


# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 <b>1502</b>  Accredited to <b>ISO/IEC 17025:2005</b>	<b>HPA, The Centre for Radiation, Chemical and Environmental Hazards CRCE Scotland</b>	
	Issue No: 020    Issue date: 26 April 2011	
	<b>155 Hardgate Road Glasgow G51 4LS</b>	<b>Contact: Mr Keith Bulloch Tel: +44 (0)141 440 2201 Fax: +44 (0)141 440 0820 E-Mail: keith.bulloch@hpa.org.uk Website: www.hpa.org.uk</b>

**Testing performed by the Organisation at the locations specified below**

### Locations covered by the organisation and their relevant activities

#### Laboratory locations:

Location details		Activity	Location code
<b>Address</b> 155 Hardgate Road Glasgow G51 4LS	<b>Local contact</b> Mr K Bulloch  Tel: +44 (0)141 440 2201 Fax: +44 (0)141 440 0820 Email: keith.bulloch@hpa.org.uk Website: www.hpa.org.uk	Radiation and Radiochemistry	A

#### Site activities performed away from the locations listed above:

Location details		Activity	Location code
<b>Address</b> 155 Hardgate Road Glasgow G51 4LS	<b>Local contact</b> Mr K Bulloch	Radiation and Radiochemistry	B



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### DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
ENVIRONMENTAL MATERIALS, FOOD AND FOODSTUFFS, INDUSTRIAL EFFLUENTS AND SAMPLES, and WATER	<u>Radiological Testing</u>	Documented In-House Methods:	
	Total alpha activity relative to: Americium-241 ( <sup>241</sup> Am)	Technical Manual Section 4.6 by solid scintillation counting	A
	Total beta activity relative to: Caesium-137 ( <sup>137</sup> Cs) Or Strontium-90 ( <sup>90</sup> Sr)	Technical Manual Section 4.7 by Geiger-Muller counting	A
	Gamma spectrometry (Energy Range: 59keV-2MeV)	Technical Manual Section 7.1 using HP-Ge detector	A
	Tritium ( <sup>3</sup> H)	Technical Manual Section 4.1 Total tritium by combustion and liquid scintillation spectrometry Inorganic or total tritium by distillation and liquid scintillation spectrometry	A
	Carbon-14 ( <sup>14</sup> C)	Technical Manual Section 4.13 by chemical separation and liquid scintillation spectrometry	A
	Sulphur-35 ( <sup>35</sup> S)	Technical Manual Sections 4.15 (liquids) and 4.16 (solids) by chemical separation and liquid scintillation spectrometry	A
	Strontium-90 ( <sup>90</sup> Sr)	Technical Manual Section 4.2 & 4.9 by chemical separation and beta particle counting	A
	Technetium-99 ( <sup>99</sup> Tc)	Technical Manual Section 4.17 by chemical separation and beta particle counting	A
	Polonium-210 ( <sup>210</sup> Po)	Technical Manual Section 4.14 by chemical separation and alpha particle spectrometry	A
Radium-226 ( <sup>226</sup> Ra)	Technical Manual Section 4.12 by radon emanation and solid scintillation spectrometry	A	
Sample preparation	Technical Manual Section 4.11	A	



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ENVIRONMENTAL MATERIALS, FOOD AND FOODSTUFFS, INDUSTRIAL EFFLUENTS AND SAMPLES, and WATER (cont'd)	<u>Radiological Testing</u> (cont'd)	Documented In-House Methods:	
	Thorium Isotopes $^{232}\text{Th}$ , $^{230}\text{Th}$ , $^{228}\text{Th}$ ,	Technical Manual Section 4.10 by chemical separation and alpha particle spectrometry	A
	Plutonium Isotopes $^{240+239}\text{Pu}$ , $^{238}\text{Pu}$	Technical Manual Section 4.4 by chemical separation and alpha particle spectrometry	A
	Uranium Isotopes $^{238}\text{U}$ , $^{235}\text{U}$ , $^{234}\text{U}$ ,	Technical Manual Section 4.3 by chemical separation and alpha particle spectrometry	A
LOW SPECIFIC ACTIVITY SCALES	Americium-241 ( $^{241}\text{Am}$ )	Technical Manual Section 4.5 by chemical separation and alpha particle spectrometry	A
	Gamma spectrometry (Energy Range: 59keV-2MeV)	Technical Manual Section 7.1 using HP-Ge detector	A
WATER AND LIQUID EFFLUENTS	Polonium-210 ( $^{210}\text{Po}$ )	Technical Manual Section 4.14 by chemical separation and alpha particle spectrometry	A
	Curium Isotopes $^{242}\text{Cm}$ , $^{243+244}\text{Cm}$	Technical Manual Section 4.5 by chemical separation and alpha particle spectrometry	A
URINE	Radionuclides and total activity relative to: Iron-55/Carbon-14 ( $^{55}\text{Fe}/^{14}\text{C}$ ) or Carbon-14/Caesium-137 ( $^{14}\text{C}/^{137}\text{Cs}$ )	Technical Manual Section 4.20 by liquid scintillation spectrometry	A
	Plutonium Isotopes $^{240+239}\text{Pu}$ , $^{238}\text{Pu}$	Technical Manual Section 4.4 by chemical separation and alpha particle spectrometry	A
	Uranium Isotopes $^{238}\text{U}$ , $^{235}\text{U}$ , $^{234}\text{U}$ ,	Technical Manual Section 4.3 by chemical separation and alpha particle spectrometry	A
	Americium-241 ( $^{241}\text{Am}$ )	Technical Manual Section 4.5 by chemical separation and alpha particle spectrometry	A



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URINE	<u>Chemical Testing</u> Uranium (natural or <sup>238</sup> U)	Documented In-House Methods: Technical Manual Section 8.1 by ICP-MS (Inductively Coupled Plasma - Mass Spectrometry)	A
ENVIRONMENTAL MONITORING SITES	<u>Monitoring</u> Gamma-ray air kerma rates	Technical Manual Section 6.2 based on HMIP Technical Guidance Note M5, HMSO 1995	B
	<u>Sampling</u> Soil	Documented In-House Methods in the Technical Manual: Sections 6.1 and 6.3	B
	Sediment (inter-tidal zone)	Sections 6.1 and 6.4	B
	Vegetation	Sections 6.1 and 6.5	B
	Waters (including surface, estuarine, saline, leachate/borehole)	Sections 6.1 and 6.6	B
	Shellfish (inter-tidal zone)	Sections 6.1 and 6.7	B
	Seaweed	Sections 6.1 and 6.8	B
END			