

APPENDIX 3

IONISING RADIATIONS REGULATIONS 1999 Prior authorisation for the use of accelerators (other than electron microscopes)	
1. For the purposes of regulation 5(2) of the Ionising Radiations Regulations 1999, the Health and Safety Executive (HSE) hereby authorises the type of practice referred to in paragraph 3 subject to any such practice being carried out in accordance with the conditions hereby approved by HSE as set out in paragraph 4.	
2. Notwithstanding the prior authorisation given in paragraph 1, radiation employers must comply with all other relevant requirements of these Regulations, including notifying HSE of their intention to work with radiation in accordance with regulation 6.	
3. The type of practice referred to in paragraph 1 is: <i>The use of accelerators (other than electron microscopes).</i> NB: The scope covers all uses of accelerators (other than electron microscopes), including medical and veterinary purposes (an accelerator is an apparatus or installation in which particles are accelerated and which emits ionising radiation with an energy higher than 1 MeV).	
4. The conditions referred to in paragraph 1 are as follows. The radiation employer shall: 4.1 as part of satisfying the general requirement in regulation 8 of the Ionising Radiations Regulations 1999 to keep exposure as low as reasonably practicable, take specific steps before starting the work to provide engineering controls, design features, safety devices and warning devices which include at least the following: (a) where the work is to be carried out in a room, purpose made structure, other enclosure or a cabinet: (i) adequate shielding as far as reasonably practicable; and (ii) interlocks or trapped key systems or other appropriate safety devices in order to prevent access to high dose rate areas (eg in which employed persons could receive an effective dose greater than 20 mSv or an equivalent dose in excess of a dose limit within several minutes when radiation emission is underway). The control system for such safety devices should comply with paragraph 4.4; (b) in other cases, adequate local shielding as far as reasonably practicable and, in the case of site radiography, a suitable system for ensuring that: (i) persons other than those directly involved in the exposure are excluded from the area by means of a barrier or other suitable means; (ii) where employees of another employer may be present in the same workplace, there is co-operation and co-ordination with the other employer(s) for the purposes of restricting access to the controlled area; (iii) warning notices are displayed at the perimeter of the controlled area; and (iv) radiation levels are monitored to establish that controlled areas have been properly designated; (c) suitable means to minimise exposure so far as is reasonably practicable from substances that have been activated by the accelerator; (d) a suitable assessment of the hazards arising from the production of adventitious radiation; (e) where there is a risk of significant exposure arising from unauthorised or malicious operation, equipment which has been fitted with locking-off arrangements to prevent its uncontrolled use; (f) initiation of exposures under key control, or some equally effective means, so as to prevent unintended or accidental emission of a radiation beam; and (g) suitable warning devices which indicate when the accelerator is preparing to produce radiation and give a signal when the radiation is about to be produced and a distinguishable signal when the emission is underway, unless this is impracticable; 4.2 arrange for adequate and suitable personal protective equipment to be provided where appropriate; 4.3 arrange for suitable maintenance and testing schedules for the control measures selected; and 4.4 provide safety devices, as referred to in 4.1(a), which should be configured so that the control system will ensure that an exposure: (a) cannot commence while any relevant access door, access hatch, cover or appropriate barrier is open, or safety device is triggered; (b) is interrupted if the access door, access hatch, cover or barrier is opened; and (c) does not re-commence on the mere act of closing a door, access hatch, cover or barrier.	
Signed Margaret Clare	Dated 6 March 2000
A person approved by the Health and Safety Executive to perform the functions under regulation 6(2) of the Ionising Radiations Regulations 1999.	
Notes: (a) Work referred to in paragraph 3 when carried out in accordance with the conditions in paragraph 4 is not subject to the requirement for individual prior authorisation pursuant to regulation 5(1) of the Ionising Radiations Regulations 1999. (b) This authorisation is without prejudice to the requirements or prohibitions imposed by any other enactment, in particular, the Health and Safety at Work etc. Act 1974 and the Ionising Radiations Regulations 1999, and to the provisions of the Approved Code of Practice supporting the Ionising Radiations Regulations 1999. (c) Electron microscopes are not covered by the authorisation as they do not need to be authorised under the Ionising Radiations Regulations 1999.	

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IONISING RADIATIONS REGULATIONS 1999 Prior authorisation for the use of electrical equipment intended to produce X-rays	
1. For the purposes of regulation 5(2) of the Ionising Radiations Regulations 1999, the Health and Safety Executive (HSE) hereby authorises the type of practice referred to in paragraph 3 subject to any such practice being carried out in accordance with the conditions hereby approved by HSE as set out in paragraph 4.	
2. Notwithstanding the prior authorisation given in paragraph 1, radiation employers must comply with all other relevant requirements of these Regulations, including notifying HSE of their intention to work with radiation in accordance with regulation 6.	
3. The type of practice referred to in paragraph 1 is: <i>The use of electrical equipment intended to produce X-rays ("X-ray sets") for: industrial radiography; processing of products; research; or exposure of persons for medical treatment.</i>	
4. The conditions referred to in paragraph 1 are as follows. The radiation employer shall: 4.1 as part of satisfying the general requirement in regulation 8 of the Ionising Radiations Regulations 1999 to keep exposure as low as reasonably practicable, take specific steps before starting the work to provide engineering controls, design features, safety devices and warning devices which include at least the following: (a) where the work is to be carried out in a room, purpose made structure, other enclosure or a cabinet, (i) adequate shielding as far as reasonably practicable; and (ii) except in the use of X-ray sets for radiotherapy at or below 50kV, interlocks or trapped key systems or other appropriate safety devices in order to prevent access to high dose rate areas (eg in which employed persons could receive an effective dose greater than 20 mSv or an equivalent dose in excess of a dose limit within several minutes when radiation emission is underway). The control system for such safety devices should comply with paragraphs 4.4 or 4.5; (b) in other cases, adequate local shielding as far as reasonably practicable and, in the case of site radiography, a suitable system for ensuring that: (i) persons other than those directly involved in the exposure are excluded from the area by means of a barrier or other suitable means; (ii) where employees of another employer may be present in the same workplace, there is co-operation and co-ordination with the other employer(s) for the purposes of restricting access to the controlled area; (iii) warning notices displayed at the perimeter of the controlled area; and (iv) monitoring of radiation levels to establish that controlled areas have been properly designated; (c) where there is a risk of significant exposure arising from unauthorised or malicious operation, equipment which has been fitted with locking-off arrangements to prevent its uncontrolled use; (d) initiation of exposures under key control, or some equally effective means, so as to prevent unintended or accidental emission of a radiation beam; and (e) suitable warning devices which indicate when the tube is in a state of readiness to emit radiation and except for diagnostic radiology equipment, give a signal when the useful beam is about to be emitted and a distinguishable signal when the emission is underway, unless this is impracticable; 4.2 arrange for adequate and suitable personal protective equipment to be provided where appropriate; 4.3 arrange for suitable maintenance and testing schedules for the control measures selected; and 4.4 provide safety devices, as referred to in 4.1(a), which for routine operations should be configured so that the control system will ensure that an exposure: (a) cannot commence while any relevant access door, access hatch, cover or appropriate barrier is open, or safety device is triggered; (b) is interrupted if the access door, access hatch, cover or barrier is opened; and (c) does not re-commence on the mere act of closing a door, access hatch, cover or barrier; or 4.5 for non-routine operations such as setting up or aligning equipment, where the safeguards for routine operation are not in use, provide a procedure for an alternative method of working that affords equivalent protection from the risk of exposure which should be documented and incorporated into the local rules.	
Signed Margaret Clare	Dated 6 March 2000
A person approved by the Health and Safety Executive to perform the functions under regulation 6(2) of the Ionising Radiations Regulations 1999.	
Notes: (a) Work referred to in paragraph 3 when carried out in accordance with the conditions in paragraph 4 is not subject to the requirement for individual prior authorisation pursuant to regulation 5(1) of the Ionising Radiations Regulations 1999. (b) This authorisation is without prejudice to the requirements or prohibitions imposed by any other enactment, in particular, the Health and Safety at Work etc. Act 1974 and the Ionising Radiations Regulations 1999, and to the provisions of the Approved Code of Practice on the Ionising Radiations Regulations 1999.	