

INDUSTRIAL RAILWAY CIRCULAR NO. - 1

GUIDELINE FOR THE TRANSFER OF DANGEROUS GOODS TO OR FROM A RAILWAY VEHICLE

1. GENERAL

This guideline applies to a company under the jurisdiction of the *Railway (Alberta) Act* that intends to transfer dangerous goods to or from a railway vehicle.

The various classes and definitions referred to are identified in the [Transportation of Dangerous Goods Regulations](#).

2. EXCEPTIONS

Class 1 (explosive) materials must be handled in accordance with the Federal "[Handling of Carloads of Explosives on Railway Trackage Regulations](#)" and railway and/or local police must be advised of such activity.

NOTE: This circular does not apply to emergency transfers due to overloading, leaking or damaged railway vehicles.

3. REGULATORY REQUIREMENTS

The [Industrial Railway Regulations](#) outline specific requirements for railway operations.

Schedule 1	Operating Rules
Schedule 2	Locomotive Inspection and Safety Rules
Schedule 3	Rail Car Mover Inspection and Safety Rules
Schedule 4	Freight Car Inspection and Safety Rules
Schedule 5	Rules Respecting Track Safety
Schedule 6	Crossing Rules
Schedule 7	Transfer of Dangerous Goods Rules
Schedule 8	Employee Qualification Standards
Schedule 9	Safety Critical Positions Rules
Schedule 10	Medical Rules for Positions Critical to Safe Operations

4. NOTIFICATION / SITE SELECTION

Notification

The Alberta Government requires railways under the jurisdiction of the [Railway \(Alberta\) Act](#) that intend to connect railway track to a service provider or to construct railway works, to have approval from the Railway Administrator prior to starting construction.

'Railway works' are defined to mean *the construction of railway track in addition to existing track, track at a new location, or a railway structure at an existing or new site.*

More information can be found in the [Intent to Construct New Industrial Track](#) Notification requirements document.

Site Selection

Site selection must be conducted in accordance with section 5, and 6 of this Circular.

If the criteria in section 5 and 6 cannot be met, an application may still be considered providing an equivalent level of safety can be demonstrated.

5. PRIMARY SELECTION CRITERIA

A dangerous goods transfer track/rack should not be located less than the noted distances from commercial establishments, residences and other places of assembly such as schools, hospitals or recreation centres.

Classes and Specific Distances

Class		Exemptions	Distance
2.1	Flammable gases		100 metres
2.2	Inert gases		50 metres
2.3	Toxic gases		450 meters
2.3	Toxic gases	Applies only to Anhydrous Ammonia	250 meters
3	Flammable Liquids	Excluding Inhalation Hazard Materials	100 metres
4.1	Flammable Solids	Excluding Molten Sulphur	100 metres
5.1	Oxidizing substances	Excluding Inhalation Hazard Materials	50 metres
6.1	Toxic substances	Excluding Inhalation Hazard Materials	100 metres
8	Corrosives		100 metres
9	Miscellaneous		50 metres

6. ADDITIONAL SELECTION CRITERIA

Where possible, a dangerous goods loading/unloading or transfer track should be:

- located away or protected from busy highways,
- not located under a bridge or an overhead highway or commuter rail structure,
- located away from power lines, transformers, underground gas lines or other sources of ignition,
- located away from sensitive areas of the environment such as sensitive inland waters, including sewer openings,
- located away from fuelling or repair facilities,
- located adjacent to a roadway in order to provide easy access for inspections and emergency response,
- located near an emergency water source,

- equipped with spill trays or other containment devices that will collect any product that may leak during connecting or disconnecting of loading or unloading hoses,
- located on a site that offers natural containment to negate spill runoff, and
- suitable railway infrastructure in a condition that meets or exceeds the *Alberta Industrial Railway Rules Respecting Track Safety*.

7. APPROVALS

A company that does not have a current industrial railway operating approval required by the *Railway (Alberta) Act* that intends to transfer dangerous goods to or from a railway vehicle must obtain an Industrial Railway Operating Approval from the Railway Administrator prior to the start of railway operations.

Companies that are current holders of an operating approval for a non-dangerous goods transfer site that wish to add the transfer of dangerous goods, must abide by this Circular.

By authority of the Act, the Railway Administrator can request any information deemed appropriate in order to decide whether to grant an approval.

When applying for an Industrial Railway Operating Approval certificate the application must include the following:

- A copy of the third party liability insurance, minimum of 25 million required,
- Approved development permit from the appropriate municipality,
- Written evidence the local emergency response agencies have been consulted and have no objections,
- A copy of the company's Safety Management System plan,
- A copy of the site security management program (**Use Circular 2**), and
- Verification of an approved dangerous goods Emergency Response Assistance Plan (ERAP) if required.

8. INSPECTIONS

Periodic railway inspections are to be completed. At minimum, inspections should be:

- completed by trained industrial railway personnel,
- performed by a competent person who is trained under the *Transportation of Dangerous Goods Regulations*,
- performed by someone who is familiar with these circular requirements and the *Industrial Railway Regulations*, and
- completed by someone who knows where to look for leaks, and is competent in procedures if a leak is found.

Industrial railways must provide or make arrangements to provide a visual walk around inspection every 48 hours after the fifth day cars have been held to ensure they are not leaking. The inspection may be performed by any person who is trained under the *Transportation of*

Dangerous Goods Regulations, knows where to look for leaks and if leaks are found, knows who to contact for immediate remedial action, if necessary.

Written records must be made of all inspections and retained for a period of two years after the cars are released from holding.

9. TRAINING

Any person engaged on the site for the purposes of loading, unloading or transferring products must be trained as per the *Industrial Railway Regulations*, Schedule 8 “Industrial Railway Employee Qualification Standards”.

In addition, they must be experienced and knowledgeable in the safety requirements for the specific loading, unloading or transfer operation being performed. This is to include knowledge of tank cars, their fittings, products being loaded or unloaded, as well as the requirements for marking, labelling and/or placarding.

Any person handling, offering for transport or transporting dangerous goods must be adequately trained. For more information on dangerous goods training please view the [Training Bulletin](#).

10. DOCUMENTATION

Any persons, consignors, or their representatives, are to ensure correct documentation for loaded, partially loaded or residue cars is provided to the carrier and arrangements are made for copies of covering documents to be made available at the site.

For more information of dangerous goods documentation/consist requirements please view the [Documentation Bulletin](#).

11. SAFETY MARKS

For information on safety marks (placards) for railway vehicles, please view the [Safety Marks Bulletin](#).

12. INCIDENT NOTIFICATION

Each person who has possession of the dangerous goods at the time of an accidental release, a “dangerous goods accident”, a “dangerous goods incident” or an imminent accidental release must make an immediate report to the following:

- Alberta Transportation at 1-800-272-9600,
- The local police authority,
- the person's employer,
- the consignor of the dangerous goods,
- for a road vehicle, the owner, lessee or charterer of the road vehicle,

- for a railway vehicle, CANUTEC at (613) 996-6666,
- for Class 1, Explosives, and Class 6.2, Infectious Substances, CANUTEC at 613-996-6666, and
- for an accidental release from a cylinder that has suffered a catastrophic failure, CANUTEC at (613) 996-6666.

For more information on dangerous goods spill/incident reporting please view the [Reporting Requirements Bulletin](#).

13. LOADING/UNLOADING

(1) When loading:

(a) When tank cars are loaded and prior to shipping, the consignor or his representative must determine to the extent practicable, including removal for inspection of the frangible discs on safety vents, that the tank, safety appurtenances and fittings are in proper condition for the safe transportation of the lading.

(b) Tank cars with bottom discharge outlets must have their outlet caps off, or outlet cap plugs open, or secondary valve and plug open during the entire time tanks are being loaded. After loading, tanks dripping of the liquid contents or emission of gases at any location shall not be offered for transportation.

(c) Tank cars equipped with interior heater coils, except when coils are rendered inoperative by blocking off the inlet and outlets, must be loaded with the heater coiled inlet and outlet caps off during the entire time the tanks are being loaded and show no leakage with caps off.

(d) Sufficient outage must be left in the tank (consideration must be given to climate, products and manufacturer outage tables). Stencilled load limits and railway track limitations must not be exceeded.

(2) When loading or unloading:

(a) For dangerous goods having a primary or subsidiary classification of 2.1, 3, 4 or 5, measures are taken to prevent exposure of the dangerous goods to a source of ignition, intense heat or any source of electrical hazard and to dissipate static electricity. (More information on the grounding and bonding of tracks and cars can be found [here](#).)

(b) The hand brakes applied and one set of wheels must be blocked/chocked in both directions on one car for a string of 1-2 cars, two cars for a string of 3-9 coupled cars and an additional car for every block or fraction of block of 10 cars in excess of the first 9 cars coupled to a string, including the first and last cars of the string.

(c) The track where the dangerous goods are being loaded or unloaded are protected by locked switches or locked derails that are controlled by the facility.

(d) Caution signs (blue flag by day – blue light at night) that meet the requirements of paragraph (3) below are placed on the track or railway vehicle to warn persons approaching the vehicle from either end of the track. Caution signs shall remain clearly visible while a tank car is connected to any loading or unloading device, or while the railway vehicle is being loaded or unloaded.

(e) The immediate vicinity of the railway vehicle is kept substantially free of combustible and other material not compatible with the dangerous goods being loaded or unloaded.

(f) In the case of a tank car, all closures are secured when the loading or unloading is completed or is discontinued, except that the heater coils inlet and outlets pipes may be left open after unloading.

(g) The railway vehicle is monitored by direct, remote, or automatic means during loading or unloading so that any condition or release of dangerous goods from the railway vehicle that could endanger public safety can be promptly identified.

14. Self-Audit Program

To ensure ongoing safe railway operations and compliance with the railway regulations, all railways are required to conduct self-audits on an annual basis and the submission of an external audit with their application for an operating approval renewal every three years. Note: This applies to category 1 and 2 railways only; category 3 railways may submit an internal self-audit in place of the external audit.

New industrial railway sites are required, as part of their operating, to submit a railway self-audit 6 months after the issuance of an industrial railway operating approval. The audit must be conducted by a competent person that has been trained on the *Alberta Industrial Railway Regulations* and railway auditing.

[Railway Audit Protocols](#)

For more information on rail requirements, please contact Rail Safety at 780-427-7572 or email railsafety@gov.ab.ca.

For more information on dangerous goods requirements, please contact the Coordination and Information Centre at 1-800-272-9600.