



FIRE PLAN

**(INCLUDES THE REQUIREMENTS OF THE FIRE
PREPAREDNESS AND FIRE HAZARD REDUCTION PLANS)**

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INTRODUCTION

Transport Canada's *Prevention and Control of Fires on Line Works Regulations*, (the "Fire Regulations") require that when a railway company becomes aware of a fire on the right of way, it must ensure that steps are taken to extinguish or control the fire as soon as practicable. These steps are set out in more details in this Fire Plan, which incorporates the requirements for the Fire Preparedness Plan, Fire Hazard Reduction Plan, the whole as more fully set out below.

These steps must include (a) the notification of the fire service that is responsible for the area where the fire is located if the fire cannot be extinguished or controlled without fire service assistance; and (b) the notification, if applicable, of the railway company that operates or maintains the line work.

The Fire Plans will be reviewed and revised at a minimum every five years.

1. FIRE PREPAREDNESS PLAN

1.1. PROCEDURES FOR EXTINGUISHING OR CONTROLLING A FIRE

If a fire on the right of way poses any danger to safe operation or the public in general, rail traffic must be halted and, if considered safe to do so, immediate suppression action must be taken using the resources reasonably and lawfully available to contain the fire. Employees are required to stay at the scene of the fire until released. If CN personnel cannot extinguish the fire easily, they must immediately request assistance from the appropriate fire service.

1.1.1. CN FIREFIGHTING EQUIPMENT

The available firefighting equipment varies between CN's subdivisions and is dependent on the size and location of these subdivisions. Minimum required equipment is dependent on work being performed and fire risk as outlined in the Fire Hazard Reduction Plan.

Bridges and Structures function have sprinkler systems that will provide protection for 1,000 feet of timber deck ties that are complete with water pumps. Across Canada, CN currently has 81 of these fire suppression kits. This equipment stays with the crew at the work site in dry conditions. Each bridges and structures gang is also equipped with shovels and two (2) Wajax backpacks with a foam nozzle and foam solution.

CN has access to firefighting trailers through mutual aid, contracted agreement and CN company-owned equipment that is staged at strategic locations across the network. CN's firefighting trailers are designed and positioned for flammable liquid and liquefied petroleum gas movements but also have fire pumps, hoses, bladder tanks and laydown equipment applicable to other fires along the right of way.

Attached as **Appendix A** is a map indicating location of CN's available fire suppression capacity across CN network.

1.2. INTERNAL FIRE NOTIFICATION PROCEDURES

Fires on or near the right of way must be reported as soon as possible (verbally) through the RTC, along with the exact location and approximate size of the fire, by calling by radio or by phone 1-780-472-3999.

The RTC is responsible for notification to the CN Emergency Communication Centre. All operational communications are routed through the CN Emergency Communication Centre which is responsible to maintain contact with all operating CN trains and other vehicles across Canada, through VHF radio. In addition, portable radios are used by ground personnel to monitor and communicate with trains, vehicles, and control centres.

The general CN radio emergency frequency is: Channel 1, Frequency 161.415.

For the safety of CN personnel, air-tankers will use CN's Channel 1 to notify CN crews of planned or imminent air-tanker actions against wildfires on or affecting CN's right-of-way.

1.3. PROCEDURES FOR NOTIFYING FIRE SERVICES

CN Emergency Communication Centre is responsible for maintaining a current contact list of the local Public Safety Answering Point (PSAP) telephone numbers who are ultimately responsible for notifying and communicating with the fire services along CN's network in Canada.

CN Emergency Communication Centre is to contact the PSAP which is usually the local 911 Centre who is responsible for dispatching emergency services (Police, Fire, and Ambulance) within the jurisdiction in which an incident is occurring. This is the most effective protocol that ensures that all necessary responders are contacted in a timely fashion. Furthermore, CN's procedures also stipulate that the CN Emergency Communication Centre is required to ask the Local 911 emergency service dispatcher to ensure they advise their local fire department for specific incident types including:

- Dangerous Goods Incident
- Derailment
- Blocked Crossing
- Bomb/Explosion
- Fires
- Leakers

2. FIRE HAZARD REDUCTION PLAN

2.1. IDENTIFICATION AND REDUCTION OR ELIMINATION OF FIRE HAZARDS

The Company's Fire Hazard Reduction Plan is based on best practices as they relate to known fire hazards. The Company considers potential additional fire hazard and required mitigation that arises when the Company proposes a change to its railway operations, including (i) the introduction or elimination of a technology, or a change to a technology; (ii) the addition or elimination of a railway work, or a change to a railway work; (iii) an increase in the volume of dangerous goods it transports; (iv) a change to the route on which dangerous goods are transported, or (v) a change affecting personnel, including an increase or decrease in the number of employees or a change in their responsibilities or duties.

The Company's risk assessments mandated under the *Railway Safety Management System Regulations* can include consideration of potential new fire hazards and, as the case may be, associated measures for reducing or eliminating the fire hazards that are identified.

The following list outlines CN's primary Wildfire Prevention Strategies in connection with known fire hazards:

- **Motive Power:** Mandatory inspections of CN Internal Locomotive Fleet and inspection procedures for Motive Power Exhaust Systems.
- **Handling of non-turbocharged locomotives:** Crews are required to shut down or isolate non-turbocharged locomotives during fire season and place them in an engine consist for transfer to another location.
- **Fire extinguishers:** Fire extinguishers are kept readily available on all locomotives and are regularly inspected.
- **Hot Box and Hot Wheel Detectors:** Hot Box and Hot Wheel Detectors are used to detect hot wheel bearings and wheels on railway cars. This risk management tool helps mitigate fire hazards, as it will detect hot bearings and wheels on trains.
- **Operating Instructions:** CN General Managers issue a copy of the complete Fire Plan and other instructions to supervisors. In addition, general notices are issued to Locomotive Engineers regarding extra care in handling of the throttle in extremely dry conditions and on high risk locations. Additional operating instructions are provided to CN employees and contractors as more fully set out in **Appendix B** hereto.

- **Engineering Track Standards:** Track maintenance activities are governed by the Engineering Track Standards, which include detailed instructions. An excerpt of the current track standards is reproduced in **Appendix C** hereto.

3. ADDITIONAL MEASURES

3.1. TOWER-BASED DETECTION

CN may participate with Forest Services in wildfire detection technology using cameras placed on Forest Protection lookouts in locations along CN's mainline.

3.2. SMART-START

The Smart-Start system automatically starts the locomotive engine when the engine temperature drops below a pre-set temperature and thereby maintains a more complete combustion of the fuel and reduces the risk of carbon build-up. The system has been installed on all HHP locomotives and 383 LHP/MHP locomotives to conserve fuel and reduce fire risk.

3.3. DRAGGING EQUIPMENT DETECTORS

All of CN's 815 Hot Box Detector sites feature Dragging Equipment Detectors (DED) equipment. When a dragging component is detected by a DED, the train crew is notified through an electronic voice message system. The train crew will then stop the train and proceed with an inspection, according to CN's GOI 5. CN owns and maintains all of the DED sites on its network

3.4. HOT WHEEL DETECTORS

This detector triggers an alarm when a wheel with a temperature of 293°C (560°F) or greater passes in front of the detector and produces an alert when a wheel reaches a temperature of 148°C (300°F) . When a hot wheel alarm is detected, the location of the hot wheel on the train is transmitted to the train crew through an electronic voice system. The train crew will then stop the train and proceed with an inspection, according to CN's GOI 5. When a hot wheel alert is produced, RTCMech will contact the crew and have them perform a positive reduction. If the heat continues, the car will be inspected at the next available inspection location.

3.5. HOT BEARING DETECTORS

The detector triggers an alarm when a bearing with a differential of 8 millimeters (mm) on the mainline or 6 mm or greater on no- mainline track passes in front of the detector. An alarm will also occur when a single bearing has a differential of 15 mm on mainline track or 12 mm on non-mainline track. Alerts are produced when there is a 6 mm differential on both mainline and non-mainline track or if a single bearing has a differential of 12 mm on mainline track. When a hot bearing is detected, the location of the hot bearing on the train is transmitted to the train crew through an electronic voice system. The train crew will then

stop the train and proceed with an inspection, according to CN's GOI 5. When a hot bearing alert is produced, RTCMech will continue to follow the bearing temperatures and have the car set out for repair at the next available repair location.

An inventory of CN Detectors by Subdivision is attached in **Appendix D**.

3.6. VEGETATION MANAGEMENT INITIATIVES

CN practices Integrated Vegetation Management (IVPM) throughout its operations, which is aligned with CN's goal to take all reasonable steps to prevent wildfires. CN's IVMP is applicable to all CN operations and includes all track ballasts, right-of-way (ROW) and station grounds including rail yards and all property owned or controlled by CN. CN's IVMP utilizes recognized principles of Integrated Vegetation Management; CN will conduct all vegetation management activities in a sustainable and responsible manner to minimize any potential negative impacts within environmentally sensitive areas.

The main purpose for controlling vegetation along the railway is to maintain the safe functioning of train operations and to protect the public, employees, and the environment from potential hazards including fires that are associated with railway operations. CN will develop long term vegetation management plans based on the hazard assessment and required ballast and infrastructure maintenance.

Control of vegetation adjacent to bridges is a necessity for fire protection. Due to the close proximity of riparian zones, a combined approach of mechanical/manual cutting and herbicides will be used. Additional infrastructure that requires vegetation management includes hotbox detectors, fuel stands, and signals/communication equipment, where diligent vegetation control is desirable. In addition to the ballast section, total vegetation control is desirable around buildings, storage areas and service areas for safety reasons; housekeeping; and fire prevention. Vegetation management activities will be prioritized based on the potential fire risk to communities.

3.7. MAINTENANCE PROGRAM

CN System Mechanical annually issues instructions (bulletins/ work scope instructions) in the spring for the maintenance and inspection of equipment in order to refresh knowledge and understanding of the following maintenance requirements for locomotives and equipment, all of which are designed to ensure reduction in potential events related to sparks and fire:

- Provision, maintenance, and recording of dates on fire control appliances to be placed on locomotives.
- Exhaust/Spark arrestor maintenance.
- Further identification of maintenance priorities to prevent throwing of oil and sparks from locomotives.

- Removal of any carbon residue in exhaust on locomotives by loading prior to departing yard.
- Overage air brake valve initiative to reduce sticking & inoperative brakes.
- Intermodal gasket initiative to reduce sticking brakes on intermodal cars.
- Electronic single car air brake tests.
- Increased focus on brake shoe wear during #1 ABT inspections to ensure brake shoes have adequate wear remaining to prevent sparking when shoe is worn down to the backing plate.
- Safe and proper use of fire safety appliance available on locomotives and vehicles.

3.8. MAINTENANCE AND INSPECTION OF FIRE SUPPRESSION EQUIPMENT

CN is responsible for completing an annual inspection of all fire suppression equipment. The date of inspection, individual completing inspection, and any maintenance work performed must be recorded.

4. HIGH-RISK WORK – USE OF RAIL GRINDING TRAIN

As stated in the *Prevention and Control of Fires on Line Works Regulations*, the use of Rail Grinding Train to perform grinding activities is considered high-risk work. Wherever feasible, CN endeavors to schedule rail grinding activities outside of periods with elevated fire risk. When the fire danger level is high to extreme, CN is required to complete the following when using the Rail Grinding Train:

- Notify the appropriate fire service of the work and location at least 24 hours in advance, but not more than 48 hours in advance.
- If no fire danger level is available, notify the appropriate fire service following the above rules.
- Inform contractors of CN's fire prevention measures when they are completing high risk work while under CN supervision.

When the fire service has been notified for high risk work during high to extreme danger levels, the following details must be recorded:

- Date and time the fire service was contacted.
- Name of individual contacted.
- All recommendations provided from fire service and reasons if the provided recommendations are not followed.

All high-risk work being completed must be accompanied by the appropriate prevention measures and fire suppression equipment for the fire danger level in the area. Employees cannot participate in high-risk or supervise contractors completing high-risk work unless they have received fire prevention training. Training requirements for high-risk work must be documented with the following requirements:

- Employee name
- Date training was completed
- Training provider’s name

5. TRAINING

Pursuant to the “Guidelines and Prevention and Control of Fires on Line Works Regulations” (see Appendix A), CN is required to ensure that supervisors and employees engaged in the prevention of fires are fully knowledgeable of the fire reporting requirements for the fire services in the areas in which they are working. Employees will also ensure that the appropriate fire service and railway employees responsible for co-ordination of fire response are immediately notified of the existence and location of the fire.

CN’s fire training manual “Fire Safety - Prevention and Response” is available upon request.

Annual briefing of employees will be conducted through:

- Health and Safety Committees.
- General Bulletins.

A one-day course has been designed to assist employees involved with fire patrols and initial fire suppression. Attendees receive a course manual for future reference.

Training resources available to CN for training related to wildfires include:

- “Fire Safety - Prevention and Response”, a one day course instructor led course
- Critical Task Fire Prevention training is provided to all Engineering employees when they begin their training as a Track Maintainer
- Training is provided to all Operations employees on the proper use and procedures for using a fire extinguisher

When and where training will take place:

- The CN Fire Safety Prevention and Response Training will be provided by CN Training and Development staff

As a part of the fire prevention process awareness CN:

- Distributes a bulletin to all CN key staff every spring, advising the staff of the risks of causing wildfires.
- Issues bulletins on a regular basis, updating employees as to fire hazards and risk levels.
- Issues daily bulletins to Engineering staff to identify fire hazards.
- Regularly scheduled patrols following trains are instructed to watch for fires and identify areas requiring track maintenance that could pose a fire hazard.
- CN Transportation supervisor communicates with train and engine service employees to discuss:
 - Responsibilities and reporting procedure of train and engine service employees in the event of spotting fires on or near railway right-of-way.
 - Safe and proper use of fire safety appliances available on locomotives.
 - Job briefing as it relates to fire control and prevention.

All CN employees working near tracks are required to watch any passing trains to evaluate for sparks, hot wheels, or any other visual signs of malfunctioning that may lead to a fire hazard (Canadian Railway Operating Rule 110). Training is provided to Engineering and Transportation Employees on what to watch for when inspecting passing trains.

6. OTHER LEGISLATION

The Company may, from time to time, be subject to other legislation governing the same subject matter as those addressed under this plan. In the event of conflict between the terms of this plan and the terms of such other legislation, the company will apply the most stringent standard.

Appendix A

MAP – LOCATION OF SPECIALIZED FIRE-FIGHTING ASSETS AVAILABLE TO CN



ERAC references Emergency Response Assistance Canada (<https://www.erac.org/>), Canada's dangerous goods emergency preparedness and response organization.

Appendix B

EXCERPTS FROM GENERAL OPERATING INSTRUCTIONS OPERATING INSTRUCTIONS PROVIDED TO CN EMPLOYEES AND CONTRACTORS

General Additional Operating Instructions

1. Grass or weeds may not be burned on the right-of-way without proper authorization. Any required federal, provincial or local permits must be obtained before burning begins. All applicable fire regulations shall apply.
2. There shall be no smoking, use of open flames or ignition sources where flammable materials are stored or handled.
3. All flammable liquids/substances are to be placed in approved containers and Workplace Hazardous Materials Information System (WHMIS) labels applied. Ensure the availability of Material Safety Data Sheets where applicable.
4. Flammable liquids/substances shall not be disposed of in sewer systems, drains or garbage containers used for general disposal.
5. Flammable liquids/substances shall not be stored in open containers. Ensure proper storage procedures with proper ventilation away from sources of heat or ignition.
6. Compressed gas cylinders must be stored in a designated location offering protection from passing vehicles or falling objects. All cylinders shall be secured in a vertical position with empty cylinders separated from full ones. Cylinders shall be stored in accordance with applicable fire codes.
7. Metal contact (ground /bonding cable) must be maintained between containers while transferring flammable liquids.
8. Filling gasoline tanks inside buildings or other enclosed spaces or while an internal combustion engine is running is prohibited.
9. Firefighting equipment must be maintained in operating condition and must be readily accessible at all times. If fire extinguishers are discharged for any reason, they must be re-charged immediately or replaced by fully charged extinguishers.
10. Fire doors must never be locked, blocked or tied open.

Fire prevention on locomotives

In the event of a fire on a locomotive, whether at the engine or in the electrical equipment, the following procedure should be followed:

- Shut down engine immediately.
- Pull battery switch if practicable.
- Pull all cables and disconnect hoses between the locomotive on fire and other locomotives in the consist.
- If possible, determine the location of the fire. It may be necessary to break electrical cabinet seals in order to properly direct fire extinguisher at flames.
- If it appears that the fire cannot be brought under control, a member of the operating crew should immediately notify the proper authorities so that assistance may be obtained as soon as possible.
- Using the remaining locomotives of the consist, the locomotive on fire should be placed on a siding in a remote location, (properly secured) to prevent further damage to railway and private property.

Appendix C

EXCERPTS FROM CN STANDARDS FOR FIRE PREVENTION (AS PER ENGINEERING TRACK STANDARDS T.S.11.0)

FIRE PREVENTION

1. Prevention of fires on to property and structures must be considered at the beginning of each task when working on the right of way.
2. Fire risk is highest during spring when dry grasses are prevalent. Fire risk can also rise in the summer during extreme hot and dry periods, and anytime work is performed near wooden structures. Local, State or Provincial agency warnings or advisories should be noted when working in these types of conditions. Use the higher of the agency or CN activity rating.
3. HOT WORK is any activity which involves cutting, grinding, welding or open flames.
4. The RIGHT OF WAY AND BRIDGE FIRE RISK ASSESSMENT, MITIGATION AND EMERGENCY RESPONSE form must be completed prior to performing any hot work when fire risk exists.
5. FIRE WATCH is a person assigned to observe a location during and after hot work. The fire watch will:
 - a. Have communications and contact information adequate to request assistance or contact the RTC.
 - b. Be equipped with sufficient firefighting equipment to suppress flare-ups.
 - i. The firefighting equipment will be a minimum of a filled 5 gallon back pack sprayer, and
 - ii. One round nose shovel and adze.
 - c. Be stationed in a safe position to fight fires as work is being performed.
 - d. Remain at the location for a minimum of two hours after the work is completed.
6. Fire prevention, fire awareness training and firefighting preparedness are mandated in Canada by Transport Canada's "Rules for the Control and Prevention of Fires on Railway Rights-of-Way". These rules outline:
 - a. The right's of a fire service inspector to request inspection of the right-of-way assess fire risk and training.
 - b. The requirements of the Railway to train, staff and provide equipment to prevent or fight fires.
 - c. To provide training records which will include:
 - i. Location and duration of training.
 - ii. Names and titles of trainer(s) and participants.
 - iii. Subject matter of the training course.

- d. The responsibility of the Railway for fires along, or originating from the right-of-way.
 - e. Limitations on days or time of day that hot work can be performed.
7. These items are also addressed locally by respective Provincial natural resources management governments and some State's Department of Natural Resources (or equivalent). These agencies have standards and guidelines pertaining to fire risk index fuel values (combustible materials present), required firefighting equipment, fire prevention and fire fighting training, and minimum fire watch inspection times.
- Consult these requirements when planning to perform work
- a. Be aware that environmental management agencies can restrict work activities based on "High" or "Extreme" fire risk rating.
8. Local Supervisors will:
- a. Ensure crews know the agency fire risk rating and work restrictions.
 - b. Ensure crews have firefighting equipment inventory that is required.
 - c. Maintain supplementary firefighting assets where required.
 - d. Have an updated fire fighting action plan where required.
 - e. Have a fire plan for critical or strategic structures,
 - f. Arrange for track patrols during periods of extreme fire danger.
 - i. Be aware of on going fires.
 - ii. Be aware of wind speed and direction when active fires are present.
 - iii. Provide constant monitoring of bridges if situations require.
9. Risk factors which need to be considered prior to performing hot work along the right-of-way include:
- a. Dry or dead vegetation.
 - b. Ties or timbers stacked and/or distributed along the right-of-way.
 - c. Weather, such as recent precipitation or lack thereof, wind speed and direction, temperature, humidity and forecasts.
 - d. Structural materials such as timber caps, stringers, piling or posts and ties. When these components are cracked, rotting or decayed the possibility of igniting increases.
 - e. Clothing – greasy or oily clothes can be ignited during cutting or grinding activities.
 - f. Smoking – smoking materials must be rubbed out and buried or disposed of properly.

- g. Equipment – Steel tracked equipment or cutting heads have the potential to throw sparks into combustible materials.
 - h. Fueling – ensure gas powered machines are fueled on a noncombustible surface, and after the machine has cooled to minimize the possibility of igniting in the event of a fuel spill.
 - i. Vehicles must not be parked in locations where hot exhaust systems could ignite dry vegetation.
10. Work activities addressed in these instructions include, but are not limited to:
- a. Routine work – defined as work performed on the right-of-way such as cutting rail, any welding, hand grinding, applying signal bond wires, etc.
 - b. Work on structures, in timber lined tunnels or snow sheds:
 - i. Rail related work (cutting, welding, hand grinding, applying signal bond wires, etc.).
 - ii. Dragging rail along the right-of-way and over bridges.
 - iii. Bridge work involving cutting with saw or torch, welding or grinding.
 - iv. Rail grinding with self propelled machines.
11. The minimum briefing for any Hot Work fire must include:
- a. Completing the RIGHT OF WAY AND BRIDGE FIRE RISK ASSESSMENT, MITIGATION AND EMERGENCY RESPONSE form.
 - b. The nearest fire department or fire service.
 - c. The contact number for fire / emergency services
 - d. Access to the location and directions to the site.
 - e. Any warnings, advisories or work restrictions issued by any agencies concerning fire risk status.
 - f. Fire fighting equipment on hand and ensuring operability of such equipment.
 - i. A minimum of two 5 gallon backpack sprayers with foaming nozzles.
 - ii. A minimum of two round nose shovels.
 - iii. A minimum of two adzes.
 - iv. Fire equipment to be staged no more than 50 feet from the work location.
12. For routine work during High or Extreme fire conditions, additional fire protection will include:
- a. Increasing the quantity of water carried onboard trucks to at least 90 gallons which includes at least 4 filled 5 gallon backpack sprayers with foaming nozzles.

- b. Foam fire suppressant added to the water supply.
 - c. Centrifugal pumps with at least 100 feet of 1 1/2" diameter hose.
 - d. Wetting of the area where sparks may be generated and in the direction of the wind.
 - e. Use of spark screens for all cutting, welding and grinding.
 - f. Wetting of area after work is complete.
 - g. Posting a fire watch for at least two hours after work is completed.
13. Any hot work on a structure or in a timber lined structure will include:
- a. A briefing with the B & S Supervisor and the Track Supervisor detailing the work to be performed.
 - b. A site inspection to identify all hazards, in particular fire hazards including the structure itself.
 - i. Remove piled timbers, dry grasses or brush if necessary.
 - c. Wetting of the immediate area and materials in the direction the wind is blowing prior to commencing hot work:
 - i. Foam fire suppressant additive must be mixed with water.
 - ii. Protect foam from entering the waterway.
 - iii. Foam will make ties slippery and extreme caution needs to be exercised.
 - d. Fire proof mats or packing sand will be placed to protect timber.
 - e. Spark shields will be used on timber structures in all conditions.
 - i. When possible, direct rail cutting sparks toward the center line of the track.
 - f. Cutting of structural components or rail will be made:
 - i. With a Saws-all or shear for sway brace and hook bolts, drift pins, etc.
 - ii. Using abrasive saws for cutting rail.
 - iii. Using a torch as the last option and only after discussing with the B & S Supervisor and Track Supervisor.
 - iv. Using chain saws to cut wood components.
 - g. Wet the entire area as often as required both during the work and after the work is completed.
 - h. A fire watch will remain with the bridge for a minimum of 2 hours.

14. Long term bridge construction or repair projects, which involve pile driving, significant torch cutting or other fire risk, will have a fire fighting and prevention plan which includes pumps and hoses utilizing either river water or a minimum 300 gallon portable water tank.
15. Rail on a bridge requiring flash butt welding, thermite welding or rail end build-up shall be welded off the bridge, when possible, and then installed on the bridge after all work on the weld is finished. However, if there is no alternative but to perform the welding on a bridge, follow the precautions below:
 - a. The briefing will include all items listed in the above sections.
 - b. Bridge ties must be spread at the joint to be welded.
 - c. For thermite welds, a 1/4" thick steel sandbox, partially filled with dry sand, will be placed between the ties in case of thermite weld run through.
 - d. If required, position an employee in a safe location under the structure to watch for and fight fires.
 - e. Fire watch will be posted for at least two hours after final work is completed.
16. Dragging rail on track causes heat build up on the rail being dragged and generates sparks which can ignite combustible materials. Track behind any rail dragging operation must be inspected for damage to rail fastenings and for fires or smoldering ties.
17. When dragging rail over an open deck bridge and temperatures are above 20°F (-10°C):
 - a. The briefing will include all items listed in the above sections.
 - b. Rail will not be dragged faster than 3 MPH across the bridge.
 - c. Care must be taken to avoid "steel on steel" contact of rail on open deck bridges.
 - d. At least one fire watches will remain at each structure for at least 2 hours after the move is completed,
18. Rail grinding with self propelled machines fire prevention requirements is covered in E.T.S. 1.4 GRINDING WITH SELF PROPELLED MACHINES.
19. In the event of a fire or flare up on or near any part of the structure, a fire watch will remain in place for a minimum of 4 hours after the fire has been extinguished and relieved of duty on after.

Appendix D

INVENTORY OF CN DETECTORS

Subdivision	Number of Detectors		
	Hot Box	Hot Wheel	Dragging Equipment
Aberdeen	8	8	9
Albreda	10	10	16
Allanwater	11	5	11
Ashcroft	10	10	19
Assiniboine	1	1	1
Bala	21	11	22
Bedford	4	3	5
Blackfoot	7	7	9
Brazeau	2	2	2
Bulkley	10	10	14
Camrose	3	3	3
Caramat	18	11	19
Carberry	1	1	1
Chatham	1	1	1
Chetwynd	7	7	7
Clearwater	13	12	14
Coronado	2	2	2
Cromer	2	2	2
Drumheller	1	1	1
Drummondville	9	6	11
Dundas	10	6	14
Edson	28	23	38
Foothills	1	1	1
Fort Frances	8	8	8
Fort St. John	2	2	2
Fraser	10	8	12
Gladstone	3	3	3
Grande Cache	6	6	6
Grimsby	5	5	5
Guelph	1	0	1
Hagersville	1	1	1
Halton	7	4	11
Joliette	5	5	9
Kashabowie	6	6	6
Kingston	53	39	71
La Tuque	2	2	2
Lac La Biche	11	11	11
Lac St-Jean	8	8	13
Lampman	1	1	1
Letellier	1	1	1
Lillooet	4	4	4
Manning	5	2	5
Margo	3	3	3
Meander River	6	6	6

Subdivision	Number of Detectors		
	Hot Box	Hot Wheel	Dragging Equipment
Mont-Joli	5	4	5
Montmagny	6	5	6
Montreal	2	2	2
Napadogan	14	10	14
Nechako	8	8	8
Newcastle	4	4	4
Newmarket	4	3	4
Oakville	3	3	3
Okanagan	1	1	1
Oyen	1	1	1
Peace River	2	2	2
Pelletier	6	6	7
Prince George	4	4	4
Quappelle	4	4	5
Redditt	18	10	18
Rivers	30	18	37
Robson	3	3	3
Rosetown	4	4	5
Rouses Point	2	2	2
Ruel	23	18	23
Sangudo	3	3	3
Skeena	7	7	7
Slave Lake	5	3	5
Soo	5	5	5
Sorel	3	3	8
Sprague	8	8	9
Springhill	9	5	11
Squamish	6	6	6
Stamford	2	2	2
St-Hyacinthe	4	4	6
St-Laurent	3	3	3
St-Maurice	5	5	5
Strathroy	7	7	8
Stuart	1	1	1
Sussex	3	3	11
Telkwa	9	9	13
Tete Jaune	3	3	3
Three Hills	5	5	5
Togo	3	3	3
Tumbler	1	1	1
Turnberry	2	2	2
Val D'or	1	1	1
Vegreville	7	7	9

Subdivision	Number of Detectors		
	Hot Box	Hot Wheel	Dragging Equipment
Wainwright	22	22	39
Warman	1	1	1
Watrous	22	13	27
Westlock	4	4	4
Yale	10	10	16
York	3	3	5
Total	636	529	776