

Responding to Accidents Involving Portable Gauges



Canada's
Nuclear
Regulator

Radiation Safety Officer (RSO):

Telephone Number:

24-hour Emergency Contact:

Telephone Number:

Specialist Firm*:

Telephone Number:

Local Police:

Telephone Number:

24-hour Canadian Nuclear Safety Commission (CNSC) Duty Officer

1-844-879-0805 (toll-free)

*If your procedures require the assistance of an emergency services provider.

Source/Shielding Damage or Accident Response

1. Initiate company emergency procedures.
2. Establish a perimeter of at least two (2) metres around the damaged gauge.
3. Keep workers away from the emergency site.
4. Verify radiation sources are secured, the source rod has been retracted, and radiation levels are safe before entering the area.

Minor or Superficial Damage

- Return the radiation sources to a safe, shielded position (shutter closed).
- Notify the RSO and supervisor immediately.
- Do not use the device without ensuring it is functioning properly (refer to Section 21 **Nuclear Substances and Radiation Devices Regulations**).
- Use the manufacturer's Type A container for transport if the source rod is returned to the safe, shielded position and radiation levels do not exceed the transport index (TI) requirements for a Type A package labelled Category II - YELLOW.

Severe Damage or Non-retracting Source Rod

Inform your RSO, supervisor, and the CNSC duty officer immediately.

Loss or Theft of Gauge

Immediately inform your RSO, supervisor, the local police, and the CNSC duty officer.

Pursuant to section 29 of the **General Nuclear Safety and Control Regulations**, you must notify the CNSC immediately of any reportable incident.

A full written report must be submitted to the CNSC within 21 days.

Transporting Damaged Gauges

- Use calibrated radiation survey meters to measure radiation levels for Type A package labels.
- If the portable gauge or transport container is damaged, a new Type A package may be required to safely transport the damaged gauge.
- Before transporting a damaged gauge, the consignor is responsible to meet the requirements identified in **Packaging and Transport of Nuclear Substances Regulations, 2015** and **Transportation of Dangerous Goods Regulations**.

Recovery Actions

Minimize radiation exposure by using time, distance, and shielding principles. Remember to keep radiation levels **As Low As Reasonably Achievable (ALARA)**.

Time: Minimize time by planning your actions (i.e. gathering any necessary recovery tools, locating the recovery drum, getting assistance, etc.)

Distance: Keep non-essential personnel out of the area, use long-handled tools, and secure the package in the vehicle at the furthest point from the driver when transporting.

Shielding: The body of the gauge, sand and/or gravel may be used as shielding material.

Unconditional Release of the Affected Area

Perform a radiation survey with a calibrated radiation survey meter to ensure all radiation sources have been recovered.

Contact the CNSC at cnsccinfo.ccsn@canada.ca or **1-888-229-2672** or nuclearsafety.gc.ca



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Canada