CONDITIONS APPLICABLE TO INDUSTRIAL RADIOGRAPHY

(1) SOURCES

1. Sources of radioactive prescribed substances used for radiography purposes, hereafter referred to as "sources", shall be of a type approved by the Board.

2. Unshielded sources shall not be handled except by long handled tongs or other remote handling equipment.

3. Sources shall not be introduced into or removed from radiography exposure devices by persons engaged in industrial radiography operations except by procedures approved by the Board.

4. Sources shall not be changed in locations not under the jurisdiction of the user.

5. Tests capable of detecting the presence of 0.005 microcuries of radioactive contamination shall be performed at least once every six months or after any incident which could have caused source damage. Records of these tests shall be kept for at least three years.

(2) RADIOGRAPHY EXPOSURE DEVICES AND STORAGE CONTAINERS

1. Sources shall not be used in any radiography exposure device or storage and shipping container until the design of that device or container has been approved by the Board.

2. Every radiography exposure device or container shall be maintained in good operating condition through regular inspections and maintenance, records of which shall be kept for at least 3 years.

(3) MARKING AND LABELLING

1. Each radiography exposure device or container shall be prominently and durably marked with nameplate(s) showing:

   (a) the nature and the activity on a specified date of the source contained therein,

   (b) an approved radiation warning symbol and words, such as "RADIATION - DANGER - RAYONNEMENT",

   (c) the owner's and, if desired, the maker's name, and

   (d) the model number and serial number of the device or container.

(4) QUALIFICATIONS OF RADIOGRAPHERS

1. The licensee shall ensure that no person shall use sources for industrial radiography purposes without supervision until he has received training in
(a) the fundamentals of radiation protection,
(b) the operation of the radiography exposure devices provided to him,
(c) the use of the protective equipment available,
(d) the relevant provisions of the Atomic Energy Control Regulations, and
(e) the procedures to be followed in the event of an accident.

(5) MONITORING AND PROTECTIVE EQUIPMENT

1. The licensee shall ensure that every person using sources for radiography purposes shall use monitoring films or thermoluminescent dosimeters and direct reading pocket dosimeters.

2. A survey meter, properly calibrated and capable of measuring dose-rates of 2 mrem/h to 10 rem/h shall be used during all stages of the radiography exposures. A second survey meter with the same capabilities shall be available on site.

(6) GENERAL OPERATING INSTRUCTIONS

1. Radiation surveys shall be carried out at each radiography site and distinctive warning signs displayed and barriers erected, if necessary, to prevent non-atomic radiation workers from receiving a dose of more than 10 millirem of ionizing radiation in the course of one week.

2. Each time a source is returned to its shielded position in the device a radiation survey shall be carried out immediately to check that the source has been returned to its proper shielded position in the radiography exposure device.

3. Each radiography exposure device containing a source shall be locked and the key removed when not being used.

4. Radiography exposure devices containing sources shall be stored in a locked, unoccupied, fire-resistant enclosure, at the outside of which the dose which a person in normally accessible places might receive shall be less than 0.0025 rem in one hour.

5. Emergency equipment and written procedures approved by the Atomic Energy Control Board, shall be on site.

(7) NOTIFICATION TO AUTHORITIES

1. The licensee shall notify the fire department of a municipality whenever he brings or sends into that municipality a radiography exposure device containing a source for use or for storage for a period greater than 24 hours.

2. The licensee, before commencing operations at any field location other than that specified in his radioisotope licence, shall obtain special permission from the Board.
3. The licensee shall, in the event of:
   (a) any loss or theft of a radiography source,
   (b) discovery of a leaking or damaged source,
   (c) any accident leading to the exposure or suspected exposure of any person to ionizing radiation in excess of 3 rem,
report such loss, theft, leakage or accident within twenty-four hours to the Atomic Energy Control Board, and the appropriate inspection officer, and as soon as possible send a complete report thereon to the Board.

8) RECORDS

The licensee shall maintain, in addition to the records required under Section 11 of the Atomic Energy Control Regulations, records showing the following information:
   (a) the age, make, model and serial number of the radiography exposure devices,
   (b) the nature, activity and the date of procurement of the source contained in each radiography exposure device,
   (c) the names of the atomic radiation workers to whom these devices have been assigned,
   (d) schedules of the dates and locations of use of these devices,
   (e) daily radiation exposures to personnel as recorded by direct reading pocket dosimeters
and shall make such records available at all reasonable times to an inspection officer.

9) LICENCES

A copy of the radioisotope licence shall be prominently displayed on the licensee's premises. In field locations a copy of the licence shall be displayed in a prominent place protected from the weather, and not more than 1 km from each location where radiography operations are in progress.

10) PACKAGING AND SHIPMENT

Packaging and shipment of radioactive material shall be in accordance with Section 23 of the Atomic Energy Control Regulations.