## RAILWAY SAFETY PROGRAM: SAFETY HANDBOOK



Safe technical systems. Everywhere.

## Contents

Purp	oose of this Handbook	5
Main	ntenance Plans and Operational Hazards	5
	Winter Plan	5
	Spring Plan	7
	Movement and Securing of Equipment	7
	Walking Hazards	8
	Restricted Clearance Hazards	8
	Spillage / Wheel Contamination	8
Railo	cars: Hand Brakes, Doors, Wheel Sets	8
	Hand Brakes	8
	Minimum Number of Hand Brakes	9
	Safe Operation of Hand Brakes	9
	Brake Stick Operation	13
	Partially and Fully Applied Hand Brakes	14
	Doors: Operation and Spill Prevention	14
	General Procedures	14
	Opening Doors	14
	Closing Doors	15
	Plug Doors	15
	Bottom Gates and Hatch Covers – Closed Covered Hopper Cars	16
	Spillage and Wheel Contamination	17
	Wheel Contamination	17
	Wildlife Protection	17
	Wheel Sets	18
	General Information	18
	Wheel Set Damage	18
Railo	car Handling: Loading, Lifting, Moving	19
	Loading	19
	Regulations and Requirements	19
	Balance and Securement	19

	Dimensional Loads/Overloads	20
	Lifting	21
	Moving	· 21
	Procedures	21
	Starting a Movement	22
	Hand Signals	22
	Blue Flags	22
	Car moving Equipment or Locomotive Signals	23
	Pushing Movements	23
	Speed on Yard Tracks	23
	Riding Equipment	23
	Entraining and Detraining Moving Equipment	24
	Clothing	25
	Emergency Protection	25
	Hand Operated Car Mover and Rail Car Movers (Track mobile)	25
	Hand Operated Car Mover	26
	Rail Car Movers (Track mobiles)	26
	Coupling Cars	27
	Leaving Cars	28
	Yard Crossing at Grades	28
	Key Safety Reminders	29
	Proficiency Testing/Job Observations	29
Tran	sportation of Dangerous Goods	· 30
	Regulations and Resources	30
	Transportation of Dangerous Goods (TDG)	30
	Loading and Unloading Procedures/Regulations	31
	Offering Dangerous Goods for Transportation	32
	Documentation	32
	Dangerous Goods Emergencies	32
Trac	kside Protection and Signage	· 32
	Derails	33

Function	33
Use on Railway Tracks	33
Switches	34
Flagging and Signage	34
Working on, or Near Tracks	35
Working Around Tracks	35
Crossing Over Tracks	
Crossing Over Equipment	
Preventing Hazards	
Water	38
Line of Sight	38
Railway Clearances	39
Clearance Definitions	
Vertical and Lateral Clearances	39
Main Track and Sidings	
Voltage Wire Lines	
Track and Structure Maintenance	41
Regulation and Inspection	
Marking Tracks Out of Service	
Safety Standards on Railway Property	42
Before Beginning Work	
Job Briefings	
General Information	
Planning the Job Briefing	
Conducting the Job Briefing	
Before Starting Work	
Follow Up	
Individual Responsibility	
Required Protection Programs	
Fall Protection	
Confined Spaces	

Personal Protective Equipment	47
Flagging Protection: Working with a Rail Flag Person	48
Arranging for Flagging Protection	48
Working under Flagging Protection	48
Security on the Railway	48
Prevent Trespassing	49
Notes	50
Important Contacts	51
Technical Safety BC	51
Railway Safety Resources and Materials	51

## Purpose of this Handbook

This handbook has been developed by Technical Safety BC's Railway Safety Program in order to provide information to managers and employees of BC railways. This handbook contains information on consequences of unsafe acts and conditions that can affect the safety of railway employees, the public, and the environment. All employees must receive proper certification before moving railcars by any means, including but not limited to winches, front-end loaders, forklifts, track mobiles, locomotives, pry bars, and gravity. The movement of railcars by untrained personnel can result in serious injury, derailment, or damage to the railcar.

This handbook is intended to be used as reference material. This handbook does not relieve a railway client who is certified to operate within BC from fully complying with all applicable provincial legislation specific to their railway operation.

Please make this handbook available to all railway employees so they may understand and follow the safety principles and recommended best practices for safe railway operations.

# Maintenance Plans and Operational Hazards

## Winter Plan

The risk of incidents increase during winter months. These incidents can be caused by the buildup of snow, ice and debris on and around tracks, especially at switch locations and flange ways of crossings. The railway is responsible for snow, ice and debris removal up to the railway service provider's track switch. The following checklist will help ensure your employees as well as your service providers' employees remain safe on and around your railway operation:

Have a winter plan. Focus on important issues before the snow arrives, including inspecting and keeping track and walking areas free of debris and tripping hazards.
Arrange resources in advance. Prepare for the availability of snow removal equipment, of sand, and de-icer.
<b>Keep it clear.</b> Ensure flange ways of tracks running through private or public roads are clear of snow, ice and debris at all times. This includes sanding or cleaning away ice caused by winter conditions.
<b>Update crews on weather conditions.</b> Crews should be reminded daily of the hazards associated with the ever- changing weather and track conditions.
<b>Clear snow from the right of way.</b> Remove snow that slipped from adjacent roof tops from the right of way.
<b>Keep signs visible.</b> If heavy equipment is used for snow removal, ensure restricted clearance and derail signs have not been buried or run over.
Anticipate the snow melting. Be prepared for when the snow melts. Pooling of water can create tripping hazards or icy conditions when it freezes.
<b>Keep wide clearances.</b> Avoid creating close clearances when removing snow. Make sure the right of way is wide enough to allow crew members to move about. Serious injuries can occur due to restricted clearances.

Allow more time for switching. Crews may require more time to do their job safely and the service provider will also appreciate more time too.



**Check derails and stop blocks.** Clear snow away from derails and stop blocks that are not visible. Derailments can result from derails and stop blocks that are not visible.

Keep all switches in the plant free of snow. This
includes switch points and the area(s) where employees
stand to operate switches. Ensure these areas are
draining properly.

## **Spring Plan**

The following spring plan will help reduce the potential for derailments and injuries:

**Arrange resources in advance**. Prepare for grass and brush cutting, as well as spraying.

**Keep right of ways clear.** Remove any grass, weed and debris from right of ways.

**Review and check in.** Have a track maintenance inspector review your trackage and facility.

**Follow upkeep procedures.** Schedule routine repairs and maintenance.

**Think ahead.** Identify the need for any long term capital project work.

## **Movement and Securing of Equipment**

Moving and securing rail equipment is one of the most important aspects of railway safety. Equipment that is not properly secured can significantly impact the safety of railway operations. The safety information in the section: *Railcars: Hand Brakes, Doors, Wheel Sets* and *Railcar Handling: Loading, Lifting, Moving* is useful for all employees who are responsible for moving and securing railway equipment.

## **Walking Hazards**

The leading causes of injuries to railway employees on railway property are slips, trips and falls. It is important that track and railway facilities are free of walking hazards including debris, spillage, vegetation, uneven surfaces, snow and ice. See the *Working on or Near Tracks* section for more information about walking hazards and how they can be avoided. Do not walk on the tops of rails or, when practicable the ties, as they are slippery.

## **Restricted Clearance Hazards**

Serious injuries occur because of restricted clearances. It is crucial that railway facilities have at least six feet of side and overhead clearance from restrictions, or as much as possible. Where there are restrictions, they must be protected by designated warning signs. Refer to the section on *Railway Clearances* for more information.

## **Spillage / Wheel Contamination**

Wheel contamination from consumer products like flour, canola oil and cornstarch can reduce braking capacity and cause other problems with rail equipment. These and other similar substances can cause serious incidents and equipment damage when cars are being moved. Ensure that the facility is free from spillage and wheel contamination. Refer to the section on *Spillage and Wheel Contamination* for more information.

# Railcars: Hand Brakes, Doors, Wheel Sets

## Hand Brakes

Railcars have two braking systems:

1. **Air brakes** use air pressure when cars are connected to a locomotive or a car mover. They are used for train control

and are not intended for long term car securement as air brakes will release over time.

2. Hand brakes are used to secure unattended railcars when they are not coupled to a locomotive or a car mover. They prevent unintentional movement. Hand brakes take up slack on a chain which is linked by a series of rods, levers and gears to brake shoes. Be sure that the brake shoes are free of snow and ice, and that they are contacting the tread of the wheels.

#### **Minimum Number of Hand Brakes**

The Canadian Rail Operating Rules (CROR) Rule 112 lists the minimum number of hand brakes required to secure a car or block of cars. Hand brakes must be determined to be sufficient through an effectiveness test. In some cases, (e.g., when loading heavy material or securing cars on a grade) extra hand brakes may be required. A company's instructions which address internal hand brake policies must meet or exceed minimum requirements per CROR Rule 112.

When securing cars on a grade:

- 1. Apply **more than the minimum** number of hand brakes and perform an effectiveness test.
- 2. Apply hand brakes to the cars at the lower end of the downward sloping track.

#### Safe Operation of Hand Brakes

There are many different types of hand brakes, with different methods of operation. The following safe practices are recommended for *all* hand brakes.

Ensure the equipment is in good working order:

1. Observe the condition of ladders, sill steps / stirrup, grab irons, handholds and crossover platforms before climbing onto a car.

- 2. Before operating any hand brake, observe its type and the condition of all parts, including the hand wheel or lever and chain. Ensure the chain is not caught on the platform.
- 3. Do not attempt to use a hand brake or other equipment that is difficult to operate, defective or damaged.
- 4. In winter, make sure the brake rigging and shoes are free of snow and ice.

Always use the correct hand position:

- 1. Never reach through the spokes of a brake wheel, as the wheel may spin.
- 2. Use one hand to operate the hand brake and the other hand to firmly grip the handhold or ladder.
- When applying a hand brake, always grip the wheel with the thumb on the outside. Grasp the rim of the wheel for maximum leverage. Turn the brake wheel clockwise (or if the hand brake is lever-type – ratchet the lever up and down).
- 4. When releasing wheel-type hand brakes, keep hands and fingers clear of the wheel.

Always keep the correct body position:

- 1. Be alert while climbing up on a car, while operating the hand brake and while climbing down from the car.
- 2. Be aware of other equipment in the area that may cause the car to move unexpectedly.
- 3. Avoid applying hand brakes on the leading platform of a moving car.
- 4. Maintain three-point contact (e.g., two feet and one hand with equipment and safety devices) when applying or releasing a hand brake. This reduces risk of falling if cars unexpectedly move or if a hand brake malfunctions. The

only exception is that standing equipment with a low sidemounted brake may be operated from the ground.

- 5. Never operate a hand brake while standing on a draw bar head, other coupling mechanism or rail.
- 6. Be on guard against sudden car impacts. Anticipate starts and stops.
- 7. Observe lading for tonnage and type of load. Be cautious of a surge or shift of load (e.g., tank car will have a surging effect due to lading moving back and forth inside).
- 8. Apply the minimum number of handbrakes and test the effectiveness in accordance with applicable operating rules governing hand brakes.

To apply a hand brake:

- 1. Always maintain three-point contact when applying or releasing hand brakes.
- 2. Reach behind the brake wheel and place the release lever or pawl (if equipped) in the "ON" position. Keep hands, fingers and loose clothing away from the wheel spokes.
- 3. Grip the brake wheel rim, keeping your thumb on the outside. Turn the brake wheel clockwise to take up the slack in the brake chain.
- 4. After slack is taken up, place your hand at the seven o'clock position on the rim of the wheel. Keeping your back straight, push hard downward with your legs as you lift upward in short pulls on the brake wheel. Minimize twisting by keeping hips and shoulders facing in the same direction.
- 5. After you detrain, visually observe that the brake shoes are tight against the wheels. Keep in mind that some hand brake riggings are connected to brake shoes on both ends of the car while others are only connected at one end. You may need to check both ends of the car.

Before releasing a hand brake, consider the following:

- 1. Is there anyone working on or around the equipment?
- 2. Is the equipment on a grade? Will it start to roll if the hand brake is released?
- 3. Are there dock plates, loading chutes, hoses or other attachments connected to any of the cars?
- 4. Are there any hoses, cables, extension cords or other obstructions lying across the rails?
- 5. Can the cars be safely moved or stopped and hand brakes re-applied?
- 6. Are the operators familiar with safe practices for car movement?
- 7. Are there any derails in the vicinity?

To release a hand brake:

- Assume the three-point contact position when applying a hand brake. Keep hands, fingers and loose clothing clear of the wheel spokes. Note that some types of wheels will spin when the release lever or pawl is put in the "OFF" position.
- 2. Reach behind the brake wheel and place the release lever or pawl (if equipped) in the "OFF" position. Never reach through the wheel spokes.
- 3. If the hand brake is not equipped with a release lever or pawl, grasp the wheel at the one o'clock position and turn the wheel counterclockwise until the brake is completely released.
- 4. Ensure the hand brake is fully released. Observe that the:
  - i. Brake chain is loose,

- ii. Pawl is kicked out (if equipped), and
- iii. Bell crank is in down position (if equipped).
- 5. After the hand brake is fully released, return the release lever to the "ON" position.

After moving rail equipment:

- 1. Assume the three-point contact position for applying the hand brake.
- 2. Apply the required number of hand brakes and test effectiveness.
- 3. Visually observe that the brake shoes are tight against the wheels. Remember that some hand brake riggings are connected on both ends of the car while others are connected at one end. You may need to check both ends of the car.
- 4. Push or pull the car(s) slightly to ensure brakes are providing a sufficient slowing force.
- 5. Observe the cars to ensure they are completely at rest.

#### **Brake Stick Operation**

Approved brake sticks may only be used to operate vertical wheel style hand brakes, retainer valves, open knuckles and angle cocks. The use of defective brake sticks is prohibited. When using a brake stick to operate a handbrake:

- 1. If possible, work from the field side rather than between adjacent tracks.
- 2. If working between adjacent tracks, keep clear of moving equipment.
- 3. Crew members must comply with the positive protection requirements.
- 4. Place the hook to the outside of the wheel to avoid the hook from being caught between the wheel and the equipment.
- 5. Never place the butt of the brake stick against your body; keep it at the side of your body.

- 6. Never cross equipment with the brake stick in hand; pass it through equipment.
- 7. Never walk backwards.
- 8. Do not place the brake stick:
  - i. on or remove from moving equipment.
  - ii. in a location where it may be an obstruction or tripping hazard.
- 9. Do not use the brake stick to:
  - i. operate defective hand brake wheels.
  - ii. operate quick release handles.

#### Partially and Fully Applied Hand Brakes

## Never move railcars while hand brakes are fully applied or wheels are skidding.

A hand brake can apply enough force on the wheels of a railcar to prevent the wheels from turning when the car moves. This causes the wheel to skid along the rail. Skidding a wheel for as little as one second can cause small cracks on the tread. These small cracks lead to spalling, where small pieces of the tread fall out, and into deeper cracks in the structure of the wheel. Structural damage can go undetected until the wheel suddenly breaks apart. It is very dangerous to leave hand brakes partially applied.

## **Doors: Operation and Spill Prevention**

#### **General Procedures**

The Association of American Railroads (AAR) publishes circulars and best practices for the safe opening and use of all railcar doors. Contact your service providers' customer service representative if you operate rail car doors to obtain this information.

#### **Opening Doors**

- 1. Use caution when opening doors of any type. Lading can shift during transport and may fall out or push the door out of its tracks.
- 2. Before opening, visually inspect the door and supporting hardware for damage.
- 3. Always use the proper tools to open doors. Using improper tools can damage railcars.

## **Closing Doors**

- 1. Close and secure all doors before moving cars, including bottom gates and top hatch covers.
- 2. Leaving railcar doors open or unsecured:
  - impacts railway safety,
  - allows trespassers to climb into cars,
  - allows loss of commodity, and
  - decreases locomotive fuel efficiency.
- 3. Take the necessary time and precautions to ensure railcar doors are closed before transport. Do not load cars with defective doors or gates. The supervisor in charge must immediately notify the service provider of any damage to the railcars before you load or unload them.

## Plug Doors

- 1. All plug doors must be securely closed according to regulatory requirements before cars are moved.
- Inspect plug doors before attempting to open them. Ensure door hinges are secure in the track, top and bottom, before opening. Ensure that nothing is bent, damaged or broken. The supervisor in charge must immediately notify the service provider of any damage to the railcars.
- 3. Observe that the operating handle is loose in its keeper before removing the keeper from the handle. If the handle is not loose, this may indicate that the lading is applying pressure against the door.

- 4. Use caution when opening plug doors. Loads that have shifted against the door can cause the handle to spin unexpectedly, and the door to jump outwards when released. This can result in employee injury.
- Never use lift equipment to open a railcar door. If the door is difficult to open, use a cable or chain winch for assistance.

## Bottom Gates and Hatch Covers – Closed Covered Hopper Cars

Before opening the bottom gates on closed covered hopper cars:

- 1. Be sure to use the correct gate opening device or tool.
- 2. Release all gate locks (including those with self-locking locks). This prevents bending and damage to the gate shaft and opening mechanisms.
- 3. Ensure that the gate opening device is well into the capstan. This prevents damage to the capstan such as rounding of the square drive socket.
- 4. Do not over-torque the capstan.

When loading covered hoppers:

- 1. Be careful not to damage the hatch covers.
- 2. To prevent any spillage, inspect all gates to ensure they are properly closed and secured.
- 3. Ensure hatch covers are closed prior to shipping.
- 4. Use a fall protection system when working on the tops of hopper cars.

## Spillage and Wheel Contamination

Report all leaks and wheel contamination to your railway service provider.

If the substance spilled is a dangerous good, refer to *Transportation of Dangerous Goods* for more information on reporting and emergency procedures.

## Wheel Contamination

Wheel contamination from consumer products like flour, canola oil and cornstarch can cause problems with rail equipment. These and other similar substances can affect braking and lead to serious incidents.

To avoid wheel contamination:

- 1. Ensure your facility is free of product contamination and spillage.
- 2. Clean up all spills immediately.
- 3. Report any leaks to your railway service provider.

To prevent serious incidents and equipment damage:

- 1. If railway equipment is rolled through an area with dangerous goods contamination, pressure-cleaning the wheels with air or water is mandatory.
- 2. After cleaning, inspect the wheels to ensure no contamination still exists.

## **Wildlife Protection**

Grain and other food products that leak from hopper gates, or are left on hopper car tops and end sills, attract wildlife to the tracks where they are at risk of being harmed of killed by trains. To address this risk:

1. Spot and report any defective hopper gates.

- 2. Ensure the loading chute is completely closed when positioning cars underneath.
- 3. Before loading and after unloading hoppers, ensure gates are closed and secured to prevent spillage.
- 4. After loading, inspect top and side sills and clean off any grain or other food product.
- 5. Establish a process to clean spills on or near tracks once cars are pulled.

## Wheel Sets

#### **General Information**

Railcar wheel sets are comprised of two wheels, two bearings and one connecting axle. The condition of the wheel sets is extremely important to safe railway operations. When moving and spotting cars, there is a risk of contacting the freight car wheels, journal bearings or axles with equipment such as forklifts, other large machinery, or equipment indexers. This can cause serious damage.

#### Wheel Set Damage

Under the weight of a railcar and at increasing speed, any damage to the wheel or bearing can progress to the point of catastrophic failure, and can result in train derailment. If a car derails, note the speed and distance traveled as this will govern whether the wheel set will be inspected or replaced. In addition, if a bearing is ever submerged in water, it must be replaced. The supervisor must contact your railway service provider immediately if:

- 1. a car derails.
- 2. there is any potential damage to bearings (i.e., bearings submerged in water).
- 3. there is any contact to a freight car wheel or bearing by a forklift or any other machine or device.

## Railcar Handling: Loading, Lifting, Moving

## Loading

#### **Regulations and Requirements**

The Railway Association of Canada (RAC) and the Association of American Railroads (AAR) establish General Rules governing loading requirements for railcars. Failure to load in accordance with these rules is an unsafe activity. Follow the loading rules for the type of lading and railcar being used. This applies to all railcars, including intermodal containers and trailers, boxcars and covered hoppers.

Before loading, ensure that the railcar is in good mechanical condition and that it meets the following criteria:

- 1. Weather tight/leak proof.
- 2. Interior floor in good condition with no holes.
- 3. Interior walls in good condition.
- 4. Doors and locking mechanisms in good condition, closed properly and sealed.
- 5. Safety appliances such as ladders, steps, railings are not broken.

#### **Balance and Securement**

The wheels of a railcar are flanged to guide the railcar through curves and to prevent it from sliding off of the rail. An improperly balanced load causes the wheel on the lighter side to climb the rail, particularly during curving. It is vital that all loads are properly balanced and secured.

Before moving a car after loading or unloading:

- 1. Ensure the load is properly blocked and secured. Add more blocking and bracing as required. For closed car loading, including intermodal containers or trailers and box cars, use blocking and bracing to prevent movement of the load in transit.
- 2. Do not use end doors for blocking and bracing, as the train's forces are too strong.
- 3. Check that all doors, hatches, and outlet gates are fully closed.
- 4. Remove all loose material from any open car deck.
- 5. Ensure that double stack well cars have no inter box connectors (IBCs) lying on the deck.
- 6. Remove or secure any banding, chains, or cables.
- 7. Remember that only qualified and certified persons are permitted to move railcars or operate railcar moving equipment.

#### **Dimensional Loads/Overloads**

A dimensional load is a shipment that is greater than the maximum standard for size, weight, and/or height of center of gravity. The track structure is carefully designed to handle the standard forces of railcar weight and movement. Dimensional loads place excessive stress on the equipment and track and can cause damage and derailment.

To prevent damage:

- Observe the load limit stenciled on the car or identified in the Universal Machine Language Equipment Register (UMLER).
- 2. Ensure that your load is within the maximum standard for weight and height of center of gravity.

## Lifting

The frame or body of a standard railcar sits on two center plates, each on top of a truck assembly. The lubricated surface of the center plates allows the truck to rotate beneath the body and allows rail equipment to turn without causing excessive force on the gauge between the rails. Neither the car body nor the wheels are fastened to the truck assemblies. The components sit in place primarily by weight.

**Never lift railcars in any way.** Tractive effort may be gained by borrowing weight from the rail car by slightly applying upward pressure onto the coupling device with the car mover. If an emergency condition requires the railcar to be lifted, the supervisor must contact the railway service provider or a qualified car inspector.

## Moving

#### Procedures

The movement of railcars by mechanical methods (i.e., loaders, cables, winches, or pulleys) requires the development of safe work procedures specific to each operation.

Railways must develop, document and train their employees in safe car movement. Here are a few key requirements to keep in mind when developing procedures for railcar movement.

Procedures must:

 Clearly outline the method of controlling and signaling that will be used during car movement activities. This includes keeping someone in a position to observe the leading end of the movement and relay signals to the equipment operator.

- 2. Ensure that no car can be moved while people are working in, or around that equipment.
- 3. Include the requirement to walk around and inspect for the removal of all dock plates, loading/ unloading equipment, connecting hoses or cables and loose debris of any kind.
- 4. Ensure established methods of communication are followed.
- 5. Ensure the speed and direction of travel of the railcar are controlled at all times during the movement.
- 6. Clearly outline radio or communication procedures which include positive communication and the establishment of standards for brief, to-the-point conversations for instructions and information between crew members.

#### Starting a Movement

A movement shall not commence until the proper signal or instruction is received by the locomotive engineer or car moving equipment operator.

#### Hand Signals

Employees whose duties may require them to give hand signals must have the proper appliances, such as lanterns, in good order and ready for immediate use. Night signals (using a lantern) must be used from sunset to sunrise and when day signals cannot be plainly seen. Refer to the *Canadian Rail Operating Rules* for more information.

#### **Blue Flags**

A blue flag displayed at one or both ends of equipment indicates that employees are in the vicinity. By day, a blue flag may be displayed, while by night (or when day signals cannot be easily seen), a blue light may be displayed. When these signals are displayed, the equipment must not be coupled or moved. When blue flags or blue lights are in use, the track is locked at both ends to prevent equipment from gaining access to that track. Refer to the *Canadian Rail Operating Rules* Rule 26 for more information. Additional information on blue flags is provided in the section on *Flagging and Signage* of this handbook.

Other ways to provide protection while railcars are being loaded and unloaded include the use of derails or locked switches in addition to blue flags.

#### **Car moving Equipment or Locomotive Signals**

Bells and whistles must be used in accordance with the *Canadian Rail Operating Rules*. The engine or car moving equipment bell must be rung when engine or car moving equipment is about to move, except when switching requires frequent stopping and starting after the initial move. The engine or car moving equipment bell should be rung when passing any other movement on an adjacent track.

#### **Pushing Movements**

When pushing railcars, a qualified employee must be on the leading piece of equipment, or on the ground to ensure that the way is clear, the switches are aligned for the movement, and that all derails are in the correct position for the movement.

#### Speed on Yard Tracks

Equipment movements on yard tracks must be performed in accordance with *Canadian Rail Operating Rules*. Employees must operate at reduced speed and be prepared to stop short of red and blue signals. They must also be able stop short of derails in the derailing position and when switches are not properly lined.

#### **Riding Equipment**

Riding railway equipment is extremely dangerous and is not recommended.

When riding railway equipment, the employee must:

- continuously maintain a firm grip on handholds provided.
- be aware, of and protect against sudden movements and slack action or movements caused by tank car sloshing.
- look in the direction of travel, continuously monitoring safety of movement.
- be aware of, and react to restricted clearances.
- ride on the side if possible, which provides the best escape route.
- not ride on the roof of the equipment.
- not ride on end ladder or end crossover platform.

#### **Entraining and Detraining Moving Equipment**

Getting on and off moving equipment is extremely dangerous. It requires a high degree of concentration and coordination.

The following conditions must be considered when entraining and detraining from moving equipment:

- Speed is less than four miles per hour or at walking speed. If unable to judge the speed, ask that the speed is reduced to allow safe entraining and detraining of moving equipment.
- 2. Traction and footing is safe.
- 3. Hands are free of extra equipment such as bags, tools and other items.
- 4. When possible, entrain and detrain on the operator's side.
- 5. Ensure suitable handrails or grab irons are present and provide room for both hands.
- 6. Steps are in good condition.

- 7. Be vigilant for slack action.
- 8. Visually inspect and select a safe area to perform these actions.
- 9. Be alert to any objects such as switch stands, track materials and other obstructions which could result in contact, tripping and falling.
- 10. Entrain on lead end of equipment to prevent falling between cars. When entraining, face the equipment that is moving. When detraining, look in the direction of travel while observing possible obstructions.
- 11. Communicate your intentions to other employees.

#### Clothing

Railway employees who are required to move or work around railcars must wear steel toe CSA approved footwear that protects the feet and ankles from any expected injuries. Steel toe running shoes are not allowed.

High visibility vests must be worn by all employees who are required to be around moving railway equipment. Loose clothing that may catch on passing or moving equipment must not be worn. Hoods must not be worn as they prevent peripheral vision. Refer to the section on *Personal Protective Equipment* for more information.

#### **Emergency Protection**

Any employee discovering a hazardous condition which may affect the safe passage or movement of railway equipment shall by any means necessary make every effort to stop and provide the necessary instructions to prevent an accident.

## Hand Operated Car Mover and Rail Car Movers (Track mobile)

These steps are recommended when moving freight cars with hand operated car movers and rail car movers (track mobiles).

#### Hand Operated Car Mover

Hand operated car movers should not be used to move cars on a grade.

Be aware and fully understand how it operates before any action.

- 1. Ensure the track is clear of obstructions for the entire distance where the car will be moved.
- 2. Advise everyone in the area of the intended move.
- 3. Discuss the intended move with all personnel involved.
- 4. Fully release the car's hand brake, unless it is required to control movement. In this case, ensure the wheels do not skid.
- 5. Keep an employee at the hand brake to apply it when required.
- 6. After the car is moved, fully apply the handbrake and if possible, test its effectiveness.

## Rail Car Movers (Track mobiles)

A rail car mover should only be operated by qualified individuals.

- 1. Ensure the track is clear of obstructions for the entire distance where the car will be moved.
- 2. Discuss the intended move with all personnel involved.
- 3. Ensure the rail car mover is set for track operations.
- 4. Ensure the rail wheels are correctly aligned with the track.
- 5. Retract the road wheels completely using the road wheel hydraulic control.
- 6. Ensure the rail car mover brakes work as intended.

- 7. Couple or connect the rail car mover to the car to be moved.
- 8. When raising the coupling device, be sure not to lift the rail car off of its truck assembly.
- 9. Fully release the hand brake.
- 10. Keep an employee at the hand brake to apply it when required.
- 11. After the car is moved, fully apply the hand brake and test its effectiveness.
- 12. If using the air brakes, ensure that the brake pipe angle cock to the car is open and the air pressure has built up to the correct level before moving the car(s).
- 13. Test the air brakes' operation to ensure the brakes release and apply correctly when the brake pipe pressure is reduced.
- 14. Do not use the car's air pressure to apply the brakes instead of applying the handbrake.

## **Coupling Cars**

When coupling cars:

- Ensure that the car being coupled to is properly secured so that the coupling action does not cause the car to roll away.
- 2. Ensure that you stand clear of the equipment before coupling.
- 3. Ensure all couplers are aligned and that at least one knuckle is open before coupling to any car.
- 4. Do not adjust drawbars or knuckles, hoses or angle cocks without communicating intentions with others, or if the equipment is moving.

- 5. Confirm that any string of cars is fully coupled before moving or leaving. A slight push or pull should be sufficient.
- 6. Ensure one angle cock is left open after moving cars with coupled air lines.

#### **Leaving Cars**

When leaving cars unattended:

- 1. Do not move or leave railcars foul of main tracks, sidings, or other tracks including tracks within your facility. Trains and track units can hit foul equipment or personnel.
- 2. Do not leave cars within four feet of the nearest rail line, as it will foul the track. This is close enough for the individual or equipment to be struck by a moving train or track unit.
- 3. If railcars must be left foul of the clearance point of a switch, the switch must be lined towards the cars. Cars should be as close to the switch, or occupying the switch, to make it obvious to others that the railcars are foul.
- 4. Derails must be locked in the derailing position with equipment left within 100 feet of a derail whenever possible.
- 5. Apply the required number of handbrakes to all cars left unattended and test the brake's effectiveness.

#### Yard Crossing at Grades

Care should be taken to protect crew members and equipment where a railway track and a public road share the same roadbed without a fence or other barrier in between. When moving rail cars that are not headed by an engine, the car moving equipment or a remotely controlled engine must be protected by a crew member. The crew member should be on the leading car or on the ground, in a position to warn persons standing on, or crossing, or about to cross the track. Refer to the *Canadian Rail Operating Rules*, Rule 103 for more information.

## **Key Safety Reminders**

Follow these rules when moving cars:

- 1. Do not lift railcars in any way.
- 2. Do not push or pull with a car mover or cable on the car by the handrail, ladder or any other part of the car not designed for that purpose.
- 3. Stand clear of equipment when connecting railcars.

Always use hand brakes correctly:

- 1. Do not move railcars with the brakes applied, unless the brakes are required to control movement. If it is necessary, ensure the wheels do not skid.
- 2. Do not release hand brakes until it is clearly identified how the movement will be controlled and stopped.
- 3. Always leave unattended cars with sufficient hand brakes applied. Refer to *Canadian Rail Operating Rules*, Rule 112 for hand brake requirements.

#### **Proficiency Testing/Job Observations**

Railway employees work in an environment often absent of direct management oversight. Even slight lapses in compliance with the rules or awareness can lead to tragedy. Without a strong sense of personal responsibility for their own safety, employees can become complacent and a danger to themselves or to other crew members.

Management and senior employees must reinforce a culture of safe task performance, as instructed in training. In addition, proficiency testing is performed by a supervisor and involves periodic observation of an employee's on-thejob performance for compliance to a set of core CROR rules and safe work practices outlined in the company's Safe Work Procedures or General Operating Instructions. Testing should be routinely performed for employees and managers who regularly work in the field.

## **Transportation of Dangerous Goods**

## **Regulations and Resources**

When handling cars containing dangerous commodities or hazardous materials, the railway must comply with all applicable regulatory requirements.

For additional information, please refer to: *Transportation of Dangerous Goods Regulations*, available at <a href="http://www.tc.gc.ca/eng/tdg/clear-menu-497.htm">http://www.tc.gc.ca/eng/tdg/clear-menu-497.htm</a>

## Transportation of Dangerous Goods (TDG)

Provincial regulated railways that handle dangerous goods must comply with all regulations and be familiar with the following:

- 1. Emergency response requirements.
- 2. Proper training for handling equipment.
- 3. Customized training that meets regulatory requirements in topics such as:
  - Loading rack protection
  - Inspection and securement
  - Safe loading and unloading of railway cars, trucks and other containers
  - Proper preparation of shipping papers
  - Safety markings
  - Loader/un-loader safety
  - In-plant switching

## Loading and Unloading Procedures/Regulations

The following applies to employees involved in loading and unloading tank cars carrying dangerous goods.

Employees must be trained under the appropriate regulations:

- 1. Transportation of Dangerous Goods Regulations
- Ammonium Nitrate Storage Facilities Regulations (GO 0-36)
- 3. Anhydrous Ammonia Bulk Storage Regulations (GO 0-33)
- Chlorine Tank Car Unloading Facilities Regulations (GO 0-35)
- 5. Flammable Liquids Bulk Storage Regulations (GO 0-32)
- 6. Handling of Carloads of Explosives on Railway Trackage Regulations (1978-11)
- 7. Liquid Petroleum Gas Bulk Storage Regulations (GO 0-31)
- 8. Railway Prevention of Electrical Sparks Regulation (CTC-1982-8-R)
- 9. Be experienced in and know the safety requirements for the specific loading and/or unloading operation being performed.
- 10. Know about the tank cars being used and their fittings, the type of product being loaded or unloaded, and marking, labeling and/or placarding requirements.

In addition, the following instructions must be followed:

Railway Association of Canada: *Circular No. DG-2, Instructions for the Transfer of Dangerous Goods in Bulk on Railway Property.* 

## **Offering Dangerous Goods for Transportation**

When transporting dangerous goods, provincially regulated railways must ensure:

- 1. The railcar is properly placarded.
- 2. There are no signs of railcar damage.
- 3. There are no signs that the railcar is leaking.
- 4. All dangerous goods documentation is provided.
- 5. The overall condition of the railcar is acceptable for transportation.
- 6. All connections, wheel blocks, derails and grounding straps are removed and clear of the car before moving.

## **Documentation**

All consignors, consignees or their representatives must provide the correct documentation for loaded, partially loaded or residue cars to service railways.

## **Dangerous Goods Emergencies**

Report any incident, accident or leak involving dangerous goods immediately to CANUTEC, 1 613 996 6666 or \*666 on your cell phone.

## **Trackside Protection and Signage**

To ensure safety, railcar loading and unloading operations may require that specific protective measures are put in place so equipment is not moved while employees are working on, or near it. Protection from the train and equipment movements must be provided at any time when crew members are working on, or around rail cars. This can be provided by securing a non-main track switch with a private lock, or by installing a private lock on a derail set in the derailing position. Personnel operating any type of railway equipment must comply with all of the company's rules, directions and instructions. This includes, but is not limited to, the applicable sections of the *Canadian Railway Operating Rules* (CROR).

## Derails

#### Function

Although derails cause damage to the wheels and track, derails protect people from free-rolling and uncontrolled railcars and equipment. They do this by guiding the flange of the wheel over the rail, so that the wheels drop onto the ties and ballast. Derail signage indicates the location of a derail. Be familiar with these locations on the tracks you use. A derail sign with a number attached to it indicates other derail(s) on adjacent track(s) where signs cannot be installed because of clearance restrictions.

#### **Use on Railway Tracks**

Keep equipment within 100 feet of a derail in the derailing position. Derails must be locked when unattended and in the derailing position, whether there are cars on the track or not. Employees must know the location of derails on their property and assist in their upkeep.

This includes:

- 1. Keeping the ground surface level and clear (of snow and debris) around the derail.
- 2. Making sure there is no ice buildup or rust present.
- 3. Ensuring the derail is secured to the track.
- 4. Ensuring derails remain locked in the derailing position.
- 5. Ensuring the derail is properly lubricated and moves freely when opened or closed.

6. Keeping derail signs clean and visible.

## Switches

Railway employees must know the location of switches on their property and assist in their upkeep. This includes:

- 1. Keeping the ground surface level around the switch to avoid walking hazards.
- 2. Clearing the area of snow, debris and anything else that may disturb movement.
- 3. Making sure there is no ice buildup or rust on the block.
- 4. Making sure switches are adjusted and lubricated.
- 5. Ensuring the bolts are secured to the base.
- 6. Ensuring switches remain locked or the keeper inserted when not in use.
- 7. Keeping switches clean and painted, and the targets clear and visible.

## **Flagging and Signage**

The following is required for blue flag protection on railway property:

- 1. Keep blue flags clean on both sides, free of dirt, oil and grease, and any other substances that would make it difficult for others to clearly see the flag.
- Keep the paint on both sides of the flag in good condition so that it can be clearly seen. Be sure that it is not weathered or obstructed by rust.
- Secure and lock the blue flag using mechanical means so that it will not fall down due to wind, or inadvertently be removed.
- 4. Do not display blue flags between adjacent railcars. This can block employees' view of the blue flags.

- 5. Display blue flags at one or both ends of all equipment on the same track, depending on the layout and access to the tracks.
- 6. Develop safety procedures to ensure that flag protection and its removal are understood and complied with by all employees.
- Blue lights are used for work done during the evenings and bad weather conditions to ensure the signal is visible. If using blue lights, apply the same procedures as given for blue flags.

## Working on, or Near Tracks

There are several safety concerns that employees should be aware of prior to working on, or near rail equipment and track. The practices outlined below are required at all times.

## **Working Around Tracks**

Be alert:

- 1. Watch for the possible movement of trains, engines, cars and other on-track equipment. They can move at any time, on any track, and in either direction.
- 2. Be especially careful in yards and terminal areas. Cars are pushed and moved, and can change tracks often. Cars that appear to be stationary or in storage can begin to move.
- 3. Look before you step. Trains can approach with little or no warning. You may not be able to hear them due to atmospheric conditions, terrain, noisy work equipment, or passing trains on other tracks.
- 4. Be aware of the location of structures or obstructions where clearances are close.
- 5. Never rely on others to protect you from train or car movement. Watch out for yourself.

6. Make sure that your fellow employees know where you are.

Watch for tripping and slipping hazards:

1. Be aware that rails and ties can be slippery, and railway ballast can shift while walking on top of it.

Stay clear of tracks whenever possible:

- 1. Never stand, walk or sit on railway tracks, between the rails, or on the ends of ties unless absolutely necessary.
- 2. Never step, stand, or sit on rails.
- 3. Do not occupy the area between adjacent tracks in multiple track territory when a train is passing.
- 4. Never stand on, or foul of the track when there is an approaching engine, car or other moving equipment.
- 5. Stand 20 feet away from the tracks if possible when rail equipment is passing through.

Stay away from trackside devices:

- 1. Stay away from track switches. Remotely operated switch points can move unexpectedly with enough force to crush ballast rock.
- 2. Stay away from any other railway devices you are unsure of.

## **Crossing Over Tracks**

When crossing railway tracks:

- 1. Watch for movement in both directions before crossing.
- 2. Watch for pinch points at switch locations.

- 3. If the tracks are clear, walk single file at a right angle to the rails.
- 4. Never step on the rail.
- 5. Never walk between the rails of any track.
- 6. Keep at least 25 feet away from the end of a car or locomotive to protect yourself from sudden movement.
- 7. If crossing between two railcars, ensure there is at least 50 feet between them.

## **Crossing Over Equipment**

In some cases, you may have to cross over rail equipment. Always try to walk around the equipment. However, if you must cross over a car to apply or release a handbrake, be extremely careful and follow these instructions:

- 1. Never cross under equipment.
- 2. Never cross over moving equipment.
- 3. Always use safety devices such as ladders, handholds and crossover platforms.
- 4. Never put your feet on moveable machinery such as couplers, sliding sills or uncoupling levers.
- 5. Never step onto any part of the coupler or assembly, angle cock, air hose, wheel or truck assembly, train line or operating (uncoupling) lever.
- 6. Always keep three-point contact with equipment and safety devices.
- 7. Do not stand, sit, or walk on any part of open top rail cars (i.e., gondolas, hoppers, ballast cars, or air dump cars).
- 8. When crossing in front of a locomotive or car moving equipment, make sure you are far enough in front that the operator can see you.

## **Preventing Hazards**

Obstructions can cause tripping hazards and car derailments.

- 1. Keep tracks free of snow, ice, vegetation and debris. It is especially important to keep flange ways at road crossings free of ice and debris.
- 2. Remove any discarded banding used to support shipped products and other debris from the tracks.
- 3. Deliver maintenance materials to the work site as close to the actual work being done as possible to reduce the risk of materials becoming track obstructions.
- 4. Try to "clean-as-you-go."
- 5. Ensure all unloading pits are covered. When unloading pits are used, both rail and customer employees can fall in and seriously injure themselves.
- 6. Ensure that the locations of pits or other in-ground hazards are properly marked.

## Water

Standing and flowing water are serious hazards to track stability. Water can freeze, causing a potential slipping hazard. Have drainage systems direct water away from the track.

The railway must address:

- 1. blocked culverts
- 2. water undercutting the track
- 3. standing pools of water adjacent to any track

## Line of Sight

Regulations dictate the minimum railway crossing sightlines for all grade crossings without automatic warning devices (including public farm and private crossings). The railway must keep sightlines clear at all railway crossings and where there is frequent employee or pedestrian traffic. Snow piles, vegetation, materials, equipment and other obstructions must be removed if they affect the ability to see train traffic at public or private crossings.

## **Railway Clearances**

## **Clearance Definitions**

Clearance requirements protect the safety of people and equipment from moving railcars on your railway property. Clearances are the vertical and horizontal distances from the track to the nearest obstruction:

- 1. Vertical clearances are measured up from the top of the rail.
- 2. Lateral clearances are measured from the middle of the track outwards.
- 3. **Restricted clearances** are distances less than the given limits.

## **Vertical and Lateral Clearances**

To reduce the risk of serious injury or fatality while switching on your railway property, ensure there are no obstructions within the **8 feet lateral clearance** and the **22 feet vertical clearance** (i.e., no restricted clearances). If there is an unavoidable obstruction, the railway must display restricted clearance signs at the site.

Possible obstructions include:

- Temporary piles of stock
- Refuse containers

- Holes, trenches or other ground obstructions
- Parked vehicles
- Equipment or parts of equipment
- Fencing
- Buildings, including exit doors of buildings that open directly onto railway right of way

Ensure any gates leading into your property can be opened and properly secured in all weather conditions. This will prevent unsecured gates from swinging closed during switching operations. Keep in mind that gate posts designed to be pushed into the ground do not work as well when the ground is frozen.

#### **Main Track and Sidings**

As a general rule, 25 feet on either side of a main track is a railway's property, called the "right-of-way." Avoid this area at all times. Allow no equipment, machinery or other vehicles to operate or perform any work within this area. Permission is required prior to accessing any other railway property and violators may be charged with trespassing.

## Voltage Wire Lines

The required clearance limits for power lines are:

- 1. 24 feet (7.40 meters) above the top of the rail
- 2. 25 feet (7.70 meters) during installation for ballast lifts

Note: Power lines carrying more than 750 volts need more clearance.

## **Track and Structure Maintenance**

## **Regulation and Inspection**

The maintenance of tracks and structures is regulated by Technical Safety BC. Railways must inspect and maintain their tracks in accordance with Provincial Regulations.

Railway requirements are as follows:

- 1. Inspect each track, switch and crossing each month, with no more than 40 calendar days between inspections.
- 2. If the track is used less than once per month, inspect before each use.
- 3. If the inspector finds any deviation from the regulatory requirements, they must take immediate remedial action or remove the track from service.
- 4. Keep a record of all inspections performed, including the date, location, nature of any defects found and any remedial action taken.
- Keep these records for at least two years and make them available on request to Technical Safety BC Safety Officers.
- 6. Every track inspector must be qualified to inspect railway tracks in accordance with regulations.
- 7. Inspectors must be in possession of a certificate that indicates they have been trained and are qualified to conduct that work.
- 8. If maintenance work is done, ensure that a qualified inspector examines the track before allowing train operations.

## **Marking Tracks Out of Service**

To mark a track out of service, put a lock and a notice on the switch and do not allow for use until it has been repaired and inspected by a qualified track inspector.

## Safety Standards on Railway Property

Railway facilities and operations can be dangerous. This is a brief summary of some of the safety standards that should apply to all railway personnel. However, this is not a complete list.

## **Before Beginning Work**

Before beginning any work, railway employees should take part in a job briefing and safety orientation. Please keep in mind that only qualified employees can handle switches, derails, electric locking mechanisms and other appliances. Personnel operating equipment of any type must be authorized and qualified. They must comply with all applicable provincial regulations, including, but not limited to, the *Canadian Railway Operating Rules* (CROR).

## **Job Briefings**

Job briefings identify safety hazards and emergency procedures related to the work being done. Effective job briefings at the beginning of, and throughout the workday raise awareness of surroundings, increase the effectiveness of communication, and better prepares employees to recognize and avoid hazards. Employees should remain alert for anything out of the ordinary and report any safety concerns to their supervisor immediately.

Conduct a job briefing:

- 1. Before beginning a new work activity.
- 2. When work activity or work conditions change.

3. When another person joins the crew or team.

When conducting a job briefing:

- 1. Discuss the sequence of the job steps.
- 2. Identify, eliminate, contain, and communicate all potential hazards related to the job.
- 3. Inspect tools and equipment before use.
- 4. Identify proper personal protective equipment for the job task.
- 5. Ensure understanding of the planned sequence of events.
- 6. Follow up to ensure compliance with safe work practices.

#### **General Information**

Hold a job briefing before performing any job involving two or more employees to ensure that all employees understand:

- 1. The task being performed.
- 2. The hazards and related control measures for that task.
- 3. The protection required to carry out the work.
- 4. Each employee's individual responsibility.

Hold additional job briefings as the work progresses or the situation changes.

#### Planning the Job Briefing

Safe and productive work results from a well-constructed and communicated job plan.

To develop a job plan:

- 1. Review the work or tasks to be done.
- 2. Determine the steps to be taken.

- 3. Plan the action for each step.
- 4. Consider how the work will be assigned.
- 5. Determine the tools, equipment and materials required.
- 6. Determine if any forms, permits or protection are required.
- 7. Check the job location and work area.

Consider the existing and potential hazards that may be involved as a result of:

- The type of work being done.
- The time of day the work will be done.
- The job location.
- The safety or personal protective equipment required.
- The tools, equipment and materials being used and handled.
- Independent conditions (i.e., traffic, weather).

#### **Conducting the Job Briefing**

When conducting the job briefing, explain the work or tasks to all employees:

- 1. What will be done.
- 2. How will it be done.
- 3. When will it be done.
- 4. Where will it be done.

- 5. Who will do it.
- 6. Why will it be done.
- 7. The safety precautions and track protections necessary.
- 8. Existing and potential hazards, and their corresponding controls.
- 9. Coordination needed with others (i.e., supervisors or other work crews).
- 10. Ask for clarification to make sure employees understand their work assignments.
- 11. Ensure employees know how to use any special tools, material, equipment, or procedures safely.

#### **Before Starting Work**

Before beginning the job:

- 1. Verify all safety systems on tools and equipment are working correctly.
- 2. Check to make sure any potential hazards have been identified and action has been taken to correct them.
- 3. Lead employees through a warm up to stretch their muscles and prepare for injury-free work.

#### Follow Up

Check regularly to ensure that employees are:

- 1. Following all plans and using correct work procedures.
- 2. Carrying out their assigned tasks.

## Individual Responsibility

Employees must understand that they are responsible for:

- 1. Ensuring that they fully comprehend the work to be done.
- 2. Ensuring tools and equipment are inspected and determined safe before the job starts.
- 3. Using safe practices during their shift and contributing to the safety of their co-workers.
- 4. Carrying out the work according to the job briefing or modifying it appropriately if conditions change.
- 5. Stopping to clarify procedures when met with a safety issue related to their work.

## **Required Protection Programs**

#### **Fall Protection**

A fall protection program must be developed and implemented when any work is done on railway property that involves heights. Your fall protection program must comply with the relevant provincial regulations.

#### **Confined Spaces**

Railways must have a confined space program if employees are required to enter into confined spaces.

A "confined" space is one that:

- Is not intended for human occupancy except for performing work.
- Has a restricted entrance and exit.
- May become hazardous to a person entering it for reasons including its design, construction, location or atmosphere

or due to the materials in it, or any other conditions relating to it.

A confined space program and entry procedures are required to enter certain rail cars including covered hoppers and tank cars. Refer to your local regulatory requirements for more details.

#### **Personal Protective Equipment**

Personal Protective Equipment (PPE) provides an additional degree of protection against harm or injury in the workplace. PPE is intended to be used in conjunction with other safe workplace practices. It is important to note that wearing PPE does not replace the following of safe workplace practices. To reduce the risk of injury, all persons on railway property must comply with the regulatory requirements for PPE. This may include:

- Hard Hats
- Safety Glasses
- CSA Approved Safety Boots
- High Visibility Apparel
- Seat Belts
- Hearing Protection
- Respiratory Protection
- Fall Protection

## Flagging Protection: Working with a Rail Flag Person

#### **Arranging for Flagging Protection**

When planning to work on, or near tracks, notify the adjacent railway in advance so that the railway can assess the need for flagging protection. If flagging protection is necessary, it must be in place prior to any work being performed.

#### **Working under Flagging Protection**

The railway must:

- 1. Include the flag person in the job briefing prior to starting work.
- 2. Never assume a move is cleared unless you receive direct instructions from the flag person.
- 3. Never interfere with a flag person who is communicating by radio. Wait until they are finished and able to give you their full attention.
- 4. Not assume a move is cleared by something overheard on the radio.

## Security on the Railway

The railway and its employees must address any matter that could impact railway safety involving employees or the safe passage of railway equipment.

For example:

- Trespassers
- Abandoned or suspicious vehicles
- Any suspicious objects
- Vandalism attempts

- Stolen tools and equipment
- Unusual situations

#### Prevent Trespassing

To help protect non-railway persons' access, we recommend that railways:

- 1. post "No Trespassing" signs and other warning signs at any rail access points, in accordance with local regulations.
- 2. fence off unsafe areas (where possible).
- 3. maintain the state of any current fences.

## Notes

## **Important Contacts**

## **Technical Safety BC**

For Railway emergencies, accident or incident reporting, contact: 1 866 566 7233

Email: <u>railway@technicalsafetybc.ca</u> Website: <u>www.technicalsafetybc.ca/railways</u>

## **Railway Safety Resources and Materials**

Emergency Contact Number CN Rail 1 800 465 9239

Emergency Contact Number CP Rail 1 800 716 9132

Emergency Contact Number Southern Railway 604 521 4821

Emergency Contact Number BNSF 1 800 832 5452

#### Railway Association of Canada (RAC)

Tel.: 1 613 567 8591 Fax: 1 613 567 6726 rac@railcan.ca www.railcan.ca

#### CANUTEC (Canadian Transport Emergency Center)

Chemical Transport Emergencies (Canada only) **Emergency:** 1 613 996 6666 (call collect) Cell: \*666 (Canada only) Information: 1 613 992 4624 (call collect) <u>www.tc.gc.ca/canutec</u>

#### Transport Canada Rail Safety

railsafety@tc.gc.ca 613 998 2985 or 1 844 897 7245

## RAILWAY SAFETY PROGRAM: SAFETY HANDBOOK



Technical Safety BC is an independent, self-funded organization mandated to oversee the safe installation and operation of technical systems and equipment across the province. In addition to issuing permits, licences and certificates, we work with industry to reduce safety risks through assessment, research, education and outreach, and enforcement.

Our mission is to build your confidence in safety systems for life – through a focus on risk and support for innovation.



Safe technical systems. Everywhere.