

DOZERS ON MINE SITES

This year, the mining industry in British Columbia (BC) has experienced several rollovers and other high-potential incidents involving dozers on mine sites. Dozers, often called “bulldozers,” are vital to the overall mining process – they’re also extremely hazardous machines when not operated safely.

Following safe work practices and regulatory requirements are critical to mine site safety. The operator of any mobile equipment is directly responsible for its safe operation and maintaining full control while complying with all provisions of the Mines Act, Regulations and Code. Please consider the following hazard specific recommended controls:



General Recommendations

- Conduct a thorough risk assessment of all proposed work, including when the nature of existing work changes
- Develop standard operating procedures for dozer tasks, especially higher-risk operations
- Ensure trainers are competent and qualified to provide sound instruction to dozer operators
- Ensure supervisors are trained and qualified to oversee mining activity involving dozers
- Ensure workers are adequately trained and qualified to operate dozers; keep good training records
- Only use dozers for their designed and intended purpose, complying with manufacturers’ specifications
- Ensure dozers are in good working order, regularly maintained and suitable for the proposed work, including using the appropriate tracks (grousers) for the intended terrain
- Use seatbelts and consider supplying seatbelt cutters and window breaking tools for emergency use
- Ensure Rollover Protective Structures (ROPS) conform to the Code
- Ensure there is an alternate means of escape from equipment cabs

Working on Slopes

- Ensure you are operating the machine within the manufacturer’s specifications on steep slopes/grades
- Ensure there is adequate supervision/monitoring, especially during higher-risk activities like working on inclines
- Ensure workers have a good understanding of the mine plan and safe operating procedures
- Consult a qualified professional to address any geotechnical concerns or hazards

Working on or Near Water

- Consider securing doors open and removing bush guards, barriers or other items that may impair a quick exit
- Consider cold weather hazards like working on or near ice, including knowing the weight of a machine and the ice thickness if ice travel is required

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- Use appropriate personal floatation devices (PFDs) – buoyant PFDs may hinder an operator more than a manually activated PFD when escaping from a submerged cab
- Ensure the Mine Emergency Response Plan is adequate for emergency responses involving water: a well-developed plan provides rescuers with the ability to execute a successful extraction in water
- Consider additional safeguards like providing an emergency air supply in the cab for the operator

Working on a Dump, Near a Dump, Above Dig Faces or Highwalls

- Ensure dumps, stockpiles, minor impoundments, roads and ramps are designed and constructed by a qualified person using good engineering practices
- Use extra caution while backing up on a stockpile; be aware of the edges and/or overhangs at all times
- Avoid working with tracks parallel to edges unless material is competent and stable
- Keep tracks as close to perpendicular as possible to the edge when ripping or pushing material
- Ensure there is an adequate safe distance from the edge when pushing material over
- Ensure the dump is stable and adequate to support the weight of a dozer

Health, Safety and Reclamation Code for Mines in BC (Code)

The following requirements are only some of the regulations that must be considered when using a dozer on a mine site in BC. For a complete list, please review the Code:

Health and Safety Program – Code s.1.6.9(1): The manager shall develop a mine health and safety program which includes; (c) safe working procedures on a departmental basis

Training – Code s.1.11.1: The manager shall ensure that workers are adequately trained to do their job or are working under the guidance of someone who has competency both in the job and in giving instruction, and ensure that all employees receive thorough orientation and basic instruction in safe work practices

Supervision – Code s.1.12.7(1): The manager shall ensure that every worker, other than those persons referred to in sections 1.12.1 (1), 1.12.2, 1.12.3 and 1.12.6, and other than office employees, is under the supervision of the holder of a supervisor's certificate

Mine Emergency Response Plan – Code s.3.7.1(2): The Mine Emergency Response Plan must outline the response procedures that are essential for effective and timely management of an emergency response

Rubber-tired and Tracked Mobile Equipment Maintenance – Code s.4.9.01(1): The manager shall ensure that brake and steering systems on tracked or rubber-tired mobile equipment are maintained in a safe operating condition through a regularly scheduled preventative maintenance program

Rollover Protective Structures (ROPS) – Code s.4.9.11 (1): A loader, grader, scraper, tractor, compactor roller, skidder, rough terrain forklift, bulldozer and off-road haul truck introduced into service after July 1, 1991 shall be equipped with a ROPS that conforms with any of the following standards, *see s.4.9.11 to s.4.9.13*