


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 <p>Accredited to ISO/IEC 17025:2005</p>	<h3>Hall Analytical Laboratories Limited</h3> <p>Issue No: 013 Issue date: 27 April 2012</p>	
	<p>Millbrook Business Centre Unit A, Floats Road Manchester M23 9YJ</p>	<p>Contact: Dr M.L. Kimber Tel: +44 (0)161-286 7889 Fax: +44 (0)161-286 7676 E-Mail: malcolm@hallanalytical.co.uk Website: www.hallanalytical.co.uk</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>DUST and PARTICULATES</p> <p>SOILS and SEDIMENTS</p> <p>WATERS, WASTE WATERS</p>	<p><u>Chemical Tests</u></p> <p>Determination of the following polychlorinated dibenzo-p-dioxin (PCDD) and polychlorinated dibenzofuran (PCDF) compounds, for determination of Toxicity Equivalent (I-TEQ and/ or WHO-TEQ)</p> <p>2,3,7,8,-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD OCDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF</p>	<p>Documented In-House Methods</p> <p>Documented In-House Methods (in brackets) using high resolution gas chromatography/high resolution mass spectrometry: US EPA Method 1613 (SOP 8/037 and SOP 8/083)</p>



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<p>ATMOSPHERIC POLLUTANTS AND EFFLUENTS – STACK GAS SAMPLES</p> <p>Stationary source emission samples Ambient air samples</p> <p>Filters Probe and impinger rinses (toluene, acetone and water) XAD-2 resin trap</p>	<p><u>Chemical Tests</u></p> <p>Determination of the following polychlorinated dibenzo-p-dioxin (PCDD) and polychlorinated dibenzofuran (PCDF) compounds, for determination of Toxicity Equivalent (I-TEQ and/ or WHO-TEQ)</p> <p>Polychlorinated dibenzo-<i>p</i>-dioxins (PCDD's): 2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD OCDD</p> <p>Polychlorinated dibenzo-furans (PCDF's): 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF</p>	<p>Documented In-House Methods based on the following national, international and other recognised standards.</p> <p>In house procedure validated to BS EN 1948-2:2006 and BS EN 1948-3:2006 Extraction followed by GCHRMS analysis (SOP 8/037 and 8/081)</p> <p>In house procedure validated to US EPA Method 23 Extraction followed by GCHRMS analysis (SOP 8/037 and SOP 8/081)</p>



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<p>ATMOSPHERIC POLLUTANTS AND EFFLUENTS – STACK GAS SAMPLES Stationary source emission samples Ambient air samples</p> <p>Filters Probe and impinger rinses (acetone, toluene, hexane and water) XAD-2 resin trap</p>	<p align="center"><u>Chemical Tests</u></p> <p>Polycyclic aromatic hydrocarbons (PAHs) Naphthalene 1 Methyl Naphthalene 2 Methyl Naphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Benzo(e)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Indeno(1,2,3-cd)pyrene Dibenzo(a,h)anthracene Benzo(g,h,i)perylene Dibenzofuran Benzo(a)fluorene Benzo(b)fluorene Perylene Dibenzo(a,e)pyrene</p>	<p>Documented In-House Methods based on the following national, international and other recognised standards.</p> <p>In house validated procedure. Extraction followed by GCMS analysis (SOP 8/085 and 8/112)</p>



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Stationary source emission samples Ambient air samples Filters Probe and impinger rinses (toluene, acetone and water) XAD-2 resin trap	Determination of the following PCB compounds, for determination of Toxicity Equivalent (WHO-TEQ) WHO-12, Polychlorinated biphenyls (PCBs) PCB-77 PCB-81 PCB-105 PCB-114 PCB-118 PCB-123 PCB-126 PCB-156 PCB-157 PCB-167 PCB-169 PCB-189	In house validated procedure based on DD CEN/TS 1948-4. Extraction followed by GCHRMS analysis (SOP 8/081, 8/084 and 8/044)
END		