

STANDARD OPERATING PROCEDURE

Dozing and Ripping Dig Faces

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DOZING AND RIPPING DIG FACES



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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 dozing and ripping dig faces.

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

- Unsafe ground conditions leading to sloughing or face collapse.
 - Inspect crest and face for undercutting, sloughing/cracks and loose/hanging material.
 - Identify hazardous conditions on hazard assessment (FLRA / JSA) and inform supervisor.
 - Maintain a minimum distance of 3 metres from the back of the dozer tracks to a safe crest/edge. Increase distance if crest is not safe or do not work in the area.
 - Report hazards and changes in ground conditions to supervision, area operators and loading tool operators/personnel below.
 - Crawler tractor and excavator operators will not rip parallel to the face.
- Equipment travelling over the edge of a dig face.
 - Equipment operators will rip away from the crest/edge at a 90⁰ angle maintaining a minimum distance of 3 metres from a safe crest. Cross ripping will be completed at 45⁰ angles to the crest/edge, if necessary.
 - A two (2) metre berm will be maintained between the equipment and the crest/edge.
 - Equipment operators will not daylight the ripper or blade over the crest/edge.
 - Equipment operators will travel perpendicular to the crest. Working parallel to the crest/edge is only permissible when the equipment is a distance greater than twice the height of the crest/edge and when ground conditions permit.
 - If cracks are identified near the crest of the face, notify the supervisor and loading tool operator. Do not enter the potentially unsafe area.
- Neck and back strain injuries while ripping with a crawler tractor.
 - Operators must stretch to properly warm up prior to performing task.
 - Operators will take microbreaks as needed to stop, stretch and reposition.

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- Use proper posture to reduce ergonomic stress and fatigue.
 - Operators will immediately report any discomfort to Supervision.
 - Operators will be competent for the task and use proper ripping techniques.
 - Equipment will be suitable and equipped for the task, including ice lugs during winter conditions. Undercarriage condition will be appropriate for the task.
 - Supervision will limit the duration of crawler tractor ripping activities per operator. A hazard and risk assessment such as a JSA will be used to determine the impact of task duration, ground conditions, operator experience and machine condition when defining the duration of the ripping activity. Additional time will be allotted for the operator to allow them to stop and stretch. It is recommended, at a minimum, that operators stop and stretch on every break.
 - Operate in first gear only while ripping or backing over ripped sections.
 - Avoid travelling over lumps, rocks and rough terrain.
 - While ripping, prevent the crawler tractor from travelling over large debris by keeping the blade 1.5 to 2 feet off the ground. This will protect the tracks while avoiding smaller material. Do not rip and doze at the same time.
 - Straddle rip lines with tracks to reduce jarring.
 - Whenever possible, rip downhill. Utilize the structure of the ground to the crawler tractor's advantage.
- Lump management to minimize injury potential for loading tool, clean up tool, and haul truck operators during loading. This critical task will also minimize damage potential to all equipment below.
 - Break up large frost lumps that may become a problem for the loading tool.
 - If unable to manage frost lumps that may become a problem to the loading tool operator, notify the supervisor and loading tool operator.
 - Crawler tractor operators will not push material over a dig face directly in front of any equipment working below.
 - If ripping with an excavator, pay particular attention not to rip closer than 3 meters from the crest to avoid material from being dislodged and falling to the ground or striking equipment/personnel below.
 - Operators on ripping excavators will not reach over the highwall to assist ripping the dig face.
 - When repositioning to a new location ensure the area below is clear prior to pushing material.
- Inadequate communications between equipment operators.
 - Complete radio check upon claiming equipment and confirm area radio channels are being used.
 - Listen to all radio transmissions to keep informed changing plans, safety information and emergencies.
 - Call equipment operators by unit number.
 - Communicate radio messages clearly and acknowledge transmission (positive acknowledgement).
- Unclear or unknown scope of work leading to confusion and assumptions with area operators.
 - Ensure area operators understand the scope of work as assigned by the supervisor.
 - Establish the work zone.
 - Establish safe working distances from the crest.

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- Identify areas to be ripped.
- Identify berm requirements.
- Identify areas where work may be conducted below.
- Re-evaluate the work area after each break or absence from the work zone.
- Operating in adverse weather conditions.
 - Ice lugs are required on tracked ripping equipment during icy/slippery conditions.
 - Personnel are required to wear traction aids whenever icy/slippery conditions exist.
 - Clean steps, ladders, tracks and use four by three point contact whenever mounting or dismounting the equipment.
 - If the mounting hardware (footholds, handholds, railings etc.) is damaged, DO NOT mount or dismount the equipment. Call the supervisor and report the condition.
 - If the footholds are full of mud, dirt or frozen material and you are unable to clear it, DO NOT mount or dismount the equipment. Call the supervisor or labourer for assistance.
 - Proper ramps will be built and utilized beside the machine at proper height to access and egress the machine safely as needed.

4.0 CHECKLIST

- Attend all preparatory meetings (IE: daily PSI; job scope; review of JSA's and SOP's 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

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

5.4 High Wall / Dig Face

The unexcavated face of exposed overburden in a surface mine.

5.5 Positive Communication

Verbal or visual communication that is acknowledged and confirmed by the receiver.

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5.6 Crest / Edge

The top portion of the high wall or dig face.

6.0 PROCEDURE

- 1) Conduct a hazard assessment (FLRA / JSA) prior to beginning task. Notify supervisor if unsure of task or if there are hazards outside of the worker's control.
- 2) Conduct a pre use equipment inspection (including radio checks) prior to operating equipment and any time the equipment has been unattended.
- 3) Inspect work area for unsafe ground conditions – cracks, sloughing, inadequate berms, loose or falling material prior to beginning task.
- 4) Ensure a two (2) metre berm is in place between equipment and the crest/edge.
- 5) Rip material. Rip away from the crest/edge at a 90° angle and maintain 3 metres from a safe crest. Cross rip at 45° angles to the crest/edge, if necessary. Do not daylight ripper over the edge.
- 6) Push material to the edge, if / when required. Confirm equipment is not working in the area below. Do not daylight blade over edge.
- 7) Re-evaluate for changing conditions. Report hazards and changes in ground conditions to supervision, area operators and loading tool/clean up tool operators/personnel below.

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 36, Mining}

9.0 APPENDICES

There are no appendices.