RESPONDING TO ACCIDENTS INVOLVING PORTABLE GAUGES

Canada's Nuclear Regulator

Radiation safety officer (RSO)	**Telephone number**
24-hour emergency contact	**Telephone number**
Specialist firm (if your procedures require the assistance of an emergency services provider)	**Telephone number**
Police	**Telephone number**
Canadian Nuclear Safety Commission (CNSC) duty officer (24 hours)	**Toll free 1-844-879-0805**

In the event of source or shielding damage or an accident:

1. Initiate company emergency procedures.
2. Establish a perimeter of at least two (2) metres around the damaged gauge.
3. Keep additional 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 Verify radiation sources are secured, the source rod has been retracted and radiation levels are safe before entering the area.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 the safe, shielded position.
- 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 (shutter closed) and radiation levels do not exceed the transport index (TI) requirements for a Type A package labelled Category II - YELLOW.

Severe damage or the source rod will not retract – Inform the RSO, supervisor and the CNSC duty officer immediately.

Follow these guidelines for the transportation of damaged gauges:

Stay safe when transporting a damaged gauge:

- Always use a calibrated radiation survey meter to measure radiation levels and label the Type A package.
- 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 (gathering the necessary tools for the recovery, locating the recovery drum near the accident site, getting assistance).
- **Distance:** Keep non-essential personnel out of the area. Use long-handled tools. 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.

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.

For more information, please contact:
Directorate of Nuclear Substance Regulation
Canadian Nuclear Safety Commission
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Ottawa, ON K1P 5S9
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