confirmed by all parties involved. If any hand signal is used that has not been discussed and confirmed, the operator will stop immediately until the communication signals are verified will all workers.

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 Code – {Part 12 General Safety Precautions, Section 191 Signalers}
- 950C-C-042 Overhead Hazards – Limits of Approach
- 962C-SOP-042 Safe Approach to Equipment

9.0 APPENDICES

- Appendix A – Recommended Hand Signals
- Appendix B – Recommended Excavator Hand Signals

Appendix A Recommended Hand Signals

NORTH AMERICAN CONSTRUCTION GROUP

ENERGY SAFETY CANADA

PROCEED SLOWLY

FORWARD
Always face palms in direction of desired travel.

BACKWARD
Then bend both arms repeatedly toward head and chest, and then extend.

DISTANCE TO STOPPING POINT

Face palms forward, with hands above head. Bring elbow forward and hands together.

TURNS

Point one arm to indicate the direction to turn.

Bend monitoring arm repeatedly toward head to indicate continued turning.

STOP

Cross both arms above head.

CLEAR TO LEAVE AREA

Point at the driver and gain eye contact.

Turn and extend arms in desired direction.

EMERGENCY STOP

Start with hands clasped over head. Extend downward repeatedly until vehicle stops.

Appendix B Recommended Excavator Hand Signals