



RESPONDING TO ACCIDENTS INVOLVING PORTABLE GAUGES

Accidents and Suspected Source or Shielding Body Damage

1. Keep people at least 2 m away until the radiation sources are removed, or until radiation levels are known to be safe.
2. **Minor or superficial damage:** Return the radiation sources to the safe, shielded position, notify your supervisor or Radiation Safety Officer (RSO) and check the portable gauge for proper operation. 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 transport index (TI) requirements.
3. **Severe damage or the source rod will not retract:** Inform the following persons and follow the steps below for **Transportation of a Damaged Gauge**.

Supervisor or RSO:

Work Telephone:

Home Telephone:

Specialist Firm (if your procedures require outside services):

Specialist Firm:

Telephone:

Canadian Nuclear Safety Commission (CNSC):

Duty Officer, Ottawa (24 hours): (613) 995-0479

Police:

(for transportation accidents)

Transportation of a Damaged Gauge

An improvised temporary container may be used, made up of a 45 gallon steel drum with a secure lid. Sand and/or gravel may be used as shielding material. Before placing the damaged gauge in the drum, partially fill the drum with shielding material. After the damaged gauge is placed in the drum, add additional shielding material to secure and shield the contents of the drum. Use a calibrated radiation survey meter to ensure safe radiation levels. The CNSC must be contacted as special precautions, packaging and permission may be necessary in order to transport the damaged gauge.

Recovery Action

Recovery actions should always be based upon **ALARA** principles. During recovery, time, distance and shielding should be implemented to minimize radiation exposure.

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-recovery personnel out of the area. Use long handled tools. Secure the drum in the vehicle at the furthest point from the driver when shipping.

Shielding: Use the body of the gauge as a shield if necessary. Add sand and/or gravel in the drum as shielding material.

Before the accident site is unconditionally released, a calibrated radiation survey meter must be used to perform a radiation survey to verify that all radiation sources have been retrieved.

Loss or Theft of Gauge

Immediately inform your supervisor or RSO, the local police and the CNSC that a loss or theft has occurred.

Pursuant to Section 29 of the General Nuclear Safety and Control Regulations, a full report shall be filed with the CNSC within 21 days.

For more information, please contact:

Canadian Nuclear Safety Commission, Directorate of Nuclear Substance Regulation,
P.O. Box 1046, Station 'B', Ottawa, Ontario K1P 5S9
Telephone: 1-888-229-2672, Facsimile: (613) 995-5086