

HE305

RADIATION SAFETY ACT 1975

RADIATION SAFETY (GENERAL) AMENDMENT REGULATIONS 1991

Made by His Excellency the Governor in Executive Council.

Citation

1. These regulations may be cited as the *Radiation Safety (General) Amendment Regulations 1991*.

Principal regulations

2. In these regulations the *Radiation Safety (General) Regulations 1983** are referred to as the principal regulations.

[*Published in the Gazette of 21 February 1983 at pp. 555-636. For amendments to 18 January 1991 see pp. 330-31 of 1989 Index to Legislation of Western Australia and Gazettes of 20 July and 4 September 1990.]

Regulation 27 amended

3. Regulation 27 of the principal regulations is amended in subregulation (5)—

(a) by inserting “ and ” after paragraph (a); and

(b) by deleting paragraphs (b) and (c), and “and” after paragraph (b), and substituting the following paragraph—

“ (b) in the case of the mining or milling of radioactive ores, including mineral sands, in accordance with the requirements of the publication entitled “Code of Practice on Radiation Protection in the Mining and Milling of Radioactive Ores 1987” published for the Department of the Arts, Sport, the Environment, Tourism and Territories of the Commonwealth in 1987. ”.

Regulation 28 amended

4. Regulation 28 of the principal regulations is amended in subregulation (1) by deleting paragraph (d) and substituting the following paragraph—

“ (d) in the case of premises where the mining or milling of radioactive ores, including mineral sands, is carried on, require that that mining or milling be carried out in accordance with the requirements of the publication entitled “Code of Practice on Radiation Protection in the Mining and Milling of Radioactive Ores 1987” published for the Department of the Arts, Sport, the Environment, Tourism and Territories of the Commonwealth in 1987; ”.

Schedule IX amended

5. Schedule IX to the principal regulations is amended in item 4—

(a) by deleting paragraph (b) and substituting the following paragraphs—

“ (b) the high tension generator shall be—

(i) so designed that it maintains the tube potential and current within plus or minus 2% of the preset values; and

- (ii) provided with—
 - (A) a meter to indicate a deviation from the preset values of the tube potential or current; or
 - (B) a visual or audible indicator to react if the tube potential or current transgresses the preset values;
 - (ba) electronic circuits shall be provided to identify the choice and location of interchangeable filters;
 - (bc) where a choice of interchangeable filters can be made by an operation within the treatment room—
 - (i) exposure shall not be capable of being made until the choice has been verified by a confirming operation at the control panel; and
 - (ii) when the confirming operation has been completed, the chosen filter combination shall be displayed at the control panel; ”;
- and
- (b) by deleting paragraphs (i) and (j) and substituting the following paragraphs—
 - “ (i) an indicator light shall be provided near the entrance to the treatment room to indicate when the useful beam is being transmitted;
 - (j) the equipment shall be so designed that—
 - (i) the full operating tube potential and current are attained within a period of time such that the skin dose to the patient does not exceed 50 milligrays during that time; or
 - (ii) the tube assembly carries a remotely operated shutter to control the useful beam so that the skin dose to the patient does not exceed 50 milligrays during the period of time it takes for the shutter to open;
 - (k) subject to paragraph (q), the equipment shall be provided with 2 automatic timers, comprising a primary timer and a back-up timer;
 - (l) the timers referred to in paragraph (k) shall be so designed and arranged that—
 - (i) the failure of one timer does not affect the operation of the other timer;
 - (ii) the possibility of accidental communication between the timers is minimised;
 - (iii) the failure of the main power supply to either timer will terminate the exposure;
 - (iv) each timer is capable of terminating the exposure independently of the other timer;
 - (v) the 2 terminating circuits are kept physically separated;
 - (vi) each timer counts upwards from zero so that an over exposure will give a reading;
 - (vii) the primary timer terminates the exposure when the preset time for termination of the exposure is reached;
 - (viii) the back-up timer terminates the exposure after, but not more than 0.1 minutes after, the preset time for termination of exposure on the primary timer;
 - (ix) each timer continues to record and display until the exposure is terminated by whatever means and retains the display of its readings on and after termination;
 - (x) in the event of a power failure, readings displayed at the time of that failure are stored in a retrievable form;
 - (xi) a single preselection of the exposure time presets both timers;
 - (xii) the displays of the timers are positioned closely together on the control panel, identical in form and easy to read;
 - and
 - (xiii) the timers are single scaled in minutes and decimals of minutes or in seconds only and are capable of being read without further calculation;
 - (m) there shall be a clearly visible or audible indicator on the control panel which is activated when the exposure is terminated otherwise than by the primary timer referred to in paragraph (k);

- (n) subject to paragraph (o), the electronic circuits of the equipment shall be so designed that after each exposure—
 - (i) the tripping mechanism of the back-up timer is checked; and
 - (ii) the setting of each timer is returned to zero,by the operator of the equipment before a new exposure can be made;
- (o) the procedures referred to in paragraph (n) may be carried out automatically if the equipment is provided with timers that produce a permanent printout or chart record;
- (p) equipment which can operate at tube potentials exceeding 150 kilovolts peak shall be provided with a transmission monitoring ionisation chamber or equivalent device positioned in the useful beam to provide a continuous check on the constancy of the radiation output;
- (q) the chamber referred to in paragraph (p) may be used as an integrating dose meter to control treatment dose in the place of the primary timer referred to in paragraph (k) and where that chamber is so used—
 - (i) the integrating dose meter shall terminate the exposure by switching off the high tension or closing the shutter when the preset dose for the treatment is reached;
 - (ii) the equipment shall be provided with a back-up timer so designed and arranged that it—
 - (A) is capable of terminating the exposure independently of the integrating dose meter; and
 - (B) terminates the exposure after the expiry of a period of time that exceeds the period of time estimated for the treatment by not more than 10% of that estimated period of time;
 - (iii) the integrating dose meter and the back-up timer shall count upwards from zero so that an over exposure will give a reading; and
 - (iv) the integrating dose meter and the back-up timer shall continue to record and display until the exposure is terminated by whatever means and shall retain the display of their readings on and after termination. ”.

Schedule XI amended

6. Schedule XI to the principal regulations is amended in item 3 (a) (ii) by deleting “12” and substituting the following—

“ 3 ”.

By His Excellency's Command,

L. AULD, Clerk of the Council.