


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 <p>Accredited to ISO/IEC 17025:2005</p>	<h3>Wood Nuclear Limited</h3>	
	<p>Issue No: 036 Issue date: 05 October 2018</p>	<p>Contact: Mr G Tidbury Tel: +44 (0)1925 675422 E-Mail: gordon.tidbury@woodplc.com Website: www.woodplc.com</p>
<p>Analytical Services 612 Faraday Street Birchwood Park Birchwood Warrington Cheshire WA3 6ZN</p>		
<p>Testing performed at the above address only</p>		

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
<p>SEDIMENT, SOIL, CONCRETE, GEOLOGICAL MATERIALS MILK, SEWAGE SLUDGE, PLASTICS, SOFT WASTE, GRAPHITE, AQUEOUS SOLUTIONS, WATER: Natural, process, waste and potable</p>	<p><u>Radiochemical Analysis</u> Tritium - ^3H</p>	<p>Documented In-House Method OM Pyrolysis, tritium analysis by pyrolysis and liquid scintillation</p>
<p>WATER: Natural, process, waste, potable and sea water</p>	<p>Tritium - ^3H</p>	<p>Documented In-House Method OM H-3 based on ISO 9698:2015 by liquid scintillation</p>
<p>MILK</p>	<p>Tritium - ^3H</p>	<p>Documented In-House Method OM H-3 by distillation and liquid scintillation counting</p>
<p>SEDIMENT, SOIL, CONCRETE, WATER: Natural, process, waste and potable</p>	<p>Gross alpha and beta radioactivity (thick source method) relative to: Alpha - ^{239}Pu, ^{241}Am Beta - ^{137}Cs, ^{40}K</p>	<p>Documented In-House Method OM ABTS based on ISO 9696:2017 and ISO 9697:2017, by proportional counting</p>
<p>FREEZE-DRIED SEAWEED, CRUSTACEA, MOLLUSCS AND FISH</p>	<p>Gross beta radioactivity (thick source method) relative to: ^{40}K</p>	<p>Documented In-House Method OM ABTS based on ISO 9697:2008 by gas-flow proportional counting</p>



1011
Accredited to
ISO/IEC 17025:2005

Schedule of Accreditation
issued by
United Kingdom Accreditation Service
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

Wood Nuclear Limited
Issue No: 036 Issue date: 05 October 2018

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
	<u>Radiochemical Analysis (cont'd)</u>	
NUCLEAR POWER STATION EFFLUENT	Gross beta radioactivity relative to ¹³⁷ Cs, ³ H/ ¹³⁷ Cs, ³⁵ S/ ¹³⁷ Cs and ⁵⁵ Fe/ ³⁵ S	Documented In-House Method OM GBLSC by liquid scintillation counting
ACIDIC AQUEOUS BUBBLER SOLUTIONS	Gross beta radioactivity relative to Tritium ³ H and Sulfur - ³⁵ S	Documented In-House method OM GBBUB by liquid scintillation counting
ALKALINE AQUEOUS BUBBLER SOLUTIONS	Gross Beta radioactivity relative to Carbon - ¹⁴ C	Documented In-House method OM GBBUB by liquid scintillation counting
NUCLEAR POWER STATION EFFLUENT MILK, GRASS/HERBAGE	Sulfur – ³⁵ S	Documented In-House method OM S-35 by liquid scintillation counting
SWABS, SEDIMENT, SOIL, CONCRETE, BUILDING MATERIALS, GEOLOGICAL MATERIALS, WATER: Natural, process, waste and potable	Strontium - ⁹⁰ Sr	Documented In-House Method OM Sr-90 by liquid scintillation and ICP-MS (partial and full ingrowth)
LARGE SEDIMENT & SOIL SAMPLES (up to 28 g) MILK, FISH (FREEZE-DRIED) & MOSS (FREEZE-DRIED)	Strontium - ⁹⁰ Sr	Documented In-House method OM Sr-90 and OM Sample Preparation by liquid scintillation counting and ICP-MS (partial and full ingrowth)
SEDIMENT, SOIL, CONCRETE, GEOLOGICAL MATERIALS, STEEL, SWABS, WATER: Natural, process, waste and potable	Iron - ⁵⁵ Fe	Documented In-House Method OM Fe-55 by liquid scintillation
SOIL, CONCRETE, STEEL, SWABS, WATER: Natural, process, waste and potable	Nickel - ⁶³ Ni	Documented In-House Methods OM Ni-63 & OM ICPMS Ni63 by liquid scintillation and ICP-MS
CONCRETE, PAPER SWABS, SODIUM CARBONATE SOLUTION, AQUEOUS SOLUTIONS, MILK, WATER: Natural, process, waste and potable	Carbon - ¹⁴ C	Documented In-House Method OM Pyrolysis by liquid scintillation counting of Beta radioactivity



1011
Accredited to
ISO/IEC 17025:2005

Schedule of Accreditation
issued by
United Kingdom Accreditation Service
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

Wood Nuclear Limited
Issue No: 036 Issue date: 05 October 2018

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FISH (FREEZE-DRIED), GRASS and HERBAGE	<u>Radiochemical Analysis (cont'd)</u> Carbon - ¹⁴ C	Documented In House Method OM Pyrolysis by Pyrolysis and Liquid Scintillation
SOIL	Carbon - ¹⁴ C	Documented In House Method OM Pyrolysis by Pyrolysis and Liquid Scintillation
SEDIMENT, SOIL, CONCRETE, GEOLOGICAL MATERIALS, SEAFOOD, WATER: Natural, process, waste and potable	Technetium - ⁹⁹ Tc	Documented In-House Methods OM Tc-99 Solid, OM Tc-99 Water, OM ICPMS Tc99 by ICP-MS
SEDIMENT, SOIL, CONCRETE, GEOLOGICAL MATERIALS, WATER: Natural, process, waste and potable	<u>Determination of alpha emitting radionuclides</u> Natural Uranium isotopes ²³⁸ U, ²³⁵ U, ²³⁴ U	Documented In-House Method OM U and OM AS by alpha spectrometry
SEDIMENT, SOIL, CONCRETE, GEOLOGICAL MATERIALS, WATER: Natural, process, waste and potable	Recycled Uranium isotopes ²³⁸ U, ²³⁶ U, ²³⁵ U, ²³⁴ U, ²³³ U, ²³² U	Documented In-House Method OM U, OM AS and OM ICPMS-URECYC by alpha spectrometry and ICP-MS
SWABS, SEDIMENT, SOIL, CONCRETE, GEOLOGICAL MATERIALS, WATER: Natural, process, waste and potable	<u>Non-Uranic Actinides</u> Americium - ²⁴¹ Am Curium - ²⁴² Cm, ²⁴³⁺²⁴⁴ Cm Plutonium - ²³⁹⁺²⁴⁰ Pu, ²³⁸ Pu, ²⁴¹ Pu, ²⁴² Pu Thorium - ²³² Th, ²³⁰ Th, ²²⁸ Th	Documented In-House Method OM ACT and OM AS by alpha spectrometry and liquid scintillation
FISH (FREEZE-DRIED) AND MILK	Americium – ²⁴¹ Am	Documented In-House Methods OM ACT and OM AS by alpha spectrometry
FISH (FREEZE-DRIED) AND MILK	Plutonium – ²³⁹⁺²⁴⁰ Pu, ²³⁸ Pu, ²⁴² Pu	Documented In-House Methods OM ACT and OM AS by alpha spectrometry



1011
Accredited to
ISO/IEC 17025:2005

Schedule of Accreditation
issued by
United Kingdom Accreditation Service
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

Wood Nuclear Limited
Issue No: 036 Issue date: 05 October 2018

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
ENVIRONMENTAL SAMPLES (Water, aqueous solutions, leachates, biota, air filters, soils, sediment and geological materials)	<u>Gamma Emitting Nuclides</u> Gamma Spectrometry (Energy Range: 60 keV to 2 MeV)	Documented In-House Methods OM GSSP, OM GSSOP and OM GS
FOODSTUFFS	Gamma Spectrometry (Energy Range: 60 keV to 2 MeV)	Documented In-House Methods OM GSSP, OM GSSOP and OM GS
NON-ENVIRONMENTAL SOLIDS AND LIQUIDS	Gamma Spectrometry (Energy Range: 60 keV to 2 MeV) (up to density: 2.5 g cm ⁻³)	Documented In-House Methods OM GSSP, OM GSSOP and OM GS
END		