

## COC-6

# Code of Compliance for apparatus used for borehole logging 2022

### Issued February 2023

This code was approved for publication by the Chief Executive of the South Australian Environment Protection Authority on 7 February 2023.

This code provides mandatory requirements for apparatus used for borehole logging, where the requirements of the *Code of practice for the safe use of sealed radioactive sources in borehole logging (1989)* published by ARPANSA are not applicable.

It should be read in conjunction with the [Radiation Protection and Control Act 2021](#) and the [Radiation Protection and Control Regulations 2022](#).

### Citation

This code may be cited as the *Code of Compliance for apparatus used for borehole logging 2022*.

## Part 1 – Preliminary

### Interpretation

In this code, unless the contrary intention appears—

Any terms used have the meanings given to them in the *Radiation Protection and Control Act 2021* (the Act) and in the *Radiation Protection and Control Regulations 2022* (the Regulations).

If a word or phrase is defined in this code, other parts of speech and grammatical forms of the word or phrase have corresponding meanings.

**air kerma** means kerma in air

**apparatus** means ionising radiation apparatus to which this code applies

**ARPANSA** means Australian Radiation Protection and Nuclear Safety Agency

**borehole logging** means to investigate the physical properties of a geological sequence, fluids contained in a geology sequence or the properties of a bore hole, by lowering devices down a bore hole that has been drilled through the strata being investigated

**Department** means the administrative unit of the Public Service that is responsible for assisting a Minister in the administration of the Act

**energised** means generates ionising radiation

**kerma** means kinetic energy released per unit mass in material by ionising radiation expressed in the unit of joule per kilogram, where joule per kilogram is the unit of gray

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## **2 Application of code**

This code applies to apparatus used for borehole logging, where the requirements of the *Code of practice for the safe use of sealed radioactive sources in borehole logging (1989)* published by ARPANSA are not applicable.

## **3 Interaction between the regulations and relevant codes**

- (1) If a provision of this code is inconsistent with the regulations, the regulations prevail to the extent of the inconsistency.
- (2) If a provision of a code or other document, published by the ARPANSA, is inconsistent with this code, the provisions of this code prevail to the extent of the inconsistency.

## **Part 2 – Special requirements**

### **4 Good working order**

The apparatus and all items of equipment necessary for its safe operation must be maintained in good working order.

### **5 Regular checks to be performed**

- (1) The apparatus must at intervals not exceeding 12 months, be inspected, by a suitably qualified person, for the purpose of determining whether or not the apparatus is in good working order.
- (2) A register or a log of the inspection, referred to in subclause (1), must be kept and to include at least—
  - (a) the date of the inspection; and
  - (b) the name of the person who performed the inspection; and
  - (c) the signature of the person who performed the inspection; and
  - (d) details of any faults found and any actions taken to remedy the faults.

### **6 Control panel indicator light**

The apparatus must have an indicator light or illuminated sign that—

- (a) is on the control panel; and
- (b) is clearly distinguishable from the operator position; and
- (c) illuminates when the apparatus is energised.

### **7 Air kerma rate at the remote-control apparatus**

In the case of an apparatus with a remote-control device, the remote control device must be located so that the air kerma rate, at the location of the apparatus, is as low as is reasonably achievable, whenever the apparatus is energised.

### **8 Control panel parameters**

The apparatus must have a control panel that is equipped with a device or devices indicating the magnitude of apparatus generator potential and apparatus generator current, or electron or ion energy, kerma, or another relevant dose parameter.

### **9 Key operated apparatus**

The apparatus must have a key operated apparatus—

- (a) which controls, and when locked in the “OFF” position, prevents the apparatus from being energised; and
- (b) has a reliable indicator at the control panel that indicates when the apparatus is in the ‘ON’ and ‘OFF’ positions; and
- (c) where the key is removable only when the apparatus is in the ‘OFF’ position.

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## 10 Power switch

The apparatus must have a switch—

- (a) that controls the supply of power to the apparatus but does not control any other device; and
- (b) has an indicator light to indicate when the control panel is energised and the switch is in the 'ON' position.

## 11 Termination of ionising radiation

The apparatus must have a device that terminates the production of ionising radiation after a pre-set interval not exceeding 30 minutes or another period as approved by the Department.

## 12 Computer controlled apparatus

- (1) may implement the requirements of clauses 6 to 12 via a computer-controlled interface in a manner approved by the Department; and
- (2) a computer-controlled apparatus must incorporate—
  - (a) a fail-safe control system so that any failure of software or hardware the production of ionising radiation is terminated within a period approved by the Department; and
  - (b) an emergency shut off switch clearly distinguishable and reachable from the operator position that when pressed terminates the production of ionising radiation; and
  - (c) an access control system in a manner approved by the Department.

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## Document history

### Publications

Title	Release	Commencement
Code of Compliance for apparatus used for borehole logging 2022	Second release	11 February 2023

### Amendments

Provision	How changed	Commencement
Introductory text	Include link to regulations	11 February 2023
Clause 6	Deleted requirement for apparatus indicator light	11 February 2023
General information	Updated email address	11 February 2023

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## Further information

### Legislation

[Online legislation](#) is freely available.

### General information

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