

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x2 Dilution
AB	x5 Dilution

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	

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Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified BS 1377-3: 1990/USEPA 160.3 Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM22	Modified USEPA 160.4. Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (450°C)	PM0	No preparation is required.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM27	Modified US EPA method 9056.Determination of water soluble anions using Dionex (Ion-Chromatography).	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.			AD	Yes
TM27	Modified US EPA method 9056.Determination of water soluble anions using Dionex (Ion-Chromatography).	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.			AR	Yes

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Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.			AR	Yes

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Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.			AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.			AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO ₂ and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.			AR	Yes
TM61	Modified US EPA methods 245.7 and 200.7. Determination of Mercury by Cold Vapour Atomic Fluorescence.	PM38	Samples are brominated to reduce all mercury compounds to Mercury (II) which is analysed using method TM061.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

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Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	Yes
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM77	Modified DDCEN/TS method 15364:2006. Determination of Acid Neutralization Capacity by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	No
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.	Yes		AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM108	Determination of Elemental Sulphur by Reversed Phase High Performance Liquid Chromatography with Ultra Violet spectroscopy.	PM114	End over end extraction of dried and crushed soil samples for organic analysis. The solvent mix varies depending on analysis required			AD	Yes
TM108	Determination of Elemental Sulphur by Reversed Phase High Performance Liquid Chromatography with Ultra Violet spectroscopy.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes

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Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 340.2	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.				
NONE	No Method Code	PM18	Modified method EN 12457-3. As received solid samples are leached with water in a 2:1 water to solid ratio for 6 hours, the same aliquot of solid is then re-leached with water in an 8:1 water to solid ratio for 18 hours, the moisture content of the sample is included in the ratio. This preparation produces two eluates.			AR	Yes
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	



Exova Jones Environmental

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Attention :	Kathryn Ellis
Date :	3rd February, 2017
Your reference :	A090070-193
Our reference :	Test Report 17/2576 Batch 4
Location :	East Lancashire Paper Mill
Date samples received :	24th January, 2017
Status :	Final report
Issue :	1

Nine samples were received for analysis on 24th January, 2017 of which six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Client Name: WYG
 Reference: A090070-193
 Location: East Lancashire Paper Mill
 Contact: Kathryn Ellis
 JE Job No.: 17/2576

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	125-127	128-130	131-133	134-135	136-137	138-139					Please see attached notes for all abbreviations and acronyms		
Sample ID	TP 115	TP 108	TP 108	TP 121	DS03	DS03							
Depth	0.50	0.50		0.50	0.50	1.70							
COC No / misc													
Containers	V J T	V J T	V J T	V J	V J	V J							
Sample Date	20/01/2017	20/01/2017	20/01/2017	20/01/2017	23/01/2017 14:00	23/01/2017 14:20							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	4	4	4	4	4	4							
Date of Receipt	24/01/2017	24/01/2017	24/01/2017	24/01/2017	24/01/2017	24/01/2017					LOD/LOR	Units	Method No.
PAH MS													
Naphthalene ^{#M}	<0.04	0.05	0.16	0.08	0.07	<0.04					<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	0.11	<0.03	0.06	<0.03					<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	<0.05	0.14	0.15	<0.05	0.12					<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	<0.04	<0.04	0.14	0.10	<0.04	0.06					<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	<0.03	0.43	1.33	0.95	0.39	0.97					<0.03	mg/kg	TM4/PM8
Anthracene [#]	<0.04	0.09	0.28	0.15	0.09	0.24					<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	<0.03	0.78	1.79	1.68	0.84	2.34					<0.03	mg/kg	TM4/PM8
Pyrene [#]	<0.03	0.71	1.53	1.36	0.79	2.13					<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	<0.06	0.28	0.63	0.52	0.35	0.92					<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	<0.02	0.32	0.84	0.68	0.41	1.09					<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene ^{#M}	<0.07	0.54	1.20	1.02	0.71	1.93					<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	<0.04	0.28	0.63	0.61	0.39	1.13					<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	<0.04	0.18	0.52	0.38	0.27	0.70					<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	0.06	0.12	0.10	0.07	0.21					<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	<0.04	0.19	0.41	0.35	0.27	0.61					<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	3.9	9.8	8.1	4.7	12.5					<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	0.39	0.86	0.73	0.51	1.39					<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	0.15	0.34	0.29	0.20	0.54					<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	118	111	115	110	113	121					<0	%	TM4/PM8
VOC TICs	-	-	-	-	-	ND						None	TM15/PM10
Methyl Tertiary Butyl Ether ^{#M}	-	-	-	-	-	<6					<6	ug/kg	TM15/PM10
Benzene ^{#M}	-	-	-	-	-	<5					<5	ug/kg	TM15/PM10
Toluene ^{#M}	-	-	-	-	-	<3					<3	ug/kg	TM15/PM10
Ethylbenzene ^{#M}	-	-	-	-	-	<3					<3	ug/kg	TM15/PM10
p/m-Xylene ^{#M}	-	-	-	-	-	<4					<4	ug/kg	TM15/PM10
o-Xylene ^{#M}	-	-	-	-	-	<4					<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	-	-	97					<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	-	83					<0	%	TM15/PM10
SVOC TICs	-	-	-	-	-	ND						None	TM16/PM8

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	125-127	128-130	131-133	134-135	136-137	138-139					Please see attached notes for all abbreviations and acronyms		
Sample ID	TP 115	TP 108	TP 108	TP 121	DS03	DS03							
Depth	0.50	0.50		0.50	0.50	1.70							
COC No / misc													
Containers	V J T	V J T	V J T	V J	V J	V J							
Sample Date	20/01/2017	20/01/2017	20/01/2017	20/01/2017	23/01/2017 14:00	23/01/2017 14:20							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	4	4	4	4	4	4							
Date of Receipt	24/01/2017	24/01/2017	24/01/2017	24/01/2017	24/01/2017	24/01/2017					LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2					<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4	<4	<4	<4	<4					<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	12	15	<7	<7	<7					<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	<7	267	410	100	116	16					<7	mg/kg	TM5/PM16
>C35-C44	<7	180	289	136	113	<7					<7	mg/kg	TM5/PM16
Total aliphatics C5-44	<26	459	714	236	229	<26					<26	mg/kg	TM5/TM36/PM16
Aromatics													
>C5-EC7 [#]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC7-EC8 [#]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC10-EC12 [#]	<0.2	<0.2	1.0	<0.2	<0.2	<0.2					<0.2	mg/kg	TM5/PM16
>EC12-EC16 [#]	<4	<4	15	7	<4	9					<4	mg/kg	TM5/PM16
>EC16-EC21 [#]	<7	18	73	29	13	49					<7	mg/kg	TM5/PM16
>EC21-EC35 [#]	<7	236	353	144	128	143					<7	mg/kg	TM5/PM16
>EC35-EC44	<7	197	296	188	176	146					<7	mg/kg	TM5/PM16
Total aromatics C5-44	<26	451	738	368	317	347					<26	mg/kg	TM5/TM36/PM16
Total aliphatics and aromatics(C5-44)	<52	910	1452	604	546	347					<52	mg/kg	TM5/TM36/PM16
MTBE [#]	<5	<5	<5	<5	<5	-					<5	ug/kg	TM31/PM12
Benzene [#]	<5	<5	<5	<5	<5	-					<5	ug/kg	TM31/PM12
Toluene [#]	<5	<5	<5	9	<5	-					<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	<5	<5	<5	<5	-					<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5	<5	<5	7	<5	-					<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	<5	<5	<5	<5	-					<5	ug/kg	TM31/PM12
PCB 77	-	-	-	<5	-	-					<5	ug/kg	TM16/PM8
PCB 81	-	-	-	<5	-	-					<5	ug/kg	TM16/PM8
PCB 105	-	-	-	<5	-	-					<5	ug/kg	TM16/PM8
PCB 114	-	-	-	<5	-	-					<5	ug/kg	TM16/PM8
PCB 118	-	-	-	<5	-	-					<5	ug/kg	TM16/PM8
PCB 123	-	-	-	<5	-	-					<5	ug/kg	TM16/PM8
PCB 126	-	-	-	<5	-	-					<5	ug/kg	TM16/PM8
PCB 156	-	-	-	<5	-	-					<5	ug/kg	TM16/PM8
PCB 157	-	-	-	<5	-	-					<5	ug/kg	TM16/PM8
PCB 167	-	-	-	<5	-	-					<5	ug/kg	TM16/PM8
PCB 169	-	-	-	<5	-	-					<5	ug/kg	TM16/PM8
PCB 189	-	-	-	<5	-	-					<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	-	<60	-	-					<60	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

SVOC Report : Solid

J E Sample No.	138-139												
Sample ID	DS03												
Depth	1.70												
COC No / misc													
Containers	V J												
Sample Date	23/01/2017 14:20												
Sample Type	Soil												
Batch Number	4												
Date of Receipt	24/01/2017												
SVOC MS											LOD/LOR	Units	Method No.
Please see attached notes for all abbreviations and acronyms													
Phenols													
2-Chlorophenol ^{#M}	<10										<10	ug/kg	TM16/PM8
2-Methylphenol	<10										<10	ug/kg	TM16/PM8
2-Nitrophenol	<10										<10	ug/kg	TM16/PM8
2,4-Dichlorophenol ^{#M}	<10										<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10										<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10										<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10										<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10										<10	ug/kg	TM16/PM8
4-Methylphenol	<10										<10	ug/kg	TM16/PM8
4-Nitrophenol	<10										<10	ug/kg	TM16/PM8
Pentachlorophenol	<10										<10	ug/kg	TM16/PM8
Phenol ^{#M}	<10										<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene ^{#M}	<10										<10	ug/kg	TM16/PM8
2-Methylnaphthalene ^{#M}	<10										<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100										<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100										<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100										<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100										<100	ug/kg	TM16/PM8
Diethyl phthalate	<100										<100	ug/kg	TM16/PM8
Dimethyl phthalate ^{#M}	<100										<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10										<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene ^{#M}	<10										<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10										<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10										<10	ug/kg	TM16/PM8
2-Nitroaniline	<10										<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10										<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10										<10	ug/kg	TM16/PM8
3-Nitroaniline	<10										<10	ug/kg	TM16/PM8
4-Bromophenylphenylether ^{#M}	<10										<10	ug/kg	TM16/PM8
4-Chloroaniline	<10										<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10										<10	ug/kg	TM16/PM8
4-Nitroaniline	<10										<10	ug/kg	TM16/PM8
Azobenzene	<10										<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10										<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10										<10	ug/kg	TM16/PM8
Carbazole	29										<10	ug/kg	TM16/PM8
Dibenzofuran ^{#M}	<10										<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10										<10	ug/kg	TM16/PM8
Hexachlorobutadiene ^{#M}	<10										<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10										<10	ug/kg	TM16/PM8
Hexachloroethane	<10										<10	ug/kg	TM16/PM8
Isophorone ^{#M}	<10										<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine ^{#M}	<10										<10	ug/kg	TM16/PM8
Nitrobenzene ^{#M}	<10										<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	69										<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	91										<0	%	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
17/2576	4	TP 115	0.50	126	31/01/2017	General Description (Bulk Analysis)	soil/stones
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD
					31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	4	TP 108	0.50	129	31/01/2017	General Description (Bulk Analysis)	soil/stones
					31/01/2017	Asbestos Fibres	Fibre Bundles
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos Type	Chrysotile
					31/01/2017	Asbestos Level Screen	<0.1%
17/2576	4	TP 108		132	31/01/2017	General Description (Bulk Analysis)	soil/stones
					31/01/2017	Asbestos Fibres	Fibre Bundles
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos Type	Chrysotile
					31/01/2017	Asbestos Level Screen	<0.1%
17/2576	4	TP 121	0.50	135	31/01/2017	General Description (Bulk Analysis)	soil/stones
					31/01/2017	Asbestos Fibres	Fibre Bundles
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos Type	Chrysotile
					31/01/2017	Asbestos Level Screen	<0.1%
17/2576	4	DS03	0.50	137	31/01/2017	General Description (Bulk Analysis)	soil/stones
					31/01/2017	Asbestos Fibres	Fibre Bundles
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos Type	Chrysotile
					31/01/2017	Asbestos Level Screen	Asbestos level cannot be determined at this stage of analysis
17/2576	4	DS03	1.70	139	31/01/2017	General Description (Bulk Analysis)	soil/stones
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

[illegible]

Matrix : Solid

11 of 19

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/2576

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
AB	x10 Dilution

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM61	Modified US EPA methods 245.7 and 200.7. Determination of Mercury by Cold Vapour Atomic Fluorescence.	PM38	Samples are brominated to reduce all mercury compounds to Mercury (II) which is analysed using method TM061.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	Yes
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.	Yes		AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
NONE	No Method Code	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.				
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

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Attention :	Kathryn Ellis
Date :	8th March, 2017
Your reference :	A090070-193
Our reference :	Test Report 17/2576 Batch 5
Location :	East Lancashire Paper Mill
Date samples received :	25th January, 2017
Status :	Final report
Issue :	2

Fifteen samples were received for analysis on 25th January, 2017 of which ten were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

A handwritten signature in blue ink, appearing to read 'Bruce Leslie'.

Bruce Leslie
Project Co-ordinator

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
 Reference: A090070-193
 Location: East Lancashire Paper Mill
 Contact: Kathryn Ellis
 JE Job No.: 17/2576

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	146-147	150-151	154-155	158-159	160-161	164-165	166-167	168-169	170-172	173-175	Please see attached notes for all abbreviations and acronyms		
Sample ID	DS04	DS07	DS01	DS01	BH104	DS02	DS02	DS02	TP102	TP102			
Depth	0.50	0.20	0.50	1.40	0.50	0.50	0.70	0.90	0.50	1.60			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J T	V J T			
Sample Date	23/01/2017 15:00	24/01/2017 10:00	24/01/2017 12:00	24/01/2017 13:00	23/01/2017 13:00	24/01/2017 14:00	24/01/2017 14:30	24/01/2017 15:00	24/01/2017 15:00	24/01/2017 15:30			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	5	5	5	5	5	5	5	5	5	5			
Date of Receipt	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	LOD/LOR	Units	Method No.
PAH MS													
Naphthalene ^{#M}	0.31	<0.04	<0.04	0.29	<0.04	0.45	4.62 _{AA}	<0.04	0.70	0.18	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	0.03	<0.03	<0.03	<0.03	0.41	4.62 _{AA}	<0.03	<0.03	0.11	<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	0.45	<0.05	<0.05	0.68	<0.05	0.17	2.36 _{AA}	<0.05	1.87	0.10	<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	0.29	<0.04	<0.04	0.32	<0.04	0.26	4.15 _{AA}	<0.04	1.01	0.12	<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	2.69	0.30	0.10	3.94	<0.03	2.89	53.48 _{AA}	0.20	10.41	1.24	<0.03	mg/kg	TM4/PM8
Anthracene [#]	0.35	0.07	<0.04	0.61	<0.04	1.06	16.22 _{AA}	0.05	2.24	0.26	<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	4.04	0.99	0.12	4.62	<0.03	5.60	86.50 _{AA}	0.32	15.15	1.87	<0.03	mg/kg	TM4/PM8
Pyrene [#]	3.43	0.86	0.11	4.03	<0.03	4.62	73.91 _{AA}	0.29	12.91	1.55	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	1.20	0.40	0.07	1.63	<0.06	3.21	55.83 _{AA}	0.22	4.57	0.61	<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	1.63	0.52	0.08	2.03	<0.02	3.55	53.49 _{AA}	0.25	5.65	0.91	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene ^{#M}	2.40	0.85	0.11	3.06	<0.07	7.81	108.53 _{AA}	0.44	10.65	1.29	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	1.52	0.52	0.07	1.83	<0.04	5.31	75.48 _{AA}	0.28	6.67	0.77	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	0.77	0.34	<0.04	1.23	<0.04	3.93	53.39 _{AA}	0.16	3.76	0.43	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	0.23	0.08	<0.04	0.33	<0.04	0.94	11.16 _{AA}	0.05	0.87	0.13	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	0.80	0.28	<0.04	0.98	<0.04	2.93	43.85 _{AA}	0.15	4.00	0.44	<0.04	mg/kg	TM4/PM8
PAH 16 Total	20.1	5.2	0.7	25.6	<0.6	43.1	647.6 _{AA}	2.4	80.5	10.0	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.73	0.61	0.08	2.20	<0.05	5.62	78.14 _{AA}	0.32	7.67	0.93	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.67	0.24	0.03	0.86	<0.02	2.19	30.39 _{AA}	0.12	2.98	0.36	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	120	115	118	111	124	121	115 _{AA}	121	120	119	<0	%	TM4/PM8
VOC TICs	-	-	-	ND	-	-	ND	-	-	-		None	TM15/PM10
Methyl Tertiary Butyl Ether ^{#M}	-	-	-	<6	-	-	<6	-	-	-	<6	ug/kg	TM15/PM10
Benzene ^{#M}	-	-	-	<5	-	-	53	-	-	-	<5	ug/kg	TM15/PM10
Toluene ^{#M}	-	-	-	<3	-	-	44	-	-	-	<3	ug/kg	TM15/PM10
Ethylbenzene ^{#M}	-	-	-	<3	-	-	11	-	-	-	<3	ug/kg	TM15/PM10
p/m-Xylene ^{#M}	-	-	-	<4	-	-	50	-	-	-	<4	ug/kg	TM15/PM10
o-Xylene ^{#M}	-	-	-	<4	-	-	25	-	-	-	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	98	-	-	89	-	-	-	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	77	-	-	67	-	-	-	<0	%	TM15/PM10
SVOC TICs	-	-	-	See Attached _{AB}	-	-	See Attached _{AB}	-	-	-		None	TM16/PM8

Client Name: WYG
 Reference: A090070-193
 Location: East Lancashire Paper Mill
 Contact: Kathryn Ellis
 JE Job No.: 17/2576

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	146-147	150-151	154-155	158-159	160-161	164-165	166-167	168-169	170-172	173-175	Please see attached notes for all abbreviations and acronyms		
Sample ID	DS04	DS07	DS01	DS01	BH104	DS02	DS02	DS02	TP102	TP102			
Depth	0.50	0.20	0.50	1.40	0.50	0.50	0.70	0.90	0.50	1.60			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J T	V J T			
Sample Date	23/01/2017 15:00	24/01/2017 10:00	24/01/2017 12:00	24/01/2017 13:00	23/01/2017 13:00	24/01/2017 14:00	24/01/2017 14:30	24/01/2017 15:00	24/01/2017 15:00	24/01/2017 15:30			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	5	5	5	5	5	5	5	5	5	5			
Date of Receipt	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4	<4	6	<4	<4	6	<4	<4	<4	<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	<7	27	<7	10	29	<7	30	<7	<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	110	<7	51	198	<7	150	196	<7	184	11	<7	mg/kg	TM5/PM16
>C35-C44	87	<7	<7	32	<7	26	37	<7	11	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-44	197	<26	51	263	<26	186	268	<26	225	<26	<26	mg/kg	TM5/PM16/PM2/PM15
Aromatics													
>C5-EC7 [#]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 [#]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 [#]	<0.2	<0.2	<0.2	7.5	<0.2	<0.2	3.6	<0.2	0.8	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16 [#]	<4	<4	<4	104	<4	6	64	<4	19	6	<4	mg/kg	TM5/PM16
>EC16-EC21 [#]	44	17	<7	540	<7	54	954	16	156	21	<7	mg/kg	TM5/PM16
>EC21-EC35 [#]	150	100	33	1545	<7	266	4060	145	591	83	<7	mg/kg	TM5/PM16
>EC35-EC44	109	72	20	582	<7	146	1591	244	349	127	<7	mg/kg	TM5/PM16
Total aromatics C5-44	303	189	53	2779	<26	472	6673	405	1116	237	<26	mg/kg	TM5/PM16/PM2/PM15
Total aliphatics and aromatics(C5-44)	500	189	104	3042	<52	658	6941	405	1341	237	<52	mg/kg	TM5/PM16/PM2/PM15
MTBE [#]	<5	<5	<5	-	<5	<5	-	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene [#]	<5	<5	<5	-	<5	<5	-	<5	<5	<5	<5	ug/kg	TM31/PM12
Toluene [#]	<5	<5	<5	-	<5	<5	-	<5	<5	<5	<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	<5	<5	-	<5	<5	-	<5	<5	<5	<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5	<5	<5	-	<5	<5	-	<5	<5	<5	<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	<5	<5	-	<5	<5	-	<5	<5	<5	<5	ug/kg	TM31/PM12
Phenol ^{#M}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	TM26/PM21
Monoethylene glycol	-	-	<10	-	-	-	-	-	-	-	<10	mg/kg	TM24/PM8
Propylene glycol	-	-	<10	-	-	-	-	-	-	-	<10	mg/kg	TM24/PM8
Diethylene glycol	-	-	<10	-	-	-	-	-	-	-	<10	mg/kg	TM24/PM8
Triethylene glycol	-	-	<10	-	-	-	-	-	-	-	<10	mg/kg	TM24/PM8
Thiodiglycol	-	-	<10	-	-	-	-	-	-	-	<10	mg/kg	TM24/PM8
Natural Moisture Content	-	-	-	17.1	18.1	18.0	17.8	36.3	-	-	<0.1	%	PM4/PM0
Natural Moisture Content	16.3	12.0	13.4	-	-	-	-	-	21.2	22.4	<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) ^{#M}	-	-	-	55	78	192	5	44	-	-	<3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext)	0.0340	0.0030	0.0726	-	-	-	-	-	0.0109	0.0278	<0.0015	g/l	TM38/PM60

Please include all sections of this report if it is reproduced

Please see attached notes for all abbreviations and acronyms

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

SVOC Report : Solid

J E Sample No.	158-159	166-167									Please see attached notes for all abbreviations and acronyms		
Sample ID	DS01	DS02											
Depth	1.40	0.70											
COC No / misc													
Containers	V J	V J											
Sample Date	24/01/2017 13:00	24/01/2017 14:30											
Sample Type	Soil	Soil											
Batch Number	5	5									LOD/LOR	Units	Method No.
Date of Receipt	25/01/2017	25/01/2017											
SVOC MS													
Phenols													
2-Chlorophenol ^{#M}	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
2-Methylphenol	<100 _{AB}	690 _{AB}									<10	ug/kg	TM16/PM8
2-Nitrophenol	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
2,4-Dichlorophenol ^{#M}	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	687 _{AB}	1130 _{AB}									<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
4-Methylphenol	743 _{AB}	1334 _{AB}									<10	ug/kg	TM16/PM8
4-Nitrophenol	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
Pentachlorophenol	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
Phenol ^{#M}	421 _{AB}	763 _{AB}									<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene ^{#M}	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
2-Methylnaphthalene ^{#M}	7431 _{AB}	3735 _{AB}									<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<1000 _{AB}	<1000 _{AB}									<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<1000 _{AB}	<1000 _{AB}									<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<1000 _{AB}	<1000 _{AB}									<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<1000 _{AB}	<1000 _{AB}									<100	ug/kg	TM16/PM8
Diethyl phthalate	<1000 _{AB}	<1000 _{AB}									<100	ug/kg	TM16/PM8
Dimethyl phthalate ^{#M}	<1000 _{AB}	<1000 _{AB}									<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene ^{#M}	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
2-Nitroaniline	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
3-Nitroaniline	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
4-Bromophenylphenylether ^{#M}	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
4-Chloroaniline	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
4-Nitroaniline	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
Azobenzene	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
Carbazole	5835 _{AB}	14669 _{AB}									<10	ug/kg	TM16/PM8
Dibenzofuran ^{#M}	8635 _{AB}	6760 _{AB}									<10	ug/kg	TM16/PM8
Hexachlorobenzene	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
Hexachlorobutadiene ^{#M}	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
Hexachloroethane	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
Isophorone ^{#M}	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine ^{#M}	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
Nitrobenzene ^{#M}	<100 _{AB}	<100 _{AB}									<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	102 _{AB}	112 _{AB}									<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	124 _{AB}	135 _{AB}									<0	%	TM16/PM8

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

VOC Report : Solid

J E Sample No.	158-159	166-167										
Sample ID	DS01	DS02										
Depth	1.40	0.70										
COC No / misc												
Containers	V J	V J										
Sample Date	24/01/2017 13:00	24/01/2017 14:30										
Sample Type	Soil	Soil										
Batch Number	5	5										
Date of Receipt	25/01/2017	25/01/2017										
	LOD/LOR	Units	Method No.									
VOC MS												
Dichlorodifluoromethane	<2	<2								<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether ^{#M}	<6	<6								<6	ug/kg	TM15/PM10
Chloromethane [#]	<3	<3								<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2								<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1								<1	ug/kg	TM15/PM10
Chloroethane ^{#M}	<6	<6								<6	ug/kg	TM15/PM10
Trichlorofluoromethane ^{#M}	<3	<3								<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) ^{#M}	<6	<6								<6	ug/kg	TM15/PM10
Dichloromethane (DCM) [#]	<30	86								<30	ug/kg	TM15/PM10
trans-1,2-Dichloroethene [#]	<3	<3								<3	ug/kg	TM15/PM10
1,1-Dichloroethane ^{#M}	<6	<6								<6	ug/kg	TM15/PM10
cis-1,2-Dichloroethene ^{#M}	<7	<7								<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4								<4	ug/kg	TM15/PM10
Bromochloromethane ^{#M}	<4	<4								<4	ug/kg	TM15/PM10
Chloroform ^{#M}	<5	<5								<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane ^{#M}	<5	<5								<5	ug/kg	TM15/PM10
1,1-Dichloropropene [#]	<3	<3								<3	ug/kg	TM15/PM10
Carbon tetrachloride ^{#M}	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dichloroethane ^{#M}	<5	<5								<5	ug/kg	TM15/PM10
Benzene ^{#M}	<5	53								<5	ug/kg	TM15/PM10
Trichloroethene (TCE) ^{#M}	<5	<5								<5	ug/kg	TM15/PM10
1,2-Dichloropropane ^{#M}	<4	<4								<4	ug/kg	TM15/PM10
Dibromomethane ^{#M}	<4	<4								<4	ug/kg	TM15/PM10
Bromodichloromethane ^{#M}	<4	<4								<4	ug/kg	TM15/PM10
cis-1,3-Dichloropropene	<4	<4								<4	ug/kg	TM15/PM10
Toluene ^{#M}	<3	44								<3	ug/kg	TM15/PM10
trans-1,3-Dichloropropene	<3	<3								<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane ^{#M}	<4	<4								<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) [#]	<3	<3								<3	ug/kg	TM15/PM10
1,3-Dichloropropane ^{#M}	<4	<4								<4	ug/kg	TM15/PM10
Dibromochloromethane ^{#M}	<5	<5								<5	ug/kg	TM15/PM10
1,2-Dibromoethane [#]	<3	<3								<3	ug/kg	TM15/PM10
Chlorobenzene ^{#M}	<4	<4								<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane ^{#M}	<5	<5								<5	ug/kg	TM15/PM10
Ethylbenzene ^{#M}	<3	11								<3	ug/kg	TM15/PM10
p/m-Xylene ^{#M}	<4	50								<4	ug/kg	TM15/PM10
o-Xylene ^{#M}	<4	25								<4	ug/kg	TM15/PM10
Styrene	<3	<3								<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4								<4	ug/kg	TM15/PM10
Isopropylbenzene [#]	<3	<3								<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane ^{#M}	<3	<3								<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2								<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane ^{#M}	<4	<4								<4	ug/kg	TM15/PM10
Propylbenzene [#]	<4	<4								<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3								<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene [#]	<3	<3								<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3								<3	ug/kg	TM15/PM10
tert-Butylbenzene [#]	<5	<5								<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene [#]	<6	39								<6	ug/kg	TM15/PM10
sec-Butylbenzene [#]	<4	<4								<4	ug/kg	TM15/PM10
4-Isopropyltoluene [#]	<4	<4								<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene ^{#M}	<4	<4								<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene [#]	<4	<4								<4	ug/kg	TM15/PM10
n-Butylbenzene [#]	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene ^{#M}	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane [#]	<4	<4								<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene [#]	<7	<7								<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4								<4	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene [#]	<7	<7								<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	98	89								<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	77	67								<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Job number: 17/2576

Method: SVOC

Sample number: 159

Matrix: Solid

Sample identity: DS01

Sample depth: 1.40

Sample Type: Soil

Units: ug/kg

Note: Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

Job number: 17/2576

Method: SVOC

Sample number: 167

Matrix: Solid

Sample identity: DS02

Sample depth: 0.70

Sample Type: Soil

Units: ug/kg

Note: Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
17/2576	5	DS04	0.50	147	31/01/2017	General Description (Bulk Analysis)	Soil/Stone
					31/01/2017	Asbestos Fibres	Fibre Bundles
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos Type	Chrysotile
					31/01/2017	Asbestos Level Screen	Asbestos level cannot be determined at this stage of analysis
17/2576	5	DS07	0.20	151	31/01/2017	General Description (Bulk Analysis)	Soil/Stone/Veg
					31/01/2017	Asbestos Fibres	Fibre Bundles
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos Type	Chrysotile
					31/01/2017	Asbestos Level Screen	<0.1%
17/2576	5	DS01	0.50	155	31/01/2017	General Description (Bulk Analysis)	Soil/Stone/Brick/Concrete
					31/01/2017	Asbestos Fibres	Fibre Bundles
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos Type	Chrysotile
					31/01/2017	Asbestos Level Screen	<0.1%
17/2576	5	DS01	1.40	159	31/01/2017	General Description (Bulk Analysis)	Soil/Stones
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD
					31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	5	BH104	0.50	161	31/01/2017	General Description (Bulk Analysis)	Soil/Stones
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD
					31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	5	DS02	0.50	165	31/01/2017	General Description (Bulk Analysis)	Soil/Stones
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
17/2576	5	DS02	0.50	165	31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD
					31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	5	DS02	0.70	167	31/01/2017	General Description (Bulk Analysis)	soil-stones
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD
					31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	5	DS02	0.90	169	31/01/2017	General Description (Bulk Analysis)	soil-stones
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD
					31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	5	TP102	0.50	171	31/01/2017	General Description (Bulk Analysis)	soil-stones
					31/01/2017	Asbestos Fibres	Fibre Bundles
					31/01/2017	Asbestos Fibres (2)	Fibre Bundles
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	Chrysotile
					31/01/2017	Asbestos Type (2)	Amosite
					31/01/2017	Asbestos Level Screen	Asbestos level cannot be determined at this stage of analysis
					08/03/2017	Asbestos Gravimetric Quantification	0.029 (mass %)
					08/03/2017	Asbestos PCOM Quantification (Fibres)	0.016 (mass %)
					08/03/2017	Asbestos Gravimetric & PCOM Total	0.045 (mass %)
17/2576	5	TP102	1.60	174	31/01/2017	General Description (Bulk Analysis)	soil-stones
					31/01/2017	Asbestos Fibres	Free Fibres
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos Type	Chrysotile
					31/01/2017	Asbestos Level Screen	<0.1%

Matrix : Solid

[illegible]

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/2576

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
AB	x10 Dilution

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM24	Determination of Glycols by GC-MS	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM61	Modified US EPA methods 245.7 and 200.7. Determination of Mercury by Cold Vapour Atomic Fluorescence.	PM38	Samples are brominated to reduce all mercury compounds to Mercury (II) which is analysed using method TM061.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	Yes
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.	Yes		AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
NONE	No Method Code	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.				
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes



Exova Jones Environmental

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Attention :	Kathryn Ellis
Date :	3rd February, 2017
Your reference :	A090070-193
Our reference :	Test Report 17/2576 Batch 6
Location :	East Lancashire Paper Mill
Date samples received :	26th January, 2017
Status :	Final report
Issue :	1

Twenty samples were received for analysis on 26th January, 2017 of which nine were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
 Reference: A090070-193
 Location: East Lancashire Paper Mill
 Contact: Kathryn Ellis
 JE Job No.: 17/2576

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	179-180	183-185	190-191	194-195	198-200	203-205	208-210	211-213	217-219		Please see attached notes for all abbreviations and acronyms		
Sample ID	DS26	DS26	DS11	TP101	SP1	SP2	SP3	TP103	TP106				
Depth	0.60	1.80	0.50	0.50	0.80	0.80	0.80	0.80	0.50				
COC No / misc													
Containers	V J	V J T	V J	V J	V J T	V J T	V J T	V J T	V J T				
Sample Date	25/01/2017 09:00	25/01/2017 09:20	25/01/2017 10:30	24/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	6	6	6	6	6	6	6	6	6				
Date of Receipt	26/01/2017	26/01/2017	26/01/2017	26/01/2017	26/01/2017	26/01/2017	26/01/2017	26/01/2017	26/01/2017		LOD/LOR	Units	Method No.
PAH MS													
Naphthalene ^{#M}	<0.04	0.97	<0.04	0.63 _{AA}	<0.04	<0.04	<0.04	<0.04	0.45		<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.15 _{AA}	<0.03	<0.03	<0.03	<0.03	0.27		<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	<0.05	<0.05	0.85 _{AA}	<0.05	<0.05	<0.05	<0.05	3.16		<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	<0.04	<0.04	<0.04	0.50 _{AA}	<0.04	<0.04	<0.04	<0.04	1.50		<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	0.18	0.33	<0.03	5.49 _{AA}	0.66	0.17	0.15	<0.03	19.07		<0.03	mg/kg	TM4/PM8
Anthracene [#]	<0.04	<0.04	<0.04	1.12 _{AA}	0.05	<0.04	<0.04	<0.04	2.88		<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	0.29	0.08	0.05	11.54 _{AA}	0.80	0.40	0.27	<0.03	27.75		<0.03	mg/kg	TM4/PM8
Pyrene [#]	0.26	0.07	0.05	9.37 _{AA}	0.65	0.36	0.24	<0.03	23.55		<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	0.17	0.09	<0.06	3.95 _{AA}	0.29	0.17	0.16	<0.06	8.88		<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	0.17	0.07	0.02	5.74 _{AA}	0.34	0.24	0.14	<0.02	12.19		<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene ^{#M}	0.22	<0.07	<0.07	9.13 _{AA}	0.53	0.32	0.20	<0.07	18.55		<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	0.10	<0.04	<0.04	5.64 _{AA}	0.32	0.18	0.12	<0.04	10.56		<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	0.05	<0.04	<0.04	3.37 _{AA}	0.21	0.12	0.07	<0.04	6.48		<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	<0.04	<0.04	0.79 _{AA}	0.05	0.05	<0.04	<0.04	1.70		<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	0.07	<0.04	<0.04	3.43 _{AA}	0.21	0.11	0.08	<0.04	6.22		<0.04	mg/kg	TM4/PM8
PAH 16 Total	1.5	1.6	<0.6	61.6 _{AA}	4.1	2.1	1.4	<0.6	143.2		<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.16	<0.05	<0.05	6.57 _{AA}	0.38	0.23	0.14	<0.05	13.36		<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.06	<0.02	<0.02	2.56 _{AA}	0.15	0.09	0.06	<0.02	5.19		<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	103	105	100	114 _{AA}	109	110	107	116	107		<0	%	TM4/PM8
VOC TICs	-	ND	-	ND	-	-	-	-	ND _{AB}			None	TM15/PM10
Methyl Tertiary Butyl Ether ^{#M}	-	<6	-	<6	-	-	-	-	<60 _{AB}		<6	ug/kg	TM15/PM10
Benzene ^{#M}	-	16	-	<5	-	-	-	-	<50 _{AB}		<5	ug/kg	TM15/PM10
Toluene ^{#M}	-	55	-	<3	-	-	-	-	<30 _{AB}		<3	ug/kg	TM15/PM10
Ethylbenzene ^{#M}	-	8	-	<3	-	-	-	-	<30 _{AB}		<3	ug/kg	TM15/PM10
p/m-Xylene ^{#M}	-	39	-	<4	-	-	-	-	<40 _{AB}		<4	ug/kg	TM15/PM10
o-Xylene ^{#M}	-	16	-	<4	-	-	-	-	<40 _{AB}		<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	93	-	94	-	-	-	-	102 _{AB}		<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	61	-	76	-	-	-	-	83 _{AB}		<0	%	TM15/PM10
SVOC TICs	-	See Attached	-	See Attached _{AB}	-	-	-	-	See Attached			None	TM16/PM8

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	179-180	183-185	190-191	194-195	198-200	203-205	208-210	211-213	217-219		Please see attached notes for all abbreviations and acronyms		
Sample ID	DS26	DS26	DS11	TP101	SP1	SP2	SP3	TP103	TP106				
Depth	0.60	1.80	0.50	0.50	0.80	0.80	0.80	0.80	0.50				
COC No / misc													
Containers	V J	V J T	V J	V J	V J T	V J T	V J T	V J T	V J T				
Sample Date	25/01/2017 09:00	25/01/2017 09:20	25/01/2017 10:30	24/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	6	6	6	6	6	6	6	6	6				
Date of Receipt	26/01/2017	26/01/2017	26/01/2017	26/01/2017	26/01/2017	26/01/2017	26/01/2017	26/01/2017	26/01/2017		LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}		<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}		<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}		<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	3.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	7	<4	<4	<4	<4	<4	<4	<4		<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	<7	84	<7	<7	<7	<7	<7		<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	<7	<7	<7	467	24	54	10	<7	54		<7	mg/kg	TM5/PM16
>C35-C44	<7	<7	<7	178	<7	<7	<7	<7	<7		<7	mg/kg	TM5/PM16
Total aliphatics C5-44	<26	<26	<26	729	<26	54	<26	<26	54		<26	mg/kg	TM5/TM36/PM16
Aromatics													
>C5-EC7 [#]	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}		<0.1	mg/kg	TM36/PM12
>EC7-EC8 [#]	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}		<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}		<0.1	mg/kg	TM36/PM12
>EC10-EC12 [#]	<0.2	0.5	<0.2	0.6	<0.2	<0.2	<0.2	<0.2	<0.2		<0.2	mg/kg	TM5/PM16
>EC12-EC16 [#]	<4	8	<4	21	<4	<4	<4	<4	<4		<4	mg/kg	TM5/PM16
>EC16-EC21 [#]	22	10	<7	156	<7	14	<7	<7	76		<7	mg/kg	TM5/PM16
>EC21-EC35 [#]	54	10	<7	823	31	97	26	<7	313		<7	mg/kg	TM5/PM16
>EC35-EC44	<7	<7	<7	620	22	95	<7	<7	177		<7	mg/kg	TM5/PM16
Total aromatics C5-44	76	29	<26	1621	53	206	26	<26	566		<26	mg/kg	TM5/TM36/PM16
Total aliphatics and aromatics(C5-44)	76	<52	<52	2350	53	260	<52	<52	620		<52	mg/kg	TM5/TM36/PM16
MTBE [#]	<5	-	<5	-	<5	<5	<5	<5	-		<5	ug/kg	TM31/PM12
Benzene [#]	<5	-	<5	-	<5	<5	<5	<5	-		<5	ug/kg	TM31/PM12
Toluene [#]	<5	-	<5	-	<5	<5	<5	<5	-		<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	-	<5	-	<5	<5	<5	<5	-		<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5	-	<5	-	<5	<5	<5	<5	-		<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	-	<5	-	<5	<5	<5	<5	-		<5	ug/kg	TM31/PM12
PCB 77	-	-	-	<5	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 81	-	-	-	<5	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 105	-	-	-	<5	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 114	-	-	-	<5	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 118	-	-	-	<5	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 123	-	-	-	<5	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 126	-	-	-	<5	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 156	-	-	-	<5	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 157	-	-	-	<5	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 167	-	-	-	<5	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 169	-	-	-	<5	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 189	-	-	-	<5	-	-	-	-	<5		<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	-	<60	-	-	-	-	<60		<60	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

VOC Report : Solid

J E Sample No.	183-185	194-195	217-219							Please see attached notes for all abbreviations and acronyms		
Sample ID	DS26	TP101	TP106									
Depth	1.80	0.50	0.50									
COC No / misc Containers	V J T	V J	V J T									
Sample Date	25/01/2017 09:20	24/01/2017	25/01/2017									
Sample Type	Soil	Soil	Soil									
Batch Number	6	6	6									
Date of Receipt	26/01/2017	26/01/2017	26/01/2017							LOD/LOR	Units	Method No.
VOC MS												
Dichlorodifluoromethane	<2	<2	<20 _{AB}							<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether ^{#M}	<6	<6	<60 _{AB}							<6	ug/kg	TM15/PM10
Chloromethane [#]	<3	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<20 _{AB}							<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<10 _{AB}							<1	ug/kg	TM15/PM10
Chloroethane ^{#M}	<6	<6	<60 _{AB}							<6	ug/kg	TM15/PM10
Trichlorofluoromethane ^{#M}	<3	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) ^{#M}	<6	<6	<60 _{AB}							<6	ug/kg	TM15/PM10
Dichloromethane (DCM) [#]	252	97	<300 _{AB}							<30	ug/kg	TM15/PM10
trans-1,2-Dichloroethene [#]	<3	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
1,1-Dichloroethane ^{#M}	<6	<6	<60 _{AB}							<6	ug/kg	TM15/PM10
cis-1,2-Dichloroethene ^{#M}	<7	<7	<70 _{AB}							<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
Bromochloromethane ^{#M}	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
Chloroform ^{#M}	<5	<5	<50 _{AB}							<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane ^{#M}	<5	<5	<50 _{AB}							<5	ug/kg	TM15/PM10
1,1-Dichloropropene [#]	<3	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
Carbon tetrachloride ^{#M}	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
1,2-Dichloroethane ^{#M}	<5	<5	<50 _{AB}							<5	ug/kg	TM15/PM10
Benzene ^{#M}	16	<5	<50 _{AB}							<5	ug/kg	TM15/PM10
Trichloroethene (TCE) ^{#M}	<5	<5	<50 _{AB}							<5	ug/kg	TM15/PM10
1,2-Dichloropropane ^{#M}	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
Dibromomethane ^{#M}	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
Bromodichloromethane ^{#M}	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
cis-1,3-Dichloropropene	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
Toluene ^{#M}	55	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
trans-1,3-Dichloropropene	<3	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane ^{#M}	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) [#]	<3	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
1,3-Dichloropropane ^{#M}	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
Dibromochloromethane ^{#M}	<5	<5	<50 _{AB}							<5	ug/kg	TM15/PM10
1,2-Dibromoethane [#]	<3	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
Chlorobenzene ^{#M}	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane ^{#M}	<5	<5	<50 _{AB}							<5	ug/kg	TM15/PM10
Ethylbenzene ^{#M}	8	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
p/m-Xylene ^{#M}	39	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
o-Xylene ^{#M}	16	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
Styrene	<3	<3	<30 _{AB}							<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
Isopropylbenzene [#]	<3	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane ^{#M}	<3	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<20 _{AB}							<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane ^{#M}	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
Propylbenzene [#]	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene [#]	<3	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<30 _{AB}							<3	ug/kg	TM15/PM10
tert-Butylbenzene [#]	<5	<5	<50 _{AB}							<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene [#]	16	<6	<60 _{AB}							<6	ug/kg	TM15/PM10
sec-Butylbenzene [#]	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
4-Isopropyltoluene [#]	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene ^{#M}	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene [#]	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
n-Butylbenzene [#]	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene ^{#M}	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane [#]	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene [#]	<7	<7	<70 _{AB}							<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<40 _{AB}							<4	ug/kg	TM15/PM10
Naphthalene	<27	199	<270 _{AB}							<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene [#]	<7	<7	<70 _{AB}							<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	93	94	102 _{AB}							<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	61	76	83 _{AB}							<0	%	TM15/PM10

[illegible]

Exova Jones Environmental

Job number: 17/2576

Method: SVOC

Sample number: 195

Matrix: Solid

Sample identity: TP101

Sample depth: 0.50

Sample Type: Soil

Units: ug/kg

Note: Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

Job number:	17/2576
Sample number:	218
Sample identity:	TP106
Sample depth:	0.50
Sample Type:	Soil
Units:	ug/kg

Method: SVOC
Matrix: Solid

Note: Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
17/2576	6	DS26	0.60	180	31/01/2017	General Description (Bulk Analysis)	Soil/Stone
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD
					31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	6	DS26	1.80	184	31/01/2017	General Description (Bulk Analysis)	Soil/Stone/Silt
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD
					31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	6	DS11	0.50	191	31/01/2017	General Description (Bulk Analysis)	Soil/Stone
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD
					31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	6	TP101	0.50	195	31/01/2017	General Description (Bulk Analysis)	Soil/Stones
					31/01/2017	Asbestos Fibres	Fibre Bundles
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos Type	Chrysotile
					31/01/2017	Asbestos Level Screen	<0.1%
17/2576	6	SP1	0.80	199	31/01/2017	General Description (Bulk Analysis)	Soil/Stones
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
17/2576	6	SP1	0.80	199	31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	6	SP2	0.80	204	31/01/2017	General Description (Bulk Analysis)	Soil/Stones
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD
					31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	6	SP3	0.80	209	31/01/2017	General Description (Bulk Analysis)	soil/stones
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD
					31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	6	TP103	0.80	212	31/01/2017	General Description (Bulk Analysis)	soil/stones
					31/01/2017	Asbestos Fibres	NAD
					31/01/2017	Asbestos Fibres (2)	NAD
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos ACM (2)	NAD
					31/01/2017	Asbestos Type	NAD
					31/01/2017	Asbestos Type (2)	NAD
					31/01/2017	Asbestos Level Screen	NAD
17/2576	6	TP106	0.50	218	31/01/2017	General Description (Bulk Analysis)	soil/stones
					31/01/2017	Asbestos Fibres	Fibre Bundles
					31/01/2017	Asbestos ACM	NAD
					31/01/2017	Asbestos Type	Chrysotile
					31/01/2017	Asbestos Level Screen	<0.1%

Matrix : Solid

QF-PM 3.1.7 v10 Please include all sections of this report if it is reproduced 13 of 20

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/2576

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
AB	x10 Dilution

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes



Exova Jones Environmental

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Attention :	Kathryn Ellis
Date :	8th March, 2017
Your reference :	A090070-193
Our reference :	Test Report 17/2576 Batch 7
Location :	East Lancashire Paper Mill
Date samples received :	27th January, 2017
Status :	Final report
Issue :	2

Sixteen samples were received for analysis on 27th January, 2017 of which six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	229-231	238-240	243-245	248-250	253-255	258-259					Please see attached notes for all abbreviations and acronyms		
Sample ID	TP123	TP127	SP4	SP5	SP6	DS05							
Depth	1.50	1.20	0.80	0.80	0.80	0.50							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J							
Sample Date	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	7	7	7	7	7	7							
Date of Receipt	27/01/2017	27/01/2017	27/01/2017	27/01/2017	27/01/2017	27/01/2017					LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2					<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4	<4	<4	<4	9					<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	<7	9	12	48					<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	44	<7	144	57	91	240					<7	mg/kg	TM5/PM16
>C35-C44	25	<7	89	<7	13	62					<7	mg/kg	TM5/PM16
Total aliphatics C5-44	69	<26	233	66	116	359					<26	mg/kg	TM5/PM16/PM10
Aromatics													
>C5-EC7 [#]	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC7-EC8 [#]	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC10-EC12 [#]	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2					<0.2	mg/kg	TM5/PM16
>EC12-EC16 [#]	11	<4	<4	<4	<4	5					<4	mg/kg	TM5/PM16
>EC16-EC21 [#]	33	<7	17	27	31	38					<7	mg/kg	TM5/PM16
>EC21-EC35 [#]	111	<7	229	135	135	194					<7	mg/kg	TM5/PM16
>EC35-EC44	38	<7	160	43	32	60					<7	mg/kg	TM5/PM16
Total aromatics C5-44	193	<26	406	205	198	297					<26	mg/kg	TM5/PM16/PM10
Total aliphatics and aromatics(C5-44)	262	<52	639	271	314	656					<52	mg/kg	TM5/PM16/PM10
MTBE [#]	<5 ^{SV}	<5	<5	<5	<5	<5					<5	ug/kg	TM31/PM12
Benzene [#]	<5 ^{SV}	<5	<5	<5	<5	<5					<5	ug/kg	TM31/PM12
Toluene [#]	<5 ^{SV}	<5	<5	<5	<5	<5					<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5 ^{SV}	<5	<5	<5	<5	<5					<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5 ^{SV}	<5	<5	<5	<5	<5					<5	ug/kg	TM31/PM12
o-Xylene [#]	<5 ^{SV}	<5	<5	<5	<5	<5					<5	ug/kg	TM31/PM12
Phenol ^{#M}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	mg/kg	TM26/PM21
Natural Moisture Content	25.7	83.9	18.4	17.1	15.5	14.5					<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3					<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext)	0.0153	0.0169	0.1437	0.0520	0.1090	0.0404					<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	mg/kg	TM89/PM45
Total Cyanide ^{#M}	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	NDP	NDP	NDP	NDP	NDP	NDP					<0.001	None	TM21/PM24
pH ^{#M}	8.51	8.18	9.59	9.48	10.11	10.94					<0.01	pH units	TM73/PM11
Sample Type	NDP	NDP	NDP	NDP	NDP	NDP					None		PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
17/2576	7	TP123	1.50	230	03/02/2017	General Description (Bulk Analysis)	soil/stones
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos ACM	NAD
					03/02/2017	Asbestos Type	Chrysotile
					03/02/2017	Asbestos Level Screen	<0.1%
17/2576	7	TP127	1.20	239	03/02/2017	General Description (Bulk Analysis)	Soil/Stones
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos ACM	NAD
					03/02/2017	Asbestos Type	Chrysotile
					03/02/2017	Asbestos Level Screen	<0.1%
17/2576	7	SP4	0.80	244	03/02/2017	General Description (Bulk Analysis)	soil/stones
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos ACM	NAD
					03/02/2017	Asbestos Type	Chrysotile
					03/02/2017	Asbestos Level Screen	<0.1%
17/2576	7	SP5	0.80	249	03/02/2017	General Description (Bulk Analysis)	Soil/Stones
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos ACM	NAD
					03/02/2017	Asbestos Type	Chrysotile
					03/02/2017	Asbestos Level Screen	<0.1%
17/2576	7	SP6	0.80	254	03/02/2017	General Description (Bulk Analysis)	Soil/Stones
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos Fibres (2)	Fibre Bundles
					03/02/2017	Asbestos ACM	NAD
					03/02/2017	Asbestos ACM (2)	NAD
					03/02/2017	Asbestos Type	Chrysotile
					03/02/2017	Asbestos Type (2)	Amosite
					03/02/2017	Asbestos Level Screen	<0.1%
					08/03/2017	Asbestos Gravimetric Quantification	<0.001 (mass %)
					08/03/2017	Asbestos PCOM Quantification (Fibres)	0.004 (mass %)
					08/03/2017	Asbestos Gravimetric & PCOM Total	0.004 (mass %)
17/2576	7	DS05	0.50	259	03/02/2017	General Description (Bulk Analysis)	Soil/Stones
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos ACM	NAD

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

[illegible]

Matrix : Solid

[illegible]

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/2576

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes

Unit 3 Deeside Point
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Attention :	Kathryn Ellis
Date :	8th February, 2017
Your reference :	A090070-193
Our reference :	Test Report 17/2576 Batch 8
Location :	East Lancashire Paper Mill
Date samples received :	31st January, 2017
Status :	Final report
Issue :	1

Twenty samples were received for analysis on 31st January, 2017 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

A handwritten signature in blue ink, appearing to read 'Bruce Leslie'.

Bruce Leslie
Project Co-ordinator

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	270-272	276-278	292-293	302-304	312-313						Please see attached notes for all abbreviations and acronyms		
Sample ID	TP128	TP130	DS14	DS20	DS25								
Depth	2.50	1.50	0.80	1.50	0.50								
COC No / misc													
Containers	V J T	V J T	V J	V J T	V J								
Sample Date	26/01/2017	26/01/2017	26/01/2017	27/01/2017	27/01/2017								
Sample Type	Soil	Soil	Soil	Soil	Soil								
Batch Number	8	8	8	8	8								
Date of Receipt	31/01/2017	31/01/2017	31/01/2017	31/01/2017	31/01/2017						LOD/LOR	Units	Method No.
PAH MS													
Naphthalene ^{#M}	<0.04	<0.04	0.16	0.07	<0.04						<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	0.11	<0.03						<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	<0.05	<0.05	0.24	<0.05						<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	<0.04	<0.04	<0.04	0.24	<0.04						<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	<0.03	0.07	0.43	2.30	<0.03						<0.03	mg/kg	TM4/PM8
Anthracene [#]	<0.04	<0.04	0.10	0.67	<0.04						<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	<0.03	0.11	0.70	4.82	<0.03						<0.03	mg/kg	TM4/PM8
Pyrene [#]	<0.03	0.11	0.66	4.00	<0.03						<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	<0.06	0.11	0.45	2.13	<0.06						<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	<0.02	0.09	0.48	2.01	<0.02						<0.02	mg/kg	TM4/PM8
Benzo(b)fluoranthene ^{#M}	<0.07	0.14	0.84	3.33	<0.07						<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	<0.04	0.10	0.46	1.98	<0.04						<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	<0.04	0.05	0.31	1.35	<0.04						<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	<0.04	0.10	0.34	<0.04						<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	<0.04	0.06	0.33	1.07	<0.04						<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	0.8	5.0	24.7	<0.6						<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	0.10	0.60	2.40	<0.05						<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	0.04	0.24	0.93	<0.02						<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	114	113	111	107	111						<0	%	TM4/PM8
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1						<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1						<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1						<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	6.2	1.6	<0.2	<0.2						<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	11	8	<4	<4						<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	14	21	<7	<7						<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	<7	207	145	8	<7						<7	mg/kg	TM5/PM16
>C35-C44	<7	76	50	<7	<7						<7	mg/kg	TM5/PM16
Total aliphatics C5-44	<26	314	226	<26	<26						<26	mg/kg	TM5/TM36/PM16
Aromatics													
>C5-EC7 [#]	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1						<0.1	mg/kg	TM36/PM12
>EC7-EC8 [#]	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1						<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1						<0.1	mg/kg	TM36/PM12
>EC10-EC12 [#]	<0.2	<0.2	1.0	<0.2	<0.2						<0.2	mg/kg	TM5/PM16
>EC12-EC16 [#]	<4	<4	14	<4	<4						<4	mg/kg	TM5/PM16
>EC16-EC21 [#]	<7	16	38	60	<7						<7	mg/kg	TM5/PM16
>EC21-EC35 [#]	<7	200	179	140	<7						<7	mg/kg	TM5/PM16
>EC35-EC44	<7	71	66	37	<7						<7	mg/kg	TM5/PM16
Total aromatics C5-44	<26	287	298	237	<26						<26	mg/kg	TM5/TM36/PM16
Total aliphatics and aromatics(C5-44)	<52	601	524	237	<52						<52	mg/kg	TM5/TM36/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
17/2576	8	TP128	2.50	271	03/02/2017	General Description (Bulk Analysis)	Soil
					03/02/2017	Asbestos Fibres	NAD
					03/02/2017	Asbestos Fibres (2)	NAD
					03/02/2017	Asbestos ACM	NAD
					03/02/2017	Asbestos ACM (2)	NAD
					03/02/2017	Asbestos Type	NAD
					03/02/2017	Asbestos Type (2)	NAD
					03/02/2017	Asbestos Level Screen	NAD
17/2576	8	TP130	1.50	277	03/02/2017	General Description (Bulk Analysis)	Soil/Stone
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos Fibres (2)	Fibre Bundles
					03/02/2017	Asbestos ACM	NAD
					03/02/2017	Asbestos ACM (2)	NAD
					03/02/2017	Asbestos Type	Amosite
					03/02/2017	Asbestos Type (2)	Chrysotile
					03/02/2017	Asbestos Level Screen	<0.1%
17/2576	8	DS14	0.80	293	03/02/2017	General Description (Bulk Analysis)	Soil/Stone/Silt
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos ACM	NAD
					03/02/2017	Asbestos Type	Chrysotile
					03/02/2017	Asbestos Level Screen	<0.1%
17/2576	8	DS20	1.50	303	03/02/2017	General Description (Bulk Analysis)	Soil/Stone
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos ACM	NAD
					03/02/2017	Asbestos Type	Chrysotile
					03/02/2017	Asbestos Level Screen	<0.1%
17/2576	8	DS25	0.50	313	03/02/2017	General Description (Bulk Analysis)	Soil/Stone
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos ACM	NAD
					03/02/2017	Asbestos Type	Chrysotile
					03/02/2017	Asbestos Level Screen	<0.1%

Matrix : Solid

[illegible]

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/2576

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

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Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

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% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes

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Attention :	Kathryn Ellis
Date :	8th March, 2017
Your reference :	A090070-193
Our reference :	Test Report 17/2576 Batch 9
Location :	East Lancashire Paper Mill
Date samples received :	31st January, 2017
Status :	Final report
Issue :	3

Thirteen samples were received for analysis on 31st January, 2017 of which six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

A handwritten signature in black ink, appearing to read 'Bruce Leslie'.

Bruce Leslie
Project Co-ordinator

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
 Reference: A090070-193
 Location: East Lancashire Paper Mill
 Contact: Kathryn Ellis
 JE Job No.: 17/2576

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	314-315	320-322	325-327	328-329	338-339						Please see attached notes for all abbreviations and acronyms		
Sample ID	DS17	DS17	DS17	DS22	DS27								
Depth	0.30	1.60	3.80	0.30	0.30								
COC No / misc													
Containers	V J	V J T	V J T	V J	V J								
Sample Date	30/01/2017 09:00	30/01/2017 09:30	30/01/2017 09:50	30/01/2017 11:00	30/01/2017 14:30								
Sample Type	Soil	Soil	Soil	Soil	Soil								
Batch Number	9	9	9	9	9						LOD/LOR	Units	Method No.
Date of Receipt	31/01/2017	31/01/2017	31/01/2017	31/01/2017	31/01/2017								
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<1.0 ^{SV} _{AA}	<0.1	<0.1 ^{SV}	<0.1						<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<1.0 ^{SV} _{AA}	<0.1	<0.1 ^{SV}	<0.1						<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<1.0 ^{SV} _{AA}	<0.1	<0.1 ^{SV}	<0.1						<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	7.5	<0.2						<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4	<4	17	<4						<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	<7	25	10						<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	13	<7	<7	89	173						<7	mg/kg	TM5/PM16
>C35-C44	<7	<7	<7	11	17						<7	mg/kg	TM5/PM16
Total aliphatics C5-44	<26	<26	<26	150	200						<26	mg/kg	TM5/PM16/PM18
Aromatics													
>C5-EC7 [#]	<0.1	<1.0 ^{SV} _{AA}	<0.1	<0.1 ^{SV}	<0.1						<0.1	mg/kg	TM36/PM12
>EC7-EC8 [#]	<0.1	<1.0 ^{SV} _{AA}	<0.1	<0.1 ^{SV}	<0.1						<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<1.0 ^{SV} _{AA}	<0.1	<0.1 ^{SV}	<0.1						<0.1	mg/kg	TM36/PM12
>EC10-EC12 [#]	<0.2	<0.2	<0.2	11.7	<0.2						<0.2	mg/kg	TM5/PM16
>EC12-EC16 [#]	<4	<4	<4	38	<4						<4	mg/kg	TM5/PM16
>EC16-EC21 [#]	<7	<7	<7	84	<7						<7	mg/kg	TM5/PM16
>EC21-EC35 [#]	40	<7	<7	214	85						<7	mg/kg	TM5/PM16
>EC35-EC44	24	<7	<7	53	24						<7	mg/kg	TM5/PM16
Total aromatics C5-44	64	<26	<26	401	109						<26	mg/kg	TM5/PM16/PM18
Total aliphatics and aromatics(C5-44)	64	<52	<52	551	309						<52	mg/kg	TM5/PM16/PM18
MTBE [#]	<5	<50 ^{SV} _{AA}	<5	<5 ^{SV}	<5						<5	ug/kg	TM31/PM12
Benzene [#]	<5	<50 ^{SV} _{AA}	<5	<5 ^{SV}	<5						<5	ug/kg	TM31/PM12
Toluene [#]	<5	<50 ^{SV} _{AA}	<5	<5 ^{SV}	<5						<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	<50 ^{SV} _{AA}	<5	<5 ^{SV}	<5						<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5	<50 ^{SV} _{AA}	<5	<5 ^{SV}	<5						<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	<50 ^{SV} _{AA}	<5	<5 ^{SV}	<5						<5	ug/kg	TM31/PM12
PCB 77	-	-	-	-	<5						<5	ug/kg	TM16/PM8
PCB 81	-	-	-	-	<5						<5	ug/kg	TM16/PM8
PCB 105	-	-	-	-	<5						<5	ug/kg	TM16/PM8
PCB 114	-	-	-	-	<5						<5	ug/kg	TM16/PM8
PCB 118	-	-	-	-	<5						<5	ug/kg	TM16/PM8
PCB 123	-	-	-	-	<5						<5	ug/kg	TM16/PM8
PCB 126	-	-	-	-	<5						<5	ug/kg	TM16/PM8
PCB 156	-	-	-	-	<5						<5	ug/kg	TM16/PM8
PCB 157	-	-	-	-	<5						<5	ug/kg	TM16/PM8
PCB 167	-	-	-	-	<5						<5	ug/kg	TM16/PM8
PCB 169	-	-	-	-	<5						<5	ug/kg	TM16/PM8
PCB 189	-	-	-	-	<5						<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	-	-	<60						<60	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Please see attached notes for all abbreviations and acronyms

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
17/2576	9	DS17	0.30	315	03/02/2017	General Description (Bulk Analysis)	soil-stones
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos ACM	NAD
					03/02/2017	Asbestos Type	Chrysotile
					03/02/2017	Asbestos Level Screen	Asbestos level cannot be determined at this stage of analysis
17/2576	9	DS17	1.60	321	13/02/2017	General Description (Bulk Analysis)	soil/stones
					13/02/2017	Asbestos Fibres	Fibre Bundles
					13/02/2017	Asbestos ACM	NAD
					13/02/2017	Asbestos Type	Crocidolite
					13/02/2017	Asbestos Level Screen	<0.1%
17/2576	9	DS17	3.80	326	13/02/2017	General Description (Bulk Analysis)	soil/stones
					13/02/2017	Asbestos Fibres	Fibre Bundles
					13/02/2017	Asbestos Fibres (2)	Fibre Bundles
					13/02/2017	Asbestos ACM	NAD
					13/02/2017	Asbestos ACM (2)	NAD
					13/02/2017	Asbestos Type	Chrysotile
					13/02/2017	Asbestos Type (2)	Crocidolite
					13/02/2017	Asbestos Level Screen	<0.1%
17/2576	9	DS22	0.30	329	03/02/2017	General Description (Bulk Analysis)	soil-stones
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos Fibres (2)	Fibre Bundles
					03/02/2017	Asbestos Fibres (3)	Fibre Bundles
					03/02/2017	Asbestos ACM	Insulation Debris
					03/02/2017	Asbestos ACM (2)	Insulation Debris
					03/02/2017	Asbestos ACM (3)	Insulation Debris
					03/02/2017	Asbestos Type	Chrysotile
					03/02/2017	Asbestos Type (2)	Amosite
					03/02/2017	Asbestos Type (3)	Crocidolite
					03/02/2017	Asbestos Level Screen	Asbestos level cannot be determined at this stage of analysis
					08/03/2017	Asbestos Gravimetric Quantification	0.134 (mass %)
					08/03/2017	Asbestos PCOM Quantification (Fibres)	0.007 (mass %)
					08/03/2017	Asbestos Gravimetric & PCOM Total	0.141 (mass %)
17/2576	9	DS27	0.30	339	03/02/2017	General Description (Bulk Analysis)	soil-stones
					03/02/2017	Asbestos Fibres	Fibre Bundles
					03/02/2017	Asbestos ACM	NAD

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

[illegible]

Matrix : Solid

[illegible]

Matrix : Solid

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/2576

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x10 Dilution

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.	Yes	Yes	AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM61	Modified US EPA methods 245.7 and 200.7. Determination of Mercury by Cold Vapour Atomic Fluorescence.	PM38	Samples are brominated to reduce all mercury compounds to Mercury (II) which is analysed using method TM061.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	Yes
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.	Yes		AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM106	Determination of Sulphide by Skalar Continuous Flow Analyser	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM108	Determination of Elemental Sulphur by Reversed Phase High Performance Liquid Chromatography with Ultra Violet spectroscopy.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
NONE	No Method Code	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.				
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	

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Attention :	Kathryn Ellis
Date :	9th February, 2017
Your reference :	A090070-193
Our reference :	Test Report 17/2576 Batch 10
Location :	East Lancashire Paper Mill
Date samples received :	3rd February, 2017
Status :	Final report
Issue :	1

Seven samples were received for analysis on 3rd February, 2017 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

A handwritten signature in black ink, appearing to read 'Bruce Leslie'.

Bruce Leslie
Project Co-ordinator

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	342-343	344-345	348-349	350-351	354-355						Please see attached notes for all abbreviations and acronyms		
Sample ID	DS1 OHP	HP5	HP6	HP8	HP7								
Depth	0.40	0.40	0.60	0.50	0.70								
COC No / misc													
Containers	V J	V J	V J	V J	V J								
Sample Date	01/02/2017 12:30	01/02/2017 13:00	01/02/2017 14:00	01/02/2017 14:30	01/02/2017 15:30								
Sample Type	Soil	Soil	Soil	Soil	Soil								
Batch Number	10	10	10	10	10								
Date of Receipt	03/02/2017	03/02/2017	03/02/2017	03/02/2017	03/02/2017						LOD/LOR	Units	Method No.
PAH MS													
Naphthalene ^{#M}	<0.04	<0.04	0.30	0.87	0.05						<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	0.24	0.37	<0.03						<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	0.07	0.33	3.31	<0.05						<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	<0.04	0.06	0.23	1.94	<0.04						<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	<0.03	0.58	2.67	20.03	0.09						<0.03	mg/kg	TM4/PM8
Anthracene [#]	<0.04	0.18	0.72	5.07	<0.04						<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	<0.03	1.08	5.04	28.03	0.14						<0.03	mg/kg	TM4/PM8
Pyrene [#]	<0.03	0.92	4.46	23.59	0.12						<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	<0.06	0.52	2.43	11.58	0.11						<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	<0.02	0.47	2.06	11.23	0.09						<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene ^{#M}	<0.07	0.80	3.86	18.68	0.12						<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	<0.04	0.34	1.57	7.60	0.07						<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	<0.04	0.45	2.03	10.69	<0.04						<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	0.17	0.78	3.71	<0.04						<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	<0.04	0.33	1.55	7.59	<0.04						<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	6.0	28.3	154.3	0.8						<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	0.58	2.78	13.45	0.09						<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	0.22	1.08	5.23	0.03						<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	115	104	116	111	104						<0	%	TM4/PM8
EPH >C8-C10 ^{#M}	<5	<5	<5	<5	<5						<5	mg/kg	TM5/PM8
EPH >C10-C12 ^{#M}	<10	<10	<10	<10	<10						<10	mg/kg	TM5/PM8
EPH >C12-C16 ^{#M}	<10	<10	14	45	<10						<10	mg/kg	TM5/PM8
EPH >C16-C21 ^{#M}	<10	65	76	322	<10						<10	mg/kg	TM5/PM8
EPH >C21-C40	252	354	384	1090	<10						<10	mg/kg	TM5/PM8
EPH >C8-C40	252	419	474	1457	<30						<30	mg/kg	TM5/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15						<0.15	mg/kg	TM26/PM21
Natural Moisture Content	-	-	-	-	19.4						<0.1	%	PM4/PM0
Natural Moisture Content	53.8	21.2	28.5	25.9	-						<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	<0.3	<0.3						<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) ^{#M}	-	-	-	-	0.0706						<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	0.0311	0.0091	0.0131	0.0077	-						<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5						<0.5	mg/kg	TM89/PM45
pH ^{#M}	4.50	7.88	7.73	6.55	6.74						<0.01	pH units	TM73/PM11
Sample Type	NDP	NDP	NDP	NDP	Sand							None	PM13/PM0
Sample Colour	NDP	NDP	NDP	NDP	Dark Brown							None	PM13/PM0
Other Items	NDP	NDP	NDP	NDP	Stones, brick							None	PM13/PM0

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
17/2576	10	DS1 OHP	0.40	343	06/02/2017	General Description (Bulk Analysis)	Soil/Stones
					06/02/2017	Asbestos Fibres	Fibre Bundles
					06/02/2017	Asbestos ACM	NAD
					06/02/2017	Asbestos Type	Chrysotile
					06/02/2017	Asbestos Level Screen	<0.1%
17/2576	10	HP5	0.40	345	06/02/2017	General Description (Bulk Analysis)	Soil/Stones
					06/02/2017	Asbestos Fibres	Fibre Bundles
					06/02/2017	Asbestos ACM	NAD
					06/02/2017	Asbestos Type	Amosite
					06/02/2017	Asbestos Level Screen	<0.1%
17/2576	10	HP6	0.60	349	06/02/2017	General Description (Bulk Analysis)	Soil/Stones
					06/02/2017	Asbestos Fibres	Fibre Bundles
					06/02/2017	Asbestos ACM	NAD
					06/02/2017	Asbestos Type	Amosite
					06/02/2017	Asbestos Level Screen	<0.1%
17/2576	10	HP8	0.50	351	06/02/2017	General Description (Bulk Analysis)	soil-stones
					06/02/2017	Asbestos Fibres	Fibre Bundles
					06/02/2017	Asbestos ACM	NAD
					06/02/2017	Asbestos Type	Chrysotile
					06/02/2017	Asbestos Level Screen	<0.1%
17/2576	10	HP7	0.70	355	06/02/2017	General Description (Bulk Analysis)	soil-stones
					06/02/2017	Asbestos Fibres	NAD
					06/02/2017	Asbestos Fibres (2)	NAD
					06/02/2017	Asbestos ACM	NAD
					06/02/2017	Asbestos ACM (2)	NAD
					06/02/2017	Asbestos Type	NAD
					06/02/2017	Asbestos Type (2)	NAD
					06/02/2017	Asbestos Level Screen	NAD

Matrix : Solid

[illegible]

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/2576

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes



Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

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Attention :	Kathryn Ellis
Date :	22nd February, 2017
Your reference :	A090070-193
Our reference :	Test Report 17/2576 Batch 11
Location :	East Lancashire Paper Mill
Date samples received :	10th February, 2017
Status :	Final report
Issue :	1

Six samples were received for analysis on 10th February, 2017 of which six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	356-364	365-373	374-382	383-391	392-400	401-409					Please see attached notes for all abbreviations and acronyms		
Sample ID	SW3	SW4	SW1	SW5	SW6	SW2							
Depth													
COC No / misc													
Containers	V H H N Z P G	V H H N Z P G	V H H N Z P G	V H H N Z P G	V H H N Z P G	V H H N Z P G							
Sample Date	09/02/2017 09:30	09/02/2017 10:30	09/02/2017 11:00	09/02/2017 11:30	09/02/2017 12:00	09/02/2017 12:30							
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water							
Batch Number	11	11	11	11	11	11							
Date of Receipt	10/02/2017	10/02/2017	10/02/2017	10/02/2017	10/02/2017	10/02/2017					LOD/LOR	Units	Method No.
Dissolved Aluminium #	-	6.7	13.0	-	-	12.7					<1.5	ug/l	TM30/PM14
Dissolved Antimony #	<2	<2	2	<2	<2	<2					<2	ug/l	TM30/PM14
Dissolved Arsenic #	1.3	1.3	<0.9	10.5	<0.9	1.3					<0.9	ug/l	TM30/PM14
Dissolved Barium #	52.6	31.6	40.4	36.8	48.2	39.7					<1.8	ug/l	TM30/PM14
Dissolved Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM30/PM14
Dissolved Boron	50	17	47	71	38	42					<12	ug/l	TM30/PM14
Dissolved Cadmium #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03					<0.03	ug/l	TM30/PM14
Total Dissolved Chromium #	0.7	<0.2	<0.2	<0.2	<0.2	<0.2					<0.2	ug/l	TM30/PM14
Dissolved Copper #	<3	<3	<3	<3	4	<3					<3	ug/l	TM30/PM14
Total Dissolved Iron #	-	254.9	206.6	-	-	182.2					<4.7	ug/l	TM30/PM14
Dissolved Lead #	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4					<0.4	ug/l	TM30/PM14
Dissolved Molybdenum #	0.7	0.5	0.7	2.1	<0.2	0.2					<0.2	ug/l	TM30/PM14
Dissolved Nickel #	1.5	1.3	2.2	1.2	2.2	2.1					<0.2	ug/l	TM30/PM14
Dissolved Selenium #	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2					<1.2	ug/l	TM30/PM14
Dissolved Zinc #	9.6	4.3	11.6	7.8	13.5	13.1					<1.5	ug/l	TM30/PM14
Mercury Dissolved by CVAF #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM61/PM38
Total Hardness Dissolved (as CaCO ₃)	82	32	108	180	124	110					<1	mg/l	TM30/PM14
PAH MS													
Naphthalene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	ug/l	TM4/PM30
Acenaphthylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Acenaphthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Fluorene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Phenanthrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(a)anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Chrysene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(bk)fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Indeno(123cd)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Dibenzo(ah)anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
PAH 16 Total	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	ug/l	TM4/PM30
Benzo(b)fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	88	88	88	85	85	81					<0	%	TM4/PM30
VOC TICs	-	ND	ND	-	-	ND						None	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	ug/l	TM15/PM10
Benzene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM15/PM10
Toluene #	<5	<5	<5	<5	<5	<5					<5	ug/l	TM15/PM10
Ethylbenzene #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM15/PM10

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	356-364	365-373	374-382	383-391	392-400	401-409					Please see attached notes for all abbreviations and acronyms		
Sample ID	SW3	SW4	SW1	SW5	SW6	SW2							
Depth													
COC No / misc													
Containers	V H H N Z P G	V H H N Z P G	V H H N Z P G	V H H N Z P G	V H H N Z P G	V H H N Z P G							
Sample Date	09/02/2017 09:30	09/02/2017 10:30	09/02/2017 11:00	09/02/2017 11:30	09/02/2017 12:00	09/02/2017 12:30							
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water							
Batch Number	11	11	11	11	11	11							
Date of Receipt	10/02/2017	10/02/2017	10/02/2017	10/02/2017	10/02/2017	10/02/2017					LOD/LOR	Units	Method No.
p/m-Xylene #	<2	<2	<2	<2	<2	<2					<2	ug/l	TM15/PM10
o-Xylene #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	108	121	109	109	108	120					<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	96	77	95	94	94	77					<0	%	TM15/PM10
SVOC TICs	-	ND	ND	-	-	ND						None	TM16/PM30
TPH CWG													
Aliphatics													
>C5-C6 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM36/PM12
>C6-C8 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM36/PM12
>C8-C10 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM36/PM12
>C10-C12 #	<5	<5	<5	<5	<5	<5					<5	ug/l	TM5/PM30
>C12-C16 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
>C16-C21 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
>C21-C35 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
Total aliphatics C5-35 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30/PM12
Aromatics													
>C5-EC7 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM36/PM12
>EC7-EC8 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM36/PM12
>EC8-EC10 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM36/PM12
>EC10-EC12 #	<5	<5	<5	<5	<5	<5					<5	ug/l	TM5/PM30
>EC12-EC16 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
>EC16-EC21 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
>EC21-EC35 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
Total aromatics C5-35 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30/PM12
Total aliphatics and aromatics(C5-35) #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30/PM12
Phenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM26/PM0
Bromide	-	<0.05	0.09	-	-	0.12					<0.05	mg/l	TM27/PM0
Fluoride	-	<0.3	<0.3	-	-	<0.3					<0.3	mg/l	TM173/PM0
Sulphate #	22.8	10.3	35.1	56.1	28.2	35.0					<0.5	mg/l	TM38/PM0
Chloride #	22.9	7.2	33.3	25.3	35.6	35.3					<0.3	mg/l	TM38/PM0
Nitrate as NO3 #	1.9	1.2	18.1	0.8	7.1	19.6					<0.2	mg/l	TM38/PM0
Nitrite as NO2 #	<0.02	<0.02	0.13	<0.02	0.05	0.14					<0.02	mg/l	TM38/PM0
Ortho Phosphate as PO4 #	-	<0.06	0.31	-	-	0.39					<0.06	mg/l	TM38/PM0
Monoethylene glycol	-	<1	<1	-	-	<1					<1	ug/l	TM24/PM30
Propylene glycol	-	<1	<1	-	-	<1					<1	ug/l	TM24/PM30
Diethylene glycol	-	<1	<1	-	-	<1					<1	ug/l	TM24/PM30
Triethylene glycol	-	<1	<1	-	-	<1					<1	ug/l	TM24/PM30

Please see attached notes for all abbreviations and acronyms

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

VOC Report : Liquid

J E Sample No.	365-373	374-382	401-409							Please see attached notes for all abbreviations and acronyms		
Sample ID	SW4	SW1	SW2									
Depth												
COC No / misc												
Containers	V H H N N Z P G	V H H N N Z P G	V H H N N Z P G									
Sample Date	09/02/2017 10:30	09/02/2017 11:00	09/02/2017 12:30									
Sample Type	Ground Water	Ground Water	Ground Water									
Batch Number	11	11	11							LOD/LOR	Units	Method No.
Date of Receipt	10/02/2017	10/02/2017	10/02/2017									
VOC MS												
Dichlorodifluoromethane	<2	<2	<2							<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1	<0.1							<0.1	ug/l	TM15/PM10
Chloromethane #	<3	<3	<3							<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1	<0.1	<0.1							<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1	<1							<1	ug/l	TM15/PM10
Chloroethane #	<3	<3	<3							<3	ug/l	TM15/PM10
Trichlorofluoromethane #	<3	<3	<3							<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<3	<3	<3							<3	ug/l	TM15/PM10
Dichloromethane (DCM) #	<5	<5	<5							<5	ug/l	TM15/PM10
trans-1,2-Dichloroethene #	<3	<3	<3							<3	ug/l	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3							<3	ug/l	TM15/PM10
cis-1,2-Dichloroethene #	<3	<3	<3							<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1	<1							<1	ug/l	TM15/PM10
Bromochloromethane #	<2	<2	<2							<2	ug/l	TM15/PM10
Chloroform #	<2	<2	<2							<2	ug/l	TM15/PM10
1,1,1-Trichloroethane #	<2	<2	<2							<2	ug/l	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3							<3	ug/l	TM15/PM10
Carbon tetrachloride #	<2	<2	<2							<2	ug/l	TM15/PM10
1,2-Dichloroethane #	<2	<2	<2							<2	ug/l	TM15/PM10
Benzene #	<0.5	<0.5	<0.5							<0.5	ug/l	TM15/PM10
Trichloroethene (TCE) #	<3	<3	<3							<3	ug/l	TM15/PM10
1,2-Dichloropropane #	<2	<2	<2							<2	ug/l	TM15/PM10
Dibromomethane #	<3	<3	<3							<3	ug/l	TM15/PM10
Bromodichloromethane #	<2	<2	<2							<2	ug/l	TM15/PM10
cis-1,3-Dichloropropene	<2	<2	<2							<2	ug/l	TM15/PM10
Toluene #	<5	<5	<5							<5	ug/l	TM15/PM10
trans-1,3-Dichloropropene	<2	<2	<2							<2	ug/l	TM15/PM10
1,1,2-Trichloroethane #	<2	<2	<2							<2	ug/l	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3							<3	ug/l	TM15/PM10
1,3-Dichloropropane #	<2	<2	<2							<2	ug/l	TM15/PM10
Dibromochloromethane #	<2	<2	<2							<2	ug/l	TM15/PM10
1,2-Dibromoethane #	<2	<2	<2							<2	ug/l	TM15/PM10
Chlorobenzene #	<2	<2	<2							<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane #	<2	<2	<2							<2	ug/l	TM15/PM10
Ethylbenzene #	<1	<1	<1							<1	ug/l	TM15/PM10
p/m-Xylene #	<2	<2	<2							<2	ug/l	TM15/PM10
o-Xylene #	<1	<1	<1							<1	ug/l	TM15/PM10
Styrene	<2	<2	<2							<2	ug/l	TM15/PM10
Bromoform #	<2	<2	<2							<2	ug/l	TM15/PM10
Isopropylbenzene #	<3	<3	<3							<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4	<4							<4	ug/l	TM15/PM10
Bromobenzene #	<2	<2	<2							<2	ug/l	TM15/PM10
1,2,3-Trichloropropane #	<3	<3	<3							<3	ug/l	TM15/PM10
Propylbenzene #	<3	<3	<3							<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3	<3	<3							<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3							<3	ug/l	TM15/PM10
4-Chlorotoluene #	<3	<3	<3							<3	ug/l	TM15/PM10
tert-Butylbenzene #	<3	<3	<3							<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene #	<3	<3	<3							<3	ug/l	TM15/PM10
sec-Butylbenzene #	<3	<3	<3							<3	ug/l	TM15/PM10
4-Isopropyltoluene #	<3	<3	<3							<3	ug/l	TM15/PM10
1,3-Dichlorobenzene #	<3	<3	<3							<3	ug/l	TM15/PM10
1,4-Dichlorobenzene #	<3	<3	<3							<3	ug/l	TM15/PM10
n-Butylbenzene #	<3	<3	<3							<3	ug/l	TM15/PM10
1,2-Dichlorobenzene #	<3	<3	<3							<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2	<2							<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3	<3							<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3	<3							<3	ug/l	TM15/PM10
Naphthalene	<2	<2	<2							<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3	<3							<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	121	109	120							<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	77	95	77							<0	%	TM15/PM10

Please include all sections of this report if it is reproduced

Matrix : Liquid

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/2576

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM30/PM12	CWG GC-FID	Yes			
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.				
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM24	Determination of Glycols by GC-MS	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.				
TM27	Modified US EPA method 9056.Determination of water soluble anions using Dionex (Ion-Chromatography).	PM0	No preparation is required.				

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.				
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes			
TM51	Formaldehyde determination by reaction with Ammonium Ions and acetylacetone which is analysed spectrophotometrically.	PM0	No preparation is required.				
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO ₂ and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.	Yes			
TM61	Modified US EPA methods 245.7 and 200.7. Determination of Mercury by Cold Vapour Atomic Fluorescence.	PM38	Samples are brominated to reduce all mercury compounds to Mercury (II) which is analysed using method TM061.	Yes			
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			
TM75	Modified US EPA method 310.1. Determination of Alkalinity by Metrohm automated titration analyser.	PM0	No preparation is required.	Yes			
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.				

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM106	Determination of Sulphide by Skalar Continuous Flow Analyser	PM0	No preparation is required.				
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 340.2	PM0	No preparation is required.				



Exova Jones Environmental

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Attention :	Kathryn Ellis
Date :	22nd February, 2017
Your reference :	A090070-193
Our reference :	Test Report 17/2576 Batch 12
Location :	East Lancashire Paper Mill
Date samples received :	11th February, 2017
Status :	Final report
Issue :	1

Six samples were received for analysis on 11th February, 2017 of which six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	410-417	418-424	425-432	433-440	441-448	449-456					Please see attached notes for all abbreviations and acronyms		
Sample ID	DS01	BH102	DS14	BH105	BH103	BH104							
Depth													
COC No / misc													
Containers	V H N Z P G	V H N Z P G	V H N Z P G	V H N Z P G	V H N Z P G	V H N Z P G							
Sample Date	09/02/2017 14:00	09/02/2017 14:30	09/02/2017 15:00	09/02/2017 15:30	09/02/2017 16:00	09/02/2017 16:30							
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water							
Batch Number	12	12	12	12	12	12					LOD/LOR	Units	Method No.
Date of Receipt	11/02/2017	11/02/2017	11/02/2017	11/02/2017	11/02/2017	11/02/2017							
Dissolved Aluminium #	5.9	3.9	6.2	1123.0	1.6	1.8					<1.5	ug/l	TM30/PM14
Dissolved Antimony #	<2	<2	<2	2	<2	<2					<2	ug/l	TM30/PM14
Dissolved Arsenic #	6.4	<0.9	4.7	36.4	<0.9	<0.9					<0.9	ug/l	TM30/PM14
Dissolved Barium #	179.4	179.9	70.8	440.1	121.7	336.0					<1.8	ug/l	TM30/PM14
Dissolved Beryllium	<0.5	<0.5	<0.5	2.8	<0.5	<0.5					<0.5	ug/l	TM30/PM14
Dissolved Boron	747	34	123	106	41	80					<12	ug/l	TM30/PM14
Dissolved Cadmium #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03					<0.03	ug/l	TM30/PM14
Total Dissolved Chromium #	0.2	<0.2	<0.2	76.6	<0.2	<0.2					<0.2	ug/l	TM30/PM14
Dissolved Copper #	<3	<3	<3	155	<3	<3					<3	ug/l	TM30/PM14
Total Dissolved Iron #	88.3	8.7	14.5	2353.0	22.4	34.0					<4.7	ug/l	TM30/PM14
Dissolved Lead #	<0.4	<0.4	<0.4	127.7	<0.4	<0.4					<0.4	ug/l	TM30/PM14
Dissolved Molybdenum #	12.5	3.0	17.9	18.2	0.4	<0.2					<0.2	ug/l	TM30/PM14
Dissolved Nickel #	3.6	4.0	3.5	46.5	1.5	2.3					<0.2	ug/l	TM30/PM14
Dissolved Selenium #	<1.2	<1.2	<1.2	20.3	<1.2	<1.2					<1.2	ug/l	TM30/PM14
Dissolved Zinc #	2.9	2.9	2.0	125.1	15.2	<1.5					<1.5	ug/l	TM30/PM14
Mercury Dissolved by CVAF #	<0.01	<0.01	<0.01	0.02	<0.01	<0.01					<0.01	ug/l	TM61/PM38
Total Hardness Dissolved (as CaCO ₃)	405	245	575	127	139	230					<1	mg/l	TM30/PM14
PAH MS													
Naphthalene	0.1	<0.1	1.2	0.2	<0.1	<0.1					<0.1	ug/l	TM4/PM30
Acenaphthylene	<0.01	<0.01	0.35	0.05	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Acenaphthene	0.17	0.02	3.39	0.13	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Fluorene	0.03	0.01	1.81	0.17	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Phenanthrene	0.02	0.05	15.49 _{AC}	0.92	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Anthracene	0.02	0.02	5.06	0.16	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Fluoranthene	0.07	0.09	29.54 _{AC}	1.38	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Pyrene	0.06	0.08	26.82 _{AC}	1.33	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(a)anthracene	0.02	0.03	13.96 _{AC}	0.61	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Chrysene	0.03	0.04	15.50 _{AC}	0.69	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(bk)fluoranthene	0.04	0.06	25.35 _{AC}	1.13	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(a)pyrene	0.02	0.03	14.76 _{AC}	0.65	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Indeno(123cd)pyrene	0.01	0.02	8.52 _{AC}	0.37	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Dibenzo(ah)anthracene	<0.01	<0.01	2.41	0.06	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene	0.01	0.02	10.71	0.41	<0.01	<0.01					<0.01	ug/l	TM4/PM30
PAH 16 Total	0.6	0.5	174.9	8.3	<0.1	<0.1					<0.1	ug/l	TM4/PM30
Benzo(b)fluoranthene	0.03	0.04	18.25	0.81	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	0.01	0.02	7.10	0.32	<0.01	<0.01					<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	79	81	73	77	83	88					<0	%	TM4/PM30
VOC TICs	ND	ND	ND _{AA}	ND	ND	ND						None	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1	<0.2 _{AA}	<0.1	<0.1	<0.1					<0.1	ug/l	TM15/PM10
Benzene #	<0.5	<0.5	<1.0 _{AA}	<0.5	<0.5	<0.5					<0.5	ug/l	TM15/PM10
Toluene #	<5	<5	<10 _{AA}	<5	<5	<5					<5	ug/l	TM15/PM10
Ethylbenzene #	<1	<1	<2 _{AA}	<1	<1	<1					<1	ug/l	TM15/PM10

Please include all sections of this report if it is reproduced

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	410-417	418-424	425-432	433-440	441-448	449-456					Please see attached notes for all abbreviations and acronyms		
Sample ID	DS01	BH102	DS14	BH105	BH103	BH104							
Depth													
COC No / misc													
Containers	V H N Z P G	V H N Z P G	V H N Z P G	V H N Z P G	V H N Z P G	V H N Z P G							
Sample Date	09/02/2017 14:00	09/02/2017 14:30	09/02/2017 15:00	09/02/2017 15:30	09/02/2017 16:00	09/02/2017 16:30							
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water							
Batch Number	12	12	12	12	12	12							
Date of Receipt	11/02/2017	11/02/2017	11/02/2017	11/02/2017	11/02/2017	11/02/2017					LOD/LOR	Units	Method No.
p/m-Xylene #	<2	<2	<4 ^{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
o-Xylene #	<1	<1	<2 ^{AA}	<1	<1	<1					<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	106	100	107 ^{AA}	108	122	111					<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	89	69	81 ^{AA}	92	89	100					<0	%	TM15/PM10
SVOC TICs	ND	ND	ND	ND	ND	ND						None	TM16/PM30
TPH CWG													
Aliphatics													
>C5-C6 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM36/PM12
>C6-C8 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM36/PM12
>C8-C10 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM36/PM12
>C10-C12 #	<5	<5	<5	<5	<5	<5					<5	ug/l	TM5/PM30
>C12-C16 #	<10	90	<10	70	<10	<10					<10	ug/l	TM5/PM30
>C16-C21 #	110	490	<10	200	<10	<10					<10	ug/l	TM5/PM30
>C21-C35 #	1390	1510	<10	1190	<10	<10					<10	ug/l	TM5/PM30
Total aliphatics C5-35 #	1500	2090	<10	1460	<10	<10					<10	ug/l	TM5/PM30/PM12
Aromatics													
>C5-EC7 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM36/PM12
>EC7-EC8 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM36/PM12
>EC8-EC10 #	<10	<10	<10	<10	<10	<10					<10	ug/l	TM36/PM12
>EC10-EC12 #	<5	<5	<5	<5	<5	<5					<5	ug/l	TM5/PM30
>EC12-EC16 #	50	<10	<10	<10	<10	<10					<10	ug/l	TM5/PM30
>EC16-EC21 #	400	80	<10	20	<10	<10					<10	ug/l	TM5/PM30
>EC21-EC35 #	1570	650	<10	510	<10	<10					<10	ug/l	TM5/PM30
Total aromatics C5-35 #	2020	730	<10	530	<10	<10					<10	ug/l	TM5/PM30/PM12
Total aliphatics and aromatics(C5-35) #	3520	2820	<10	1990	<10	<10					<10	ug/l	TM5/PM30/PM12
Phenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM26/PM0
Bromide	0.13	<0.05	0.09	0.26 ^{AB}	<0.05	<0.05					<0.05	mg/l	TM27/PM0
Fluoride	0.3	<0.3	<0.3	<0.3	<0.3	0.7					<0.3	mg/l	TM173/PM0
Sulphate #	121.3	75.1	195.6	26.9	51.7	127.9					<0.5	mg/l	TM38/PM0
Chloride #	38.5	84.9	9.9	23.4	10.2	71.9					<0.3	mg/l	TM38/PM0
Nitrate as NO ₃ #	0.5	0.6	0.4	1.8	0.3	<0.2					<0.2	mg/l	TM38/PM0
Nitrite as NO ₂ #	<0.02	<0.02	<0.02	0.03	<0.02	<0.02					<0.02	mg/l	TM38/PM0
Ortho Phosphate as PO ₄ #	<0.06	<0.06	<0.06	<0.06	<0.06	3.55					<0.06	mg/l	TM38/PM0
Monoethylene glycol	<1	<1	<1	<1	<1	<1					<1	ug/l	TM24/PM30
Propylene glycol	<1	<1	<1	<1	<1	<1					<1	ug/l	TM24/PM30
Diethylene glycol	<1	<1	<1	<1	<1	<1					<1	ug/l	TM24/PM30
Triethylene glycol	<1	<1	<1	<1	<1	<1					<1	ug/l	TM24/PM30

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

SVOC Report : Liquid

J E Sample No.	410-417	418-424	425-432	433-440	441-448	449-456					Please see attached notes for all abbreviations and acronyms		
Sample ID	DS01	BH102	DS14	BH105	BH103	BH104							
Depth													
COC No / misc													
Containers	V H N Z P G	V H N Z P G	V H N Z P G	V H N Z P G	V H N Z P G	V H N Z P G							
Sample Date	09/02/2017 14:00	09/02/2017 14:30	09/02/2017 15:00	09/02/2017 15:30	09/02/2017 16:00	09/02/2017 16:30							
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water							
Batch Number	12	12	12	12	12	12					LOD/LOR	Units	Method No.
Date of Receipt	11/02/2017	11/02/2017	11/02/2017	11/02/2017	11/02/2017	11/02/2017							
SVOC MS													
Phenols													
2-Chlorophenol #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
2-Methylphenol #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
2-Nitrophenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
2,4-Dichlorophenol #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
2,4-Dimethylphenol	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
2,4,5-Trichlorophenol #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
2,4,6-Trichlorophenol	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
4-Chloro-3-methylphenol #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
4-Methylphenol	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
4-Nitrophenol	<10	<10	<10	<10	<10	<10					<10	ug/l	TM16/PM30
Pentachlorophenol	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
Phenol	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
PAHs													
2-Chloronaphthalene #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
2-Methylnaphthalene #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
Phthalates													
Bis(2-ethylhexyl) phthalate	<5	<5	<5	8	8	<5					<5	ug/l	TM16/PM30
Butylbenzyl phthalate	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
Di-n-butyl phthalate #	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5					<1.5	ug/l	TM16/PM30
Di-n-Octyl phthalate	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
Diethyl phthalate #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
Dimethyl phthalate	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
Other SVOCs													
1,2-Dichlorobenzene #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
1,3-Dichlorobenzene #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
1,4-Dichlorobenzene #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
2-Nitroaniline	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
2,4-Dinitrotoluene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
3-Nitroaniline	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
4-Bromophenylphenylether #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
4-Chloroaniline	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
4-Chlorophenylphenylether #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
4-Nitroaniline	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
Azobenzene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
Carbazole #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
Dibenzofuran #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
Hexachlorobenzene #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
Hexachlorobutadiene #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
Hexachloroethane #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
Isophorone #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	ug/l	TM16/PM30
Nitrobenzene #	<1	<1	<1	<1	<1	<1					<1	ug/l	TM16/PM30
Surrogate Recovery 2-Fluorobiphenyl	77	69	76	49 ^{SV}	65 ^{SV}	81					<0	%	TM16/PM30
Surrogate Recovery p-Terphenyl-d14	87	80	90	58 ^{SV}	81	93					<0	%	TM16/PM30

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

VOC Report : Liquid

J E Sample No.	410-417	418-424	425-432	433-440	441-448	449-456					Please see attached notes for all abbreviations and acronyms		
Sample ID	DS01	BH102	DS14	BH105	BH103	BH104							
Depth													
COC No / misc													
Containers	V H N Z P G	V H N Z P G	V H N Z P G	V H N Z P G	V H N Z P G	V H N Z P G							
Sample Date	09/02/2017 14:00	09/02/2017 14:30	09/02/2017 15:00	09/02/2017 15:30	09/02/2017 16:00	09/02/2017 16:30							
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water							
Batch Number	12	12	12	12	12	12							
Date of Receipt	11/02/2017	11/02/2017	11/02/2017	11/02/2017	11/02/2017	11/02/2017					LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1	<0.2 _{AA}	<0.1	<0.1	<0.1					<0.1	ug/l	TM15/PM10
Chloromethane #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1	<0.1	<0.2 _{AA}	<0.1	<0.1	<0.1					<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1	<2 _{AA}	<1	<1	<1					<1	ug/l	TM15/PM10
Chloroethane #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
Trichlorofluoromethane #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
Dichloromethane (DCM) #	<5	<5	<10 _{AA}	<5	<5	<5					<5	ug/l	TM15/PM10
trans-1,2-Dichloroethene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
1,1-Dichloroethane #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
cis-1,2-Dichloroethene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1	<2 _{AA}	<1	<1	<1					<1	ug/l	TM15/PM10
Bromochloromethane #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
Chloroform #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
1,1,1-Trichloroethane #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
1,1-Dichloropropene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
Carbon tetrachloride #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
1,2-Dichloroethane #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
Benzene #	<0.5	<0.5	<1.0 _{AA}	<0.5	<0.5	<0.5					<0.5	ug/l	TM15/PM10
Trichloroethene (TCE) #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
1,2-Dichloropropane #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
Dibromomethane #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
Bromodichloromethane #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
cis-1,3-Dichloropropene	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
Toluene #	<5	<5	<10 _{AA}	<5	<5	<5					<5	ug/l	TM15/PM10
trans-1,3-Dichloropropene	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
1,1,2-Trichloroethane #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
1,3-Dichloropropane #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
Dibromochloromethane #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
1,2-Dibromoethane #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
Chlorobenzene #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
Ethylbenzene #	<1	<1	<2 _{AA}	<1	<1	<1					<1	ug/l	TM15/PM10
p/m-Xylene #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
o-Xylene #	<1	<1	<2 _{AA}	<1	<1	<1					<1	ug/l	TM15/PM10
Styrene	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
Bromoform #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
Isopropylbenzene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4	<8 _{AA}	<4	<4	<4					<4	ug/l	TM15/PM10
Bromobenzene #	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
1,2,3-Trichloropropane #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
Propylbenzene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
4-Chlorotoluene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
tert-Butylbenzene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene #	<3	4	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
sec-Butylbenzene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
4-Isopropyltoluene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
1,3-Dichlorobenzene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
1,4-Dichlorobenzene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
n-Butylbenzene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
1,2-Dichlorobenzene #	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
Naphthalene	<2	<2	<4 _{AA}	<2	<2	<2					<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3	<6 _{AA}	<3	<3	<3					<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	106	100	107 _{AA}	108	122	111					<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	89	69	81 _{AA}	92	89	100					<0	%	TM15/PM10

Please include all sections of this report if it is reproduced

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/2576

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x2 Dilution
AB	x5 Dilution
AC	x10 Dilution

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM30/PM12	CWG GC-FID	Yes			
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.				
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM24	Determination of Glycols by GC-MS	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.				
TM27	Modified US EPA method 9056. Determination of water soluble anions using Dionex (Ion-Chromatography).	PM0	No preparation is required.				

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.				
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes			
TM51	Formaldehyde determination by reaction with Ammonium Ions and acetylacetone which is analysed spectrophotometrically.	PM0	No preparation is required.				
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO ₂ and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.	Yes			
TM61	Modified US EPA methods 245.7 and 200.7. Determination of Mercury by Cold Vapour Atomic Fluorescence.	PM38	Samples are brominated to reduce all mercury compounds to Mercury (II) which is analysed using method TM061.	Yes			
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			
TM75	Modified US EPA method 310.1. Determination of Alkalinity by Metrohm automated titration analyser.	PM0	No preparation is required.	Yes			
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.				

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM106	Determination of Sulphide by Skalar Continuous Flow Analyser	PM0	No preparation is required.				
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 340.2	PM0	No preparation is required.				



Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

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Attention :	Kathryn Ellis
Date :	22nd March, 2017
Your reference :	A090070-193
Our reference :	Test Report 17/2576 Batch 13
Location :	East Lancashire Paper Mill
Date samples received :	10th March, 2017
Status :	Final report
Issue :	1

Seven samples were received for analysis on 10th March, 2017 of which six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis
JE Job No.: 17/2576

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	459-462	463-466	467-470	471-474	475-478						Please see attached notes for all abbreviations and acronyms		
Sample ID	BH102	BH105	DS01	SW1	SW2								
Depth													
COC No / misc													
Containers	V P G	V P G	V P G	V P G	V P G								
Sample Date	09/03/2017	09/03/2017	09/03/2017	09/03/2017	09/03/2017								
Sample Type	Ground Water	Ground Water	Ground Water	Surface Water	Surface Water								
Batch Number	13	13	13	13	13								
Date of Receipt	10/03/2017	10/03/2017	10/03/2017	10/03/2017	10/03/2017						LOD/LOR	Units	Method No.
Dissolved Arsenic [#]	-	12.3	-	<0.9	<0.9						<0.9	ug/l	TM30/PM14
Dissolved Barium [#]	-	290.5	-	34.9	33.3						<1.8	ug/l	TM30/PM14
Dissolved Beryllium	-	<0.5	-	<0.5	<0.5						<0.5	ug/l	TM30/PM14
Dissolved Boron	-	158	-	32	27						<12	ug/l	TM30/PM14
Dissolved Cadmium [#]	-	<0.03	-	<0.03	<0.03						<0.03	ug/l	TM30/PM14
Total Dissolved Chromium [#]	-	15.9	-	<0.2	<0.2						<0.2	ug/l	TM30/PM14
Dissolved Copper [#]	-	<3	-	<3	<3						<3	ug/l	TM30/PM14
Dissolved Lead [#]	-	<0.4	-	<0.4	<0.4						<0.4	ug/l	TM30/PM14
Dissolved Mercury [#]	-	<0.5	-	<0.5	<0.5						<0.5	ug/l	TM30/PM14
Dissolved Nickel [#]	-	2.9	-	<0.2	0.5						<0.2	ug/l	TM30/PM14
Dissolved Selenium [#]	-	<1.2	-	<1.2	<1.2						<1.2	ug/l	TM30/PM14
Dissolved Vanadium [#]	-	25.9	-	<0.6	1.3						<0.6	ug/l	TM30/PM14
Dissolved Zinc [#]	-	<1.5	-	6.7	7.1						<1.5	ug/l	TM30/PM14
PAH MS													
Naphthalene	-	<0.1 ^B	-	<0.1 ^B	<0.1 ^B						<0.1	ug/l	TM4/PM30
Acenaphthylene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Acenaphthene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Fluorene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Phenanthrene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Anthracene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Fluoranthene	-	0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Pyrene	-	0.02	-	<0.01	0.02						<0.01	ug/l	TM4/PM30
Benzo(a)anthracene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Chrysene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Benzo(b)fluoranthene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Benzo(a)pyrene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Indeno(123cd)pyrene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Dibenzo(ah)anthracene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
PAH 16 Total	-	<0.1	-	<0.1	<0.1						<0.1	ug/l	TM4/PM30
Benzo(b)fluoranthene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	-	<0.01	-	<0.01	<0.01						<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	-	73	-	79	80						<0	%	TM4/PM30

Client Name: WYG
 Reference: A090070-193
 Location: East Lancashire Paper Mill
 Contact: Kathryn Ellis
 JE Job No.: 17/2576

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HN₃

J E Sample No.	459-462	463-466	467-470	471-474	475-478						Please see attached notes for all abbreviations and acronyms		
Sample ID	BH102	BH105	DS01	SW1	SW2								
Depth													
COC No / misc													
Containers	V P G	V P G	V P G	V P G	V P G								
Sample Date	09/03/2017	09/03/2017	09/03/2017	09/03/2017	09/03/2017								
Sample Type	Ground Water	Ground Water	Ground Water	Surface Water	Surface Water								
Batch Number	13	13	13	13	13								
Date of Receipt	10/03/2017	10/03/2017	10/03/2017	10/03/2017	10/03/2017						LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 #	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>C6-C8 #	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>C8-C10 #	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>C10-C12 #	<5	<5	<5	<5	<5						<5	ug/l	TM5/PM30
>C12-C16 #	<10	<10	<10	<10	<10						<10	ug/l	TM5/PM30
>C16-C21 #	<10	<10	<10	<10	<10						<10	ug/l	TM5/PM30
>C21-C35 #	<10	<10	<10	<10	<10						<10	ug/l	TM5/PM30
Total aliphatics C5-35 #	<10	<10	<10	<10	<10						<10	ug/l	TM5/PM30/PM12
Aromatics													
>C5-EC7 #	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>EC7-EC8 #	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>EC8-EC10 #	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>EC10-EC12 #	<5	<5	<5	<5	<5						<5	ug/l	TM5/PM30
>EC12-EC16 #	<10	<10	<10	<10	<10						<10	ug/l	TM5/PM30
>EC16-EC21 #	<10	<10	<10	<10	<10						<10	ug/l	TM5/PM30
>EC21-EC35 #	<10	<10	<10	<10	<10						<10	ug/l	TM5/PM30
Total aromatics C5-35 #	<10	<10	<10	<10	<10						<10	ug/l	TM5/PM30/PM12
Total aliphatics and aromatics(C5-35) #	<10	<10	<10	<10	<10						<10	ug/l	TM5/PM30/PM12
MTBE #	<5	<5	<5	<5	<5						<5	ug/l	TM31/PM12
Benzene #	<5	<5	<5	<5	<5						<5	ug/l	TM31/PM12
Toluene #	<5	<5	<5	<5	<5						<5	ug/l	TM31/PM12
Ethylbenzene #	<5	<5	<5	<5	<5						<5	ug/l	TM31/PM12
m/p-Xylene #	<5	<5	<5	<5	<5						<5	ug/l	TM31/PM12
o-Xylene #	<5	<5	<5	<5	<5						<5	ug/l	TM31/PM12
Free Cyanide #	-	<0.01	<0.01	<0.01	<0.01						<0.01	mg/l	TM89/PM0
Total Cyanide #	-	<0.01	<0.01	0.01	<0.01						<0.01	mg/l	TM89/PM0
Hexavalent Chromium	-	<6	-	<6	<6						<6	ug/l	TM38/PM0
Total Dissolved Chromium III	-	16	-	<6	<6						<6	ug/l	NONE/NONE

Please see attached notes for all abbreviations and acronyms

Exova Jones Environmental

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

Sample Date: 9 Mar 2017
Date of Receipt: 10 Mar 2017
Date Analysed: 15 Mar 2017

Sample ID: DS20
Depth:
JE Job No: 17/2576
JE Sample No: 458
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		<1.5	<3.8	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		<2.5	<12.4	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		<1.5	<3.1	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		<1.5	<8.4	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		<1	<4	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		<1.5	<4.8	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		<1.5	<8.1	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	# cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		5.4	20.3	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	# trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		<1.5	<10.2	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		<1.5	<6.5	<1.5	<1.5	<6.5	<6.5
	106.17	# m&p - Xylenes		<1.5	<6.5	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		<1.5	<6.5	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		2.7	11.5	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4

Client Name: WYG
Reference: A090070-193
Location: East Lancashire Paper Mill
Contact: Kathryn Ellis

Matrix : Gas

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/2576

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM30/PM12	CWG GC-FID	Yes			
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.				
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.	Yes			
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.				
TM68	Modified TO-15 method. Volatile Organic Compounds (VOCs) sampled using Gas Canisters, BottleVacs or Tedlar bags and analysed using Entech GC-MS.	PM0	No preparation is required.				
TM68	Modified TO-15 method. Volatile Organic Compounds (VOCs) sampled using Gas Canisters, BottleVacs or Tedlar bags and analysed using Entech GC-MS.	PM0	No preparation is required.	Yes			

JE Job No: 17/2576

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM69	Analysis of gas samples by direct injection onto a Gas Chromatography (GC) column and analysed using a Flame Ionisation Detector (FID) or a Thermocouple Detector (TD)	PM0	No preparation is required.				
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.	Yes			
NONE	No Method Code	NONE	No Method Code				



Appendix D – Geotechnical Test Results



LABORATORY REPORT



4043

Contract Number: PSL17/0692

Report Date: 03 March 2017
Client's Reference: A090070-193
Client Name: WYG Manchester
Quay West at MediaCityUK
Trafford Wharf Road
Trafford Park
Manchester
M17 1HH

For the attention of: David Brett

Contract Title: ELPM
Date Received: 15/2/2017
Date Commenced: 15/2/2017
Date Completed: 3/3/2017

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH102	5	B	2.00	2.45	Brown very gravelly clayey silty SAND with cobbles.
BH102	9	U	5.00	5.45	Firm brown very gravelly very sandy CLAY.
BH102	13	D	7.00		Brown slightly gravelly very sandy CLAY.
BH103	4	B	1.20		MADE GROUND brown very sandy slightly clayey GRAVEL.
BH103	7	B	3.00	3.45	Brown mottled grey slightly clayey SAND & GRAVEL.
BH103	10	U	4.50	4.95	Firm brown very gravelly very sandy CLAY.
BH104	1	B	0.00	1.00	MADE GROUND brown mottled grey very sandy very clayey gravel.
BH104	9	B	3.00	3.45	Brown very sandy slightly silty gravel of COBBLES.
BH104	12	U	4.60	5.05	Firm brown very gravelly very sandy CLAY.
BH105	4	B	3.00	3.45	MADE GROUND brown mottled grey very sandy slightly clayey silty gravel.
BH105	6	B	5.00	5.45	Brown mottled grey sandy clayey very silty GRAVEL.
BH105	11	U	7.50	7.95	Brown very silty SAND.
BH105	15	U	10.50	10.95	Very stiff brown gravelly very sandy CLAY.
DS01	3	D	1.20	1.65	Dark brown sandy very clayey GRAVEL.
DS03	8	D	3.00	3.45	Dark grey slightly gravelly sandy organic CLAY.
DS03	9	D	4.20		Brown slightly gravelly very sandy CLAY with some organic material.
DS07	1	B	0.50		Brown very sandy slightly clayey GRAVEL with some cobbles.
DS07	6	D	3.00	3.45	Brown slightly gravelly very sandy CLAY.
DS14	11	D	4.00	4.45	MADE GROUND dark brown sandy slightly clayey GRAVEL.



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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

[illegible]

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SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
BH102	5	B	2.00	2.45	15							
BH102	9	U	5.00	5.45	12			29	15	14	63	Low plasticity CL.
BH102	13	D	7.00		22			34	17	17	96	Low plasticity CL.
BH103	4	B	1.20		15				NP			
BH103	7	B	3.00	3.45	15							
BH103	10	U	4.50	4.95	14			27	14	13	73	Low plasticity CL.
BH104	1	B	0.00	1.00	17							
BH104	9	B	3.00	3.45	7.2							
BH104	12	U	4.60	5.05	13			28	14	14	71	Low plasticity CL.
BH105	4	B	3.00	3.45	7.6				NP			
BH105	6	B	5.00	5.45	20				NP			
BH105	11	U	7.50	7.95	23				NP			
BH105	15	U	10.50	10.95	13			33	17	16	84	Low plasticity CL.
DS01	3	D	1.20	1.65	23			40	21	19	51	Intermediate plasticity CL.
DS03	8	D	3.00	3.45	39			76	35	41	98	Very high plasticity CV.
DS03	9	D	4.20		36			49	25	24	95	Intermediate plasticity CL.
DS07	1	B	0.50		9.1							
DS07	6	D	3.00	3.45	16			32	16	16	93	Low plasticity CL.
DS14	11	D	4.00	4.45	31				NP			

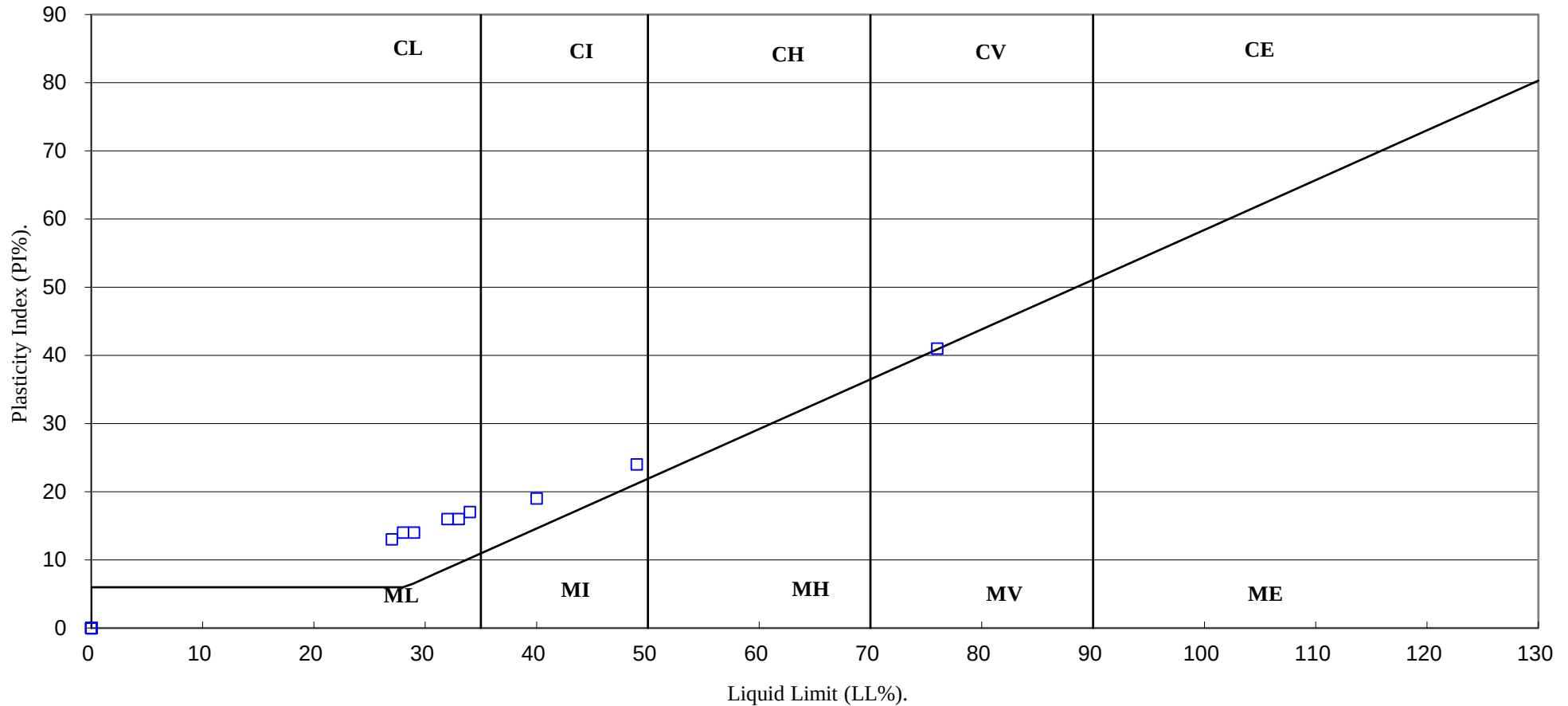
SYMBOLS : NP : Non Plastic

* : Liquid Limit and Plastic Limit Wet Sieved.

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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

(BS5930 :2015)



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SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

[illegible]

SYMBOLS : NP : Non Plastic

*** : Liquid Limit and Plastic Limit Wet Sieved.**



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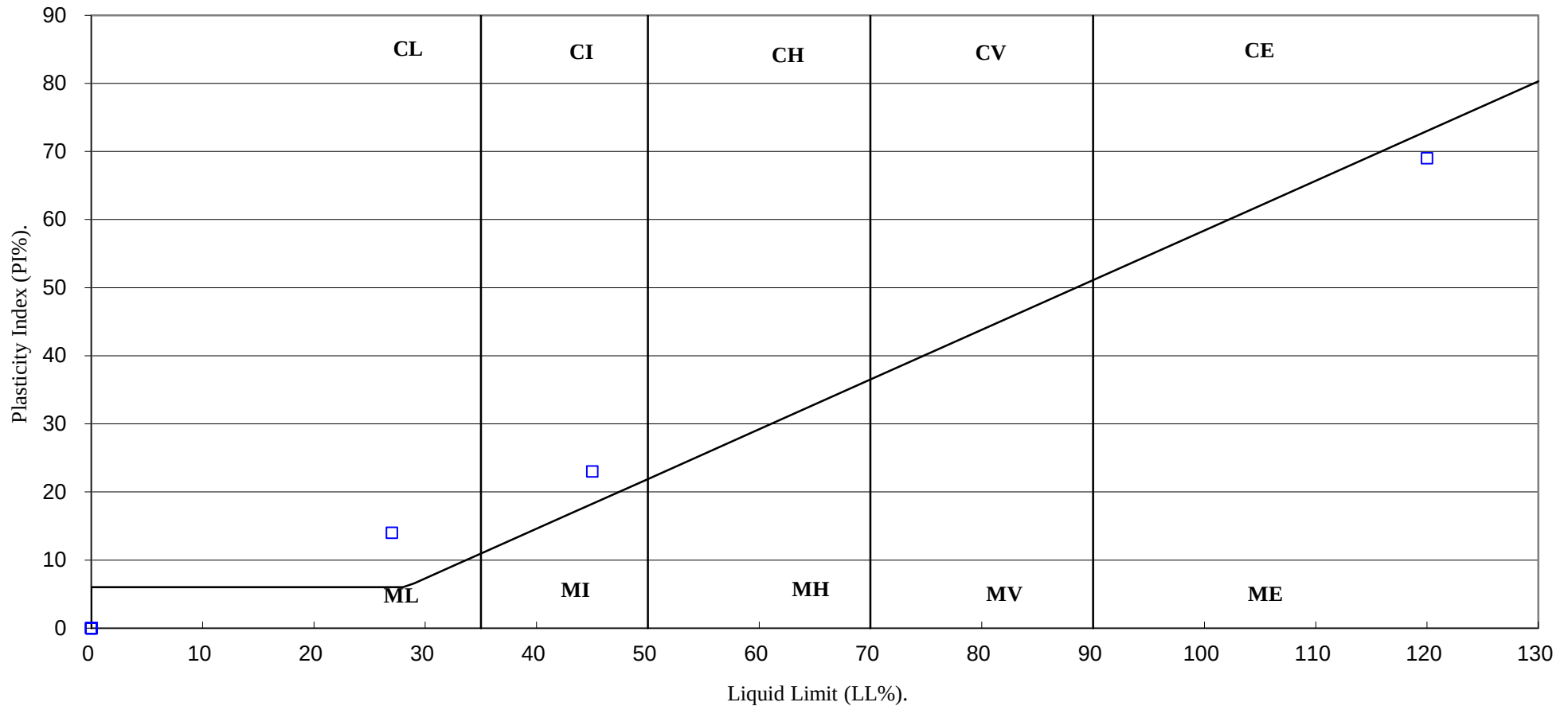
PSL17/0692

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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

(BS5930 :2015)



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PARTICLE SIZE DISTRIBUTION TEST

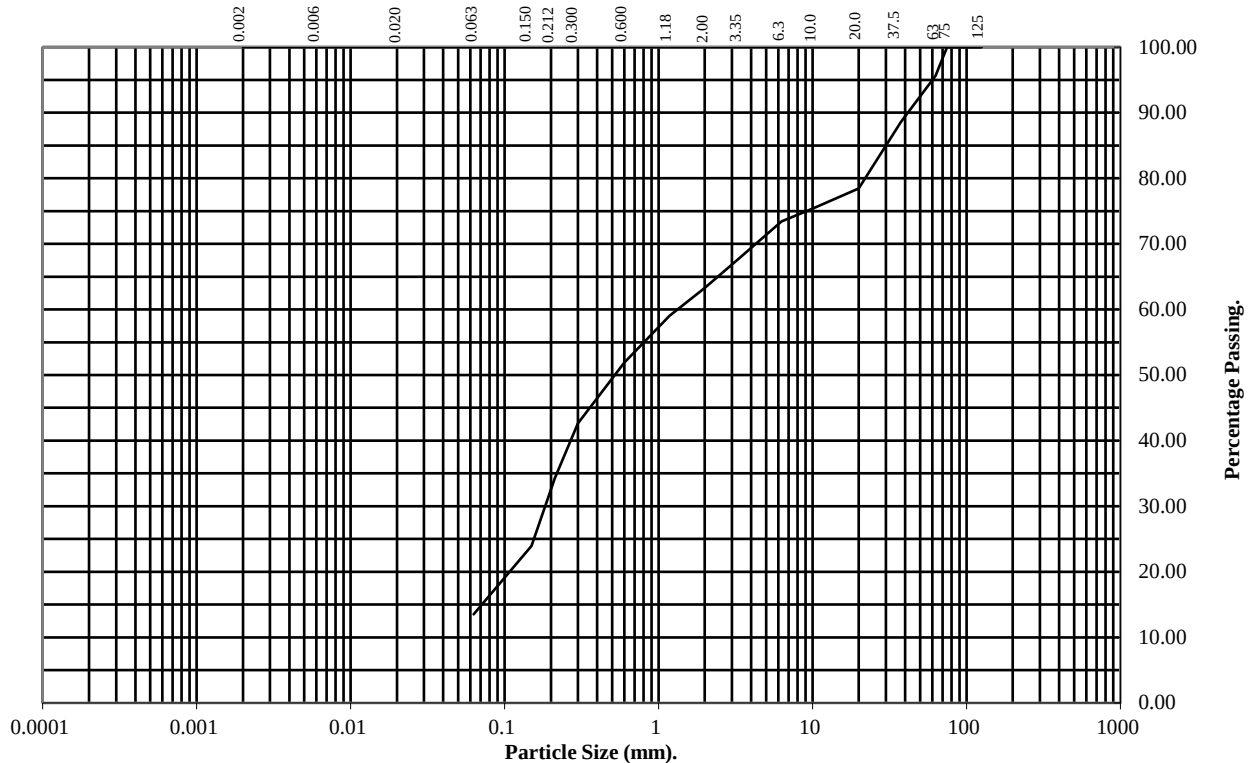
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: BH102 Top Depth (m): 2.00

Sample Number: 5 Base Depth(m): 2.45

Sample Type: B



BS Test Sieve	Percentage Passing
125	100
75	100
63	96
37.5	89
20	78
10	75
6.3	73
3.35	68
2	63
1.18	59
0.6	52
0.3	43
0.212	34
0.15	24
0.063	14

Soil Fraction	Total Percentage
Cobbles	4
Gravel	33
Sand	49
Silt/Clay	14

Remarks:

See summary of soil descriptions.



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PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

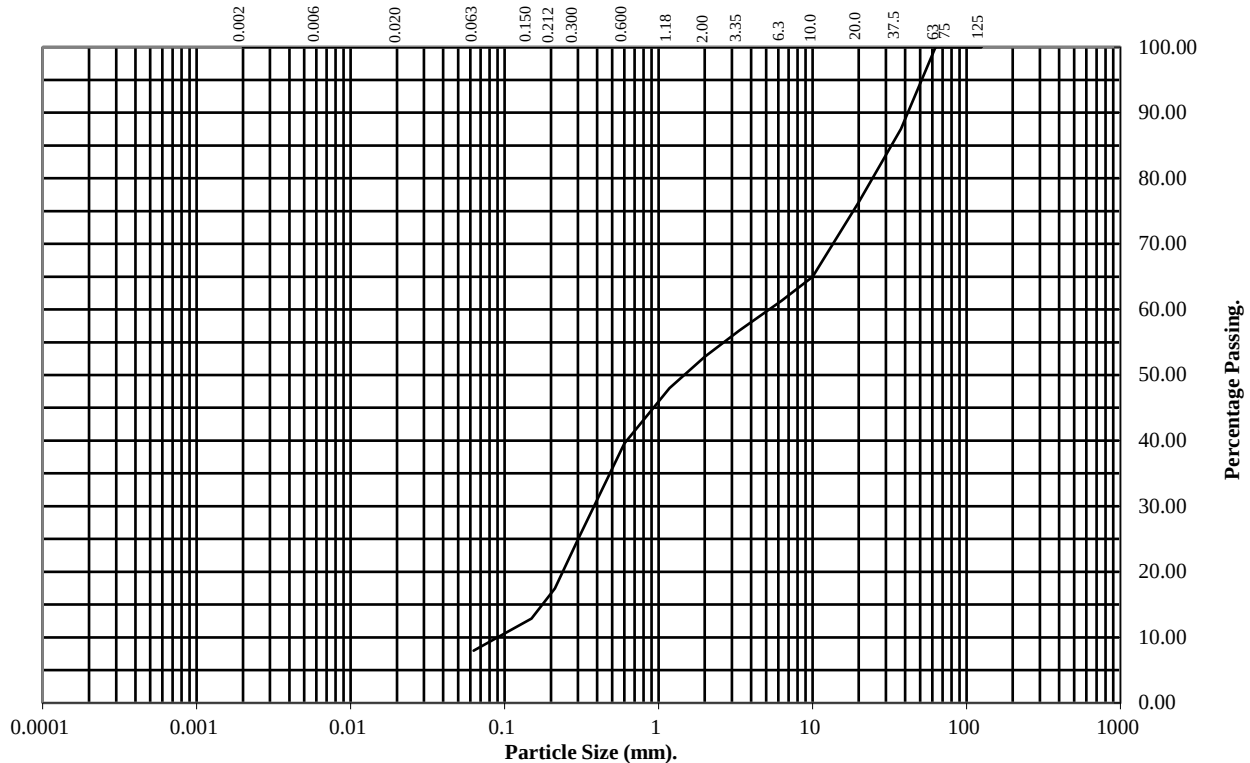
Hole Number: BH103

Top Depth (m): 3.00

Sample Number: 7

Base Depth(m): 3.45

Sample Type: B



BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	88
20	76
10	65
6.3	61
3.35	57
2	53
1.18	48
0.6	40
0.3	25
0.212	17
0.15	13
0.063	8

Soil Fraction	Total Percentage
Cobbles	0
Gravel	47
Sand	45
Silt/Clay	8

Remarks:

See summary of soil descriptions.



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PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

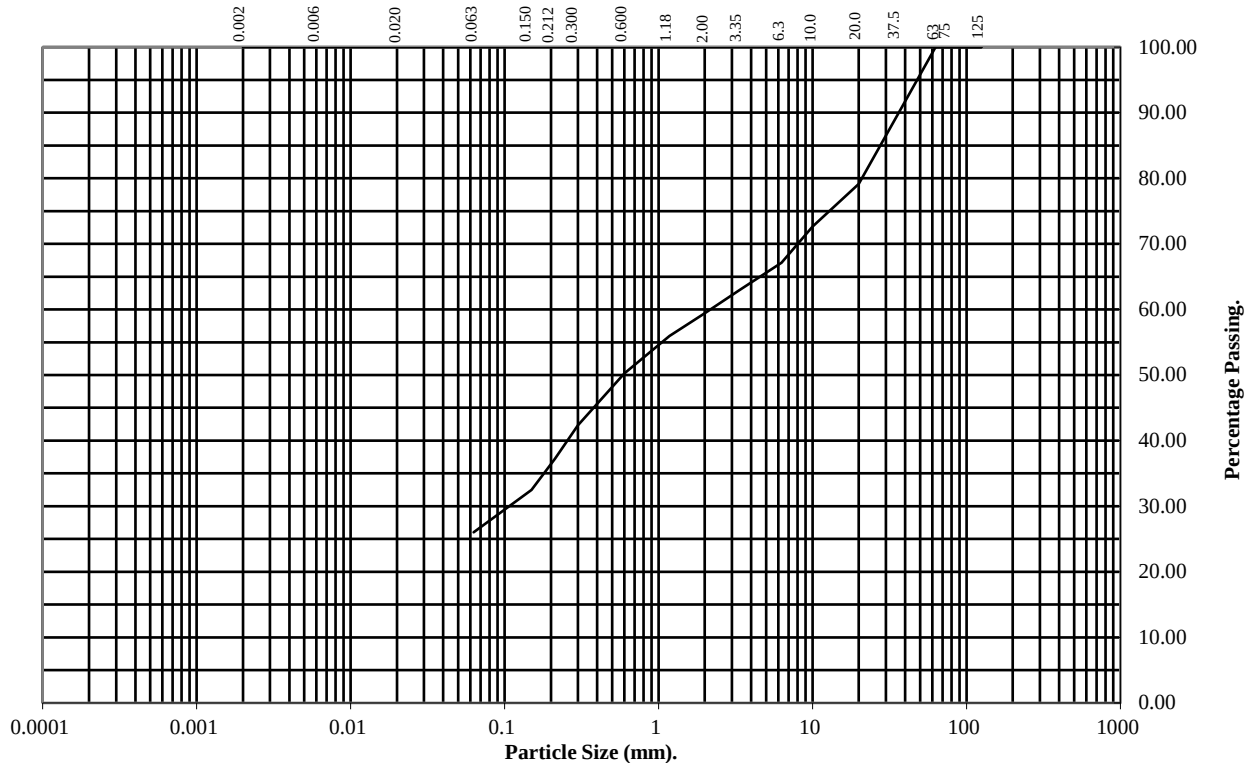
Hole Number: BH104

Top Depth (m): 0.00

Sample Number: 1

Base Depth(m): 1.00

Sample Type: B



BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	91
20	79
10	73
6.3	67
3.35	63
2	59
1.18	56
0.6	50
0.3	42
0.212	37
0.15	32
0.063	26

Soil Fraction	Total Percentage
Cobbles	0
Gravel	41
Sand	33
Silt/Clay	26

Remarks:

See summary of soil descriptions.



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PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

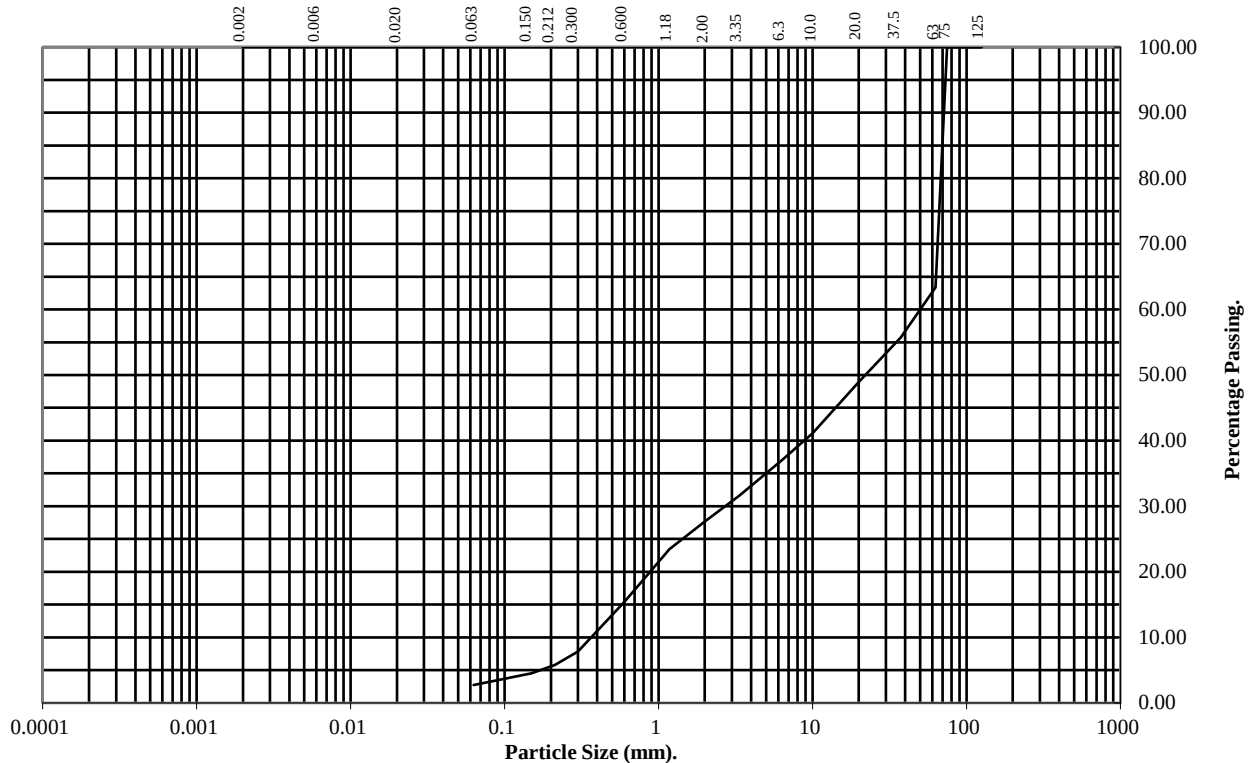
Hole Number: BH104

Top Depth (m): 3.00

Sample Number: 9

Base Depth(m): 3.45

Sample Type: B



BS Test Sieve	Percentage Passing
125	100
75	100
63	63
37.5	56
20	49
10	41
6.3	37
3.35	32
2	28
1.18	23
0.6	15
0.3	8
0.212	6
0.15	4
0.063	3

Soil Fraction	Total Percentage
Cobbles	37
Gravel	35
Sand	25
Silt/Clay	3

Remarks:

See summary of soil descriptions.



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PARTICLE SIZE DISTRIBUTION TEST

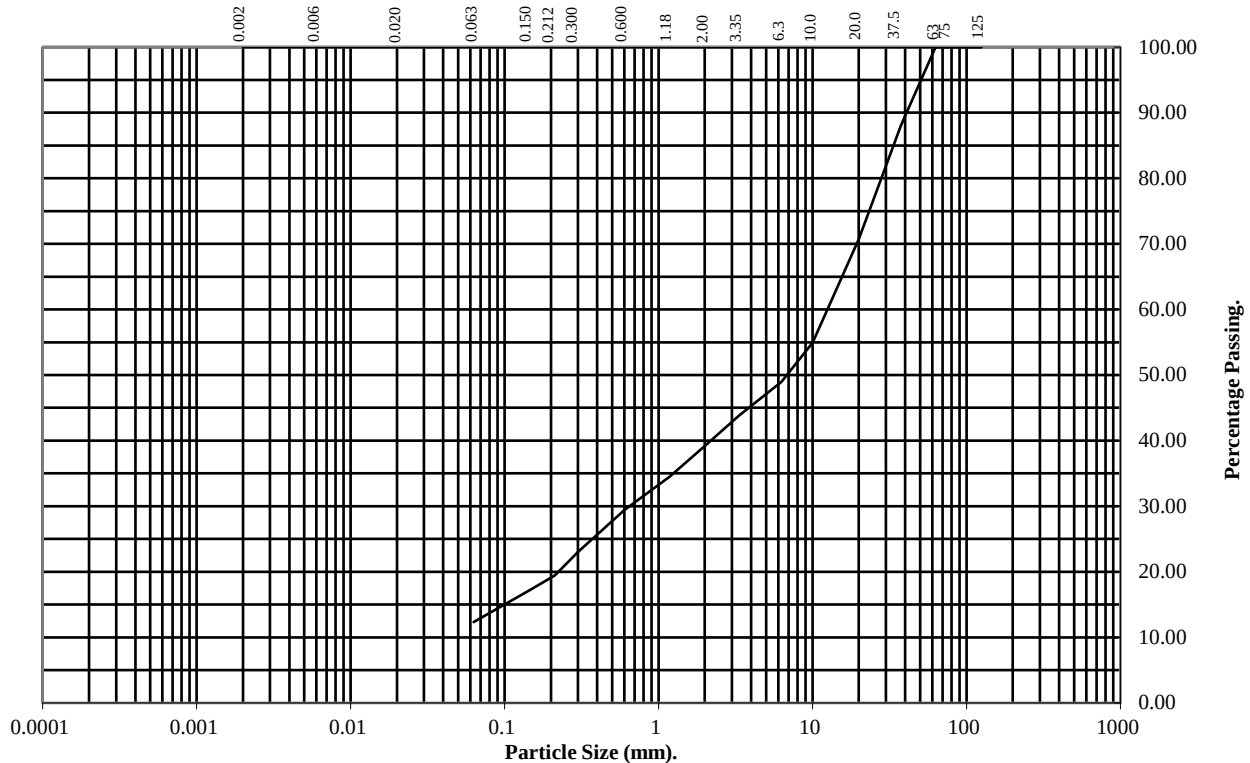
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: BH105 Top Depth (m): 3.00

Sample Number: 4 Base Depth(m): 3.45

Sample Type: B



BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	88
20	71
10	55
6.3	49
3.35	44
2	39
1.18	34
0.6	29
0.3	23
0.212	19
0.15	17
0.063	12

Soil Fraction	Total Percentage
Cobbles	0
Gravel	61
Sand	27
Silt/Clay	12

Remarks:

See summary of soil descriptions.



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PARTICLE SIZE DISTRIBUTION TEST

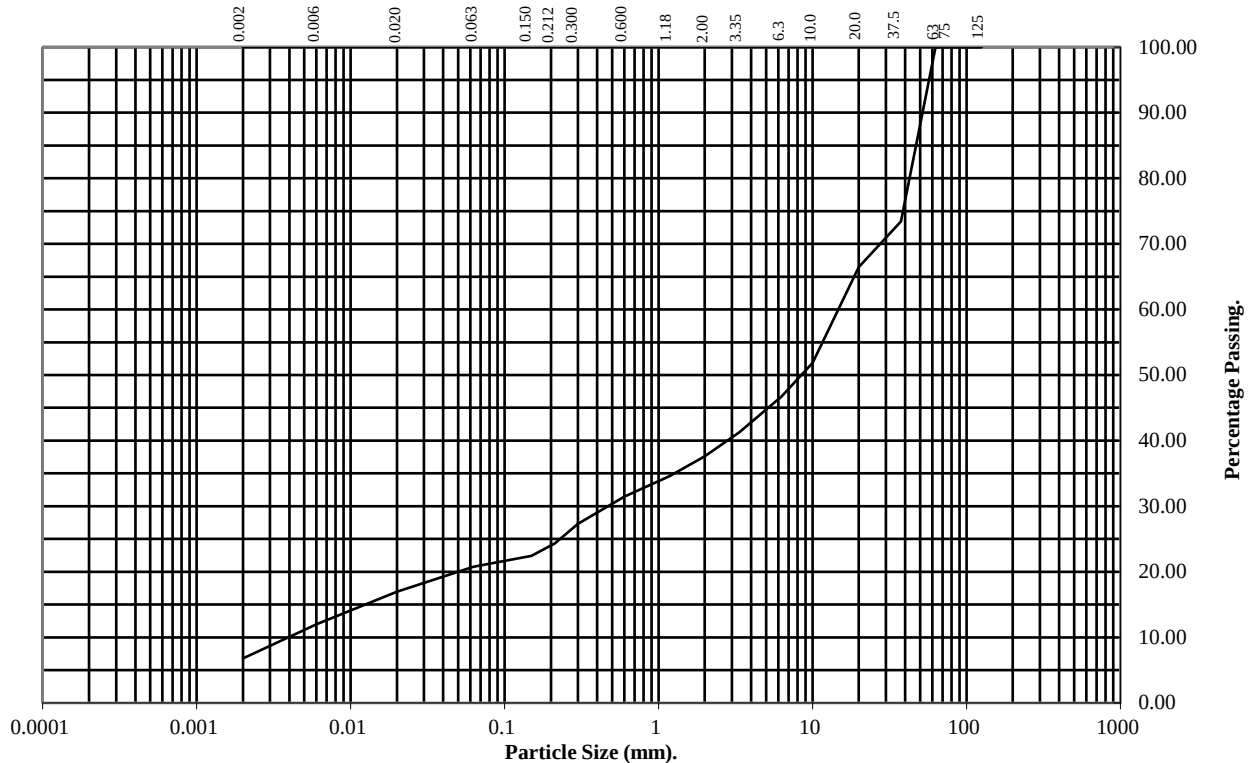
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: BH105 Top Depth (m): 5.00

Sample Number: 6 Base Depth(m): 5.45

Sample Type: B



BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	73
20	66
10	52
6.3	47
3.35	41
2	38
1.18	35
0.6	31
0.3	27
0.212	24
0.15	22
0.063	21

Particle Diameter	Percentage Passing
0.02	17
0.006	12
0.002	7

Soil Fraction	Total Percentage
Cobbles	0
Gravel	62
Sand	17
Silt	14
Clay	7

Remarks:

See summary of soil descriptions.



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PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

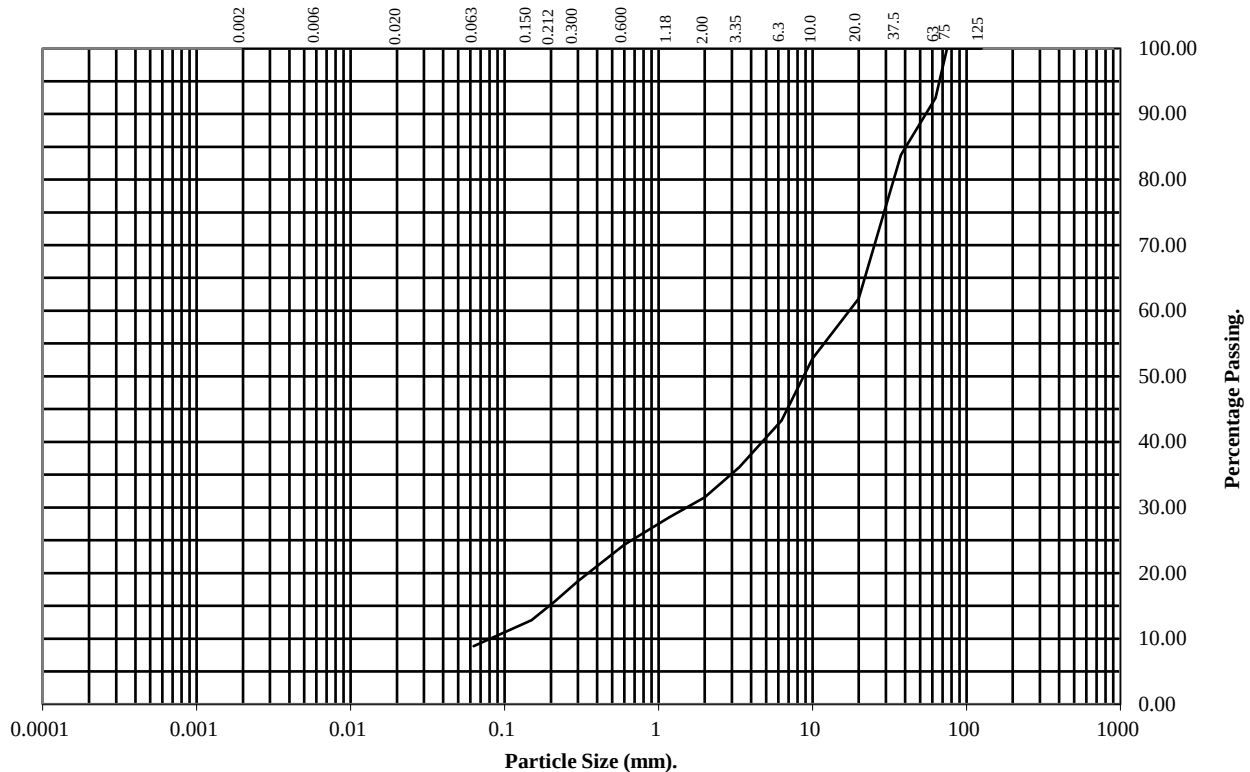
Hole Number: DS07

Top Depth (m): 0.50

Sample Number: 1

Base Depth(m):

Sample Type: B



BS Test Sieve	Percentage Passing
125	100
75	100
63	92
37.5	84
20	62
10	53
6.3	43
3.35	36
2	32
1.18	28
0.6	24
0.3	19
0.212	16
0.15	13
0.063	9

Soil Fraction	Total Percentage
Cobbles	8
Gravel	60
Sand	23
Silt/Clay	9

Remarks:

See summary of soil descriptions.



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PARTICLE SIZE DISTRIBUTION TEST

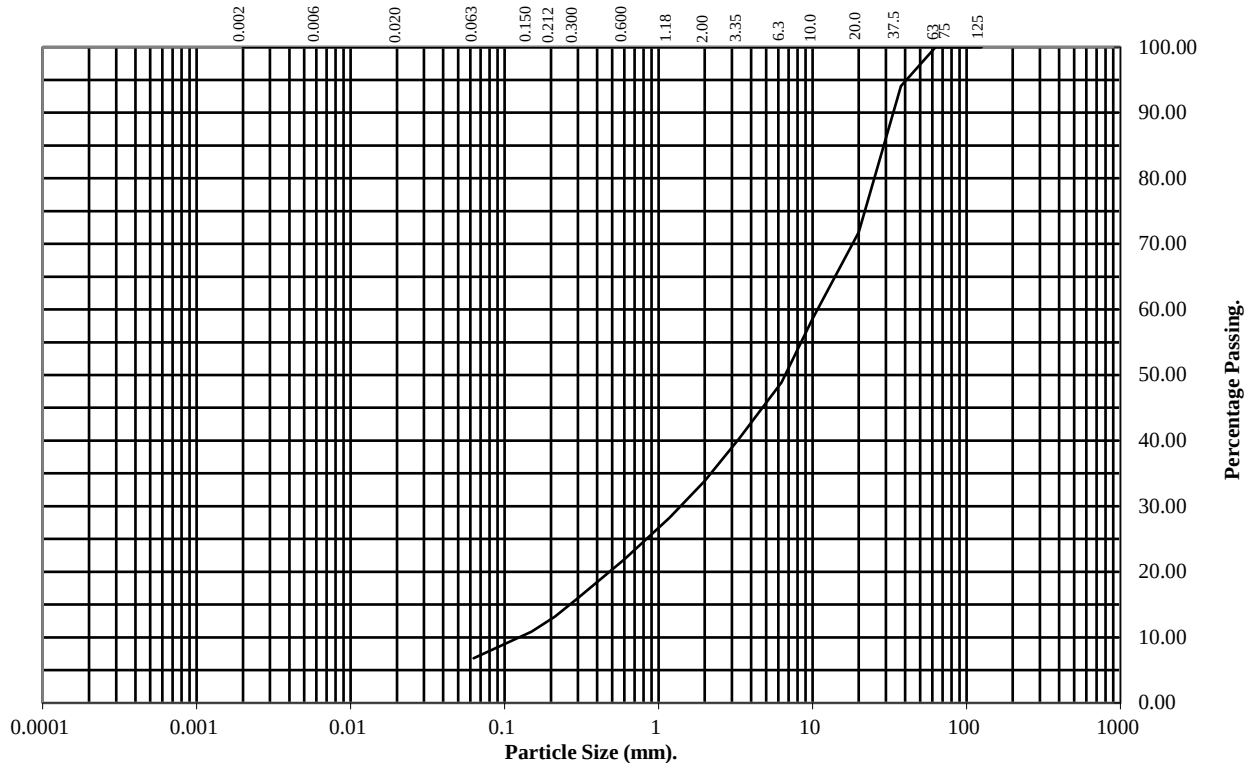
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP102 Top Depth (m): 0.80

Sample Number: 3 Base Depth(m): 1.20

Sample Type: B



BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	94
20	72
10	59
6.3	49
3.35	40
2	34
1.18	28
0.6	22
0.3	16
0.212	13
0.15	11
0.063	7

Soil Fraction	Total Percentage
Cobbles	0
Gravel	66
Sand	27
Silt/Clay	7

Remarks:

See summary of soil descriptions.



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PARTICLE SIZE DISTRIBUTION TEST

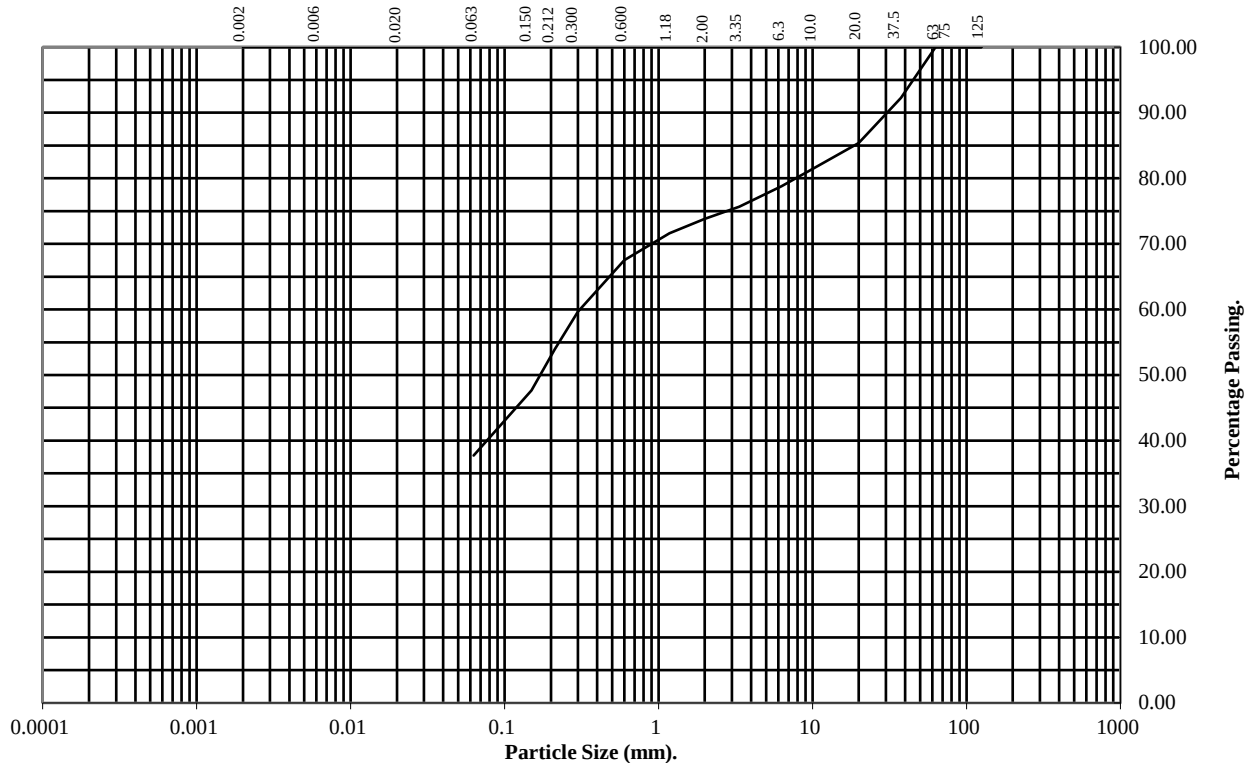
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP103 Top Depth (m): 0.60

Sample Number: 3 Base Depth(m): 1.60

Sample Type: B



BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	92
20	85
10	81
6.3	79
3.35	76
2	74
1.18	72
0.6	68
0.3	60
0.212	54
0.15	48
0.063	38

Soil Fraction	Total Percentage
Cobbles	0
Gravel	26
Sand	36
Silt/Clay	38

Remarks:

See summary of soil descriptions.



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PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

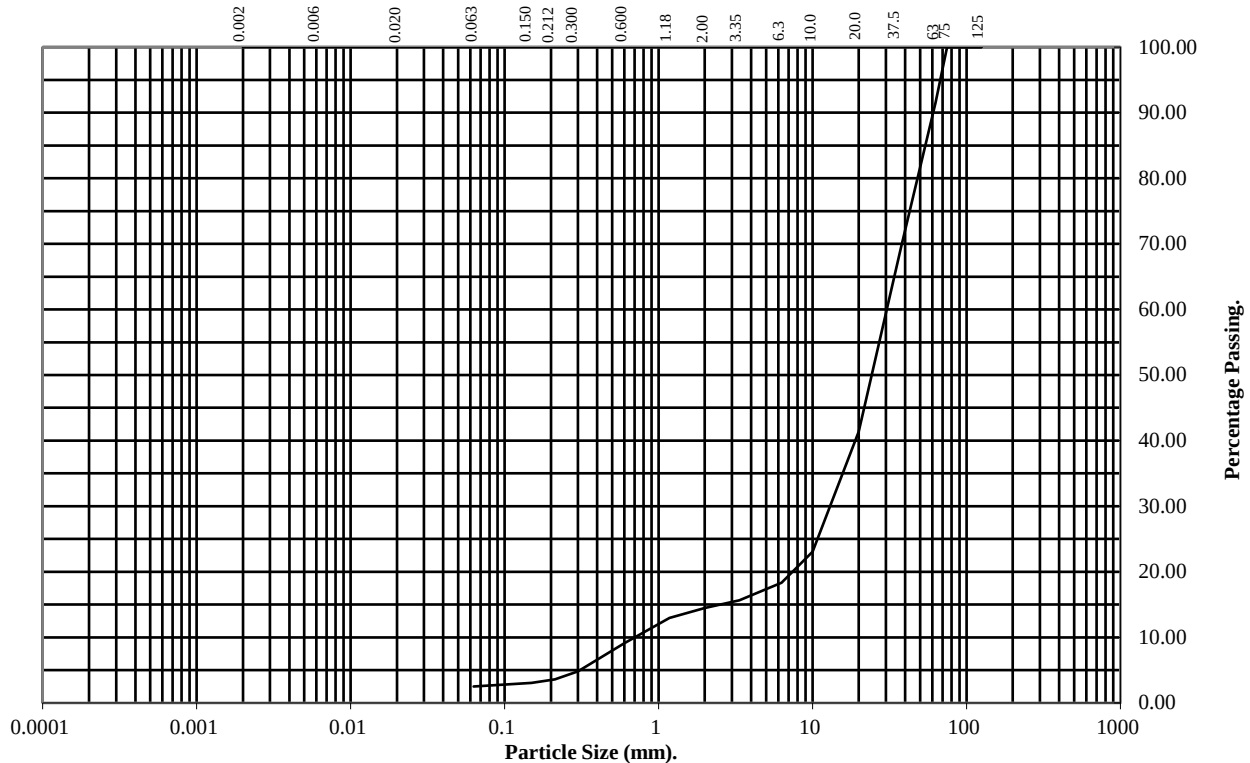
Hole Number: TP114

Top Depth (m): 0.50

Sample Number: 2

Base Depth(m): 1.00

Sample Type: B



BS Test Sieve	Percentage Passing
125	100
75	100
63	92
37.5	69
20	41
10	23
6.3	18
3.35	16
2	14
1.18	13
0.6	9
0.3	5
0.212	4
0.15	3
0.063	3

Soil Fraction	Total Percentage
Cobbles	8
Gravel	78
Sand	11
Silt/Clay	3

Remarks:

See summary of soil descriptions.



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PARTICLE SIZE DISTRIBUTION TEST

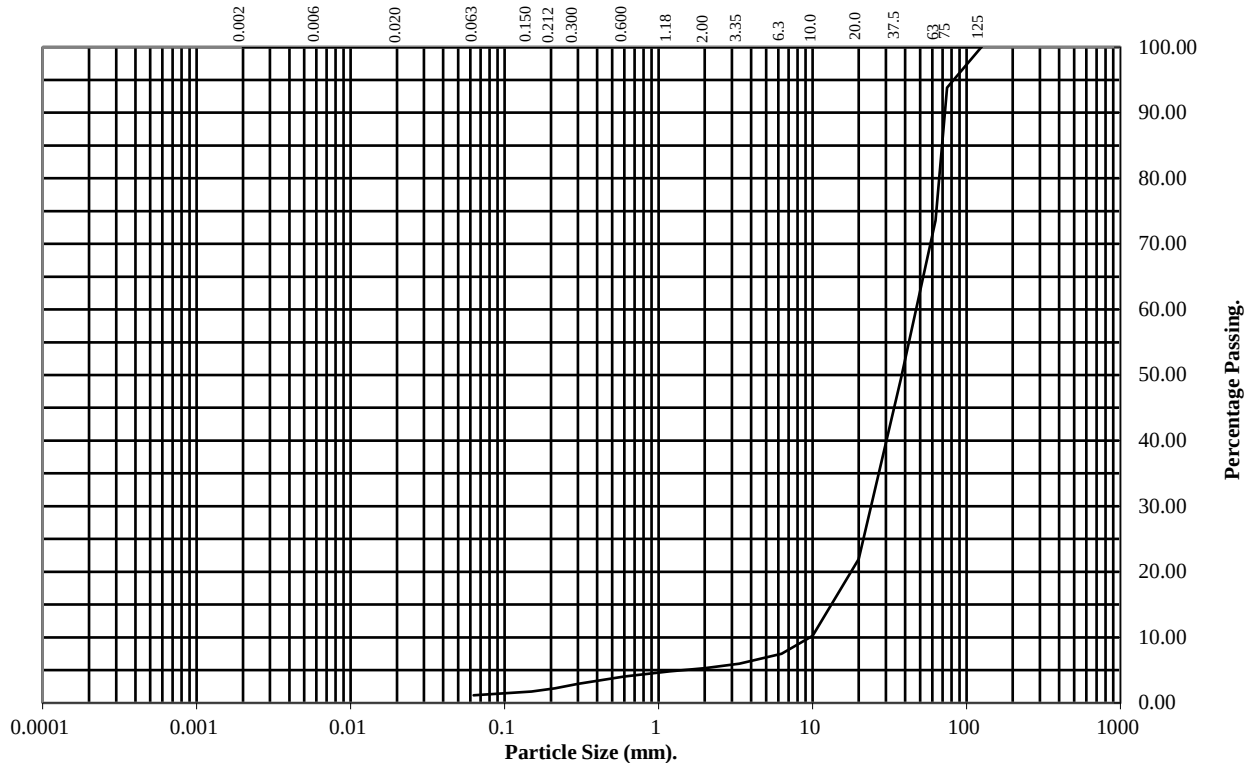
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP137 Top Depth (m): 1.00

Sample Number: 5 Base Depth(m): 1.70

Sample Type: B



BS Test Sieve	Percentage Passing
125	100
75	94
63	74
37.5	49
20	22
10	10
6.3	8
3.35	6
2	5
1.18	5
0.6	4
0.3	3
0.212	2
0.15	2
0.063	1

Soil Fraction	Total Percentage
Cobbles	26
Gravel	69
Sand	4
Silt/Clay	1

Remarks:

See summary of soil descriptions.



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UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

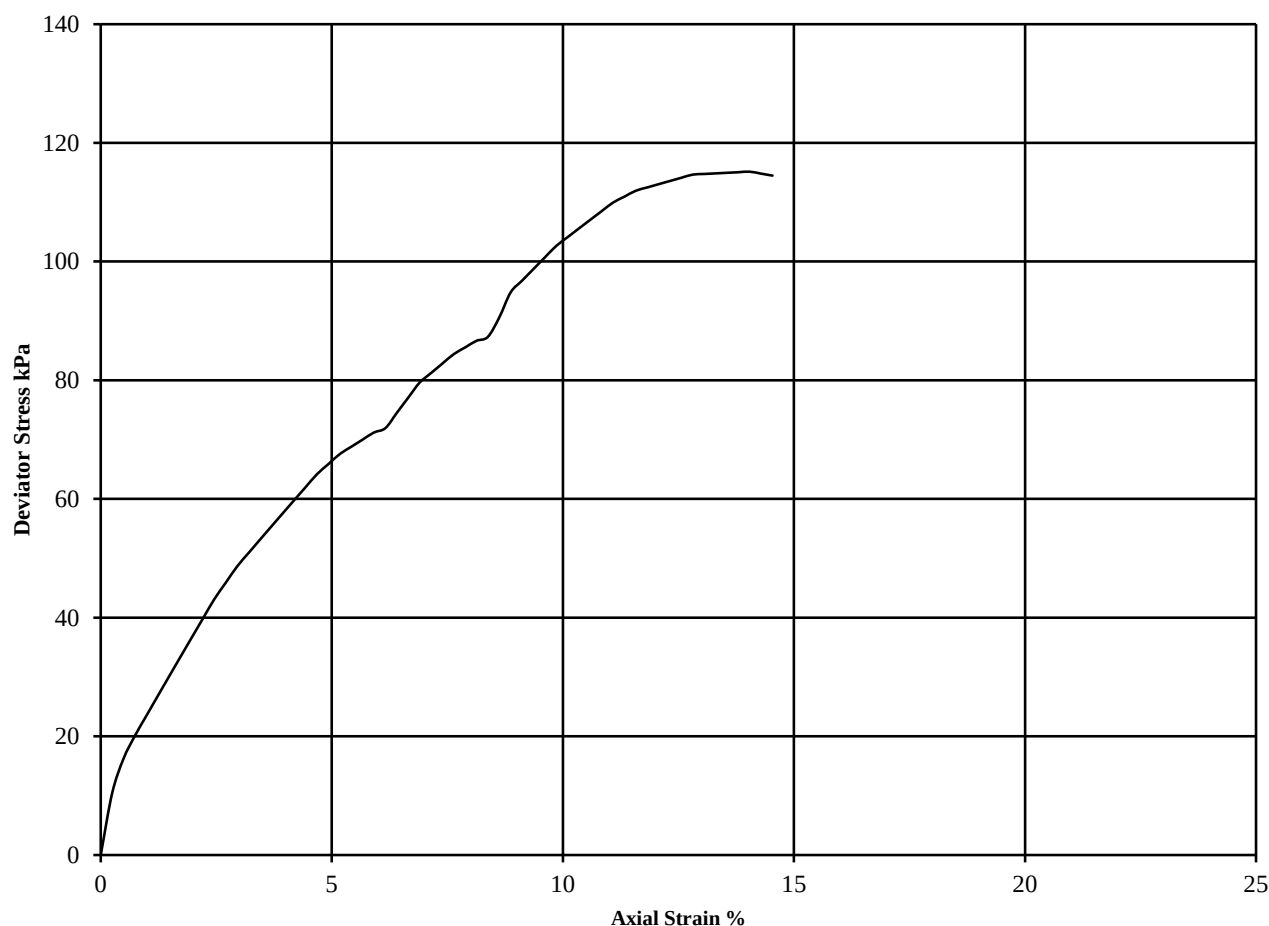
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

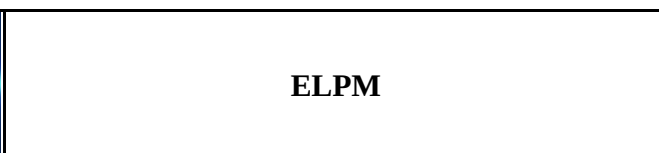
Hole Number: BH102 Top Depth (m): 5.00

Sample Number: 9 Base Depth (m): 5.45

Sample Type U



Diameter (mm):		102	Height (mm):		207	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Corr. Max. Deviator Stress (kPa)	Shear Strength Cu (kPa)	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa) 0.36 0.36 0.35 See summary of soil descriptions
1	12	2.20	1.97	100	72	36	6.2		
				150	87	44	8.4		
				250	115	58	14.0	Plastic	



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UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

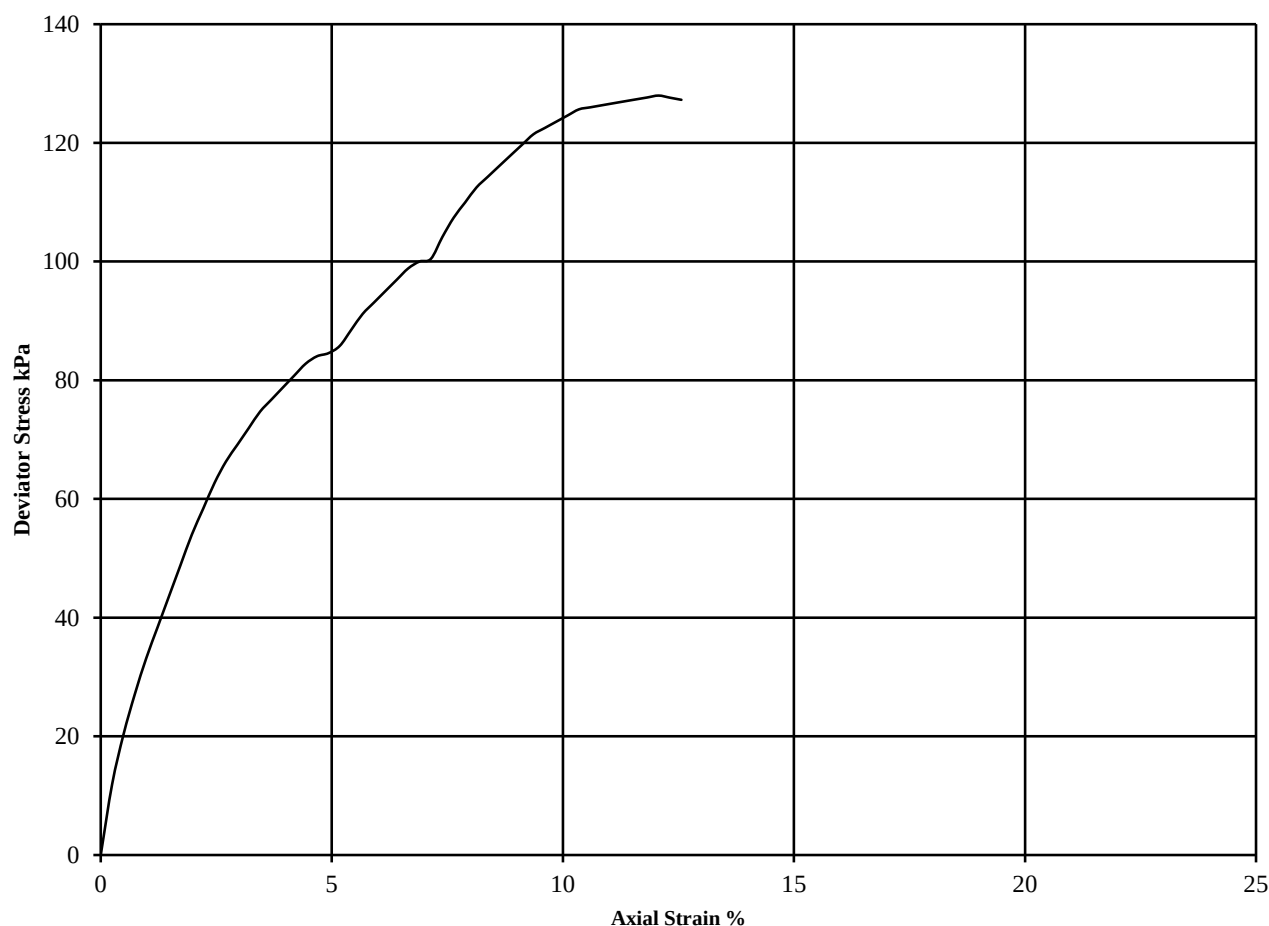
Hole Number: BH103

Top Depth (m): 4.50

Sample Number: 10

Base Depth (m): 4.95

Sample Type U



Diameter (mm):		102	Height (mm):		207	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Corr. Max. Deviator Stress (kPa)	Shear Strength Cu (kPa)	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa) 0.36 0.36 0.35 See summary of soil descriptions
	1	14	2.31	2.03	75	85	42	4.9	
				150	100	50	7.1		
				250	128	64	12.1	Plastic	



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UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

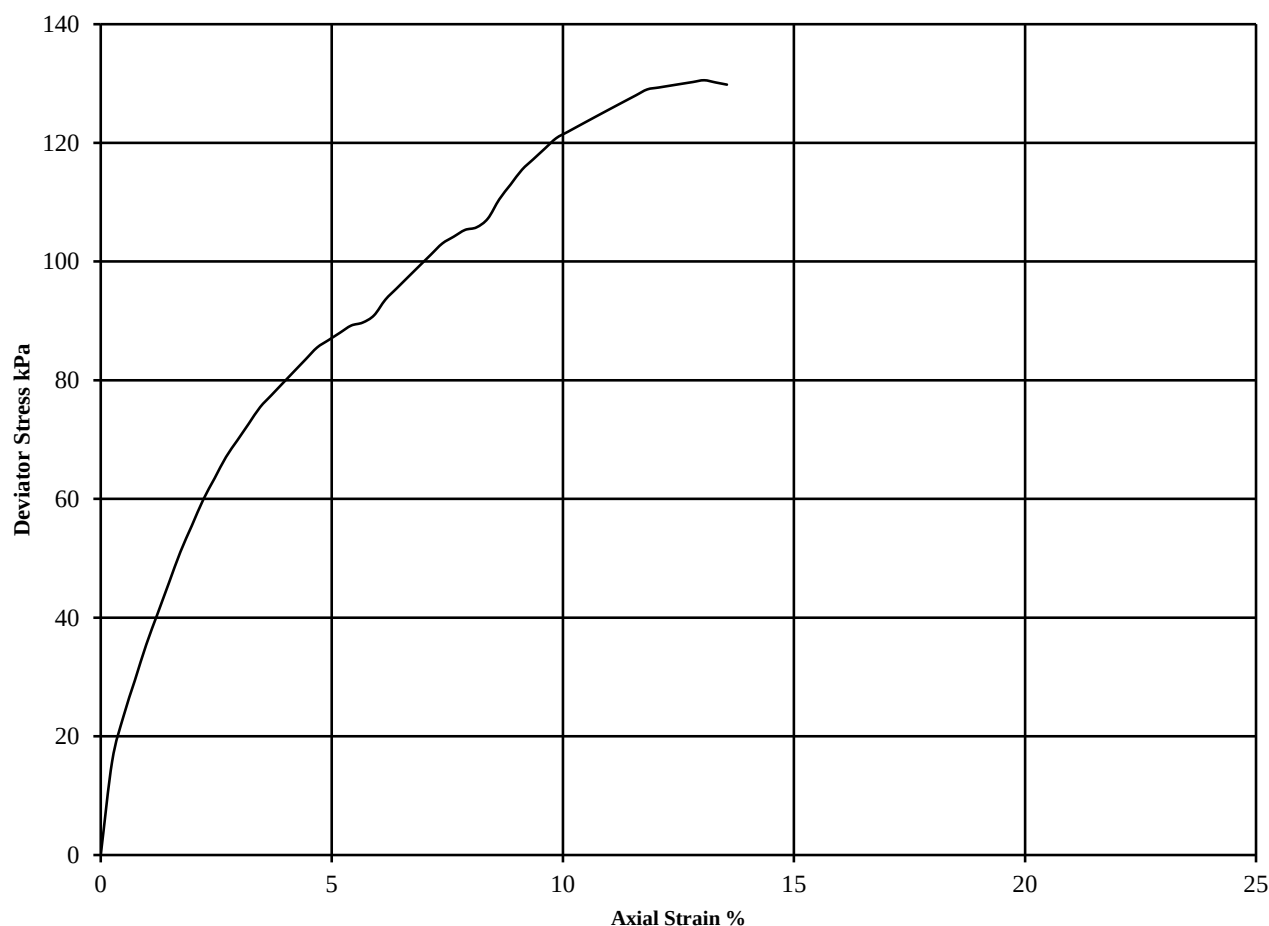
Hole Number: BH104

Top Depth (m): 4.60

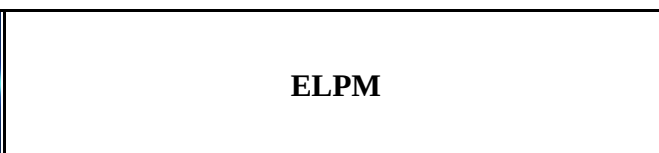
Sample Number: 12

Base Depth (m): 5.05

Sample Type U



Diameter (mm):		102	Height (mm):		207	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Corr. Max. Deviator Stress (kPa)	Shear Strength Cu (kPa)	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa) 0.36 0.36 0.35 See summary of soil descriptions
1	13	2.33	2.07	100	90	45	5.7		
				150	106	53	8.1		
				250	131	65	13.1	Plastic	



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UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

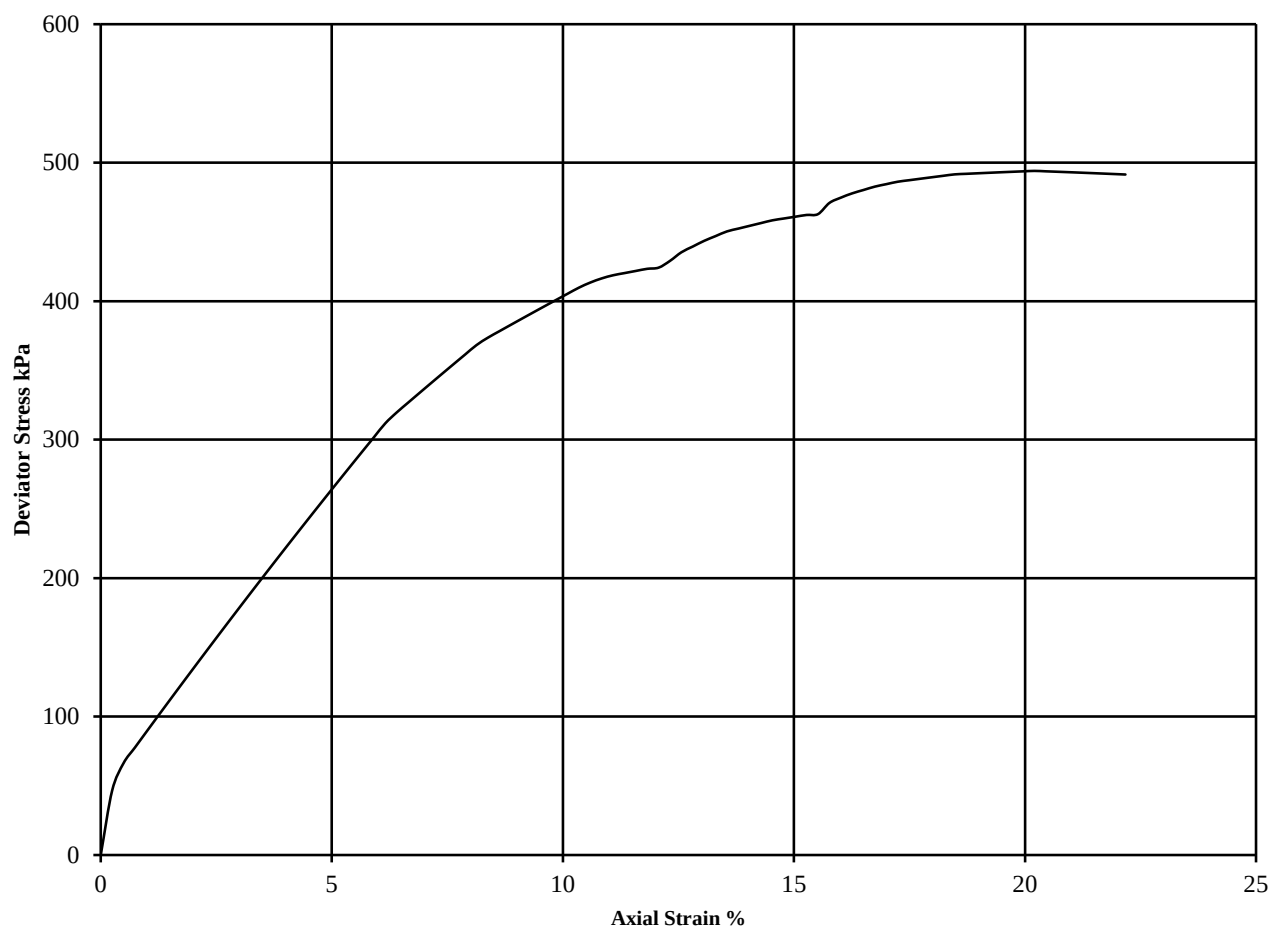
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

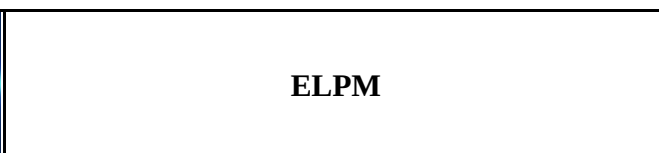
Hole Number: BH105 Top Depth (m): 10.50

Sample Number: 15 Base Depth (m): 10.95

Sample Type U



Diameter (mm):		102	Height (mm):		207	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Corr. Max. Deviator Stress (kPa)	Shear Strength Cu (kPa)	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa) 0.35 0.34 0.33 See summary of soil descriptions
	1	13	2.32	150	424	212	12.1		
				250	463	231	15.5		
				350	494	247	20.2	Plastic	



Contract No:
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Certificate of Analysis

Certificate Number 17-92079

28-Feb-17

Client Professional Soils Laboratory Ltd
5/7 Hexthorpe Road
Hexthorpe
DN4 0AR

Our Reference 17-92079

Client Reference PSL17/0692

Order No (not supplied)

Contract Title ELPM

Description 22 Soil samples.

Date Received 18-Feb-17

Date Started 18-Feb-17

Date Completed 28-Feb-17

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the scope of UKAS accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

A handwritten signature in black ink, appearing to read "Rob Brown".

Rob Brown
Business Manager



Summary of Chemical Analysis Soil Samples

Our Ref 17-92079

Client Ref PSL17/0692

Contract Title ELPM

Lab No	1130100	1130101	1130102	1130103	1130104	1130105	1130106	1130107	1130108	1130109	1130110
Sample ID	BH102	BH102	BH103	BH103	BH103	BH104	BH104	BH105	BH105	BH105	DS01
Depth	0.00-1.20	2.00-2.45	1.20-1.65	3.00-3.45	4.50-4.95	0.00-1.00	3.00-3.45	3.00-3.45	7.50-7.95	10.50-10.95	1.20-1.65
Other ID											
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units										
Inorganics													
Loss on Ignition at 440oC	DETS 2003#	0.01	%										
pH	DETS 2008#			7.5	7.2	7.5	6.7	6.8	7.3	7.3	8.6	8.7	8.5
Organic matter	DETS 2002#	0.1	%								5.4		
Sulphate Aqueous Extract as SO4	DETS 2076#	10	mg/l	32	18	150	140	33	64	20	76	35	43

Summary of Chemical Analysis

Soil Samples

Our Ref 17-92079

Client Ref PSL17/0692

Contract Title ELPM

Lab No	1130111	1130112	1130113	1130114	1130115	1130116	1130117	1130118	1130119	1130120	1130121
Sample ID	DS03	DS03	DS07	DS09	DS14	DS17	DS20	DS27	TP102	TP123	TP127
Depth	3.00-3.45	4.20	0.50	2.00-2.45	4.00-4.45	5.00-5.45	1.20	1.20-1.65	0.80-1.20	2.40	1.10
Other ID											
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units										
Inorganics													
Loss on Ignition at 440oC	DETS 2003#	0.01	%										66
pH	DETS 2008#			8.2	8.1	7.9	8.0	7.8	8.6	7.5	7.6	7.7	7.8
Organic matter	DETS 2002#	0.1	%	2.1	2.1			3.8	6.8			5.3	> 25
Sulphate Aqueous Extract as SO4	DETS 2076#	10	mg/l	180	43	25	< 10	250	620	81	13	180	110

Information in Support of the Analytical Results

Our Ref 17-92079
 Client Ref PSL17/0692
 Contract ELPM

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1130100	BH102 0.00-1.20 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130101	BH102 2.00-2.45 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130102	BH103 1.20-1.65 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130103	BH103 3.00-3.45 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130104	BH103 4.50-4.95 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130105	BH104 0.00-1.00 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130106	BH104 3.00-3.45 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130107	BH105 3.00-3.45 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130108	BH105 7.50-7.95 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Organic Matter (Manual) (730 days), pH + Conductivity (7 days)	
1130109	BH105 10.50-10.95 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130110	DS01 1.20-1.65 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130111	DS03 3.00-3.45 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Organic Matter (Manual) (730 days), pH + Conductivity (7 days)	
1130112	DS03 4.20 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Organic Matter (Manual) (730 days), pH + Conductivity (7 days)	
1130113	DS07 0.50 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130114	DS09 2.00-2.45 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130115	DS14 4.00-4.45 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Organic Matter (Manual) (730 days), pH + Conductivity (7 days)	
1130116	DS17 5.00-5.45 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Organic Matter (Manual) (730 days), pH + Conductivity (7 days)	
1130117	DS20 1.20 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130118	DS27 1.20-1.65 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130119	TP102 0.80-1.20 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1130120	TP123 2.40 SOIL		PT 1L	Sample date not supplied, Organic Matter (Manual) (730 days)	

Information in Support of the Analytical Results

Our Ref 17-92079
 Client Ref PSL17/0692
 Contract ELPM

1130121	TP127 1.10 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Loss on Ignition (730 days), Organic Matter (Manual) (730 days), pH + Conductivity (7 days)	
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Key: P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months



Appendix E – Gas and Groundwater Level Monitoring Results

**GAS & GROUNDWATER MONITORING RECORD**

Client **Homes and Communities Agency**
 Project **East Lancashire Paper Mill**
 Job Number **A090070-193**

VISIT 1 Date 09/02/2017 Start 09:15 End 15:15 By L. Daley AP Trend Steady Weather Overcast and cold.
 Instruments used - **GA5000 with internal flow pod, Dip meter**
 Background (start) CH₄ <0.1 CO₂ <0.1 O₂ 21.2% AP 1024
 Background (end) CH₄ <0.1 CO₂ <0.1 O₂ 21.0% AP 1020

Installation	Exploratory Hole Level (mAOD)	CH ₄		CO ₂		O ₂	CO	H ₂ S	VOC	Flow Rate		Atmospheric Pressure (mbar)	Depth to Water (mbgl)	Groundwater (mAOD)	Depth to Base (mbgl)	Remarks
		Peak (% vol)	Steady (% vol)	Peak (% vol)	Steady (% vol)	Steady (% vol)	Av. (ppm)	Av. (ppm)	Av. (ppm)	Peak (l/h)	Steady (l/h)					
BH102	67.055	<0.1	<0.1	0.7	0.7	21.1	<0.1	<0.1	0	0.1	0.1	1020	2.00	65.055	3.28	
BH103	67.384	<0.1	<0.1	0.3	0.3	21.6	<0.1	<0.1	0.2	0.2	0.2	1024	3.52	63.864	12.75	
BH104	66.944	1.0	1.0	0.3	0.3	19.4	<0.1	<0.1	0.8	0.2	0.2	1024	1.15	65.794	4.22	
BH105	68.930	0.8	0.8	2.1	2.1	16.9	4.0	2.0	0	0.2	0.1	1022	5.16	63.770	9.25	
DS01	62.009	<0.1	<0.1	0.5	0.5	21.2	<0.1	<0.1	0	0.1	0.1	1022	1.35	60.659	2.50	
DS02	62.143	<0.1	<0.1	<0.1	<0.1	21.8	<0.1	<0.1	0	0.1	0.1	1022	1.10	61.043	3.00	
DS03	64.193	<0.1	<0.1	<0.1	<0.1	20.4	<0.1	<0.1	0	0.1	0.1	1022	2.37	61.823	2.75	
DS04	64.208	<0.1	<0.1	<0.1	<0.1	20.9	<0.1	<0.1	12.8	0.1	0.1	1022	Dry	-	1.00	
DS05	64.897	<0.1	<0.1	<0.1	<0.1	19.6	<0.1	<0.1	8	0.1	0.1	1022	Dry	-	2.35	
DS06	64.621	<0.1	<0.1	<0.1	<0.1	21.9	<0.1	<0.1	0	0.1	0.1	1022	Dry	-	1.88	
DS07	66.512	<0.1	<0.1	0.2	0.2	21.6	<0.1	<0.1	0	0.1	0.1	1021	1.78	64.732	2.28	
DS09	67.647	<0.1	<0.1	1.3	1.3	20.2	<0.1	<0.1	0	0.1	0.1	1020	1.65	65.997	2.20	
DS11	67.573	<0.1	<0.1	3.0	2.6	19.0	<0.1	<0.1	0	0.1	0.1	1022	1.70	65.873	2.80	
DS14	64.324	0.6	0.6	3.3	3.2	10.1	<0.1	<0.1	21.2	0.1	0.1	1022	1.70	62.624	4.00	
DS17	69.176	<0.1	<0.1	7.2	7.2	3.6	21	<0.1	6.2	0.2	0.2	1022	Dry	-	3.95	
DS20	76.314	29.3	29.3	33.0	33.0	1.0	<0.1	<0.1	32.6	0.1	0.1	1022	Dry	-	5.05	
DS22	71.147	<0.1	<0.1	2.9	2.9	15.7	<0.1	<0.1	30.7	0.2	0.2	1022	Dry	-	4.77	
DS23	67.225	<0.1	<0.1	0.3	0.3	21.1	<0.1	<0.1	0	0.2	0.2	1024	0.20	67.025	1.00	
DS24	66.731	<0.1	<0.1	1.5	1.5	20.0	<0.1	<0.1	0.2	0.2	0.2	1024	0.80	65.931	1.00	
DS25	66.851	<0.1	<0.1	0.7	0.7	21.3	<0.1	<0.1	0.0	0.2	0.2	1024	1.05	65.801	1.05	
DS26	70.247	<0.1	<0.1	2.3	2.3	18.2	<0.1	<0.1	0	0.1	0.1	1022	4.25	65.997	4.60	
DS27	66.817	<0.1	<0.1	0.3	0.3	21.8	<0.1	<0.1	5.8	0.1	0.1	1022	1.68	65.137	2.40	

Notes:Calibration gas standards = CH₄ 4.94%, CO₂ 5.01%, O₂ 6.03%, VOCs 100ppm

AP - Atmospheric Pressure Trend

Peak reading = maximum recorded level during a monitoring event.

Steady reading = level which remained constant after approximately 5 minutes.

GSV = Gas Screening Value - the maximum percentage steady CH₄ or CO₂ multiplied by the gas flow rate.Atmospheric Pressure trend obtained from weather online (www.weatheronline.co.uk)

**GAS & GROUNDWATER MONITORING RECORD**

Client Homes and Communities Agency
 Project East Lancashire Paper Mill
 Job Number A090070-193

VISIT 2 Date 15/02/2017 Start 9:10 End 15:20 By LD AP Trend Rising Weather Clear, dry & cold
 Instruments used - GA5000 with internal flow pod, Dip meter
 Background (start) CH₄ <0.1 CO₂ <0.1 O₂ 21.8% AP 1017
 Background (end) CH₄ <0.1 CO₂ <0.1 O₂ 21.2% AP 1019

Installation	Exploratory Hole Level (mAOD)	CH ₄		CO ₂		O ₂	CO	H ₂ S	VOC	Flow Rate		Atmospheric Pressure (mbar)	Depth to Water (mbgl)	Groundwater (mAOD)	Depth to Base (mbgl)	Remarks
		Peak (% vol)	Steady (% vol)	Peak (% vol)	Steady (% vol)	Steady (% vol)	Av. (ppm)	Av. (ppm)	Av. (ppm)	Peak (l/h)	Steady (l/h)					
BH102	67.055	<0.1	<0.1	0.9	0.8	20.9	<1	<1	0.2	0.1	0.1	1017	2.05	65.005	3.26	
BH103	67.384	<0.1	<0.1	0.4	0.4	21.4	<1	<1	0.4	0.1	0.1	1018	3.55	63.834	12.75	
BH104	66.944	1.1	0.9	0.4	0.4	19.3	<1	<1	0.6	0.1	0.1	1018	1.16	65.784	4.20	
BH105	68.930	1	0.8	2.1	2.0	17.0	5.0	1.0	0.1	0.2	0.1	1018	5.18	63.750	9.25	
DS01	62.009	<0.1	<0.1	0.6	0.5	21.1	<1	<1	0.1	0.1	0.1	1017	1.38	60.629	2.50	
DS02	62.143	<0.1	<0.1	0.2	<0.1	21.6	<1	<1	0	0.1	0.1	1017	1.12	61.023	3.02	
DS03	64.193	<0.1	<0.1	<0.1	<0.1	20.5	<1	<1	0	0.2	0.1	1017	2.40	61.793	2.74	
DS04	64.208	<0.1	<0.1	<0.1	<0.1	21.0	<1	<1	13	0.1	0.1	1017	DRY	-	1.00	
DS05	64.897	<0.1	<0.1	<0.1	<0.1	19.8	<1	<1	6.8	0.2	0.1	1017	DRY	-	2.35	
DS06	64.621	<0.1	<0.1	<0.1	<0.1	21.7	<1	<1	0	0.1	0.1	1017	DRY	-	1.87	
DS07	66.512	<0.1	<0.1	0.3	0.1	21.7	<1	<1	0	0.1	0.1	1018	1.81	64.702	2.28	
DS09	67.647	<0.1	<0.1	1.1	1.1	20.4	<1	<1	0	0.1	0.1	1017	1.66	65.987	2.20	
DS11	67.573	<0.1	<0.1	2.8	2.8	19.3	<1	<1	0	0.2	0.1	1019	1.72	65.853	2.80	
DS14	64.324	0.5	0.5	3.4	3.4	10.2	<1	<1	27.8	0.1	0.1	1018	1.72	62.604	4.00	
DS17	69.176	<0.1	<0.1	7.3	7.0	3.8	20	<1	7.2	0.2	0.2	1017	DRY	-	3.95	
DS20	76.314	29.6	29.4	33.2	33.2	0.8	<1	<1	38.8	0.1	0.1	1018	DRY	-	5.02	
DS22	71.147	<0.1	<0.1	3.0	3.0	15.5	<1	<1	28	0.2	0.1	1017	DRY	-	4.75	
DS23	67.225	<0.1	<0.1	0.2	0.2	21.0	<1	<1	0	0.2	0.2	1017	0.28	66.945	1.00	
DS24	66.731	<0.1	<0.1	1.3	1.3	20.1	<1	<1	0	0.2	0.2	1017	0.81	65.921	1.00	
DS25	66.851	<0.1	<0.1	0.5	0.5	21.4	<1	<1	0.4	0.1	0.1	1017	0.70	66.151	1.05	
DS26	70.247	<0.1	<0.1	2.4	2.4	18.0	<1	<1	0	0.1	0.1	1017	4.27	65.977	4.60	
DS27	66.817	<0.1	<0.1	0.2	0.2	21.6	<1	<1	6.2	0.1	0.1	1017	1.70	65.117	2.41	

Notes:Calibration gas standards = CH₄ 4.94%, CO₂ 5.01%, O₂ 6.03%, VOCs 100ppm

AP - Atmospheric Pressure Trend

Peak reading = maximum recorded level during a monitoring event.

Steady reading = level which remained constant after approximately 5 minutes.

GSV = Gas Screening Value - the maximum percentage steady CH₄ or CO₂ multiplied by the gas flow rate.Atmospheric Pressure trend obtained from weather online (www.weatheronline.co.uk)

**GAS & GROUNDWATER MONITORING RECORD**

Client Homes and Communities Agency
Project East Lancashire Paper Mill
Job Number A090070-193

VISIT 3 **Date** 23.02.17 **Start** 10:30 **End** 15:40 **By** LD **AP Trend** Rising after a period of significant fall
Instruments used - GA5000 with internal flow pod, Dip meter
Background (start) **CH₄** <0.1 **CO₂** <0.1 **O₂** 20.9% **AP** 987 **Weather** Strong gales and rain
Background (end) **CH₄** <0.1 **CO₂** <0.1 **O₂** 21.4% **AP** 991

Installation	Exploratory Hole Level (mAOD)	CH ₄		CO ₂		O ₂	CO	H ₂ S	VOC	Flow Rate		Atmospheric Pressure (mbar)	Depth to Water (mbgl)	Groundwater (mAOD)	Depth to Base (mbgl)	Remarks
		Peak (% vol)	Steady (% vol)	Peak (% vol)	Steady (% vol)	Steady (% vol)	Av. (ppm)	Av. (ppm)	Av. (ppm)	Peak (l/h)	Steady (l/h)					
BH102	67.055	<0.1	<0.1	1.0	1.0	20.7	<1	<1	0.4	0.1	0.1	987	2.00	65.055	3.24	
BH103	67.384	<0.1	<0.1	0.6	0.6	21.0	<1	<1	0.6	0.1	0.1	988	3.51	63.874	12.75	
BH104	66.944	1.4	1.4	0.5	0.5	18.9	<1	<1	0.4	0.1	0.1	988	1.12	65.824	4.20	
BH105	68.930	1.4	1.2	2.2	2.0	16.8	5.0	<1	0.2	0.1	0.1	989	5.15	63.780	9.23	
DS01	62.009	<0.1	<0.1	0.7	0.6	20.9	<1	<1	0.1	0.1	0.1	988	1.35	60.659	2.50	
DS02	62.143	<0.1	<0.1	0.2	0.2	21.2	<1	<1	0	0.1	0.1	987	1.34	60.803	3.00	
DS03	64.193	<0.1	<0.1	<0.1	<0.1	20.4	<1	<1	0	0.1	0.1	989	2.38	61.813	2.75	
DS04	64.208	<0.1	<0.1	<0.1	<0.1	20.9	<1	<1	18	0.1	0.1	990	WAB	-	1.00	
DS05	64.897	<0.1	<0.1	<0.1	<0.1	19.7	<1	<1	7.4	0.1	0.1	993	DRY	-	2.33	
DS06	64.621	<0.1	<0.1	0.2	0.2	21.5	<1	<1	0	0.1	0.1	992	DRY	-	1.85	
DS07	66.512	<0.1	<0.1	0.2	0.2	21.5	<1	<1	0	0.1	0.1	994	1.80	64.712	2.28	
DS09	67.647	<0.1	<0.1	1.3	1.3	20.2	<1	<1	0	0.1	0.1	994	1.65	65.997	2.20	
DS11	67.573	<0.1	<0.1	3.0	3.0	19.0	<1	<1	0	0.2	0.2	992	1.69	65.883	2.80	
DS14	64.324	0.7	0.7	3.5	3.5	10.0	<1	<1	30	0.2	0.2	992	1.69	62.634	4.00	
DS17	69.176	<0.1	<0.1	7.5	7.5	3.5	22	<1	7.8	0.1	0.1	990	DRY	-	3.95	
DS20	76.314	29.8	29.6	33.7	33.5	0.5	<1	<1	35.2	0.4	0.4	989	DRY	-	5.03	
DS22	71.147	<0.1	<0.1	3.2	3.2	15.3	<1	<1	29.2	0.2	0.2	989	DRY	-	4.75	
DS23	67.225	<0.1	<0.1	0.3	0.3	20.9	<1	<1	0	0.2	0.2	991	0.25	66.975	1.00	GW noted then purged prior
DS24	66.731	<0.1	<0.1	1.5	1.5	19.9	<1	<1	0	0.1	0.1	990	0.58	66.151	1.00	
DS25	66.851	<0.1	<0.1	0.6	0.6	21.3	<1	<1	0.6	0.1	0.1	991	0.55	66.301	1.05	
DS26	70.247	<0.1	<0.1	2.5	2.5	17.9	<1	<1	6	0.1	0.1	991	4.00	66.247	4.60	
DS27	66.817	<0.1	<0.1	0.3	0.3	21.4	<1	<1	6.5	0.1	0.1	992	1.64	65.177	2.40	

Notes:Calibration gas standards = CH₄ 4.94%, CO₂ 5.01%, O₂ 6.03%, VOCs 100ppm

AP - Atmospheric Pressure Trend

Peak reading = maximum recorded level during a monitoring event.

Steady reading = level which remained constant after approximately 5 minutes.

GSV = Gas Screening Value - the maximum percentage steady CH₄ or CO₂ multiplied by the gas flow rate.Atmospheric Pressure trend obtained from weather online (www.weatheronline.co.uk)

**GAS & GROUNDWATER MONITORING RECORD**

Client Homes and Communities Agency
Project East Lancashire Paper Mill
Job Number A090070-193

VISIT 4 **Date** 28.02.17 **Start** 08.20 **End** 14.00 **By** LD **AP Trend** Rising after a period of significant fall
Instruments used - GA5000 with internal flow pod, Dip meter
Background (start) **CH₄** <0.1 **CO₂** 0.2% **O₂** 21.2% **AP** 976 **Weather** Snow, cold
Background (end) **CH₄** <0.1 **CO₂** <0.1 **O₂** 21.0% **AP** 977

Installation	Exploratory Hole Level (mAOD)	CH ₄		CO ₂		O ₂	CO	H ₂ S	VOC	Flow Rate		Atmospheric Pressure (mbar)	Depth to Water (mbgl)	Groundwater (mAOD)	Depth to Base (mbgl)	Remarks
		Peak (% vol)	Steady (% vol)	Peak (% vol)	Steady (% vol)	Steady (% vol)	Av. (ppm)	Av. (ppm)	Av. (ppm)	Peak (l/h)	Steady (l/h)					
BH102	67.055	<0.1	<0.1	0.7	0.3	20.9	<1	<1	<0.1	0.1	0.1	976	1.67	65.385	3.24	
BH103	67.384	<0.1	<0.1	0.4	0.4	21.0	<1	<1	0.4	0.1	0.1	976	3.19	64.194	12.75	
BH104	66.944	0.1	0.1	0.3	0.3	20.3	<1	<1	0.3	0.1	0.1	976	0.90	66.044	4.20	
BH105	68.930	0.3	0.3	2.1	2.1	15.2	3.0	<1	0.8	0.1	0.1	976	5.00	63.930	9.23	
DS01	62.009	<0.1	<0.1	0.6	0.6	20.8	<1	<1	<0.1	0.2	0.2	976	1.33	60.679	2.48	
DS02	62.143	<0.1	<0.1	0.4	0.4	21.0	<1	<1	<0.1	0.2	0.2	976	2.00	60.143	3.01	
DS03	64.193	<0.1	<0.1	0.2	0.2	21.0	<1	<1	<0.1	0.2	0.2	977	DRY	-	2.75	
DS04	64.208	<0.1	<0.1	0.1	0.1	20.9	<1	<1	16.8	0.1	0.1	977	DRY	-	1.00	
DS05	64.897	<0.1	<0.1	0.2	0.2	19.6	<1	<1	6	0.2	0.2	976	DRY	-	2.33	
DS06	64.621	<0.1	<0.1	<0.1	<0.1	21.4	<1	<1	<0.1	0.1	0.1	977	DRY	-	1.86	
DS07	66.512	<0.1	<0.1	0.2	0.2	21.0	<1	<1	<0.1	0.1	0.1	976	1.61	64.902	2.26	
DS09	67.647	<0.1	<0.1	1.4	1.2	20.3	<1	<1	<0.1	0.1	0.1	977	1.66	65.987	2.21	
DS11	67.573	<0.1	<0.1	3.2	2.8	19.6	<1	<1	0.1	0.1	0.1	977	1.66	65.913	2.80	
DS14	64.324	<0.1	<0.1	3.9	3.9	7.3	<1	<1	25.6	0.1	0.1	976	1.44	62.884	4.00	
DS17	69.176	<0.1	<0.1	4.8	3.8	14.0	<1	<1	7	0.1	0.1	976	DRY	-	3.95	
DS20	76.314	37.4	37.4	38.0	38.0	0.3	<1	<1	28.4	0.2	0.2	976	DRY	-	5.04	
DS22	71.147	<0.1	<0.1	3.1	3.1	16.8	<1	<1	12	0.1	0.1	976	DRY	-	4.75	
DS23	67.225	<0.1	<0.1	0.2	0.2	20.9	<1	<1	<0.1	0.2	0.2	977	0.25	66.975	1.00	
DS24	66.731	<0.1	<0.1	1.6	1.4	19.8	<1	<1	<0.1	0.2	0.2	977	0.70	66.031	1.00	
DS25	66.851	<0.1	<0.1	0.7	0.5	21.0	<1	<1	<0.1	0.1	0.1	976	0.59	66.261	1.05	
DS26	70.247	<0.1	<0.1	2.6	2.3	17.6	<1	<1	4.8	0.1	0.1	976	3.96	66.287	4.58	
DS27	66.817	<0.1	<0.1	0.3	0.3	21.0	<1	<1	<0.1	0.1	0.1	976	1.60	65.217	2.40	

Notes:Calibration gas standards = CH₄ 4.94%, CO₂ 5.01%, O₂ 6.03%, VOCs 100ppm

AP - Atmospheric Pressure Trend

Peak reading = maximum recorded level during a monitoring event

Steady reading = level which remained constant after approximately 5 minutes.

GSV = Gas Screening Value - the maximum percentage steady CH₄ or CO₂ multiplied by the gas flow rate.Atmospheric Pressure trend obtained from weather online (www.weatheronline.co.uk)



GAS & GROUNDWATER MONITORING RECORD
Client Homes and Communities Agency
Project East Lancashire Paper Mill
Job Number A090070-193

VISIT 5 **Date** 09/03/2017 **Start** 09:10 **End** 16:00 **By** LD **AP Trend** Rising **Weather** Clear, Sunny
Instruments used - GA5000 with internal flow pod, Dip meter
Background (start) **CH₄** <0.1 **CO₂** 0.1% **O₂** 21.1% **AP** 1009
Background (end) **CH₄** <0.1 **CO₂** 0.1% **O₂** 21.0% **AP** 1011

Installation	Exploratory Hole Level (mAOD)	CH ₄		CO ₂		O ₂	CO	H ₂ S	VOC	Flow Rate		Atmospheric Pressure (mbar)	Depth to Water (mbgl)	Groundwater (mAOD)	Depth to Base (mbgl)	Remarks
		Peak (% vol)	Steady (% vol)	Peak (% vol)	Steady (% vol)	Steady (% vol)	Av. (ppm)	Av. (ppm)	Av. (ppm)	Peak (l/h)	Steady (l/h)					
BH102	67.055	<0.1	<0.1	0.6	0.3	20.8	<1	<1	0	0.1	0.1	1009	1.60	65.455	3.25	
BH103	67.384	<0.1	<0.1	0.2	0.2	21.2	<1	<1	0	0.1	0.1	1010	3.65	63.734	12.75	
BH104	66.944	0.3	0.2	0.6	0.5	18.8	<1	<1	0.6	0.1	0.1	1010	1.02	65.924	4.20	
BH105	68.930	0.2	0.2	2.6	2.6	15.0	<1	<1	0.3	0.1	0.1	1011	5.00	63.930	9.05	
DS01	62.009	<0.1	<0.1	0.3	0.3	20.9	<1	<1	0.8	0.2	0.1	1009	1.05	60.959	2.45	
DS02	62.143	<0.1	<0.1	0.2	0.2	20.9	<1	<1	0.2	0.1	0.1	1009	0.84	61.303	3.01	
DS03	64.193	<0.1	<0.1	0.1	0.1	17.6	<1	<1	0.4	0.1	0.1	1009	2.32	61.873	2.73	
DS04	64.208	<0.1	<0.1	0.2	0.2	21.2	<1	<1	14.2	0.1	0.1	1010	DRY	-	1.00	
DS05	64.897	<0.1	<0.1	0.2	0.2	20.2	<1	<1	8.6	0.2	0.1	1009	DRY	-	2.35	
DS06	64.621	<0.1	<0.1	0.2	0.2	21.3	<1	<1	0	0.1	0.1	1009	DRY	-	1.87	
DS07	66.512	<0.1	<0.1	0.2	0.2	21.2	<1	<1	0	0.1	0.1	1011	1.72	64.792	2.29	
DS09	67.647	<0.1	<0.1	0.8	0.8	20.6	<1	<1	0	0.2	0.1	1011	1.60	66.047	2.18	
DS11	67.573	<0.1	<0.1	2.6	2.6	19.5	<1	<1	0	0.1	0.1	1010	1.66	65.913	2.80	
DS14	64.324	<0.1	<0.1	3.3	3.3	6.1	<1	<1	28.6	0.1	0.1	1009	1.65	62.674	3.95	
DS17	69.176	<0.1	<0.1	1.6	1.6	18.6	4	<1	6.6	0.1	0.1	1011	DRY	-	3.94	
DS20	76.314	37.9	37.9	36.6	36.6	0.1	<1	<1	34.8	0.2	0.2	1011	DRY	-	5.02	
DS22	71.147	<0.1	<0.1	2.8	2.8	15.9	<1	<1	0	0.1	0.1	1010	DRY	-	4.75	
DS23	67.225	<0.1	<0.1	0.2	0.2	20.8	<1	<1	0	0.2	0.1	1010	0.26	66.965	1.00	
DS24	66.731	<0.1	<0.1	1.3	1.3	20.2	<1	<1	0	0.1	0.1	1009	0.72	66.011	1.00	
DS25	66.851	<0.1	<0.1	0.6	0.5	21.2	<1	<1	0	0.1	0.1	1011	0.66	66.191	1.05	
DS26	70.247	<0.1	<0.1	2.2	2.2	18.2	<1	<1	0	0.1	0.1	1011	4.12	66.127	4.60	
DS27	66.817	<0.1	<0.1	0.2	0.2	21.2	<1	<1	6	0.2	0.2	1011	1.60	65.217	2.40	

Notes:Calibration gas standards = CH₄ 4.94%, CO₂ 5.01%, O₂ 6.03%, VOCs 100ppm

AP - Atmospheric Pressure Trend

Peak reading = maximum recorded level during a monitoring event.

Steady reading = level which remained constant after approximately 5 minutes.

GSV = Gas Screening Value - the maximum percentage steady CH₄ or CO₂ multiplied by the gas flow rate.Atmospheric Pressure trend obtained from weather online (www.weatheronline.co.uk)



GAS & GROUNDWATER MONITORING RECORD
Client Homes and Communities Agency
Project East Lancashire Paper Mill
Job Number A090070-193

VISIT 6 **Date** 14/03/2017 **Start** 09:25 **End** 15:15 **By** LD **AP Trend** Rising **Weather** Over cast

Instruments used - GA5000 with internal flow pod, Dip meter

Background (start) **CH₄** <0.1 **CO₂** <0.1% **O₂** 21.3% **AP** 1019

Background (end) **CH₄** <0.1 **CO₂** <0.1% **O₂** 21.0% **AP** 1022

Installation	Exploratory Hole Level (mAOD)	CH ₄		CO ₂		O ₂	CO	H ₂ S	VOC	Flow Rate		Atmospheric Pressure (mbar)	Depth to Water (mbgl)	Groundwater (mAOD)	Depth to Base (mbgl)	Remarks
		Peak (% vol)	Steady (% vol)	Peak (% vol)	Steady (% vol)	Steady (% vol)	Av. (ppm)	Av. (ppm)	Av. (ppm)	Peak (l/h)	Steady (l/h)					
BH102	67.055	<0.1	<0.1	0.3	0.3	20.7	<0.1	<0.1	0	0.2	0.1	1019	1.64	65.415	3.25	
BH103	67.384	<0.1	<0.1	0.3	0.3	21.1	<0.1	<0.1	0	0.1	0.1	1020	3.78	63.604	12.75	
BH104	66.944	0.4	0.4	0.4	0.4	18.7	<0.1	<0.1	1.2	0.2	0.2	1020	1.09	65.854	4.20	
BH105	68.930	0.2	0.1	2.0	2.0	15.7	<0.1	<0.1	0.2	0.1	0.1	1020	5.08	63.850	9.05	
DS01	62.009	<0.1	<0.1	0.3	0.2	20.7	<0.1	<0.1	0.6	0.1	0.1	1019	1.12	60.889	2.45	
DS02	62.143	<0.1	<0.1	0.2	0.2	20.8	<0.1	<0.1	0	0.1	0.1	1019	0.88	61.263	3.00	
DS03	64.193	<0.1	<0.1	<0.1	<0.1	17.8	<0.1	<0.1	0	0.1	0.1	1020	2.35	61.843	2.73	
DS04	64.208	<0.1	<0.1	0.2	0.2	21.1	<0.1	<0.1	12.8	0.1	0.1	1020	Dry	-	1.00	
DS05	64.897	<0.1	<0.1	0.3	0.1	20.4	<0.1	<0.1	8.0	0.2	0.1	1020	Dry	-	2.35	
DS06	64.621	<0.1	<0.1	0.3	0.1	21.3	<0.1	<0.1	0	0.1	0.1	1021	Dry	-	1.86	
DS07	66.512	<0.1	<0.1	<0.1	<0.1	21.3	<0.1	<0.1	0	0.2	0.1	1020	1.76	64.752	2.26	
DS09	67.647	<0.1	<0.1	0.6	0.5	20.9	<0.1	<0.1	0	0.1	0.1	1020	1.65	65.997	2.16	
DS11	67.573	<0.1	<0.1	3.0	2.5	19.6	<0.1	<0.1	0	0.1	0.1	1021	1.70	65.873	2.80	
DS14	64.324	<0.1	<0.1	3.0	2.9	6.3	<0.1	<0.1	28	0.2	0.2	1021	1.68	62.644	3.95	
DS17	69.176	<0.1	<0.1	1.9	1.6	19.4	10	<0.1	6.2	0.1	0.1	1020	Dry	-	3.95	
DS20	76.314	37.6	37.6	36.9	36.9	0.1	<0.1	<0.1	33.6	0.1	0.1	1021	Dry	-	5.00	
DS22	71.147	<0.1	<0.1	3.0	2.7	16.0	<0.1	<0.1	0	0.1	0.1	1021	Dry	-	4.75	
DS23	67.225	<0.1	<0.1	0.3	0.3	20.6	<0.1	<0.1	0	0.1	0.1	1020	0.32	66.905	1.00	
DS24	66.731	<0.1	<0.1	1.4	1.2	20.4	<0.1	<0.1	0	0.1	0.1	1021	0.76	65.971	1.00	
DS25	66.851	<0.1	<0.1	0.5	0.5	21.0	<0.1	<0.1	0	0.1	0.1	1021	0.68	66.171	1.03	
DS26	70.247	<0.1	<0.1	2.3	2.0	18.4	<0.1	<0.1	0	0.1	0.1	1022	4.16	66.087	4.60	
DS27	66.817	<0.1	<0.1	0.4	0.4	21.0	<0.1	<0.1	5.6	0.1	0.1	1022	1.64	65.177	2.40	

Notes:

Calibration gas standards = CH₄ 4.94%, CO₂ 5.01%, O₂ 6.03%, VOCs 100ppm

AP - Atmospheric Pressure Trend

Peak reading = maximum recorded level during a monitoring event

Steady reading = level which remained constant after approximately 5 minutes.

GSV = Gas Screening Value - the maximum percentage steady CH₄ or CO₂ multiplied by the gas flow rate.

Atmospheric Pressure trend obtained from weather online (www.weatheronline.co.uk)



Photo Plate No. 01 - Surface Water 1 (SW1) taken from upstream of the River Irwell



Photo Plate No. 02 – Surface Water 2 (SW2) taken from downstream of the River Irwell

**Quay West at MediaCityUK,
Trafford Wharf Road,
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**Tel: 0161 872 3223
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**Environmental Consultancy
Ground Technologies & Investigation**



Project : East Lancashire Paper Mill

Client: Homes & Communities Agency

Surface Water Sampling Photo Plates

Project No.: A090070-193

Date: March 2017



Photo Plate No. 03 – Surface Water 3 (SW3) taken from upstream of Hutchinson's Goit



Photo Plate No. 04 – Surface Water 4 (SW4) taken from the onsite reservoir

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**Environmental Consultancy
Ground Technologies & Investigation**



Project : East Lancashire Paper Mill

Client: Homes & Communities Agency

Surface Water Sampling Photo Plates

Project No.: A090070-193

Date: March 2017



Photo Plate No. 05 - Surface Water 5 (SW5) taken from the outfall of Hutchinson's Goit



Photo Plate No. 06 – Surface Water 6 (SW6) taken from the outfall of Crow Tree Farm Brooke

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**Environmental Consultancy
Ground Technologies & Investigation**



Project : East Lancashire Paper Mill

Client: Homes & Communities Agency

Surface Water Sampling Photo Plates

Project No.: A090070-193

Date: March 2017



Appendix F – Tier 1 Screening and Statistical Assessment

Zone 1 - Former Wilton Mill												
Sample Location			TP101	TP102	TP102	TP103	DS01	DS01	DS02	DS02	DS02	DS02
Depth (m bgl)			0.50	0.50	1.60	0.80	0.50	1.40	0.50	0.70	0.90	
Date			24/01/2017	24/01/2017	24/01/2017	25/01/2017	24/01/2017	24/01/2017	24/01/2017	24/01/2017	24/01/2017	24/01/2017
Strata			MG: Granular	MG: Granular	MG: Granular	MG: Cohesive	MG: Granular	MG: Granular	MG: Granular	MG: Granular	MG: Granular	MG: Cohesive
Field Observations			Ash and Clinker	Ash and Paper	Ash and Paper	Ash	NA	Paper Waste	Ash	Ash	Ash	
Determinand	Units	LOD	TSV									
pH	pH units	<0.01	<5 >9	8.69	8.79	8.62	8.44	10.44	8.32	12.19	10.86	9.17
Asbestos Containing Materials	NA	NA	Presence (Y/N)	Yes	Yes	Yes	No	Yes	No	No	No	No
Asbestos Classification	NA	NA	NA	Chrysotile	Chrysotile, Amosite	Chrysotile	NAD	Chrysotile	NAD	NAD	NAD	NAD
Asbestos Level	NA	NA	0.01%	<0.1%	CBT	<0.1%	NA	<0.1%	NA	NA	NA	NA
Asbestos Gravimetric Quantification	mass %			-	0.029	-	-	-	-	-	-	-
Asbestos PCOM Quantification (Fit)	mass %			-	0.016	-	-	-	-	-	-	-
Asbestos Gravimetric & PCOM	mass %			-	0.045	-	-	-	-	-	-	-
Metals												
Arsenic	mg/kg	<0.5	37	18.3	18.8	73.2	9.5	21.9	21.9	10.3	21.2	3.9
Barium	mg/kg	<1	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	mg/kg	<0.5	1.7	1.7	1.5	1.8	1	1.5	1.4	1.1	0.8	2.1
Cadmium	mg/kg	<0.1	22	0.7	0.4	18.7	0.1	0.1	2.6	0.3	0.1	0.1
Chromium	mg/kg	<0.5	910	18.2	18.2	12.5	54.1	19.1	63.3	68.6	61.1	47.8
Chromium VI	mg/kg	<0.3	21	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Copper	mg/kg	<1	2400	59	65	138	20	37	67	18	27	8
Lead	mg/kg	<5	200	214	139	102	90	57	89	41	36	899
Mercury	mg/kg	<0.1	40	0.1	0.1	0.5	0.1	0.2	0.1	0.1	0.1	0.1
Nickel	mg/kg	<0.7	180	27.4	27.5	39.7	11.7	22.9	35.8	28.2	17.9	48.5
Selenium	mg/kg	<1	250	1	1	1	2	1	1	1	1	1
Water Soluble Boron	mg/kg	<0.1	290	0.9	0.6	0.6	0.5	1.2	1.3	1	1.3	0.7
Vanadium	mg/kg	<1	410	41	38	38	23	35	31	25	24	30
Zinc	mg/kg	<5	3700	411	208	3821	52	71	261	150	51	84
PAH												
Benzo(a)Pyrene	mg/kg	<0.04	5	5.64	6.67	0.77	0.04	0.07	1.83	5.31	75.48	0.28
Naphthalene	mg/kg	<0.04	2.3	0.63	0.7	0.18	0.04	0.04	0.29	0.45	4.62	0.04
EPH Hydrocarbons*												
EPH (>C8-C10)	mg/kg	<5	27	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C10-C12)	mg/kg	<10	74	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C12-C16)	mg/kg	<10	140	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C16-C21)	mg/kg	<10	260	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C21-C40)	mg/kg	<10	1100	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C8-C40)	mg/kg	<10		NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH CWG												
Aliphatic >C5-6	mg/kg	<0.1	42	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aliphatic >C6-8	mg/kg	<0.1	100	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aliphatic >C8-10	mg/kg	<0.1	27	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aliphatic >C10-12	mg/kg	<0.2	130	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Aliphatic >C12-16	mg/kg	<4	1100	4	4	4	4	4	6	4	6	4
Aliphatic >C16-35	mg/kg	<14	65000	551	214	18	14	58	225	160	225	14
Aliphatic >C35-C44	mg/kg	<7	65000	178	11	7	7	7	32	26	37	7
Total Aliphatics C5-44	mg/kg	<26		729	225	26	26	51	263	186	268	26
Aromatic >EC5-7	mg/kg	<0.1	70	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aromatic >EC7-8	mg/kg	<0.1	130	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aromatic >EC8-10	mg/kg	<0.1	34	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aromatic >EC10-12	mg/kg	<0.2	74	0.6	0.8	0.2	0.2	0.2	7.5	0.2	3.6	0.2
Aromatic >EC12-16	mg/kg	<4	140	21	19	6	4	4	104	6	64	4
Aromatic >EC16-21	mg/kg	<7	260	156	156	21	7	7	540	54	954	16
Aromatic >EC21-35	mg/kg	<7	1100	823	591	83	7	33	1545	266	4060	145
Aromatic > EC35-EC44	mg/kg	<7	1100	620	349	127	7	20	582	146	1591	244
Total aliphatics and aromatics	mg/kg	<52		2350	1341	237	52	104	3042	658	6941	405

VOCs																			
Benzene #	ug/kg	<0.1	200	NA	<	5	<	5	<	5	<	5	NA	<	5	NA	<	5	
MTBE #	ug/kg	<5	49000	NA	<	5	<	5	<	5	<	5	NA	<	5	NA	<	5	
Toluene #	ug/kg	<5	130,000	NA	<	5	<	5	<	5	<	5	NA	<	5	NA	<	5	
Ethylbenzene #	ug/kg	<5	47000	NA	<	5	<	5	<	5	<	5	NA	<	5	NA	<	5	
m/p-Xylene	ug/kg	<5	56000	NA	<	5	<	5	<	5	<	5	NA	<	5	NA	<	5	
o-Xylene	ug/kg	<5	60000	NA	<	5	<	5	<	5	<	5	NA	<	5	NA	<	5	
WHO 12 Congeners																			
PCB 77	ug/kg	<5		<	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PCB 81	ug/kg	<5		<	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PCB 105	ug/kg	<5		<	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PCB 114	ug/kg	<5		<	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PCB 118	ug/kg	<5	8	<	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PCB 123	ug/kg	<5		<	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PCB 126	ug/kg	<5		<	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PCB 156	ug/kg	<5		<	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PCB 157	ug/kg	<5		<	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PCB 167	ug/kg	<5		<	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PCB 169	ug/kg	<5		<	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PCB 189	ug/kg	<5		<	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Total 12 PCBs	ug/kg	<60		<	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Glycol Suite																			
Monoethylene glycol	mg/kg	<10		NA	NA	NA	NA	NA	<	10	NA	NA	NA	NA	NA	NA	NA	NA	
Propylene glycol	mg/kg	<10		NA	NA	NA	NA	NA	<	10	NA	NA	NA	NA	NA	NA	NA	NA	
Diethylene glycol	mg/kg	<10		NA	NA	NA	NA	NA	<	10	NA	NA	NA	NA	NA	NA	NA	NA	
Triethylene glycol	mg/kg	<10		NA	NA	NA	NA	NA	<	10	NA	NA	NA	NA	NA	NA	NA	NA	
Thiodiglycol	mg/kg	<10		NA	NA	NA	NA	NA	<	10	NA	NA	NA	NA	NA	NA	NA	NA	
Miscellaneous																			
Fraction of organic carbon (FOC)	none	<0.001		NDP	NDP	NDP	0.02	NDP	0.082	0.019	0.182	0.006							
Soil Organic Matter							3.4483		14.1379	3.2759	31.3793	1.0345							
Total Organic Carbon	%	<0.02		NDP	21.2	22.4	25.7	NA	17.1	18	17.8	36.3							
Cyanide(free)	mg/kg	<0.5	24	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Cyanide(total)	mg/kg	<0.5	24	<	0.5	<	0.5	<	0.5	<	0.5	<	0.8	<	4.4	<	0.5	<	0.5
Sulphate as SO4 (2:1 Ext)	g/l	<0.0015		0.0133	0.0109	0.0278	NA	0.0726	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Sulphate as SO4 (2:1 Ext)	mg/kg	<3		NA	NA	NA	70	NA	55	192	5	44							
Total Phenols	mg/kg	<0.15	120	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01
Aluminium	mg/kg	<50		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Iron	mg/kg	<20		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Formaldehyde (water soluble)	mg/kg	<0.5		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Sulphide	mg/kg	<10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Elemental Sulphur	mg/kg	<1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Sulphur	%	<0.01		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ammoniacal Nitrogen as N	mg/kg	<0.6		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bromide	mg/kg	<0.3		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chloride	mg/kg	<2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ortho Phosphate as PO4	mg/kg	<0.3		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

KEY

	Concentration exceeds TSV
	S4UL 1% SOM
	C4SL 1% SOM
	WYG Screening Value
	Acute effects of infant 1 dose 3g soil
	CL:AIRE EIC Guidance, Residential without plant uptake
	Environmental Agency, 2009
NDP	No Determination Possible
NAD	No Asbestos Detected
-	Not tested
*	Worst case EPH fraction used.
Both C16-21 and C21-35 added together to create C16-25.	
CBT	Asbestos level Cannot Be Determined at this stage of analysis

				Zone 2 - Former Paper Mill Building														
Sample Location				BH101 (TP112)	BH101 (TP112)	TP106	TP108	TP108	TP110	TP110	TP111	TP111	TP112 (BH101)	TP112 (BH101)	TP113	TP113	TP119	TP119
Depth (m bgl)				0.20	1.00	0.50	0.50	2.0	0.20	1.80	0.40	0.50	0.20	1.00	0.50	1.20	0.50	1.20
Date				17/01/2017	17/01/2017	25/01/2017	20/01/2017	20/01/2017	18/01/2017	18/01/2017	18/01/2017	18/01/2017	17/01/2017	17/01/2017	17/01/2017	17/01/2017	17/01/2017	17/01/2017
Strata				MG: Granular	MG: Granular	MG: Cohesive	MG: Granular	MG: Granular	MG: Granular	MG: Granular	MG: Cohesive	MG: Granular	MG: Granular	MG: Granular	MG: Cohesive	MG: Cohesive	MG: Granular	MG: Granular
				NA	NA	Paper Waste	NA	NA	NA	Hydrocarbo n Odours	Ash and Clinker	Ash and Clinker	NA	NA	Hydrocarbo n Odours	Hydrocarbo n Odours	NA	NA
Field Observations																		
Determinand	Units	LOD	TSV															
pH	pH units	<0.01	<5 >9	8.87	11.61	7.88	10.83	11.43	11.13	11.34	8.39	9.64	8.87	11.61	9.31	8.97	7.89	8.08
Asbestos Containing Materials	NA	NA	Presence (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Asbestos Classification	NA	NA	NA	Chrysotile	Chrysotile	Chrysotile	Chrysotile	Chrysotile	Chrysotile	Chrysotile Crocidolite	Chrysotile	Chrysotile, Amosite	Chrysotile	Chrysotile	NAD	Chrysotile	NAD	Chrysotile
Asbestos Level	NA	NA	0.01%	CBT	<0.1%	<0.1%	<0.1%	<0.1%	<0.1%	<0.1%	<0.1%	<0.1%	CBT	<0.1%	NA	<0.1%	NA	<0.1%
Asbestos Gravimetric Quantification	mass %			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos PCOM Quantification (Filterable)	mass %			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Gravimetric & PCOM	mass %			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals																		
Arsenic	mg/kg	<0.5	37	28.5	31	70	11.8	11.6	10.6	10.5	5	26.2	28.5	31	8.9	18.2	58.2	47.6
Barium	mg/kg	<1	1300	NA	NA	NA	NA	NA	168	NA	77	NA	NA	NA	134	NA	NA	NA
Beryllium	mg/kg	<0.5	1.7	1.4	1.2	4	1.1	1	1	0.9	0.9	1.8	1.4	1.2	1.1	1.5	1.2	1
Cadmium	mg/kg	<0.1	22	0.5	0.7	9.9	0.5	0.9	0.4	0.3	0.2	0.2	0.5	0.7	0.1	1.6	0.1	0.2
Chromium	mg/kg	<0.5	910	21.4	24.7	36.5	21.2	22.5	14.1	16.9	6.9	18.9	21.4	24.7	36.7	49.3	51.9	29.2
Chromium VI	mg/kg	<0.3	21	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	<0.3	
Copper	mg/kg	<1	2400	119	86	405	76	83	50	62	26	125	119	86	27	123	37	63
Lead	mg/kg	<5	200	225	206	526	283	476	144	166	18	219	225	206	34	500	105	172
Mercury	mg/kg	<0.1	40	0.1	0.3	0.1	0.4	0.7	0.4	0.7	0.1	0.2	0.1	0.3	0.1	0.8	0.1	0.1
Nickel	mg/kg	<0.7	180	32.2	30.5	72.7	19	22.6	16.5	18.6	18.3	46	32.2	30.5	27	48	29.9	22
Selenium	mg/kg	<1	250	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Water Soluble Boron	mg/kg	<0.1	290	0.8	1	2.2	1.3	1.7	1.6	1.2	0.2	1.1	0.8	1	0.5	1.2	0.6	0.7
Vanadium	mg/kg	<1	410	34	28	86	30	30	20	24	18	41	34	28	23	61	26	26
Zinc	mg/kg	<5	3700	193	165	858	191	304	127	183	33	180	193	165	67	306	99	116
PAH																		
Benzo(a)Pyrene	mg/kg	<0.04	5	1.4	3.55	10.56	0.28	0.63	28.58	2.26	0.08	2.97	1.4	3.55	0.04	7.25	0.87	0.67
Naphthalene	mg/kg	<0.04	2.3	0.13	0.58	0.45	0.05	0.16	2.8	0.29	0.04	0.16	0.13	0.58	0.04	0.13	0.04	0.06
EPH Hydrocarbons*																		
EPH (>C8-C10)	mg/kg	<5	27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C10-C12)	mg/kg	<10	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C12-C16)	mg/kg	<10	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C16-C21)	mg/kg	<10	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C21-C40)	mg/kg	<10	1100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C8-C40)	mg/kg	<10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH CWG																		
Aliphatic >C5-6	mg/kg	<0.1	42	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aliphatic >C6-8	mg/kg	<0.1	100	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aliphatic >C8-10	mg/kg	<0.1	27	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aliphatic >C10-12	mg/kg	<0.2	130	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Aliphatic >C12-16	mg/kg	<4	1100	4	4	4	4	4	4	5	4	4	4	4	4	30	4	4
Aliphatic >C16-35	mg/kg	<14	65000	131	165	61	279	425	172	337	14	124	131	165	130	1202	14	20
Aliphatic >C35-C44	mg/kg	<7	65000	75	91	7	180	289	55	97	7	47	75	91	63	1127	7	7
Total Aliphatics C5-44	mg/kg	<26		199	256	54	459	714	227	439	26	171	199	256	193	2363	26	26
Aromatic >EC5-7	mg/kg	<0.1	70	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aromatic >EC7-8	mg/kg	<0.1	130	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aromatic >EC8-10	mg/kg	<0.1	34	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aromatic >EC10-12	mg/kg	<0.2	74	0.2	0.2	0.2	0.2	1	0.2	1.7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Aromatic >EC12-16	mg/kg	<4	140	8	10	4	4	15	4	13	4	4	8	10	4	20	4	4
Aromatic >EC16-21	mg/kg	<7	260	46	66	76	18	73	18	73	7	11	46	66	7	469	17	23
Aromatic >EC21-35	mg/kg	<7	1100	234	243	313	236	353	121	308	7	129	234	243	50	1190	50	82
Aromatic > EC35-EC44	mg/kg	<7	1100	200	202	177	197	296	48	91	7	110	200	202	39	984	7	70
Total aliphatics and aromatics	mg/kg	<52		687	777	620	910	1452	414	926	52	421	687	777	282	5026	67	175

VOCs																			
Benzene #	ug/kg	<0.1	200	<	5	<	5	NA	<	5	<	5	NA	<	5	<	5	<	5
MTBE #	ug/kg	<5	49000	<	5	<	5	NA	<	5	<	5	NA	<	5	<	5	<	5
Toluene #	ug/kg	<5	130,000	<	5	<	6	NA	<	5	<	5	NA	<	5	<	5	<	5
Ethylbenzene #	ug/kg	<5	47000	<	5	<	5	NA	<	5	<	5	NA	<	5	<	5	<	5
m/p-Xylene	ug/kg	<5	56000	<	5	<	5	NA	<	5	<	5	NA	<	5	<	5	<	5
o-Xylene	ug/kg	<5	60000	<	5	<	5	NA	<	5	<	5	NA	<	5	<	5	<	5
WHO 12 Congeners																			
PCB 77	ug/kg	<5			NA		NA	<	5		NA		NA	<	5		NA		NA
PCB 81	ug/kg	<5			NA		NA	<	5		NA		NA	<	5		NA		NA
PCB 105	ug/kg	<5			NA		NA	<	5		NA		NA	<	5		NA		NA
PCB 114	ug/kg	<5			NA		NA	<	5		NA		NA	<	5		NA		NA
PCB 118	ug/kg	<5	8		NA		NA	<	5		NA		NA	<	5		NA		NA
PCB 123	ug/kg	<5			NA		NA	<	5		NA		NA	<	5		NA		NA
PCB 126	ug/kg	<5			NA		NA	<	5		NA		NA	<	5		NA		NA
PCB 156	ug/kg	<5			NA		NA	<	5		NA		NA	<	5		NA		NA
PCB 157	ug/kg	<5			NA		NA	<	5		NA		NA	<	5		NA		NA
PCB 167	ug/kg	<5			NA		NA	<	5		NA		NA	<	5		NA		NA
PCB 169	ug/kg	<5			NA		NA	<	5		NA		NA	<	5		NA		NA
PCB 189	ug/kg	<5			NA		NA	<	5		NA		NA	<	5		NA		NA
Total 12 PCBs	ug/kg	<60			NA		NA	<	60		NA		NA	<	60		NA		NA
Glycol Suite																			
Monoethylene glycol	mg/kg	<10			NA		NA		NA		NA	<	10		NA		NA		NA
Propylene glycol	mg/kg	<10			NA		NA		NA		NA	<	10		NA		NA		NA
Diethylene glycol	mg/kg	<10			NA		NA		NA		NA	<	10		NA		NA		NA
Triethylene glycol	mg/kg	<10			NA		NA		NA		NA	<	10		NA		NA		NA
Thiodiglycol	mg/kg	<10			NA		NA		NA		NA	<	10		NA		NA		NA
Miscellaneous																			
Fraction of organic carbon (FOC)	none	<0.001			NDP		NDP		NDP		NDP		NDP		NDP		NDP		NDP
Soil Organic Matter																			
Total Organic Carbon	%	<0.02			17		15.2		NDP		21.8		23.4		8.6		16.4		50
Cyanide(free)	mg/kg	<0.5	24	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Cyanide(total)	mg/kg	<0.5	24	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Sulphate as SO4 (2:1 Ext)	g/l	<0.0015			0.0281		0.0457		0.1815		0.0342		0.0491		0.033		0.0452		0.2511
Sulphate as SO4 (2:1 Ext)	mg/kg	<3			NA		NA		NA		NA		NA		NA		NA		NA
Total Phenols	mg/kg	<0.15	120	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01
Aluminium	mg/kg	<50			NA		NA		NA		NA		NA		NA		NA		NA
Iron	mg/kg	<20			NA		NA		NA		NA		NA		NA		NA		NA
Formaldehyde (water soluble)	mg/kg	<0.5			NA		NA		NA		NA		NA		NA		NA		NA
Sulphide	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA
Elemental Sulphur	mg/kg	<1			NA		NA		NA		NA		NA		NA		NA		NA
Sulphur	%	<0.01			NA		NA		NA		NA		NA		NA		NA		NA
Ammoniacal Nitrogen as N	mg/kg	<0.6			NA		NA		NA		NA		NA		NA		NA		NA
Bromide	mg/kg	<0.3			NA		NA		NA		NA		NA		NA		NA		NA
Chloride	mg/kg	<2			NA		NA		NA		NA		NA		NA		NA		NA
Ortho Phosphate as PO4	mg/kg	<0.3			NA		NA		NA		NA		NA		NA		NA		NA

KEY

	Concentration exceeds TSV
	S4UL 1% SOM
	C4SL 1% SOM
	WYG Screening Value
	Acute effects of infant 1 dose 3g soil
	CL:AIRE EIC Guidance, Residential without plant uptake
	Environmental Agency, 2009
NDP	No Determination Possible
NAD	No Asbestos Detected
-	Not tested
*	Worst case EPH fraction used.

Both C16-21 and C21-35 added together to create C16-25.

CBT Asbestos level Cannot Be Determined at this stage of analysis

				Zone 2 - Former Paper Mill Building											
Sample Location				TP119	TP120	TP120	TP121	TP123	TP124	TP124	DS03	DS03	DS04	DS05	DS14
Depth (m bgl)				2.50	0.50	2.80	0.50	1.50	0.20	1.20	0.50	1.70	0.5	0.50	0.8
Date				17/01/2017	18/01/2017	18/01/2017	20/01/2017	25/01/2017	17/01/2017	17/01/2017	23/01/2017	23/01/2017	23/01/2017	25/01/2017	26/01/2017
Strata				MG: Cohesive	MG: Cohesive	Natural: Sand &	MG: Granular	MG: Granular	MG: Paper Waste	MG: Cohesive	MG: Granular	MG: Granular	MG: Granular	MG: Granular	MG: Granular
Field Observations				Black Staining	NA	Hydrocarb on Odours	NA			NA	Ash and Clinker	Ash	NA	NA	Ash
Determinand	Units	LOD	TSV												
pH	pH units	<0.01	<5 >9	8.15	9.39	7.73	11.16	8.51	8.44	8.38	10.85	9.9	8.62	10.94	8.04
Asbestos Containing Materials	NA	NA	Presence (Y/N)	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Asbestos Classification	NA	NA	NA	NAD	Chrysotile	NAD	Chrysotile	Chrysotile	Chrysotile , Amosite	Chrysotile	Chrysotile	NAD	Chrysotile	Chrysotile	Chrysotile
Asbestos Level	NA	NA	0.01%	NA	<0.1%	NA	<0.1%	<0.1%	CBT	<0.1%	CBT	NA	CBT	<0.1%	<0.1%
Asbestos Gravimetric Quantification	mass %			-	-	-	-	-	0.003	-	-	-	-	-	-
Asbestos PCOM Quantification (Fit)	mass %			-	-	-	-	-	0.001	-	-	-	-	-	-
Asbestos Gravimetric & PCOM	mass %			-	-	-	-	-	0.004	-	-	-	-	-	-
Metals															
Arsenic	mg/kg	<0.5	37	65	39.7	5.4	17	47.1	30.7	43.2	11.1	37.1	21.5	39.7	27
Barium	mg/kg	<1	1300	NA	223	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	mg/kg	<0.5	1.7	1.1	1.4	1.1	0.9	2.6	1.6	2.5	0.9	1.9	0.9	1.5	2.1
Cadmium	mg/kg	<0.1	22	0.1	0.1	0.1	0.2	0.5	0.5	0.3	0.9	0.1	0.5	0.6	0.4
Chromium	mg/kg	<0.5	910	38.3	31.3	42.3	22	25.4	33.5	21.5	19.3	57.6	27.6	21.6	19.8
Chromium VI	mg/kg	<0.3	21	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	<0.3	0.3	0.3
Copper	mg/kg	<1	2400	37	183	6	57	111	166	179	678	140	88	78	128
Lead	mg/kg	<5	200	103	182	9	169	136	944	301	1484	16820	1657	282	159
Mercury	mg/kg	<0.1	40	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.2	0.2	3.6	0.3	0.1
Nickel	mg/kg	<0.7	180	14.5	31.3	26.4	25.2	48.1	31	53	18.8	40	20.4	28.5	52.4
Selenium	mg/kg	<1	250	1	1	1	1	1	2	1	1	1	<1	1	<1
Water Soluble Boron	mg/kg	<0.1	290	1.3	1.2	0.7	0.9	0.5	0.2	0.5	1.4	1.1	0.9	1	0.9
Vanadium	mg/kg	<1	410	26	29	25	22	57	37	63	25	47	24	34	49
Zinc	mg/kg	<5	3700	81	136	57	107	151	168	185	298	135	185	160	120
PAH															
Benzo(a)Pyrene	mg/kg	<0.04	5	0.04	0.2	0.04	0.61	0.24	4.43	2.81	0.39	1.13	1.52	1.06	0.46
Naphthalene	mg/kg	<0.04	2.3	0.04	0.04	0.04	0.08	0.65	0.23	0.25	0.07	0.04	0.31	0.23	0.16
EPH Hydrocarbons*															
EPH (>C8-C10)	mg/kg	<5	27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C10-C12)	mg/kg	<10	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C12-C16)	mg/kg	<10	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C16-C21)	mg/kg	<10	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C21-C40)	mg/kg	<10	1100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C8-C40)	mg/kg	<10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH CWG															
Aliphatic >C5-6	mg/kg	<0.1	42	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	<0.1
Aliphatic >C6-8	mg/kg	<0.1	100	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	<0.1
Aliphatic >C8-10	mg/kg	<0.1	27	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	<0.1
Aliphatic >C10-12	mg/kg	<0.2	130	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.6
Aliphatic >C12-16	mg/kg	<4	1100	4	4	4	4	4	4	4	4	4	4	9	8
Aliphatic >C16-35	mg/kg	<14	65000	14	14	14	107	51	66	14	123	23	117	288	166
Aliphatic >C35-C44	mg/kg	<7	65000	7	7	7	136	25	7	7	113	7	87	62	50
Total Aliphatics C5-44	mg/kg	<26		26	26	26	236	69	66	26	229	26	197	359	226
Aromatic >EC5-7	mg/kg	<0.1	70	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	<0.1
Aromatic >EC7-8	mg/kg	<0.1	130	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	<0.1
Aromatic >EC8-10	mg/kg	<0.1	34	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	<0.1
Aromatic >EC10-12	mg/kg	<0.2	74	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1
Aromatic >EC12-16	mg/kg	<4	140	4	4	4	7	11	5	5	4	9	4	5	14
Aromatic >EC16-21	mg/kg	<7	260	7	7	7	29	33	58	28	13	49	44	38	38
Aromatic >EC21-35	mg/kg	<7	1100	7	36	7	144	111	185	89	128	143	150	194	179
Aromatic > EC35-EC44	mg/kg	<7	1100	7	7	7	188	38	165	29	176	146	109	60	66
Total aliphatics and aromatics	mg/kg	<52		52	52	52	604	262	479	151	546	347	500	656	524

VOCs																	
Benzene #	ug/kg	<0.1	200	NA	NA	NA	5	5	5	5	5	NA	5	5	5		
MTBE #	ug/kg	<5	49000	NA	NA	NA	5	5	5	5	5	NA	5	5	5		
Toluene #	ug/kg	<5	130,000	NA	NA	NA	9	5	5	5	5	NA	5	5	5		
Ethylbenzene #	ug/kg	<5	47000	NA	NA	NA	5	5	5	5	5	NA	5	5	5		
m/p-Xylene	ug/kg	<5	56000	NA	NA	NA	7	5	5	5	5	NA	5	5	5		
o-Xylene	ug/kg	<5	60000	NA	NA	NA	5	5	5	5	5	NA	5	5	5		
WHO 12 Congeners																	
PCB 77	ug/kg	<5		NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5	
PCB 81	ug/kg	<5		NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5	
PCB 105	ug/kg	<5		NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5	
PCB 114	ug/kg	<5		NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5	
PCB 118	ug/kg	<5	8	NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5	
PCB 123	ug/kg	<5		NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5	
PCB 126	ug/kg	<5		NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5	
PCB 156	ug/kg	<5		NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5	
PCB 157	ug/kg	<5		NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5	
PCB 167	ug/kg	<5		NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5	
PCB 169	ug/kg	<5		NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5	
PCB 189	ug/kg	<5		NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5	
Total 12 PCBs	ug/kg	<60		NA	NA	NA	60	NA	NA	NA	NA	NA	NA	NA	NA	60	
Glycol Suite																	
Monoethylene glycol	mg/kg	<10		NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Propylene glycol	mg/kg	<10		NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Diethylene glycol	mg/kg	<10		NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Triethylene glycol	mg/kg	<10		NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Thiodiglycol	mg/kg	<10		NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Miscellaneous																	
Fraction of organic carbon (FOC)	none	<0.001		0.002	NDP	0.004	NDP	NDP	NDP	NDP	NDP	0.067	NA	NDP	NA		
Soil Organic Matter				0.3448		0.6897						11.5517					
Total Organic Carbon	%	<0.02		28.4	24.4	14.6	15.9	25.7	16.8	26.6	NA	22	NA	NA	NA		
Cyanide(free)	mg/kg	<0.5	24	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
Cyanide(total)	mg/kg	<0.5	24	0.5	0.5	0.5	0.5	0.5	1.1	0.6	0.5	0.5	0.5	0.5	0.5		
Sulphate as SO4 (2:1 Ext)	g/l	<0.0015		NA	0.2478	NA	0.0692	0.0153	0.0141	0.0187	0.0223	NA	0.034	0.0404	0.1456		
Sulphate as SO4 (2:1 Ext)	mg/kg	<3		386	NA	47	NA	NA	NA	NA	NA	111	NA	NA	NA		
Total Phenols	mg/kg	<0.15	120	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
Aluminium	mg/kg	<50		NA	9117	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Iron	mg/kg	<20		NA	29383	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Formaldehyde (water soluble)	mg/kg	<0.5		NA	26.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Sulphide	mg/kg	<10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Elemental Sulphur	mg/kg	<1		NA	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Sulphur	%	<0.01		NA	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Ammoniacal Nitrogen as N	mg/kg	<0.6		NA	8.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Bromide	mg/kg	<0.3		NA	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Chloride	mg/kg	<2		NA	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Ortho Phosphate as PO4	mg/kg	<0.3		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		

KEY

	Concentration exceeds TSV
	S4UL 1% SOM
	C4SL 1% SOM
	WYG Screening Value
	Acute effects of infant 1 dose 3g soil
	CL:AIRE EIC Guidance, Residential without plant uptake
	Environmental Agency, 2009
NDP	No Determination Possible
NAD	No Asbestos Detected
-	Not tested
*	Worst case EPH fraction used.

Both C16-21 and C21-35 added together to create C16-25.

CBT Asbestos level Cannot Be Determined at this stage of analysis

				Zone 3 - Land North of Church Street											
				Sample Location	BH102	BH102	TP114	TP115	TP116	DS07	DS27	HP5	HP6	HP7	HP8
				Depth (m bgl)	0.20	1.30	0.50	0.50	0.50	0.20	0.30	0.40	0.60	0.70	0.50
				Date	16/01/2017	16/01/2017	16/01/2017	20/01/2017	16/01/2017	24/01/2017	30/01/2017	01/02/2017	01/02/2017	01/02/2017	01/02/2017
				Strata	Natural: Gravel	Natural: Gravel	Natural: Sand &	Natural: Sand &	MG: Granular	Topsoil	MG: Granular	MG: Granular	MG: Granular	MG: Granular	MG: Granular
Field Observations					NA	NA	NA	NA	NA	NA	NA	Ash	NA	Ash	NA
Determinand	Units	LOD	TSV												
pH	pH units	<0.01	<5 >9	7.03	7.16	7.35	8.26	7.77	8.32	6.97	7.88	7.73	6.74	6.55	
Asbestos Containing Materials	NA	NA	Presence (Y/N)	No	No	No	No	No	Yes	Yes	Yes	Yes	No	Yes	
Asbestos Classification	NA	NA	NA	NAD	NAD	NAD	NAD	NAD	Chrysotile	Chrysotile	Amosite	Amosite	NAD	Chrysotile	
Asbestos Level	NA	NA	0.01%	NA	NA	NA	NA	NA	<0.1%	<0.1%	<0.1%	<0.1%	NA	<0.1%	
Asbestos Gravimetric Quantification	mass %			-	-	-	-	-	-	-	-	-	-	-	
Asbestos PCOM Quantification (Fit)	mass %			-	-	-	-	-	-	-	-	-	-	-	
Asbestos Gravimetric & PCOM	mass %			-	-	-	-	-	-	-	-	-	-	-	
Metals															
Arsenic	mg/kg	<0.5	37	4.1	5.2	5.2	10.8	25.3	31	124.9	25.7	84.8	40.5	129.9	
Barium	mg/kg	<1	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Beryllium	mg/kg	<0.5	1.7	1.2	0.9	1.2	1.2	1	1.1	1.5	1.2	4.2	3.8	2.1	
Cadmium	mg/kg	<0.1	22	0.1	0.1	0.1	0.2	0.1	0.2	0.7	0.5	0.8	0.1	1.6	
Chromium	mg/kg	<0.5	910	43	55.4	59.2	69.7	55.3	19.7	16.7	21.6	31.9	41.2	41.4	
Chromium VI	mg/kg	<0.3	21	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Copper	mg/kg	<1	2400	6	7	8	9	9	52	201	61	194	87	161	
Lead	mg/kg	<5	200	8	8	8	11	10	103	311	137	583	165	618	
Mercury	mg/kg	<0.1	40	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.9	0.4	
Nickel	mg/kg	<0.7	180	29.9	20	29.9	28	26.9	21.6	25.8	21.3	74.7	63.6	40	
Selenium	mg/kg	<1	250	2	1	1	1	1	1	1	1	1	1	3	
Water Soluble Boron	mg/kg	<0.1	290	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.6	0.4	0.5	
Vanadium	mg/kg	<1	410	22	19	30	29	24	25	29	30	84	74	43	
Zinc	mg/kg	<5	3700	70	46	61	73	65	101	139	128	337	63	540	
PAH															
Benzo(a)Pyrene	mg/kg	<0.04	5	0.04	0.04	0.04	0.04	0.04	0.52	0.11	0.34	1.57	0.07	7.6	
Naphthalene	mg/kg	<0.04	2.3	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.3	0.05	0.87	
EPH Hydrocarbons*															
EPH (>C8-C10)	mg/kg	<5	27	NA	NA	NA	NA	NA	NA	NA	5	5	5	5	
EPH (>C10-C12)	mg/kg	<10	74	NA	NA	NA	NA	NA	NA	NA	10	10	10	10	
EPH (>C12-C16)	mg/kg	<10	140	NA	NA	NA	NA	NA	NA	NA	10	14	10	45	
EPH (>C16-C21)	mg/kg	<10	260	NA	NA	NA	NA	NA	NA	NA	65	76	10	322	
EPH (>C21-C40)	mg/kg	<10	1100	NA	NA	NA	NA	NA	NA	NA	354	384	10	1090	
EPH (>C8-C40)	mg/kg	<10		NA	NA	NA	NA	NA	NA	NA	419	474	30	1457	
TPH CWG															
Aliphatic >C5-6	mg/kg	<0.1	42	0.1	0.1	0.1	0.1	0.1	0.1	0.1	NA	NA	NA	NA	
Aliphatic >C6-8	mg/kg	<0.1	100	0.1	0.1	0.1	0.1	0.1	0.1	0.1	NA	NA	NA	NA	
Aliphatic >C8-10	mg/kg	<0.1	27	0.1	0.1	0.1	0.1	0.1	0.1	0.1	NA	NA	NA	NA	
Aliphatic >C10-12	mg/kg	<0.2	130	0.2	0.2	0.2	0.2	0.2	0.2	0.2	NA	NA	NA	NA	
Aliphatic >C12-16	mg/kg	<4	1100	4	4	4	4	4	4	4	NA	NA	NA	NA	
Aliphatic >C16-35	mg/kg	<14	65000	14	14	14	14	14	14	183	NA	NA	NA	NA	
Aliphatic >C35-C44	mg/kg	<7	65000	7	7	7	7	7	7	17	NA	NA	NA	NA	
Total Aliphatics C5-44	mg/kg	<26		26	26	26	26	26	26	200	NA	NA	NA	NA	
Aromatic >EC5-7	mg/kg	<0.1	70	0.1	0.1	0.1	0.1	0.1	0.1	0.1	NA	NA	NA	NA	
Aromatic >EC7-8	mg/kg	<0.1	130	0.1	0.1	0.1	0.1	0.1	0.1	0.1	NA	NA	NA	NA	
Aromatic >EC8-10	mg/kg	<0.1	34	0.1	0.1	0.1	0.1	0.1	0.1	0.1	NA	NA	NA	NA	
Aromatic >EC10-12	mg/kg	<0.2	74	0.2	0.2	0.2	0.2	0.2	0.2	0.2	NA	NA	NA	NA	
Aromatic >EC12-16	mg/kg	<4	140	4	4	4	4	4	4	4	NA	NA	NA	NA	
Aromatic >EC16-21	mg/kg	<7	260	7	7	7	7	7	17	7	NA	NA	NA	NA	
Aromatic >EC21-35	mg/kg	<7	1100	7	7	7	7	7	100	85	NA	NA	NA	NA	
Aromatic > EC35-EC44	mg/kg	<7	1100	7	7	7	7	7	72	24	NA	NA	NA	NA	
Total aliphatics and aromatics	mg/kg	<52		52	52	52	52	52	189	309	NA	NA	NA	NA	

VOCs																											
Benzene #	ug/kg	<0.1	200	-	5	<	5	<	5	<	5	<	NA	<	5	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
MTBE #	ug/kg	<5	49000	-	5	<	5	<	5	<	5	<	NA	<	5	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
Toluene #	ug/kg	<5	130,000	-	5	<	5	<	5	<	5	<	NA	<	5	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
Ethylbenzene #	ug/kg	<5	47000	-	5	<	5	<	5	<	5	<	NA	<	5	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
m/p-Xylene	ug/kg	<5	56000	-	5	<	5	<	5	<	5	<	NA	<	5	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
o-Xylene	ug/kg	<5	60000	-	5	<	5	<	5	<	5	<	NA	<	5	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
WHO 12 Congeners																											
PCB 77	ug/kg	<5		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
PCB 81	ug/kg	<5		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
PCB 105	ug/kg	<5		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
PCB 114	ug/kg	<5		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
PCB 118	ug/kg	<5	8	-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
PCB 123	ug/kg	<5		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
PCB 126	ug/kg	<5		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
PCB 156	ug/kg	<5		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
PCB 157	ug/kg	<5		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
PCB 167	ug/kg	<5		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
PCB 169	ug/kg	<5		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
PCB 189	ug/kg	<5		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	5	<	NA	<	NA	<	NA	<	NA	<	NA
Total 12 PCBs	ug/kg	<60		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	60	<	NA	<	NA	<	NA	<	NA	<	NA
Glycol Suite																											
Monoethylene glycol	mg/kg	<10		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Propylene glycol	mg/kg	<10		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Diethylene glycol	mg/kg	<10		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Triethylene glycol	mg/kg	<10		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Thiodiglycol	mg/kg	<10		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Miscellaneous																											
Fraction of organic carbon (FOC)	none	<0.001		-	0.001	<	0.003	<	0.002	<	0.001	<	0.002	<	NDP	<	NDP	<	NA	<	NA	<	NA	<	NA	<	NA
Soil Organic Matter				-	0.1724	<	0.5172	<	0.3448	<	0.1724	<	0.3448	<		<		<	NA	<	NA	<	NA	<	NA	<	NA
Total Organic Carbon	%	<0.02		-	7.2	<	11.3	<	7.7	<	7	<	9.6	<	NA	<	NA	<	NA	<	NA	<	NA	<	19.4	<	NA
Cyanide(free)	mg/kg	<0.5	24	-	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Cyanide(total)	mg/kg	<0.5	24	-	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	NA	<	NA	<	NA	<	NA	<	NA
Sulphate as SO4 (2:1 Ext)	g/l	<0.0015		-	8	<	22	<	6	<	8	<	7	<	0.003	<	0.0064	<	0.0091	<	0.0131	<	0.0706	<	0.0077	<	
Sulphate as SO4 (2:1 Ext)	mg/kg	<3		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Total Phenols	mg/kg	<0.15	120	-	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.15	<	0.15	<	0.15	<	0.15	<	0.15
Aluminium	mg/kg	<50		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Iron	mg/kg	<20		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Formaldehyde (water soluble)	mg/kg	<0.5		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Sulphide	mg/kg	<10		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Elemental Sulphur	mg/kg	<1		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Sulphur	%	<0.01		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Ammoniacal Nitrogen as N	mg/kg	<0.6		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Bromide	mg/kg	<0.3		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Chloride	mg/kg	<2		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA
Ortho Phosphate as PO4	mg/kg	<0.3		-	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA	<	NA

KEY

	Concentration exceeds TSV
	S4UL 1% SOM
	C4SL 1% SOM
	WYG Screening Value
	Acute effects of infant 1 dose 3g soil
	CL:AIRE EIC Guidance, Residential without plant uptake
	Environmental Agency, 2009
NDP	No Determination Possible
NAD	No Asbestos Detected
-	Not tested
*	Worst case EPH fraction used.

Both C16-21 and C21-35 added together to create C16-25.

CBT Asbestos level Cannot Be Determined at this stage of analysis

				Zone 4 - CHP and Boiler House Landfill								
				Sample Location	TP127	TP128	TP130	DS17	DS17	DS17	DS20	DS22
				Depth (m bgl)	1.20	2.50	1.50	0.30	1.60	3.80	1.50	0.30
				Date	25/01/2017	26/01/2017	26/01/2017	30/01/2017	30/01/2017	30/01/2017	27/01/2017	30/01/2017
				Strata	MG: Cohesive	MG: Granular	MG: Cohesive	MG: Granular	MG: Cohesive	MG: Cohesive	MG: Cohesive	MG: Granular
Field Observations					Paper Waste	Ash and Clinker	Ash and Coal	NA	Paper Waste	Paper Waste	Black Staining	NA
Determinand	Units	LOD	TSV									
pH	pH units	<0.01	<5 >9	8.18	8.28	8.77	8.04	7.75	7.82	7.38	8.03	
Asbestos Containing Materials	NA	NA	Presence (Y/N)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Asbestos Classification	NA	NA	NA	Chrysotile	NAD	Amosite, Chrysotile	Chrysotile	Crocidolite	Chrysotile, Crocidolite	Chrysotile	Chrysotile e, Amosite	
Asbestos Level	NA	NA	0.01%	<0.1%	NA	<0.1%	CBT	<0.1%	<0.1%	<0.1%	CBT	
Asbestos Gravimetric Quantification	mass %			-	-	-	-	-	-	-	-	0.134
Asbestos PCOM Quantification (Fit)	mass %			-	-	-	-	-	-	-	-	0.007
Asbestos Gravimetric & PCOM	mass %			-	-	-	-	-	-	-	-	0.141
Metals												
Arsenic	mg/kg	<0.5	37	2.8	3.3	20.6	72.2	2.7	16.4	73.1	34.9	
Barium	mg/kg	<1	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	mg/kg	<0.5	1.7	0.5	0.5	1.6	2.2	0.5	0.5	1.5	1.4	
Cadmium	mg/kg	<0.1	22	0.4		0.5	1.7	0.1	0.1	0.8	0.3	
Chromium	mg/kg	<0.5	910	5.5	6.6	28.8	25.5	4.1	7.4	41.4	13.5	
Chromium VI	mg/kg	<0.3	21	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Copper	mg/kg	<1	2400	11	6	222	283	10	36	100	75	
Lead	mg/kg	<5	200	<5	7	495	2166	12	49	197	120	
Mercury	mg/kg	<0.1	40	0.1	0.1	0.6	0.5	0.1	0.1	0.5	0.1	
Nickel	mg/kg	<0.7	180	2.8	2.5	32.5	27.8	5.1	9.9	26.5	42.6	
Selenium	mg/kg	<1	250	1	1	1	1	1	1	1	1	
Water Soluble Boron	mg/kg	<0.1	290	0.4	1.1	1.2	0.4	0.8	0.7	0.7	0.6	
Vanadium	mg/kg	<1	410	4	4	31	29	4	14	37	36	
Zinc	mg/kg	<5	3700	11	15	202	242	16	47	152	88	
PAH												
Benzo(a)Pyrene	mg/kg	<0.04	5	0.04	0.04	0.1	0.29	0.04	0.21	0.52	NA	
Naphthalene	mg/kg	<0.04	2.3	0.04	0.04	0.04	0.04	0.04	0.04	0.07	1.02	
EPH Hydrocarbons*												
EPH (>C8-C10)	mg/kg	<5	27	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C10-C12)	mg/kg	<10	74	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C12-C16)	mg/kg	<10	140	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C16-C21)	mg/kg	<10	260	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C21-C40)	mg/kg	<10	1100	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C8-C40)	mg/kg	<10		NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH CWG												
Aliphatic >C5-6	mg/kg	<0.1	42	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	
Aliphatic >C6-8	mg/kg	<0.1	100	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	
Aliphatic >C8-10	mg/kg	<0.1	27	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	
Aliphatic >C10-12	mg/kg	<0.2	130	0.2	0.2	6.2	0.2	0.2	0.2	0.2	7.5	
Aliphatic >C12-16	mg/kg	<4	1100	4	4	11	4	4	4	4	17	
Aliphatic >C16-35	mg/kg	<14	65000	14	14	221	20	14	14	15	114	
Aliphatic >C35-C44	mg/kg	<7	65000	7	7	76	7	7	7	7	11	
Total Aliphatics C5-44	mg/kg	<26		26	26	314	26	26	26	26	150	
Aromatic >EC5-7	mg/kg	<0.1	70	0.1	0.1	0.1	0.1	1	0.1	0.1	NA	
Aromatic >EC7-8	mg/kg	<0.1	130	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	
Aromatic >EC8-10	mg/kg	<0.1	34	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	
Aromatic >EC10-12	mg/kg	<0.2	74	0.2	0.2	0.2	0.2	0.2	0.2	0.2	11.7	
Aromatic >EC12-16	mg/kg	<4	140	4	4	4	4	4	4	4	38	
Aromatic >EC16-21	mg/kg	<7	260	7	7	16	7	7	7	60	84	
Aromatic >EC21-35	mg/kg	<7	1100	7	7	200	40	7	7	140	214	
Aromatic > EC35-EC44	mg/kg	<7	1100	7	7	71	24	7	7	37	53	
Total aliphatics and aromatics	mg/kg	<52		52	52	601	64	52	52	237	551	

VOCs													
Benzene #	ug/kg	<0.1	200	<	5	<	5	<	5	<	5	<	5
MTBE #	ug/kg	<5	49000	<	5	<	5	<	5	<	5	<	5
Toluene #	ug/kg	<5	130,000	<	5	<	5	<	5	<	5	<	5
Ethylbenzene #	ug/kg	<5	47000	<	5	<	5	<	5	<	5	<	5
m/p-Xylene	ug/kg	<5	56000	<	5	<	5	<	5	<	5	<	5
o-Xylene	ug/kg	<5	60000	<	5	<	5	<	5	<	5	<	5
WHO 12 Congeners													
PCB 77	ug/kg	<5			NA		NA		NA		NA		NA
PCB 81	ug/kg	<5			NA		NA		NA		NA		NA
PCB 105	ug/kg	<5			NA		NA		NA		NA		NA
PCB 114	ug/kg	<5			NA		NA		NA		NA		NA
PCB 118	ug/kg	<5	8		NA		NA		NA		NA		NA
PCB 123	ug/kg	<5			NA		NA		NA		NA		NA
PCB 126	ug/kg	<5			NA		NA		NA		NA		NA
PCB 156	ug/kg	<5			NA		NA		NA		NA		NA
PCB 157	ug/kg	<5			NA		NA		NA		NA		NA
PCB 167	ug/kg	<5			NA		NA		NA		NA		NA
PCB 169	ug/kg	<5			NA		NA		NA		NA		NA
PCB 189	ug/kg	<5			NA		NA		NA		NA		NA
Total 12 PCBs	ug/kg	<60			NA		NA		NA		NA		NA
Glycol Suite													
Monoethylene glycol	mg/kg	<10			NA		NA		NA		NA		NA
Propylene glycol	mg/kg	<10			NA		NA		NA		NA		NA
Diethylene glycol	mg/kg	<10			NA		NA		NA		NA		NA
Triethylene glycol	mg/kg	<10			NA		NA		NA		NA		NA
Thiodiglycol	mg/kg	<10			NA		NA		NA		NA		NA
Miscellaneous													
Fraction of organic carbon (FOC)	none	<0.001			NDP		0.006		NDP		NDP		NDP
Soil Organic Matter							1.0345						
Total Organic Carbon	%	<0.02			83.9		89.1		24		NA		NA
Cyanide(free)	mg/kg	<0.5	24	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Cyanide(total)	mg/kg	<0.5	24	<	0.5	<	0.5	<	5.2	<	0.5	<	0.5
Sulphate as SO4 (2:1 Ext)	g/l	<0.0015			0.0169		NA		0.125		0.0186		0.0204
Sulphate as SO4 (2:1 Ext)	mg/kg	<3			NA		306		NA		NA		NA
Total Phenols	mg/kg	<0.15	120	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01
Aluminium	mg/kg	<50			NA		NA		NA		NA		NA
Iron	mg/kg	<20			NA		NA		NA		NA		NA
Formaldehyde (water soluble)	mg/kg	<0.5			NA		NA		NA		NA		NA
Sulphide	mg/kg	<10			NA		NA		NA	<	10	<	10
Elemental Sulphur	mg/kg	<1			NA		NA		NA	<	1	<	1
Sulphur	%	<0.01			NA		NA		NA		NA		NA
Ammoniacal Nitrogen as N	mg/kg	<0.6			NA		NA		NA		NA		NA
Bromide	mg/kg	<0.3			NA		NA		NA		NA		NA
Chloride	mg/kg	<2			NA		NA		NA		NA		NA
Ortho Phosphate as PO4	mg/kg	<0.3			NA		NA		NA		NA		NA

KEY

	Concentration exceeds TSV
	S4UL 1% SOM
	C4SL 1% SOM
	WYG Screening Value
	Acute effects of infant 1 dose 3g soil
	CL:AIRE EIC Guidance, Residential without plant uptake
	Environmental Agency, 2009
NDP	No Determination Possible
NAD	No Asbestos Detected
-	Not tested
*	Worst case EPH fraction used.
Both C16-21 and C21-35 added together to create C16-25.	
CBT Asbestos level Cannot Be Determined at this stage of analysis	

			Zone 5 - Former Reservoirs																
			Sample Location	BH103	BH104	TP117	TP117	TP117	TP118	TP118	TP133	TP133	TP134	TP134	TP135	TP136	TP137	TP137	TP138
			Depth (m bgl)	1.20	0.50	0.50	1.20	1.50	0.10	1.00	0.40	1.50	0.50	1.10	1.00	0.20	0.50	1.00	0.20
			Date	18/01/2017	23/01/2017	17/01/2017	17/01/2017	17/01/2017	17/01/2017	17/01/2017	19/01/2017	19/01/2017	19/01/2017	19/01/2017	19/01/2017	19/01/2017	19/01/2017	19/01/2017	19/01/2017
			Strata	MG: Cohesive	MG: Granular	MG: Cohesive	MG: Granular	Natural: Sand &	MG: Cohesive	Natural: Sand &	MG: Cohesive	Natural: Cohesive	MG: Granular	Natural: Cohesive	MG: Cohesive	MG: Cohesive	MG: Cohesive	Natural: Sand &	MG: Cohesive
Field Observations				NA	NA	NA	Black Staining	NA	NA	Black Staining	NA	Black Staining	NA	Black Staining	NA	NA	NA	NA	NA
Determinand	Units	LOD	TSV																
pH	pH units	<0.01	<5 >9	10.91	7.24	7.87	7.62	7.92	8.06	8.21	8.24	7.33	6.37	6.26	5.1	5.76	5.76	6.21	6.08
Asbestos Containing Materials	NA	NA	Presence (Y/N)	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	No	No	No
Asbestos Classification	NA	NA	NA	NAD	NAD	NAD	NAD	NAD	Chrysotile, Crocidolite, Amosite	NAD	Chrysotile	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Level	NA	NA	0.01%	NA	NA	NA	NA	NA	CBT	NA	<0.1%	NA	NA	NA	NA	NA	NA	NA	NA
Asbestos Gravimetric Quantification	mass %			-	-	-	-	-	0.146	-	-	-	-	-	-	-	-	-	-
Asbestos PCOM Quantification (Fit)	mass %			-	-	-	-	-	0.009	-	-	-	-	-	-	-	-	-	-
Asbestos Gravimetric & PCOM	mass %			-	-	-	-	-	0.155	-	-	-	-	-	-	-	-	-	-
Metals																			
Arsenic	mg/kg	<0.5	37	12.7	7.3	33.9	6.9	4	29.8	5.6	17.9	53.7	19.4	6.6	15.4	22.6	15.6	10.2	18
Barium	mg/kg	<1	1300	NA	NA	NA	NA	NA	NA	NA	130	NA	NA	NA	NA	NA	106	NA	NA
Beryllium	mg/kg	<0.5	1.7	2.1	1.1	1.4	0.9	1	1.5	1.1	2.3	1	0.9	1	1.3	1	0.8	1.2	
Cadmium	mg/kg	<0.1	22	0.1	0.1	0.1	0.1	0.4	0.1	0.2	0.1	0.9	0.1	0.1	0.1	0.1	0.2	0.1	
Chromium	mg/kg	<0.5	910	55.9	60	57.6	45.9	52.4	34.4	42.6	33.5	89.8	68.5	43.5	50.7	51.9	48.2	69.5	65.4
Chromium VI	mg/kg	<0.3	21	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Copper	mg/kg	<1	2400	46	21	69	8	7	92	7	62	274	3	22	17	25	26	9	43
Lead	mg/kg	<5	200	84	33	104	9	7	348	11	125	490	9	37	23	38	45	10	89
Mercury	mg/kg	<0.1	40	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nickel	mg/kg	<0.7	180	27.2	22.3	28.9	23.7	27.3	28.7	29.7	21.1	59.2	18.5	16.5	31.7	35.2	22	29.2	29.1
Selenium	mg/kg	<1	250	1	1	1	2	1	1	2	1	3	1	2	2	2	2	1	2
Water Soluble Boron	mg/kg	<0.1	290	1	0.5	0.4	0.3	0.2	0.6	0.3	0.9	1.8	0.3	0.7	0.2	0.3	0.4	0.3	0.5
Vanadium	mg/kg	<1	410	33	23	30	21	20	32	22	24	44	16	28	24	25	24	16	28
Zinc	mg/kg	<5	3700	75	73	119	68	56	134	60	99	320	41	77	77	115	82	81	99
PAH																			
Benzo(a)Pyrene	mg/kg	<0.04	5	2.22	0.04	0.04	0.04	0.04	0.2	0.04	0.45	0.04	0.04	0.04	0.06	0.04	0.04	0.04	0.04
Naphthalene	mg/kg	<0.04	2.3	0.47	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
EPH Hydrocarbons*																			
EPH (>C8-C10)	mg/kg	<5	27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C10-C12)	mg/kg	<10	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C12-C16)	mg/kg	<10	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C16-C21)	mg/kg	<10	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C21-C40)	mg/kg	<10	1100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C8-C40)	mg/kg	<10		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH CWG																			
Aliphatic >C5-6	mg/kg	<0.1	42	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aliphatic >C6-8	mg/kg	<0.1	100	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aliphatic >C8-10	mg/kg	<0.1	27	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aliphatic >C10-12	mg/kg	<0.2	130	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Aliphatic >C12-16	mg/kg	<4	1100	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Aliphatic >C16-35	mg/kg	<14	65000	16	14	14	14	14	29	14	14	14	14	14	14	14	14	14	14
Aliphatic >C35-C44	mg/kg	<7	65000	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Total Aliphatics C5-44	mg/kg	<26		26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
Aromatic >EC5-7	mg/kg	<0.1	70	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aromatic >EC7-8	mg/kg	<0.1	130	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aromatic >EC8-10	mg/kg	<0.1	34	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aromatic >EC10-12	mg/kg	<0.2	74	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Aromatic >EC12-16	mg/kg	<4	140	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Aromatic >EC16-21	mg/kg	<7	260	29	7	7	7	7	7	7	8	7	7	7	7	7	7	7	7
Aromatic >EC21-35	mg/kg	<7	1100	110	7	7	7	7	53	7	52	76	7	45	7	10	7	7	7
Aromatic > EC35-EC44	mg/kg	<7	1100	77	7	7	7	7	29	7	7	7	7	7	7	7	7	7	7
Total aliphatics and aromatics	mg/kg	<52		216	52	52	52	52	82	52	60	76	52	52	52	52	52	52	52

VOCs																					
Benzene #	ug/kg	<0.1	200	<	5	<	5	<	NA	<	5	<	5	<	5	<	5	<	5	<	5
MTBE #	ug/kg	<5	49000	<	5	<	5	<	NA	<	5	<	5	<	5	<	5	<	5	<	5
Toluene #	ug/kg	<5	130,000	<	5	<	5	<	NA	<	5	<	5	<	5	<	5	<	5	<	5
Ethylbenzene #	ug/kg	<5	47000	<	5	<	5	<	NA	<	5	<	5	<	5	<	5	<	5	<	5
m/p-Xylene	ug/kg	<5	56000	<	5	<	5	<	NA	<	5	<	5	<	5	<	5	<	5	<	5
o-Xylene	ug/kg	<5	60000	<	5	<	5	<	NA	<	5	<	5	<	5	<	5	<	5	<	5
WHO 12 Congeners																					
PCB 77	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA		NA
PCB 81	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA		NA
PCB 105	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA		NA
PCB 114	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA		NA
PCB 118	ug/kg	<5	8		NA		NA		NA		NA		NA		NA		NA		NA		NA
PCB 123	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA		NA
PCB 126	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA		NA
PCB 156	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA		NA
PCB 157	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA		NA
PCB 167	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA		NA
PCB 169	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA		NA
PCB 189	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA		NA
Total 12 PCBs	ug/kg	<60			NA		NA		NA		NA		NA		NA		NA		NA		NA
Glycol Suite																					
Monoethylene glycol	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA		NA
Propylene glycol	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA		NA
Diethylene glycol	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA		NA
Triethylene glycol	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA		NA
Thiodiglycol	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA		NA
Miscellaneous																					
Fraction of organic carbon (FOC)	none	<0.001			0.023		0.007		0.028		0.006		0.001		NDP		0.001		NDP		
Soil Organic Matter					3.9655		1.2069		4.8276		1.0345		0.1724						8.4483		
Total Organic Carbon	%	<0.02			12.5		18.1		16.8		10.4		8.7		22.8		6.7		17.8		
Cyanide(free)	mg/kg	<0.5	24	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Cyanide(total)	mg/kg	<0.5	24	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Sulphate as SO4 (2:1 Ext)	g/l	<0.0015			NA		NA		NA		NA		0.0052		NA		0.1159		NA		NA
Sulphate as SO4 (2:1 Ext)	mg/kg	<3			371		78		30		35		19		NA		9		83		215
Total Phenols	mg/kg	<0.15	120	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01
Aluminium	mg/kg	<50			NA		NA		NA		NA		NA		10345		NA		NA		NA
Iron	mg/kg	<20			NA		NA		NA		NA		NA		27306		NA		NA		NA
Formaldehyde (water soluble)	mg/kg	<0.5			NA		NA		NA		NA		NA		NA		NA		NA		NA
Sulphide	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA		NA
Elemental Sulphur	mg/kg	<1			NA		NA		NA		NA		NA		4		NA		NA		NA
Sulphur	%	<0.01			NA		NA		NA		NA		NA		0.05		NA		NA		NA
Ammoniacal Nitrogen as N	mg/kg	<0.6			NA		NA		NA		NA		NA		0.6		NA		NA		NA
Bromide	mg/kg	<0.3			NA		NA		NA		NA		NA		0.3		NA		NA		NA
Chloride	mg/kg	<2			NA		NA		NA		NA		NA		2		NA		NA		NA
Ortho Phosphate as PO4	mg/kg	<0.3			NA		NA		NA		NA		NA		NA		NA		NA		NA

KEY

	Concentration exceeds TSV
	S4UL 1% SOM
	C4SL 1% SOM
	WYG Screening Value
	Acute effects of infant 1 dose 3g soil
	CL:AIRE EIC Guidance, Residential without plant uptake
	Environmental Agency, 2009
NDP	No Determination Possible
NAD	No Asbestos Detected
-	Not tested
*	Worst case EPH fraction used.

Both C16-21 and C21-35 added together to create C16-25.

CBT Asbestos level Cannot Be Determined at this stage of analysis

				Zone 5 - Former Reservoirs							Stockpiles					
Sample Location				TP139	TP139	DS10H P	DS11	DS25	DS26	DS26	SP1	SP2	SP3	SP4	SP5	SP6
Depth (m bgl)				0.50	1.20	0.40	0.50	0.50	0.60	1.80	0.80	0.80	0.80	0.80	0.80	0.80
Date				19/01/2017	19/01/2017	01/02/2017	25/01/2017	27/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017	25/01/2017
Strata				MG: Cohesive	MG: Cohesive	Natural: Sand	MG: Cohesive	MG: Sand & Gravel	MG: Cohesive	MG: Granular	MG: Granular	MG: Granular	MG: Granular	MG: Granular	MG: Granular	MG: Granular
Field Observations				NA	NA	NA	NA	NA	Ash	Ash	NA	NA	NA	NA	NA	NA
Determinand	Units	LOD	TSV													
pH	pH units	<0.01	<5 >9	4.43	8.07	4.5	7.41	8.43	8.75	8.57	9.03	8.67	8.73	9.59	9.48	10.11
Asbestos Containing Materials	NA	NA	Presence (Y/N)	No	Yes	Yes	No	Yes	No	No	No	No	No	Yes	Yes	Yes
Asbestos Classification	NA	NA	NA	NAD	Chrysotile	Chrysotile	NAD	Chrysotile	NAD	NAD	NAD	NAD	NAD	Chrysotile	Chrysotile	Chrysotile, Amosite
Asbestos Level	NA	NA	0.01%	NA	<0.1%	<0.1%	NA	<0.1%	NA	NA	NA	NA	NA	<0.1%	<0.1%	<0.1%
Asbestos Gravimetric Quantification	mass %			-	-	-	-	-	-	-	-	-	-	-	-	<0.001
Asbestos PCOM Quantification (Fit)	mass %			-	-	-	-	-	-	-	-	-	-	-	-	0.004
Asbestos Gravimetric & PCOM	mass %			-	-	-	-	-	-	-	-	-	-	-	-	0.004
Metals																
Arsenic	mg/kg	<0.5	37	107	54.5	28.8	4.2	51.2	21.7	10.8	3.2	6.6	4.9	22.5	22.6	28.5
Barium	mg/kg	<1	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	mg/kg	<0.5	1.7	1.5	3	1.7	0.5	1.9	1.8	2.3	1	0.7	0.8	1.5	1.3	1.4
Cadmium	mg/kg	<0.1	22	0.1	1.4	0.5	0.1	0.5	0.1	0.1	0.1	0.2	0.1	0.4	0.4	0.5
Chromium	mg/kg	<0.5	910	55.4	60.9	28.6	64.6	25.6	73.2	42.6	57.1	63.9	54.6	25.9	20.3	24.3
Chromium VI	mg/kg	<0.3	21	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Copper	mg/kg	<1	2400	28	114	94	10	21	63	71	55	19	15	90	67	83
Lead	mg/kg	<5	200	34	200	145	22	19	139	35	16	21	15	103	155	203
Mercury	mg/kg	<0.1	40	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5
Nickel	mg/kg	<0.7	180	31.8	63.4	24.5	8.7	38.2	27.3	34.7	29.9	24	25.1	25.8	24.5	24.5
Selenium	mg/kg	<1	250	2	3	1	1	1	2	1	1	1	1	1	1	1
Water Soluble Boron	mg/kg	<0.1	290	0.4	1.6	0.5	0.2	0.1	1	0.5	0.3	0.3	0.2	2.4	1.1	1.4
Vanadium	mg/kg	<1	410	25	75	37	12	33	37	61	22	27	20	39	29	32
Zinc	mg/kg	<5	3700	117	340	143	30	149	119	50	68	55	50	234	143	155
PAH																
Benzo(a)Pyrene	mg/kg	<0.04	5	0.04	0.49	0.04	0.04	0.04	0.1	0.04	0.32	0.18	0.12	1.01	2.6	3.3
Naphthalene	mg/kg	<0.04	2.3	0.04	0.04	0.04	0.04	0.04	0.04	0.97	0.04	0.04	0.04	0.2	0.16	0.12
EPH Hydrocarbons*																
EPH (>C8-C10)	mg/kg	<5	27	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C10-C12)	mg/kg	<10	74	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C12-C16)	mg/kg	<10	140	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C16-C21)	mg/kg	<10	260	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C21-C40)	mg/kg	<10	1100	NA	NA	252	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C8-C40)	mg/kg	<10		NA	NA	252	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH CWG																
Aliphatic >C5-6	mg/kg	<0.1	42	0.1	0.1	NA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aliphatic >C6-8	mg/kg	<0.1	100	0.1	0.1	NA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aliphatic >C8-10	mg/kg	<0.1	27	0.1	0.1	NA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aliphatic >C10-12	mg/kg	<0.2	130	0.2	0.2	NA	0.2	0.2	0.2	3	0.2	0.2	0.2	0.2	0.2	0.2
Aliphatic >C12-16	mg/kg	<4	1100	4	4	NA	4	4	4	7	4	4	4	4	4	4
Aliphatic >C16-35	mg/kg	<14	65000	226	217	NA	14	20	14	14	31	61	17	151	66	103
Aliphatic >C35-C44	mg/kg	<7	65000	108	35	NA	7	7	7	7	7	7	7	89	7	13
Total Aliphatics C5-44	mg/kg	<26		334	252	NA	26	26	26	26	26	54	26	233	66	116
Aromatic >EC5-7	mg/kg	<0.1	70	0.1	0.1	NA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aromatic >EC7-8	mg/kg	<0.1	130	0.1	0.1	NA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aromatic >EC8-10	mg/kg	<0.1	34	0.1	0.1	NA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Aromatic >EC10-12	mg/kg	<0.2	74	0.2	0.2	NA	0.2	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.2
Aromatic >EC12-16	mg/kg	<4	140	4	4	NA	4	4	4	8	4	4	4	4	4	4
Aromatic >EC16-21	mg/kg	<7	260	7	59	NA	7	7	22	10	7	14	7	17	27	31
Aromatic >EC21-35	mg/kg	<7	1100	7	326	NA	7	7	54	10	31	97	26	229	135	135
Aromatic > EC35-EC44	mg/kg	<7	1100	7	49	NA	7	7	7	7	22	95	7	160	43	32
Total aliphatics and aromatics	mg/kg	<52		334	686	NA	52	52	76	52	53	260	52	639	271	314

VOCs																			
Benzene #	ug/kg	<0.1	200	<	5	<	5	<	NA	<	5	<	5	<	5	<	5	<	5
MTBE #	ug/kg	<5	49000	<	5	<	5	<	NA	<	5	<	5	<	5	<	5	<	5
Toluene #	ug/kg	<5	130,000	<	5	<	5	<	NA	<	5	<	5	<	5	<	5	<	5
Ethylbenzene #	ug/kg	<5	47000	<	5	<	5	<	NA	<	5	<	5	<	5	<	5	<	5
m/p-Xylene	ug/kg	<5	56000	<	5	<	5	<	NA	<	5	<	5	<	5	<	5	<	5
o-Xylene	ug/kg	<5	60000	<	5	<	5	<	NA	<	5	<	5	<	5	<	5	<	5
WHO 12 Congeners																			
PCB 77	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA
PCB 81	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA
PCB 105	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA
PCB 114	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA
PCB 118	ug/kg	<5	8		NA		NA		NA		NA		NA		NA		NA		NA
PCB 123	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA
PCB 126	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA
PCB 156	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA
PCB 157	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA
PCB 167	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA
PCB 169	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA
PCB 189	ug/kg	<5			NA		NA		NA		NA		NA		NA		NA		NA
Total 12 PCBs	ug/kg	<60			NA		NA		NA		NA		NA		NA		NA		NA
Glycol Suite																			
Monoethylene glycol	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA
Propylene glycol	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA
Diethylene glycol	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA
Triethylene glycol	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA
Thiodiglycol	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA
Miscellaneous																			
Fraction of organic carbon (FOC)	none	<0.001			0.006		NDP		NA		0.004		NDP		0.037		0.442		0.005
Soil Organic Matter					1.0345						0.6897				6.3793		76.2069		0.8621
Total Organic Carbon	%	<0.02			20.1		59		NA		9.9		NA		30		28		6.8
Cyanide(free)	mg/kg	<0.5	24	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Cyanide(total)	mg/kg	<0.5	24	<	0.5	<	0.5	<	NA	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Sulphate as SO4 (2:1 Ext)	g/l	<0.0015			NA		0.4252		0.0311		NA	<	0.0015		NA		NA		NA
Sulphate as SO4 (2:1 Ext)	mg/kg	<3			298		NA		NA	<	3		NA		143		92		39
Total Phenols	mg/kg	<0.15	120	<	0.01	<	0.01	<	0.15	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01
Aluminium	mg/kg	<50			NA		NA		NA		NA		NA		NA		NA		NA
Iron	mg/kg	<20			NA		NA		NA		NA		NA		NA		NA		NA
Formaldehyde (water soluble)	mg/kg	<0.5			NA		NA		NA		NA		NA		NA		NA		NA
Sulphide	mg/kg	<10			NA		NA		NA		NA		NA		NA		NA		NA
Elemental Sulphur	mg/kg	<1			NA		NA		NA		NA		NA		NA		NA		NA
Sulphur	%	<0.01			NA		NA		NA		NA		NA		NA		NA		NA
Ammoniacal Nitrogen as N	mg/kg	<0.6			NA		NA		NA		NA		NA		NA		NA		NA
Bromide	mg/kg	<0.3			NA		NA		NA		NA		NA		NA		NA		NA
Chloride	mg/kg	<2			NA		NA		NA		NA		NA		NA		NA		NA
Ortho Phosphate as PO4	mg/kg	<0.3			NA		NA		NA		NA		NA		NA		NA		NA

KEY

	Concentration exceeds TSV
	S4UL 1% SOM
	C4SL 1% SOM
	WYG Screening Value
	Acute effects of infant 1 dose 3g soil
	CL:AIRE EIC Guidance, Residential without plant uptake
	Environmental Agency, 2009
NDP	No Determination Possible
NAD	No Asbestos Detected
-	Not tested
*	Worst case EPH fraction used.

Both C16-21 and C21-35 added together to create C16-25.

CBT Asbestos level Cannot Be Determined at this stage of analysis

				Zone 1 - Former Wilton Mill			Zone 2 - Former Paper Mill									Zone 3 - Land North of Church Street		Zone 5 - Former Reservoirs	
				Sample Location	TP101	DS01	DS02	TP106	TP110	TP111	TP113	TP119	TP120	TP120	DS03	TP116	DS26	TP117	TP118
				Depth (m bgl)	0.50	1.40	0.70	0.50	0.20	0.40	1.20	2.50	0.50	2.80	1.70	0.50	1.80	0.50	1.00
				Date	24/01/2017	24/01/2017	24/01/2017	25/01/2017	18/01/2017	18/01/2017	17/01/2017	17/01/2017	18/01/2017	18/01/2017	23/01/2017	16/01/2017	25/01/2017	17/01/2017	17/01/2017
Strata				MG: Granular	MG: Granular	MG: Granular	MG: Cohesive	MG: Granular	MG: Cohesive	MG: Cohesive	MG: Cohesive	MG: Cohesive	Natural: Sand & Gravel	MG: Granular	MG: Granular	MG: Granular	MG: Cohesive	Natural: Sand & Gravel	
Field Observations				Ash and Clinker	Paper Waste	Ash and Clinker	Ash and Paper	NA	NA	NA	Black Staining	Black Staining	Hydrocarbons	NA	NA	Ash	Ash and Clinker	Black Staining	
Determinand	Units	LOD	TSV																
Dichlorodifluoromethane	ug/kg	<2		< 2	< 2	< 2	< 20	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	
Methyl Tertiary Butyl Ether	ug/kg	<6		< 6	< 6	< 6	< 60	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	
Chloromethane	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
Vinyl Chloride	ug/kg	<2		< 2	< 2	< 2	< 20	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	
Bromomethane	ug/kg	<1		< 1	< 1	< 1	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Chloroethane	ug/kg	<6		< 6	< 6	< 6	< 60	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	
Trichlorofluoromethane	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
1,1-Dichloroethene (1,1 DCE)	ug/kg	<6		< 6	< 6	< 6	< 60	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	
Dichloromethane (DCM)	ug/kg	<30	580	< 97	< 30	< 86	< 300	< 40	< 62	< 30	< 30	< 30	< 30	< 55	< 30	< 252	< 63	< 30	
trans-1-2-Dichloroethene	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
1,1-Dichloroethane	ug/kg	<6		< 6	< 6	< 6	< 60	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	
cis-1-2-Dichloroethene	ug/kg	<7		< 7	< 7	< 7	< 70	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	< 7	
2,2-Dichloropropane	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
Bromochloromethane	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
Chloroform	ug/kg	<5		< 5	< 5	< 5	< 50	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
1,1,1-Trichloroethane	ug/kg	<5		< 5	< 5	< 5	< 50	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
1,1-Dichloropropene	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
Carbon tetrachloride	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
1,2-Dichloroethane	ug/kg	<5		< 5	< 5	< 5	< 50	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
Trichloroethene (TCE)	ug/kg	<5		< 5	< 5	< 5	< 50	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
1,2-Dichloropropane	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
Dibromomethane	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
Bromodichloromethane	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
cis-1-3-Dichloropropene	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
trans-1-3-Dichloropropene	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
1,1,2-Trichloroethane	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
Tetrachloroethene (PCE)	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
1,3-Dichloropropane	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
Dibromochloromethane	ug/kg	<5		< 5	< 5	< 5	< 50	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
1,2-Dibromoethane	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
Chlorobenzene	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
1,1,1,2-Tetrachloroethane	ug/kg	<5		< 5	< 5	< 5	< 50	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
Styrene	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
Bromoform	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
Isopropylbenzene	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
1,1,2,2-Tetrachloroethane	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
Bromobenzene	ug/kg	<2		< 2	< 2	< 2	< 20	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	
1,2,3-Trichloropropane	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
Propylbenzene	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
2-Chlorotoluene	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
1,3,5-Trimethylbenzene	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
4-Chlorotoluene	ug/kg	<3		< 3	< 3	< 3	< 30	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	
tert-Butylbenzene	ug/kg	<5		< 5	< 5	< 5	< 50	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
1,2,4-Trimethylbenzene	ug/kg	<6		< 6	< 6	39	< 60	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	16	< 6	< 6	
sec-Butylbenzene	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
4-Isopropyltoluene	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
1,3-Dichlorobenzene	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	
1,4-Dichlorobenzene	ug/kg	<4		< 4	< 4	< 4	< 40	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4		

				Zone 1 - Former Wilton mill				Zone 2 - Former Paper Mill									
				Sample Location	TP101	DS01	DS02	TP106	TP110	TP111	TP113	TP119	TP120	TP120	DS03		
					Depth (m)	0.50	1.40	0.70	0.50	0.20	0.40	1.20	2.50	0.50	2.80	1.70	
					Date	24/01/2017	24/01/2017	24/01/2017	25/01/2017	18/01/2017	18/01/2017	17/01/2017	17/01/2017	18/01/2017	18/01/2017	23/01/2017	
Strata				MG: Granular	MG: Granular	MG: Granular	MG: Cohesive	MG: Granular	MG: Cohesive	MG: Cohesive	MG: Cohesive	MG: Cohesive	Natural: Sand & Gravel	MG: Granular			
Field Observations				Ash and Clinker	Paper Waste	Ash and Clinker	Ash and Paper	NA	NA	NA	Black Staining	Black Staining	Hydrocarbons	NA			
Determinand	Units	LOD	TSV														
Phenols																	
2-Chlorophenol	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
2-Methylphenol	ug/kg	<10		<	100	<	100	<	690	<	10	<	10	<	10		
2-Nitrophenol	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
2,4-Dichlorophenol	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
2,4-Dimethylphenol	ug/kg	<10	19000	<	100		687	<	1130	<	10	<	10	<	10		
2,4,5-Trichlorophenol	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
2,4,6-Trichlorophenol	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
4-Chloro-3-methylphenol	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
4-Methylphenol	ug/kg	<10	80000	<	100		743		1334	<	10	<	10	<	10		
4-Nitrophenol	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
Pentachlorophenol	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
Phenol	ug/kg	<10	120000	<	100		421		763	<	10	<	10	<	10		
PAHs																	
2-Chloronaphthalene	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
2-Methylnaphthalene	ug/kg	<10			1183		7431		3735		138		153	<	10		
Phthalates																	
Bis(2-ethylhexyl) phthalate	ug/kg	<100	280000	<	1000	<	1000	<	1000	<	100		5128	<	100		
Butylbenzyl phthalate	ug/kg	<100		<	1000	<	1000	<	1000	<	100	<	100	<	100		
Di-n-butyl phthalate	ug/kg	<100		<	1000	<	1000	<	1000	<	100	<	100	<	100		
Di-n-Octyl phthalate	ug/kg	<100		<	1000	<	1000	<	1000	<	100	<	100	<	100		
Diethyl phthalate	ug/kg	<100		<	1000	<	1000	<	1000	<	100	<	100	<	100		
Dimethyl phthalate	ug/kg	<100		<	1000	<	1000	<	1000	<	100	<	100	<	100		
Other SVOCs																	
1,2-Dichlorobenzene	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
1,2,4-Trichlorobenzene	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
1,3-Dichlorobenzene	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
1,4-Dichlorobenzene	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
2-Nitroaniline	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
2,4-Dinitrotoluene	ug/kg	<10	1500	<	100	<	100	<	100	<	10		5445	<	10		
2,6-Dinitrotoluene	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
3-Nitroaniline	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
4-Bromophenylphenylether	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
4-Chloroaniline	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
4-Chlorophenylphenylether	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
4-Nitroaniline	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
Azobenzene	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
Bis(2-chloroethoxy)methane	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
Bis(2-chloroethyl)ether	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
Carbazole	ug/kg	<10			1736		5835		14669		422		172	<	10		
Dibenzofuran	ug/kg	<10			1083		8635		6760		200		144	<	10		
Hexachlorobenzene	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
Hexachlorobutadiene	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
Hexachlorocyclopentadiene	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
Hexachloroethane	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
Isophorone	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
N-nitrosodi-n-propylamine	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
Nitrobenzene	ug/kg	<10		<	100	<	100	<	100	<	10	<	10	<	10		
SVOC TICs																	
Naphthalene, 1-methyl-	ug/kg	<100			See Attached	See Attached	See Attached	See Attached	See Attached	ND	See Attached	ND	See Attached	ND	ND		
Naphthalene, 2-methyl-	ug/kg	<100			-	-	-	-	219	-	-	-	-	-	-		
Biphenyl	ug/kg	<100			-	7960	-	-	-	-	-	-	-	-	-		
Naphthalene, 2-ethyl-	ug/kg	<100			-	3039	-	-	-	-	-	-	-	-	-		
Naphthalene, 2,7-dimethyl-	ug/kg	<100			1871	-	-	-	-	-	-	-	-	-	-		
Naphthalene, 2,3-dimethyl-	ug/kg	<100			-	9736	6267	-	-	-	-	-	-	-	-		
Naphthalene, 1,7-dimethyl-	ug/kg	<100			-	4420	-	-	-	-	-	-	-	-	-		
Dodecane	ug/kg	<100			-	-	-	-	-	-	-	-	-	-	-		
Butylated Hydroxytoluene	ug/kg	<100			-	-	-	-	-	-	2282	-	-	-	-		
Naphthalene, 1,6,7-trimethyl-	ug/kg	<100			-	-	-	-	-	-	-	-	-	-	-		
Naphthalene, 1,4,6-trimethyl-	ug/kg	<100			-	-	-	-	-	-	-	-	-	-	-		
1,1'-Biphenyl, 2-methyl-	ug/kg	<100			-	3516	-	-	-	-	-	-	-	-	-		
Dibenzofuran, 4-methyl-	ug/kg	<100			-	6421	-	-	-	-	-	-	-	-	-		
Heptadecane	ug/kg	<100			-	-	-	-	-	-	-	-	-	-	-		
Eicosane	ug/kg	<100			-	-	-	-	262	-	-	-	-	-	-		
Hexadecane, 2,6,10,14-tetramethyl-	ug/kg	<100			-	-	-	-	-	-	-	-	-	-	-		
Pentadecane, 2,6,10,14-tetramethyl-	ug/kg	<100			-	-	-	-	273	-	-	-	-	-	-		
9H-Fluoren-9-one	ug/kg	<100			-	4830	-	-	-	-	-	-	-	-	-		
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	ug/kg	<100			-	-	-	-	-	-	2529	-	-	-	-		
Naphtho[2,1-b]thiophene	ug/kg	<100			-	7507	-	-	-	-	-	-	-	-	-		
Dibenzothiophene	ug/kg	<100			-	-	-	-	-	-	2968	-	-	-	-		
Cyclobuta[1',2',3,4,3',4',3'',4'']tetracyclo[2,1,2:1,2']benzene, 4b,4c,8a,8c-tetrahydro-	ug/kg	<100			-	7267	-	-	-	-	-	-	-	-	-		
Phenanthrene, 2-methyl-	ug/kg	<100			7569	22710	-	-	422	-	7357	-	-	-	-		
Phenanthrene, 1-methyl-	ug/kg	<100			-	-	-	2140	-	-	1100	-	-	-	-		
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	ug/kg	<100			-	-	36403	-	-	-	-	-	-	-	-		
Phenanthrene, 4-methyl-	ug/kg	<100			-	-	-	-	439	-	-	-	-	-	-		
Anthracene, 1-methyl-	ug/kg	<100			-	-	17422	-	-	-	-	-	-	-	-		
4H-Cyclopenta[def]phenanthrene	ug/kg	<100			-	-	53633	-	539	-	6613	-	-	-	-		
9,10-Anthracenedione	ug/kg	<100			-	-	-	-	-	-	1202	-	-	-	-		
Naphthalene, 2-phenyl-	ug/kg	<100			-	7769	16560										

KEY	Concentration exceeds TSV
	S4UL 1% SOM
	EIC.AGS/CL.AIRE GAC for organics with 1% SOM

				Zone 3 - Land North of Church Street		Zone 4 - CHP and Boiler House Landfill		Zone 5 - Former Reservoirs	
				TP116	DS26	DS17	DS17	TP117	TP118
Sample Location									
Depth (m)				0.50	1.80	1.60	3.80	0.50	1.00
Date				16/01/2017	25/01/2017	30/01/2017	30/01/2017	17/01/2017	17/01/2017
Strata				MG: Granular	MG: Granular	MG: Cohesive	MG: Cohesive	MG: Cohesive	Natural: Sand & Gravel
Field Observations				NA	Ash	Paper Waste	Paper Waste	Ash and Clinker	Black Staining
Determinand	Units	LOD	TSV						
Phenols									
2-Chlorophenol	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
2-Methylphenol	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
2-Nitrophenol	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
2,4-Dichlorophenol	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
2,4-Dimethylphenol	ug/kg	<10	19000	< 10	< 10	< 10	< 10	< 10	< 10
2,4,5-Trichlorophenol	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
2,4,6-Trichlorophenol	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
4-Chloro-3-methylphenol	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
4-Methylphenol	ug/kg	<10	80000	< 10	< 10	< 10	< 10	< 10	< 10
4-Nitrophenol	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
Pentachlorophenol	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
Phenol	ug/kg	<10	120000	< 10	< 10	< 10	< 10	< 10	< 10
PAHs									
2-Chloronaphthalene	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
2-Methylnaphthalene	ug/kg	<10		< 10	1187	< 10	83	< 10	< 10
Phthalates									
Bis(2-ethylhexyl) phthalate	ug/kg	<100	280000	< 100	< 100	< 100	2716	< 100	< 100
Butylbenzyl phthalate	ug/kg	<100		< 100	< 100	< 100	< 100	< 100	< 100
Di-n-butyl phthalate	ug/kg	<100		< 100	< 100	< 100	< 100	< 100	< 100
Di-n-Octyl phthalate	ug/kg	<100		< 100	< 100	< 100	< 100	< 100	< 100
Diethyl phthalate	ug/kg	<100		< 100	< 100	< 100	< 100	< 100	< 100
Dimethyl phthalate	ug/kg	<100		< 100	< 100	< 100	< 100	< 100	< 100
Other SVOCs									
1,2-Dichlorobenzene	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
1,2,4-Trichlorobenzene	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
1,3-Dichlorobenzene	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
1,4-Dichlorobenzene	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
2-Nitroaniline	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
2,4-Dinitrotoluene	ug/kg	<10	1500	< 10	< 10	< 10	< 10	< 10	< 10
2,6-Dinitrotoluene	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
3-Nitroaniline	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
4-Bromophenylphenylether	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
4-Chloroaniline	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
4-Chlorophenylphenylether	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
4-Nitroaniline	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
Azobenzene	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
Bis(2-chloroethoxy)methane	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
Bis(2-chloroethyl)ether	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
Carbazole	ug/kg	<10		< 10	< 10	< 10	67	< 10	< 10
Dibenzofuran	ug/kg	<10		< 10	243	< 10	56	< 10	< 10
Hexachlorobenzene	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
Hexachlorobutadiene	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
Hexachlorocyclopentadiene	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
Hexachloroethane	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
Isophorone	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
N-nitrosodi-n-propylamine	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
Nitrobenzene	ug/kg	<10		< 10	< 10	< 10	< 10	< 10	< 10
SVOC TICs									
	None			ND	See Attached	-	-	ND	ND
Naphthalene, 1-methyl-	ug/kg	<100		-	1089	-	-	-	-
Naphthalene, 2-methyl-	ug/kg	<100		-	-	-	-	-	-
Biphenyl	ug/kg	<100		-	278	-	-	-	-
Naphthalene, 2-ethyl-	ug/kg	<100		-	-	-	-	-	-
Naphthalene, 2,7-dimethyl-	ug/kg	<100		-	-	-	-	-	-
Naphthalene, 2,3-dimethyl-	ug/kg	<100		-	931	-	-	-	-
Naphthalene, 1,7-dimethyl-	ug/kg	<100		-	-	-	-	-	-
Dodecane	ug/kg	<100		-	502	-	-	-	-
Butylated Hydroxytoluene	ug/kg	<100		-	-	-	-	-	-
Naphthalene, 1,6,7-trimethyl-	ug/kg	<100		-	298	-	-	-	-
Naphthalene, 1,4,6-trimethyl-	ug/kg	<100		-	405	-	-	-	-
1,1'-Biphenyl, 2-methyl-	ug/kg	<100		-	-	-	-	-	-
Dibenzofuran, 4-methyl-	ug/kg	<100		-	-	-	-	-	-
Heptadecane	ug/kg	<100		-	378	-	-	-	-
Eicosane	ug/kg	<100		-	-	-	-	-	-
Hexadecane, 2,6,10,14-tetramethyl-	ug/kg	<100		-	433	-	-	-	-
Pentadecane, 2,6,10,14-tetramethyl-	ug/kg	<100		-	-	-	-	-	-
9H-Fluoren-9-one	ug/kg	<100		-	-	-	-	-	-
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	ug/kg	<100		-	-	-	-	-	-
Naphtho[2,1-b]thiophene	ug/kg	<100		-	-	-	-	-	-
Dibenzothiophene	ug/kg	<100		-	-	-	-	-	-
Cyclobuta[1,2',3,4,3',4'-3,4']dicyclobuta[1,2:1,2']dibenzene, 4b,4c,8b,8c-tetrahydro-	ug/kg	<100		-	-	-	-	-	-
Phenanthrene, 2-methyl-	ug/kg	<100		-	-	-	-	-	-
Phenanthrene, 1-methyl-	ug/kg	<100		-	-	-	-	-	-
1H-Cyclopropa[1]phenanthrene,1a,9b-dihydro-	ug/kg	<100		-	784	-	-	-	-
Phenanthrene, 4-methyl-	ug/kg	<100		-	-	-	-	-	-
Anthracene, 1-methyl-	ug/kg	<100		-	-	-	-	-	-
4H-Cyclopenta[def]phenanthrene	ug/kg	<100		-	-	-	-	-	-
9,10-Anthracenedione	ug/kg	<100		-	-	-	-	-	-
Naphthalene, 2-phenyl-	ug/kg	<100		-	-	-	-	-	-
Cyclic octaatomic sulfur	ug/kg	<100		-	-	-	-	-	-
9,10-Dimethylantracene	ug/kg	<100		-	-	-	-	-	-
Cyclopenta(def)phenanthrenone	ug/kg	<100		-	-	-	-	-	-
Benzo[b]naphtho[2,3-d]furan	ug/kg	<100		-	-	-	-	-	-
Pyrene, 1-methyl-	ug/kg	<100		-	-	-	-	-	-
11H-Benzo[b]fluorene	ug/kg	<100		-	-	-	-	-	-
Fluoranthene, 2-methyl-	ug/kg	<100		-	-	-	-	-	-
: 4-((2-Methylphenyl)diazenyl)-1H-pyrazole-3,5-diamine	ug/kg	<100		-	-	-	-	-	-
Benzo[b]naphtho[2,1-d]thiophene	ug/kg	<100		-	-	-	-	-	-
11H-Benzo[a]fluoren-11-one	ug/kg	<100		-	-	-	-	-	-
Triphenylene	ug/kg	<100		-	-	-	-	-	-
Chrysene, 1-methyl-	ug/kg	<100		-	-	-	-	-	-
2-Methylchrysene	ug/kg	<100		-	-	-	-	-	-
1,2,4,5-Dibenzopyrene	ug/kg	<100		-	-	-	-	-	-
Benzo[e]pyrene	ug/kg	<100		-	-	-	-	-	-
Perylene	ug/kg	<100		-	-	-	-	-	-
16-Hentriacontanone	ug/kg	<100		-	-	-	-	-	-

KEY

Concentration exceeds TSV

S4UL 1% SOM

			Sample ID	TP102	TP108	TP110	TP111	TP117	TP119	TP121	TP137	DS01	DS17	DS22
			Sample Location	Former Wilton Mill	Former Paper Mill	Former Paper Mill	Former Paper Mill	Land North of Church Street	Former Paper Mill	Former Paper Mill	Former Reservoirs	Former Wilton Mill	CHP and Boiler House Landfill	CHP and Boiler House Landfill
			Depth (m)	1.60	0.50	0.20	0.40	0.50	0.50	0.50	0.50	1.40	1.60	3.90
			Date	24/01/2017	20/01/2017	20/01/2017	18/01/2017	17/01/2017	17/01/2017	20/01/2017	19/01/2017	24/01/2017	30/01/2017	30/01/2017
Determinand	Units	LOD												
pH	pH units	<0.01	>6 <9	12.69	10.64	10.8	8.02	7.85	4.73	8.08	10.14	7.98	8.16	8.09
Sulphate	mg/l	<0.5	250	72.52	19.65	18.68	66.44	3.54	22.8	25.14	15.33	8.17	6.7	11.44
Total Cyanide	ug/l	<1	1	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Ammoniacal Nitrogen as NH4	mg/l	<0.03	0.6	0.05	0.03	0.04	< 0.03	0.06	0.1	0.44	0.03	< 0.03	0.03	< 0.03
Metals														
Dissolved Arsenic	ug/l	<0.9	50	< 0.9	6.6	1.5	< 0.9	< 0.9	12.3	17.5	1.7	2.2	2.8	5.5
Dissolved Boron	ug/l	<12	1000	< 12	39	26	14	< 12	35	29	< 12	33	70	14
Dissolved Cadmium	ug/l	<0.03	0.9	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dissolved Chromium	ug/l	<0.2	50	11.2	1	4.8	< 0.2	0.5	0.5	2.2	0.5	0.4	< 0.2	0.6
Dissolved Copper	ug/l	<3	1	< 3	12	3	< 3	< 3	6	31	< 3	< 3	< 3	< 3
Dissolved Lead	ug/l	<0.4	14	68.7	6.6	< 0.4	< 0.4	< 0.4	< 0.4	6.6	< 0.4	< 0.4	< 0.4	< 0.4
Dissolved Nickel	ug/l	<0.2	34	< 0.2	< 0.2	< 0.2	< 0.2	0.2	1.1	3.5	1.4	0.4	< 0.2	0.7
Dissolved Selenium	ug/l	<1.2	10	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Dissolved Zinc	ug/l	<1.5	10.9	6	< 3	< 3	< 3	5	4	3	6	5	< 3	< 3
Dissolved Mercury Dissolved by CVAF	ug/l	<0.01	0.07	0.06	< 0.04	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01

KEY

Drinking Water Standards
 Environmental Quality Standard (EQS) - River Water
 Bold text indicates TSV value lower than LOD

			Sample ID	BH102	BH102	BH103	BH104	BH105	BH105	DS01	DS01	DS14
			Sample Location	Land North of Church Street	Land North of Church Street	Former Reservoirs	Former Reservoirs	CHP and Landfill	CHP and Landfill	Wilton Mill	Wilton Mill	Former Paper Mill
			Date	09/02/2017	09/03/2017	09/02/2017	09/02/2017	09/02/2017	09/03/2017	09/02/2017	09/03/2017	09/02/2017
Determinand	Units	LOD										
pH	pH	<0.01	>6 <9	7.47	NA	7.09	7.31	8.75	NA	7.34	NA	7.54
Total Alkalinity as CaCO3	mg/l	<1		1986	NA	128	244	566	NA	2738	NA	2322
Total Hardness Dissolved (as CaCO3)	mg/l	<1		245	NA	139	230	127	NA	405	NA	575
Sulphate	mg/l	<0.5	250	75.1	NA	51.7	127.9	26.9	NA	121.3	NA	195.6
Chloride	mg/l	<0.3	250	84.9	NA	10.2	71.9	23.4	NA	38.5	NA	9.9
Nitrate as NO3	mg/l	<0.2	50	0.6	NA	0.3	< 0.2	1.8	NA	0.5	NA	0.4
Nitrite as NO2	mg/l	<0.02	0.5	< 0.02	NA	< 0.02	< 0.02	0.03	NA	< 0.02	NA	< 0.02
Free Cyanide	ug/l	<1	1	1	NA	7	2	5	< 10	9	< 10	8
Total Cyanide	ug/l	<1	1	4	NA	10	7	22	< 10	16	< 10	15
Ammoniacal Nitrogen as NH3	mg/l	<0.03	0.6	0.17	NA	0.13	7.01	5.45	NA	2.56	NA	0.24
Ammoniacal Nitrogen as NH4	mg/l	<0.03	0.6	0.18	NA	0.14	7.43	5.77	NA	2.71	NA	0.25
Dissolved Organic Carbon	mg/l	<2		4	NA	3	4	244	NA	8	NA	15
Sulphide	ug/l	<10		< 10	NA	< 10	< 10	30	NA	< 10	NA	< 10
Formaldehyde	mg/l	<0.5	0.05	< 0.5	NA	< 0.5	< 0.5	< 0.5	NA	< 0.5	NA	< 0.5
Phenol	ug/l	<0.5	46	< 0.5	NA	< 0.5	< 0.5	< 0.5	NA	0.5	NA	< 0.5
Bromide	mg/l	<0.05		< 0.05	NA	< 0.05	< 0.05	0.26	NA	0.13	NA	0.09
Fluoride	mg/l	<0.3	1.5	< 0.3	NA	< 0.3	0.7	< 0.3	NA	0.3	NA	< 0.3
Ortho Phosphate as PO4	mg/l	<0.06		< 0.06	NA	< 0.06	3.55	< 0.06	NA	< 0.06	NA	< 0.06
Metals												
Aluminium	ug/l	<1.5	200	3.9	NA	1.6	1.8	1123	NA	5.9	NA	6.2
Antimony	ug/l	<2	5	< 2	NA	< 2	< 2	2	NA	< 2	NA	< 2
Arsenic	ug/l	<0.9	50	< 0.9	NA	< 0.9	< 0.9	36.4	12.3	6.4	NA	4.7
Barium	ug/l	<1.8	700	179.9	NA	121.7	336	440.1	290.5	179.4	NA	70.8
Beryllium	ug/l	<0.5		< 0.5	NA	< 0.5	< 0.5	2.8	< 0.5	< 0.5	NA	< 0.5
Boron	ug/l	<12	1000	34	NA	41	80	106	158	747	NA	123
Cadmium	ug/l	<0.03	0.9	< 0.03	NA	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	NA	< 0.03
Total Chromium	ug/l	<0.2	50	< 0.2	NA	< 0.2	< 0.2	76.6	15.9	0.2	NA	< 0.2
Copper	ug/l	<3	1	< 3	NA	< 3	< 3	155	< 3	< 3	NA	< 3
Total Iron	ug/l	<4.7	1000	8.7	NA	22.4	34	2353	NA	88.3	NA	14.5
Lead	ug/l	<0.4	14	< 0.4	NA	< 0.4	< 0.4	127.7	< 0.4	< 0.4	NA	< 0.4
Molybdenum	ug/l	<0.2	70	3	NA	0.4	< 0.2	18.2	NA	12.5	NA	17.9
Nickel	ug/l	<0.2	34	4	NA	1.5	2.3	46.5	2.9	3.6	NA	3.5
Selenium	ug/l	<1.2	10	< 1.2	NA	< 1.2	< 1.2	20.3	< 1.2	< 1.2	NA	< 1.2
Zinc	ug/l	<1.5	10.9	2.9	NA	15.2	< 1.5	125.1	< 1.5	< 2.9	NA	2
Vanadium	ug/l	<0.6	20	NA	NA	NA	NA	25.9	NA	NA	NA	NA
Mercury Dissolved by CVAf	ug/l	<0.01	0.07	< 0.01	NA	< 0.01	< 0.01	0.02	< 0.5	< 0.01	NA	< 0.01
PAH												
Acenaphthene	ug/l	<0.01		0.02	NA	< 0.01	< 0.01	0.13	< 0.01	0.17	NA	3.39
Acenaphthylene	ug/l	<0.01		< 0.01	NA	< 0.01	< 0.01	0.05	< 0.01	< 0.01	NA	0.35
Anthracene	ug/l	<0.01	0.1	0.02	NA	< 0.01	< 0.01	0.16	< 0.01	0.02	NA	5.06
Benzo(a)anthracene	ug/l	<0.01		0.03	NA	< 0.01	< 0.01	0.61	< 0.01	0.02	NA	13.96
Benzo(a)pyrene	ug/l	<0.01	0.27	0.03	NA	< 0.01	< 0.01	0.65	< 0.01	0.02	NA	14.76
Benzo(b)fluoranthene	ug/l	<0.01	0.017	0.04	NA	< 0.01	< 0.01	0.81	< 0.01	0.03	NA	18.25
Benzo(ghi)perylene	ug/l	<0.01	0.0082	0.02	NA	< 0.01	< 0.01	0.41	< 0.01	0.01	NA	10.71
Benzo(k)fluoranthene	ug/l	<0.01	0.017	0.02	NA	< 0.01	< 0.01	0.32	< 0.01	0.01	NA	7.1
Chrysene	ug/l	<0.01		0.04	NA	< 0.01	< 0.01	0.69	< 0.01	0.03	NA	15.5
Dibenzo(ah)anthracene	ug/l	<0.01		< 0.01	NA	< 0.01	< 0.01	0.06	< 0.01	< 0.01	NA	2.41
Fluoranthene	ug/l	<0.01	0.12	0.09	NA	< 0.01	< 0.01	1.38	0.01	0.07	NA	29.54
Fluorene	ug/l	<0.01		0.01	NA	< 0.01	< 0.01	0.17	< 0.01	0.03	NA	1.81
Indeno(123cd)pyrene	ug/l	<0.01		0.02	NA	< 0.01	< 0.01	0.37	< 0.01	0.01	NA	8.52
Naphthalene	ug/l	<0.1	130	< 0.1	NA	< 0.1	< 0.1	0.2	< 0.1	0.1	NA	1.2
Phenanthrene	ug/l	<0.01		0.05	NA	< 0.01	< 0.01	0.92	< 0.01	0.02	NA	15.49
Pyrene	ug/l	<0.01		0.08	NA	< 0.01	< 0.01	1.33	0.02	0.06	NA	26.82
TPH CWG												
Aliphatics												
>C5-C6	ug/l	<10	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>C6-C8	ug/l	<10	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>C8-C10	ug/l	<10	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>C10-C12	ug/l	<5	10	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
>C12-C16	ug/l	<10	10	90	< 10	< 10	< 10	70	< 10	< 10	< 10	< 10
>C16-C21	ug/l	<10	10	490	< 10	< 10	< 10	200	< 10	110	< 10	< 10
>C21-C35	ug/l	<10	10	1510	< 10	< 10	< 10	1190	< 10	1390	< 10	< 10
Total aliphatics C5-35	ug/l	<10		2090	< 10	< 10	< 10	1460	< 10	1500	< 10	< 10
Aromatics												
>C5-EC7	ug/l	<10	50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>EC7-EC8	ug/l	<10	74	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>EC8-EC10	ug/l	<10	20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>EC10-EC12	ug/l	<5	2	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
>EC12-EC16	ug/l	<10	10	< 10	< 10	< 10	< 10	< 10	< 10	50	< 10	< 10
>EC16-EC21	ug/l	<10	0.27	80	< 10	< 10	< 10	20	< 10	400	< 10	< 10
>EC21-EC35	ug/l	<10	0.0082	650	< 10	< 10	< 10	510	< 10	1570	< 10	< 10
Total aromatics C5-35	ug/l	<10		730	< 10	< 10	< 10	530	< 10	2020	< 10	< 10
Total TPH	ug/l	<10		2820	< 10	< 10	< 10	1990	< 10	3520	< 10	< 10
BTEX/MTBE MS												
Methyl Tertiary Butyl Ether	ug/l	<0.1	15	< 0.1	< 5	< 0.1	< 0.1	< 0.1	< 5	< 0.1	< 5	< 0.2
Benzene	ug/l	<0.5	50	< 0.5	< 5	< 0.5	< 0.5	< 0.5	< 5	< 0.5	< 5	< 1
Toluene	ug/l	<5	74	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 10
Ethylbenzene	ug/l	<1	200	< 1	< 5	< 1	< 1	< 1	< 5	< 1	< 5	< 2
Total Xylene	ug/l	<3	30	< 3	< 5	< 3	< 3	< 3	< 5	< 3	< 5	< 6
Gycol Suite												
Monoethylene glycol	ug/l	<1		< 1	NA	1	1	1	NA	1	NA	< 1
Propylene glycol	ug/l	<1		< 1	NA	1	1	1	NA	1	NA	< 1
Diethylene glycol	ug/l	<1		< 1	NA	1	1	1	NA	1	NA	< 1
Triethylene glycol	ug/l	<1		< 1	NA	1	1	1	NA	1	NA	< 1
Thiodiglycol	ug/l	<1		< 1	NA	1	1	1	NA	1	NA	< 1

KEY

Drinking Water Standards

River Water EQS - (where DWS not available) - Maximum Allowable Concentration (MAC) where published & hardness values

			Sample ID	SW1	SW1	SW2	SW2	SW3	SW4	SW5	SW6
			Sample Location	Upstream River Irwell	Upstream River Irwell	Downstream River Irwell	Downstream River Irwell	Upstream Hutchinson's Goit	Onsite Reservoir	Downstream Hutchinson's Goit	Crow Tree Farm Brook
			Date	09/02/2017	09/03/2017	09/02/2017	09/03/2017	09/02/2017	09/02/2017	09/02/2017	09/02/2017
Determinand	Units	LOD									
pH	pH	<0.01	>6 <9	7.37	NA	7.48	NA	7.07	6.77	7.9	7.6
Total Alkalinity as CaCO3	mg/l	<1		80	NA	76	NA	70	28	140	98
Total Hardness Dissolved (as CaCO3)	mg/l	<1		108	NA	110	NA	82	32	180	124
Sulphate	mg/l	<0.5	250	35.1	NA	35	NA	22.8	10.3	56.1	28.2
Chloride	mg/l	<0.3	250	33.3	NA	35.3	NA	22.9	7.2	25.3	35.6
Nitrate as NO3	mg/l	<0.2	50	18.1	NA	19.6	NA	1.9	1.2	0.8	7.1
Nitrite as NO2	mg/l	<0.02	0.5	0.13	NA	0.14	NA	< 0.02	< 0.02	< 0.02	0.05
Free Cyanide	ug/l	<1	1	1	< 10	< 1	< 10	< 1	< 1	1	< 1
Total Cyanide	ug/l	<1	1	2	10	1	< 10	1	< 1	1	2
Ammoniacal Nitrogen as NH3	mg/l	<0.03	0.6	0.28	NA	0.3	NA	< 0.03	0.08	< 0.03	0.17
Ammoniacal Nitrogen as NH4	mg/l	<0.03	0.6	0.3	NA	0.32	NA	0.03	0.08	0.03	0.18
Dissolved Organic Carbon	mg/l	<2		5	NA	5	NA	4	4	3	5
Sulphide	ug/l	<10		< 10	NA	< 10	NA	< NA	< 10	NA	NA
Formaldehyde	mg/l	<0.5	0.05	< 0.5	NA	< 0.5	NA	< NA	< 0.5	NA	NA
Phenol	ug/l	<0.5	46	< 0.5	NA	< 0.5	NA	< 0.5	< 0.5	< 0.5	< 0.5
Bromide	mg/l	<0.05		0.09	NA	0.12	NA	< NA	< 0.05	NA	NA
Fluoride	mg/l	<0.3	1.5	< 0.3	NA	< 0.3	NA	< NA	< 0.3	NA	NA
Ortho Phosphate as PO4	mg/l	<0.06		0.31	NA	0.39	NA	< NA	< 0.06	NA	NA
Metals											
Aluminium	ug/l	<1.5	200	13	NA	12.7	NA	NA	6.7	NA	NA
Antimony	ug/l	<2	5	2	NA	< 2	NA	< 2	< 2	< 2	< 2
Arsenic	ug/l	<0.9	50	< 0.9	< 0.9	1.3	< 0.9	1.3	1.3	10.5	< 0.9
Barium	ug/l	<1.8	700	40.4	34.9	39.7	33.3	52.6	31.6	36.8	48.2
Beryllium	ug/l	<0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Boron	ug/l	<12	1000	47	32	42	27	50	17	71	38
Cadmium	ug/l	<0.03	0.9	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Total Chromium	ug/l	<0.2	50	< <0.2	< 0.2	< 0.2	< 0.2	0.7	< 0.2	< 0.2	< 0.2
Copper	ug/l	<3	1	< 3	< 3	< 3	< 3	< 3	< 3	< 3	4
Total Iron	ug/l	<4.7	1000	206.6	NA	182.2	NA	NA	254.9	NA	NA
Lead	ug/l	<0.4	14	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Molybdenum	ug/l	<0.2	70	0.7	NA	0.2	NA	0.7	0.5	2.1	< 0.2
Nickel	ug/l	<0.2	34	2.2	< 0.2	2.1	0.5	1.5	1.3	1.2	2.2
Selenium	ug/l	<1.2	10	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< .2
Zinc	ug/l	<1.5	10.9	11.6	6.7	13.1	7.1	9.6	4.3	7.8	13.5
Vanadium	ug/l	<0.6	20	NA	< 0.6	NA	1.3	NA	NA	NA	NA
Mercury Dissolved by CVAf	ug/l	<0.01	0.07	< 0.01	< 0.5	< 0.01	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01
PAH											
Acenaphthene	ug/l	<0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	ug/l	<0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	ug/l	<0.01	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	ug/l	<0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	ug/l	<0.01	0.27	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	ug/l	<0.01	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	ug/l	<0.01	0.0082	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	ug/l	<0.01	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	ug/l	<0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(ah)anthracene	ug/l	<0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	ug/l	<0.01	0.12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	ug/l	<0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(123cd)pyrene	ug/l	<0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Naphthalene	ug/l	<0.1	130	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	ug/l	<0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	ug/l	<0.01		< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01
TPH CWG											
Aliphatics											
>C5-C6	ug/l	<10	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>C6-C8	ug/l	<10	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>C8-C10	ug/l	<10	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>C10-C12	ug/l	<5	10	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
>C12-C16	ug/l	<10	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>C16-C21	ug/l	<10	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>C21-C35	ug/l	<10	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Total aliphatics C5-35	ug/l	<10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Aromatics											
>C5-EC7	ug/l	<10	50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>EC7-EC8	ug/l	<10	74	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>EC8-EC10	ug/l	<10	20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>EC10-EC12	ug/l	<5	2	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
>EC12-EC16	ug/l	<10	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>EC16-EC21	ug/l	<10	0.27	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
>EC21-EC35	ug/l	<10	0.0082	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Total aromatics C5-35	ug/l	<10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Total TPH	ug/l	<10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BTEX/MTBE MS											
Methyl Tertiary Butyl Ether	ug/l	<0.1	15	< 0.1	< 5	< 0.1	< 5	< 0.1	< 0.1	< 0.1	< 0.1
Benzene	ug/l	<0.5	50	< 0.5	< 5	< 0.5	< 5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	ug/l	<5	74	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/l	<1	200	< 1	< 5	< 1	< 5	< 1	< <	< 1	< 1
Total Xylene	ug/l	<3	30	< 3	< 5	< 3	< 5	< 3	< 3	< 3	< 3
Gycol Suite											
Monoethylene glycol	ug/l	<1		< 1	NA	< 1	NA	NA	< 1	NA	NA
Propylene glycol	ug/l	<1		< 1	NA	< 1	NA	NA	< 1	NA	NA
Diethylene glycol	ug/l	<1		< 1	NA	< 1	NA	NA	< 1	NA	NA
Triethylene glycol	ug/l	<1		< 1	NA	< 1	NA	NA	< 1	NA	NA
Thiodiglycol	ug/l	<1		< 1	NA	< 1	NA	NA	< 1	NA	NA

KEY

Drinking Water Standards

River Water EQS - (where DWS not available) - Maximum Allowable Concentration (MAC) where published & hardness values

			Sample ID	BH102	BH103	BH104	BH105	DS01	DS14	SW1	SW2	SW4
			Sample Location	Land north of Chuch Street	Land north of Chuch Street	Former Reservoirs	CHP and Landfill	Wilton Mill	Former Paper Mill	Upstream River Irwell	Downstream River Irwell	Onsite Reservoir
			Date	09/02/2017	09/02/2017	09/02/2017	09/02/2017	09/02/2017	09/02/2017	09/02/2017	09/02/2017	09/02/2017
Determinand	Units	LOD										
Dichlorodifluoromethane	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
Methyl Tertiary Butyl Ether	ug/l	<0.1	15	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1	< 0.1
Chloromethane	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
Vinyl Chloride	ug/l	<0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1	< 0.1
Bromomethane	ug/l	<1		< 1	< 1	< 1	< 1	< 1	< 2	< 1	< 1	< 1
Chloroethane	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
Trichlorofluoromethane	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
1,1-Dichloroethene (1,1 DCE)	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
Dichloromethane (DCM)	ug/l	<5		< 5	< 5	< 5	< 5	< 5	< 10	< 5	< 5	< 5
trans-1-2-Dichloroethene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
1,1-Dichloroethane	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
cis-1-2-Dichloroethene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
2,2-Dichloropropane	ug/l	<1		< 1	< 1	< 1	< 1	< 1	< 2	< 1	< 1	< 1
Bromochloromethane	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
Chloroform	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
1,1,1-Trichloroethane	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
1,1-Dichloropropene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
Carbon tetrachloride	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
1,2-Dichloroethane	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
Benzene	ug/l	<0.5	50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 0.5
Trichloroethene (TCE)	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
1,2-Dichloropropane	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
Dibromomethane	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
Bromodichloromethane	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
cis-1-3-Dichloropropene	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
Toluene	ug/l	<5	74	< 5	< 5	< 5	< 5	< 5	< 10	< 5	< 5	< 5
trans-1-3-Dichloropropene	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
1,1,2-Trichloroethane	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
Tetrachloroethene (PCE)	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
1,3-Dichloropropane	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
Dibromochloromethane	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
1,2-Dibromoethane	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
Chlorobenzene	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
1,1,1,2-Tetrachloroethane	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
Ethylbenzene	ug/l	<1	200	< 1	< 1	< 1	< 1	< 1	< 2	< 1	< 1	< 1
p/m-Xylene	ug/l	<2	30	< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
o-Xylene	ug/l	<1	30	< 1	< 1	< 1	< 1	< 1	< 2	< 1	< 1	< 1
Styrene	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
Bromoform	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
Isopropylbenzene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
1,1,2,2-Tetrachloroethane	ug/l	<4		< 4	< 4	< 4	< 4	< 4	< 8	< 4	< 4	< 4
Bromobenzene	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
1,2,3-Trichloropropane	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
Propylbenzene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
2-Chlorotoluene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
1,3,5-Trimethylbenzene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
4-Chlorotoluene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
tert-Butylbenzene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
1,2,4-Trimethylbenzene	ug/l	<3		4	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
sec-Butylbenzene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
4-Isopropyltoluene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
1,3-Dichlorobenzene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
1,4-Dichlorobenzene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
n-Butylbenzene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
1,2-Dichlorobenzene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
1,2-Dibromo-3-chloropropane	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
1,2,4-Trichlorobenzene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
Hexachlorobutadiene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
Naphthalene	ug/l	<2		< 2	< 2	< 2	< 2	< 2	< 4	< 2	< 2	< 2
1,2,3-Trichlorobenzene	ug/l	<3		< 3	< 3	< 3	< 3	< 3	< 6	< 3	< 3	< 3
VOC TICs	None			ND	ND	ND	ND	ND	ND	ND	ND	ND

KEY

Drinking Water Standards

River Water EQS

			Sample ID		BH102		BH103		BH104		BH105		DS01		DS14		SW1		SW2		SW4
			Sample Location		Land north of Church Street		Land north of Church Street		Former Reservoirs		CHP and Landfill		Wilton Mill		Former Paper Mill		Upstream River Irwell		Downstream River Irwell		Onsite Reservoir
			Date		09/02/2017		09/02/2017		09/02/2017		09/02/2017		09/02/2017		09/02/2017		09/02/2017		09/02/2017		09/02/2017
Determinand	Units	LOD	TSV																		
Phenols																					
2-Chlorophenol	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2-Methylphenol	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
2-Nitrophenol	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
2,4-Dichlorophenol	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
2,4-Dimethylphenol	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2,4,5-Trichlorophenol	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
2,4,6-Trichlorophenol	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4-Chloro-3-methylphenol	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
4-Methylphenol	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4-Nitrophenol	ug/l	<10		<	10	<	10	<	10	<	10	<	10	<	10	<	10	<	10	<	10
Pentachlorophenol	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Phenol	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
PAHs																					
2-Chloronaphthalene	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2-Methylnaphthalene	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Phthalates																					
Bis(2-ethylhexyl) phthalate	ug/l	<5		<	5		8	<	5		8	<	5	<	5	<	5	<	5	<	5
Butylbenzyl phthalate	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Di-n-butyl phthalate	ug/l	<1.5		<	1.5	<	1.5	<	1.5	<	1.5	<	1.5	<	1.5	<	1.5	<	1.5	<	1.5
Di-n-Octyl phthalate	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Diethyl phthalate	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Dimethyl phthalate	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Other SVOCs																					
1,2-Dichlorobenzene	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,2,4-Trichlorobenzene	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,3-Dichlorobenzene	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,4-Dichlorobenzene	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2-Nitroaniline	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2,4-Dinitrotoluene	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
2,6-Dinitrotoluene	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
3-Nitroaniline	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4-Bromophenylphenylether	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4-Chloroaniline	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4-Chlorophenylphenylether	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4-Nitroaniline	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Azobenzene	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Bis(2-chloroethoxy)methane	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Bis(2-chloroethyl)ether	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Carbazole	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Dibenzofuran	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Hexachlorobenzene	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Hexachlorobutadiene	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Hexachlorocyclopentadiene	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Hexachloroethane	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Isophorone	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
N-nitrosodi-n-propylamine	ug/l	<0.5		<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Nitrobenzene	ug/l	<1		<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
SVOC TICs	None				ND		ND		ND		ND		ND		ND		ND		ND		ND

KEY

Drinking Water Standards

River Water EQS

Bulk Composition	Units	LOD		DS20
Carbon Dioxide	%	<0.05		20.01
Carbon Monoxide	%	<0.05	<	0.05
Methane	%	<0.05		22.31
Methane	ppmV	<5		207630
Nitrogen	%	<0.5		48.2
Oxygen	%	<0.5		9.5

Key
 LOD Limit of Detection
 Bold text indicates determinand greater than LOD

	BH101 (TP112)	BH101 (TP112)	BH102	BH102	BH103	BH104	TP101	TP102	TP102	TP103	TP106	TP108	TP108	TP110	TP110	TP111	TP111	TP113	TP113	TP114
Depth (m)	0.20	1.00	0.20	1.30	1.20	0.50	0.50	0.50	1.60	0.80	0.50	0.50	2.0	0.20	1.80	0.40	0.50	0.50	1.20	0.50
Benzo(a)Anthracene	1.54	3.74	0.06	0.06	2.18	0.06	3.95	4.57	0.61	0.06	8.88	0.28	0.63	34.85	2.15	0.12	1.98	0.06	11.32	0.06
Chrysene	1.8	3.94	0.02	0.02	2.39	0.02	5.74	5.65	0.91	0.02	12.19	0.32	0.84	34.14	2.44	0.08	2.39	0.02	11.42	0.02
Benzo(b)fluoranthene	1.92	4.11	0.05	0.05	2.63	0.05	6.57	7.67	0.93	0.05	13.36	0.39	0.86	36.6	2.85	0.1	4.01	0.05	9.68	0.05
Benzo(k)fluoranthene	0.75	1.6	0.02	0.02	1.02	0.02	2.56	2.98	0.36	0.02	5.19	0.15	0.34	14.24	1.11	0.04	1.56	0.02	3.76	0.02
Dibenzo(ah)anthracene	0.12	0.25	0.04	0.04	0.26	0.04	0.79	0.87	0.13	0.04	1.7	0.06	0.12	3.07	0.24	0.04	0.38	0.04	0.7	0.04
Indeno(123cd)pyrene	0.78	1.81	0.04	0.04	1.23	0.04	3.37	3.76	0.43	0.04	6.48	0.18	0.52	19.1	1.36	0.04	2.32	0.04	4.29	0.04
Benzo(ghi)Perylene	0.87	1.8	0.04	0.04	1.31	0.04	3.43	4	0.44	0.04	6.22	0.19	0.41	16.11	1.27	0.04	2.27	0.04	3.49	0.04
Benzo(a)Pyrene	1.4	3.55	0.04	0.04	2.22	0.04	5.64	6.67	0.77	0.04	10.56	0.28	0.63	28.58	2.26	0.08	2.97	0.04	7.25	0.04
Ratio to B(a)P	BH101 (TP112)	BH101 (TP112)	BH102	BH102	BH103	BH104	TP101	TP102	TP102	TP103	TP106	TP108	TP108	TP110	TP110	TP111	TP111	TP113	TP113	TP114
	0.20	1.00	0.20	1.30	1.20	0.50	0.50	0.50	1.60	0.80	0.50	0.50	2.0	0.20	1.80	0.40	0.50	0.50	1.20	0.50
Benzo(a)Anthracene	1.10	1.05	1.50	1.50	0.98	1.50	0.70	0.69	0.79	1.50	0.84	1.00	1.00	1.22	0.95	1.50	0.67	1.50	1.56	1.50
Chrysene	1.29	1.11	0.50	0.50	1.08	0.50	1.02	0.85	1.18	0.50	1.15	1.14	1.33	1.19	1.08	1.00	0.80	0.50	1.58	0.50
Benzo(b)fluoranthene	1.37	1.16	1.25	1.25	1.18	1.25	1.16	1.15	1.21	1.25	1.27	1.39	1.37	1.28	1.26	1.25	1.35	1.25	1.34	1.25
Benzo(k)fluoranthene	0.54	0.45	0.50	0.50	0.46	0.50	0.45	0.45	0.47	0.50	0.49	0.54	0.54	0.50	0.49	0.50	0.53	0.50	0.52	0.50
Dibenzo(ah)anthracene	0.09	0.07	1.00	1.00	0.12	1.00	0.14	0.13	0.17	1.00	0.16	0.21	0.19	0.11	0.11	0.50	0.13	1.00	0.10	1.00
Indeno(123cd)pyrene	0.56	0.51	1.00	1.00	0.55	1.00	0.60	0.56	0.56	1.00	0.61	0.64	0.83	0.67	0.60	0.50	0.78	1.00	0.59	1.00
Benzo(ghi)Perylene	0.62	0.51	1.00	1.00	0.59	1.00	0.61	0.60	0.57	1.00	0.59	0.68	0.65	0.56	0.56	0.50	0.76	1.00	0.48	1.00

	TP115	TP116	TP117	TP117	TP117	TP118	TP118	TP119	TP119	TP119	TP120	TP120	TP121	TP123	TP124	TP124	TP127	TP128	TP130	TP133	TP133	TP134	TP134
Depth (m)	0.50	0.50	0.50	1.20	1.50	0.10	1.00	0.50	1.20	2.50	0.50	2.80	0.50	1.50	0.20	1.20	1.20	2.50	1.50	0.40	1.50	0.50	1.10
Benzo(a)Anthracene	0.06	0.06	0.06	0.06	0.06	0.2	0.06	0.7	0.59	0.06	0.19	0.06	0.52	0.3	3.64	2.48	0.06	0.06	0.11	0.4	0.06	0.06	0.06
Chrysene	0.02	0.02	0.02	0.02	0.02	0.25	0.02	0.83	0.67	0.02	0.22	0.02	0.68	0.34	4.82	2.38	0.02	0.02	0.09	0.42	0.02	0.04	0.02
Benzo(b)fluoranthene	0.05	0.05	0.05	0.05	0.05	0.26	0.05	0.97	0.77	0.05	0.22	0.05	0.73	0.28	5.27	3.31	0.05	0.05	0.1	0.5	0.05	0.05	0.05
Benzo(k)fluoranthene	0.02	0.02	0.02	0.02	0.02	0.1	0.02	0.38	0.3	0.02	0.09	0.02	0.29	0.11	2.05	1.29	0.02	0.02	0.04	0.2	0.02	0.02	0.02
Dibenzo(ah)anthracene	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.07	0.05	0.04	0.04	0.04	0.1	0.04	0.49	0.29	0.04	0.04	0.04	0.06	0.04	0.04	0.04
Indeno(123cd)pyrene	0.04	0.04	0.04	0.04	0.04	0.11	0.04	0.53	0.36	0.04	0.14	0.04	0.38	0.13	2.67	1.81	0.04	0.04	0.05	0.26	0.04	0.04	0.04
Benzo(ghi)Perylene	0.04	0.04	0.04	0.04	0.04	0.11	0.04	0.43	0.35	0.04	0.11	0.04	0.35	0.15	2.52	1.53	0.04	0.04	0.06	0.24	0.04	0.04	0.04
Benzo(a)Pyrene	0.04	0.04	0.04	0.04	0.04	0.2	0.04	0.87	0.67	0.04	0.2	0.04	0.61	0.24	4.43	2.81	0.04	0.04	0.1	0.45	0.04	0.04	0.04
Ratio to B(a)P	TP115	TP116	TP117	TP117	TP117	TP118	TP118	TP119	TP119	TP119	TP120	TP120	TP121	TP123	TP124	TP124	TP127	TP128	TP130	TP133	TP133	TP134	TP134
	0.50	0.50	0.50	1.20	1.50	0.10	1.00	0.50	1.20	2.50	0.50	2.80	0.50	1.50	0.20	1.20	1.20	2.50	1.50	0.40	1.50	0.50	1.10
Benzo(a)Anthracene	1.50	1.50	1.50	1.50	1.50	1.00	1.50	0.80	0.88	1.50	0.95	1.50	0.85	1.25	0.82	0.88	1.50	1.50	1.10	0.89	1.50	1.50	1.50
Chrysene	0.50	0.50	0.50	0.50	0.50	1.25	0.50	0.95	1.00	0.50	1.10	0.50	1.11	1.42	1.09	0.85	0.50	0.50	0.90	0.93	0.50	1.00	0.50
Benzo(b)fluoranthene	1.25	1.25	1.25	1.25	1.25	1.30	1.25	1.11	1.15	1.25	1.10	1.25	1.20	1.17	1.19	1.18	1.25	1.25	1.00	1.11	1.25	1.25	1.25
Benzo(k)fluoranthene	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.44	0.45	0.50	0.45	0.50	0.48	0.46	0.46	0.46	0.50	0.50	0.40	0.44	0.50	0.50	0.50
Dibenzo(ah)anthracene	1.00	1.00	1.00	1.00	1.00	0.20	1.00	0.08	0.07	1.00	0.20	1.00	0.16	0.17	0.11	0.10	1.00	1.00	0.40	0.13	1.00	1.00	1.00
Indeno(123cd)pyrene	1.00	1.00	1.00	1.00	1.00	0.55	1.00	0.61	0.54	1.00	0.70	1.00	0.62	0.54	0.60	0.64	1.00	1.00	0.50	0.58	1.00	1.00	1.00
Benzo(ghi)Perylene	1.00	1.00	1.00	1.00	1.00	0.55	1.00	0.49	0.52	1.00	0.55	1.00	0.57	0.63	0.57	0.54	1.00	1.00	0.60	0.53	1.00	1.00	1.00

	TP135	TP136	TP137	TP137	TP138	TP139	TP139	DS01	DS01	DS02	DS02	DS02	DS03	DS03	DS04	DS05	DS07	DS10HP	DS11	DS14	DS17
Depth (m)	1.00	0.20	0.50	1.00	0.20	0.50	1.20	0.50	1.40	0.50	0.70	0.90	0.50	1.70	0.5	0.50	0.20	0.40	0.50	0.80	0.30
Benzo(a)Anthracene	0.06	0.06	0.06	0.06	0.06	0.06	0.56	0.07	1.63	3.21	55.83	0.22	0.35	0.92	1.2	1.12	0.4	0.06	0.06	0.45	0.36
Chrysene	0.06	0.03	0.02	0.02	0.05	0.05	0.6	0.08	2.03	3.55	53.49	0.25	0.41	1.09	1.63	1.21	0.52	0.02	0.02	0.48	0.36
Benzo(b)fluoranthene	0.06	0.05	0.05	0.05	0.05	0.05	0.64	0.08	2.2	5.62	78.14	0.32	0.51	1.39	1.73	1.35	0.61	0.05	0.05	0.6	0.35
Benzo(k)fluoranthene	0.03	0.02	0.02	0.02	0.02	0.02	0.25	0.03	0.86	2.19	30.39	0.12	0.2	0.54	0.67	0.53	0.24	0.02	0.02	0.24	0.14
Dibenzo(ah)anthracene	0.04	0.04	0.04	0.04	0.04	0.04	0.1	0.04	0.33	0.94	11.16	0.05	0.07	0.21	0.23	0.25	0.08	0.04	0.04	0.1	0.04
Indeno(123cd)pyrene	0.04	0.04	0.04	0.04	0.04	0.04	0.29	0.04	1.23	3.93	53.39	0.16	0.27	0.7	0.77	0.71	0.34	0.04	0.04	0.31	0.19
Benzo(ghi)Perylene	0.04	0.04	0.04	0.04	0.04	0.04	0.24	0.04	0.98	2.93	43.85	0.15	0.27	0.61	0.8	0.64	0.28	0.04	0.04	0.33	0.16
Benzo(a)Pyrene	0.06	0.04	0.04	0.04	0.04	0.04	0.49	0.07	1.83	5.31	75.48	0.28	0.39	1.13	1.52	1.06	0.52	0.04	0.04	0.46	0.29
Ratio to B(a)P	TP135	TP136	TP137	TP137	TP138	TP139	TP139	DS01	DS01	DS02	DS02	DS02	DS03	DS03	DS04	DS05	DS07	DS10HP	DS11	DS14	DS17
	1.00	0.20	0.50	1.00	0.20	0.50	1.20	0.50	1.40	0.50	0.70	0.90	0.50	1.70	0.5	0.50	0.20	0.40	0.50	0.80	0.30
Benzo(a)Anthracene	1.00	1.50	1.50	1.50	1.50	1.50	1.14	1.00	0.89	0.60	0.74	0.79	0.90	0.81	0.79	1.06	0.77	1.50	1.50	0.98	1.24
Chrysene	1.00	0.75	0.50	0.50	1.25	1.25	1.22	1.14	1.11	0.67	0.71	0.89	1.05	0.96	1.07	1.14	1.00	0.50	0.50	1.04	1.24
Benzo(b)fluoranthene	1.00	1.25	1.25	1.25	1.25	1.25	1.31	1.14	1.20	1.06	1.04	1.14	1.31	1.23	1.14	1.27	1.17	1.25	1.25	1.30	1.21
Benzo(k)fluoranthene	0.50	0.50	0.50	0.50	0.50	0.50	0.51	0.43	0.47	0.41	0.40	0.43	0.51	0.48	0.44	0.50	0.46	0.50	0.50	0.52	0.48
Dibenzo(ah)anthracene	0.67	1.00	1.00	1.00	1.00	1.00	0.20	0.57	0.18	0.18	0.15	0.18	0.18	0.19	0.15	0.24	0.15	1.00	1.00	0.22	0.14
Indeno(123cd)pyrene	0.67	1.00	1.00	1.00	1.00	1.00	0.59	0.57	0.67	0.74	0.71	0.57	0.69	0.62	0.51	0.67	0.65	1.00	1.00	0.67	0.66
Benzo(ghi)Perylene	0.67	1.00	1.00	1.00	1.00	1.00	0.49	0.57	0.54	0.55	0.58	0.54	0.69	0.54	0.53	0.60	0.54	1.00	1.00	0.72	0.55

	DS17	DS17	DS20	DS25	DS26	DS26	DS27	SP1	SP2	SP3	SP4	SP5	SP6	HP5	HP6	HP7	HP8				
Depth (m)	1.60	3.80	1.50	0.50	0.60	1.80	0.30	0.80	0.80	0.80	0.80	0.80	0.80	0.40	0.60	0.70	0.50				
Benzo(a)Anthracene	0.06	0.24	2.13	0.06	0.17	0.09	0.12	0.29	0.17	0.16	1.29	2.13	3.44	0.52	2.43	0.11	11.58				
Chrysene	0.06	0.26	2.01	0.02	0.17	0.07	0.1	0.34	0.24	0.14	1.21	2.32	3.35	0.47	2.06	0.09	11.23				
Benzo(b)fluoranthene	0.05	0.24	2.4	0.05	0.16	0.05	0.12	0.38	0.23	0.14	1.1	3.09	3.85	0.58	2.78	0.09	13.45				
Benzo(k)fluoranthene	0.02	0.1	0.93	0.02	0.06	0.02	0.04	0.15	0.09	0.06	0.43	1.2	1.5	0.22	1.08	0.03	5.23				
Dibenzo(ah)anthracene	0.04	0.04	0.34	0.04	0.04	0.04	0.04	0.05	0.05	0.04	0.2	0.52	0.54	0.17	0.78	0.04	3.71				
Indeno(123cd)pyrene	0.04	0.11	1.35	0.04	0.05	0.04	0.04	0.21	0.12	0.07	0.58	2.03	2.52	0.45	2.03	0.04	10.69				
Benzo(ghi)Perylene	0.04	0.11	1.07	0.04	0.07	0.04	0.05	0.21	0.11	0.08	0.49	1.72	1.98	0.33	1.55	0.04	7.59				
Benzo(a)Pyrene	0.04	0.21	0.52	0.04	0.1	0.04	0.11	0.32	0.18	0.12	1.01	2.6	3.3	0.34	1.57	0.07	7.6				
Ratio to B(a)P	DS17	DS17	DS20	DS25	DS26	DS26	DS27	SP1	SP2	SP3	SP4	SP5	SP6	HP5	HP6	HP7	HP8	Min	Max	Culp study limits	
	1.60	3.80	1.50	0.50	0.60	1.80	0.30	0.80	0.80	0.80	0.80	0.80	0.80	0.40	0.60	0.70	0.50			Lower Limit	Upper Limit
Benzo(a)Anthracene	1.50	1.14	4.10	1.50	1.70	2.25	1.09	0.91	0.94	1.33	1.28	0.82	1.04	1.53	1.55	1.57	1.52	0.60	4.10	0.12	12.43
Chrysene	1.50	1.24	3.87	0.50	1.70	1.75	0.91	1.06	1.33	1.17	1.20	0.89	1.02	1.38	1.31	1.29	1.48	0.50	3.87	0.12	11.61
Benzo(b)fluoranthene	1.25	1.14	4.62	1.25	1.60	1.25	1.09	1.19	1.28	1.17	1.09	1.19	1.17	1.71	1.77	1.29	1.77	1.00	4.62	0.11	10.85
Benzo(k)fluoranthene	0.50	0.48	1.79	0.50	0.60	0.50	0.36	0.47	0.50	0.50	0.43	0.46	0.45	0.65	0.69	0.43	0.69	0.36	1.79	0.04	3.72
Dibenzo(ah)anthracene	1.00	0.19	0.65	1.00	0.40	1.00	0.36	0.16	0.28	0.33	0.20	0.20	0.16	0.50	0.50	0.57	0.49	0.07	1.00	0.01	1.38
Indeno(123cd)pyrene	1.00	0.52	2.60	1.00	0.50	1.00	0.36	0.66	0.67	0.58	0.57	0.78	0.76	1.32	1.29	0.57	1.41	0.36	2.60	0.07	7.27
Benzo(ghi)Perylene	1.00	0.52	2.06	1.00	0.70	1.00	0.45	0.66	0.61	0.67	0.49	0.66	0.60	0.97	0.99	0.57	1.00	0.45	2.06	0.08	8.22

			Sample Location	TP101		TP102		TP108		TP113		DS01		DS02	
			Depth (m bgl)	0.50		0.50		2.0		1.20		1.40		0.70	
			Date	24/01/2017		24/01/2017		20/01/2017		17/01/2017		24/01/2017		24/01/2017	
			Strata	MG: Granular		MG: Granular		MG: Granular		MG: Cohesive		MG: Granular		MG: Granular	
Field Observations				Ash and Clinker		Ash and Paper Waste		NA		Hydrocarbon Odours		Paper Waste		Ash	
TPH CWG															
Aliphatic >C5-6	mg/kg	<0.1	42	< 0.1	0.002	< 0.1	0.002	< 0.1	0.002	< 0.1	0.002	< 0.1	0.002	< 0.1	0.002
Aliphatic >C6-8	mg/kg	<0.1	100	< 0.1	0.001	< 0.1	0.001	< 0.1	0.001	< 0.1	0.001	< 0.1	0.001	< 0.1	0.001
Aliphatic >C8-10	mg/kg	<0.1	27	< 0.1	0.004	< 0.1	0.004	< 0.1	0.004	< 0.1	0.004	< 0.1	0.004	< 0.1	0.004
Aliphatic >C10-12	mg/kg	<0.2	130	< 0.2	0.002	< 0.2	0.002	< 0.2	0.002	< 3.8	0.029	< 0.2	0.002	< 0.2	0.002
Aliphatic >C12-16	mg/kg	<4	1100	< 4	0.004	< 4	0.004	< 4	0.004	< 30	0.027	< 6	0.005	< 6	0.005
Aliphatic >C16-35	mg/kg	<14	65000	551	0.008	214	0.003	425	0.007	1202	0.018	225	0.003	225	0.003
Aliphatic >C35-C44	mg/kg	<7	65000	178	0.003	11	0.000	289	0.004	1127	0.017	32	0.000	37	0.001
Aromatic >EC5-7	mg/kg	<0.1	70	< 0.1	0.001	< 0.1	0.001	< 0.1	0.001	< 0.1	0.001	< 0.1	0.001	< 0.1	0.001
Aromatic >EC7-8	mg/kg	<0.1	130	< 0.1	0.001	< 0.1	0.001	< 0.1	0.001	< 0.1	0.001	< 0.1	0.001	< 0.1	0.001
Aromatic >EC8-10	mg/kg	<0.1	34	< 0.1	0.003	< 0.1	0.003	< 0.1	0.003	< 0.1	0.003	< 0.1	0.003	< 0.1	0.003
Aromatic >EC10-12	mg/kg	<0.2	74	< 0.6	0.008	< 0.8	0.011	< 1	0.014	< 0.2	0.003	< 7.5	0.101	< 3.6	0.049
Aromatic >EC12-16	mg/kg	<4	140	< 21	0.150	< 19	0.136	< 15	0.107	< 20	0.143	< 104	0.743	< 64	0.457
Aromatic >EC16-21	mg/kg	<7	260	< 156	0.600	< 156	0.600	< 73	0.281	< 469	1.804	< 540	2.077	< 954	3.669
Aromatic >EC21-35	mg/kg	<7	1100	< 823	0.748	< 591	0.537	< 353	0.321	< 1190	1.082	< 1545	1.405	< 4060	3.691
Aromatic > EC35-EC44	mg/kg	<7	1100	< 620	0.564	< 349	0.317	< 296	0.269	< 984	0.895	< 582	0.529	< 1591	1.446
Total aliphatics and aromatics (C5-44)	mg/kg	<52		2350		1341		1452		5026		3042		6941	
TOTAL Aliphatic	mg/kg				0.023		0.016		0.023		0.099		0.018		0.018
TOTAL Aromatic	mg/kg				2.075		1.606		0.997		3.931		4.860		9.317
HAZARD INDEX	mg/kg				2.099		1.622		1.020		4.030		4.878		9.336

KEY

	Concentration exceeds TSV
	S4UL 1% SOM
	C4SL 1% SOM

Parameter	TSV	TP101 (0.5m) MG Granular	TP102 (0.5m) MG Granular	TP102 (1.6m) MG Granular	TP103 (0.8m) - MG Cohesive	DS01 (0.5m) MG Granular	DS01 (1.4m) MG Granular	DS02 (0.5m) MG Granular	DS02 (0.7m) MG Granular	DS02 (0.9m) - MG Cohesive	No. of Samples	UCL	Arithmetic Mean	Geometric Mean	No. of LN Samples	Standard Deviation	LN Standard Deviation	Coeff. Variability	Distribution	LN Arithmetic Mean	Applicable 95% UCL	95% UCL LogNormal	95% UCL Normal	Max	Min	Max Ln	Tcalc	Tcrit (10%)	Critical Value Test	(Max val test) Outlier?	Mean Value Test
Lead	200	214	139	102	90	57	89	41	36	899	9	0.95	185.22	107.00	9	273.22	0.98	1.48	LOGNORMAL	4.67	196.15	196.15	354.58	899.00	36.00	6.80	2.18	1.977	YES	YES	Pass
Arsenic	37	18.3	18.8	73.2	9.5	21.9	21.9	10.3	21.2	3.9	9	0.95	22.11	16.64	9	20.21	0.80	0.91	NORMAL	2.81	34.64	27.26	34.64	73.20	3.90	4.29	1.86	1.977	NO	NO	Pass
Beryllium	1.2	1.7	1.5	1.8	1	1.5	1.4	1.1	0.8	2.1	9	0.95	1.43	1.38	9	0.41	0.31	0.29	NORMAL	0.32	1.69	1.67	1.69	2.10	0.80	0.74	1.37	1.977	NO	NO	Fail
Zinc	3700	411	208	3821	52	71	261	150	51	84	9	0.95	567.67	180.39	9	1225.77	1.36	2.16	LOGNORMAL	5.20	418.99	418.99	1327.46	3821.00	51.00	8.25	2.25	1.977	YES	YES	Pass
Benzo(a)pyrene	5	5.64	6.67	0.77	0.04	0.07	1.83	5.31	75.48	0.28	9	0.95	10.68	1.37	9	24.44	2.42	2.29	LOGNORMAL	0.31	6.11	6.11	25.83	75.48	0.04	4.32	1.66	1.977	NO	NO	Fail
Naphthalene	2.3	0.63	0.7	0.18	0.04	0.04	0.29	0.45	4.62	0.04	9	0.95	0.78	0.24	9	1.46	1.62	1.88	LOGNORMAL	-1.41	0.67	0.67	1.68	4.62	0.04	1.53	1.82	1.977	NO	NO	Pass

Zone 1 - Human Health Assessment
Soil Statistical Analysis (Outliers Excluded)

Parameter	TSV	TP101 (0.5m) MG Granular	TP102 (0.5m) MG Granular	TP102 (1.6m) MG Granular	TP103 (0.8m) - MG Cohesive	DS01 (0.5m) MG Granular	DS01 (1.4m) MG Granular	DS02 (0.5m) MG Granular	DS02 (0.7m) MG Granular	DS02 (0.9m) - MG Cohesive	No. of Samples	UCL	Arithmetic Mean	Geometric Mean	No. of LN Samples	Standard Deviation	LN Standard Deviation	Coeff. Variability	Distribution	LN Arithmetic Mean	Applicable 95% UCL	95% UCL LogNormal	95% UCL Normal	Max	Min	Max Ln	Tcalc	Tcrit (10%)	Critical Value Test	(Max val test) Outlier?	Mean Value Test
Lead	200	214	139	102	90	57	89	41	36		8	0.95	96.00	82.00	8	58.60	0.60	0.61	LOGNORMAL	4.41	122.88	122.88	135.25	214.00	36.00	5.37	1.59	1.909	NO	NO	Pass
Zinc	3700	411	208		52	71	261	150	51	84	8	0.95	161.00	123.16	8	126.96	0.78	0.79	NORMAL	4.81	246.05	208.20	246.05	411.00	51.00	6.02	1.54	1.909	NO	NO	Pass
Benzo(a)pyrene	5	5.64	6.67	0.77	0.04	0.07	1.83	5.31		0.28	8	0.95	2.58	0.83	8	2.81	2.02	1.09	LOGNORMAL	-0.19	3.20	3.20	4.46	6.67	0.04	1.90	1.03	1.909	NO	NO	Pass

Zone 2 - Human Health Assessment
Soil Statistical Analysis (Outliers Included)

Parameter	TSV	BH101 (TP112) 0.20m MG Granular	BH101 (TP112) 1.00m MG Granular	TP106 (0.5m) MG Cohesive	TP108 (0.5m) MG Granular	TP110 (0.2m) MG Granular	TP110 (1.8m) MG Granular	TP111 (0.4m) MG Cohesive	TP111 (0.5m) MG Granular	TP113 (0.5m) MG Cohesive	TP113 (1.2m) MG Cohesive	TP119 (0.5m) MG Granular	TP119 (1.2m) MG Granular	TP120 (0.5m) MG Cohesive	TP121 (0.5m) MG Granular	TP123 (1.5m) MG Granular	TP124 (0.2m) MG Cohesive	TP124 (1.2m) MG Granular	DS03 (0.5m) MG Granular	DS04 (0.5m) MG Granular	DS05 (0.5m) MG Granular	DS14 (0.8m) MG Granular	No. of Samples	UCL	Arithmetic Mean	Geometric Mean	No. of LN Samples	Standard Deviation	LN Standard Deviation	Coeff. Variability	Distribution	LN Arithmetic Mean	Applicable 95% UCL	95% UCL LogNormal	95% UCL Normal	Max	Min	Max Ln	Tcalc	Tcrit (10%)	Critical Value Test	(Max val test) Outlier?	Mean Value Test
Lead	200	225	206	526	283	144	166	18	219	34	500	105	172	182	169	136	944	301	1484	1657	282	159	21	0.95	376.76	225.54	21	445.64	1.06	1.18	LOGNORMAL	5.42	336.35	336.35	544.48	1657.00	18.00	7.41	1.88	2.408	NO	NO	Fail
Arsenic	37	28.5	31	70	11.8	10.6	10.5	5	26.2	8.9	18.2	58.2	47.6	39.7	17	47.1	30.7	43.2	11.1	21.5	39.7	27	21	0.95	28.74	23.29	21	17.68	0.71	0.62	NORMAL	3.15	35.39	30.38	35.39	70.00	5.00	4.25	1.56	2.408	NO	NO	Pass
Beryllium	1.2	1.4	1.2	4	1.1	1	0.9	0.9	1.8	1.1	1.5	1.2	1	1.4	0.9	2.6	1.6	2.5	0.9	0.9	1.5	2.1	21	0.95	1.50	1.37	21	0.77	0.41	0.51	NORMAL	0.31	1.79	1.60	1.79	4.00	0.90	1.39	2.59	2.408	YES	YES	Fail
Benzo(a)pyrene	5	1.4	3.55	10.56	0.28	28.58	2.26	0.08	2.97	0.04	7.25	0.67	0.67	0.2	0.61	0.24	4.43	2.81	0.39	1.52	1.06	0.46	21	0.95	3.34	1.07	21	6.35	1.62	1.90	LOGNORMAL	0.97	1.97	1.97	5.74	28.58	0.04	3.35	2.93	2.408	NO	NO	Pass
Naphthalene	2.3	0.13	0.58	0.45	0.05	2.8	0.29	0.04	0.16	0.04	0.13	0.04	0.06	0.04	0.06	0.65	0.23	0.25	0.07	0.31	0.23	0.16	21	0.95	0.32	0.16	21	0.59	1.13	1.84	LOGNORMAL	-1.86	0.24	0.24	0.55	2.80	0.04	1.03	2.57	2.408	YES	YES	Pass

Zone 2 - Human Health Assessment
Soil Statistical Analysis (Outliers Excluded)

Parameter	TSV	BH101 (TP112) 0.20m MG Granular	BH101 (TP112) 1.00m MG Granular	TP106 (0.5m) MG Cohesive	TP108 (0.5m) MG Granular	TP110 (0.2m) MG Granular	TP110 (1.8m) MG Granular	TP111 (0.4m) MG Cohesive	TP111 (0.5m) MG Granular	TP113 (0.5m) MG Cohesive	TP113 (1.2m) MG Cohesive	TP119 (0.5m) MG Granular	TP119 (1.2m) MG Granular	TP120 (0.5m) MG Cohesive	TP121 (0.5m) MG Granular	TP123 (1.5m) MG Granular	TP124 (0.2m) MG Cohesive	TP124 (1.2m) MG Granular	DS03 (0.5m) MG Granular	DS04 (0.5m) MG Granular	DS05 (0.5m) MG Granular	DS14 (0.8m) MG Granular	No. of Samples	UCL	Arithmetic Mean	Geometric Mean	No. of LN Samples	Standard Deviation	LN Standard Deviation	Coeff. Variability	Distribution	LN Arithmetic Mean	Applicable 95% UCL	95% UCL LogNormal	95% UCL Normal	Max	Min	Max Ln	Tcalc	Tcrit (10%)	Critical Value Test	(Max val test) Outlier?	Mean Value Test
Beryllium	1.2	1.4	1.2		1.1	1	0.9	0.9	1.8	1.1	1.5	1.2	1	1.4	0.9	2.6	1.6	2.5	0.9	0.9	1.5	2.1	20	0.95	1.38	1.30	20	0.52	0.34	0.38	NORMAL	0.26	1.58	1.48	1.58	2.60	0.90	0.96	2.04	2.385	NO	NO	Fail
Naphthalene	2.3	0.13	0.58	0.45	0.05		0.29	0.04	0.16	0.04	0.13	0.04	0.06	0.04	0.08	0.65	0.23	0.25	0.07	0.31	0.23	0.16	20	0.95	0.20	0.13	20	0.18	0.93	0.91	NORMAL	-2.01	0.27	0.19	0.27	0.65	0.04	-0.43	1.69	2.385	NO	NO	Pass

Parameter	TSV	TP127 (1.2m) MG Cohesive	TP128 (2.5m) MG Granular	TP130 (1.5m) MG Cohesive	DS17 (0.3m) MG Granular	DS17 (1.6m) MG Cohesive	DS17 (3.8m) MG Cohesive	DS20 (1.5m) MG Cohesive	DS22 (0.3m) MG Granular	No. of Samples	UCL	Arithmetic Mean	Geometric Mean	No. of LN Samples	Standard Deviation	LN Standard Deviation	Coeff. Variability	Distribution	LN Arithmetic Mean	Applicable 95% UCL	95% UCL LogNormal	95% UCL Normal	Max	Min	Max Ln	Tcalc	Tcrit (10%)	Critical Value Test	(Max val test) Outlier?	Mean Value Test
Lead	200	5	7	495	2166	12	49	197	120	8	0.95	381.38	69.13	8	739.58	2.15	1.94	LOGNORMAL	4.24	292.55	292.55	876.77	2166.00	5.00	7.68	1.60	1.909	NO	NO	Fail
Arsenic	37	2.8	3.3	20.6	72.2	2.7	16.4	73.1	34.9	8	0.95	28.25	14.09	8	29.54	1.40	1.05	LOGNORMAL	2.65	36.11	36.11	48.04	73.10	2.70	4.29	1.17	1.909	NO	NO	Pass
Beryllium	1.2	0.5	0.5	1.6	2.2	0.5	0.5	1.5	1.4	8	0.95	1.09	0.91	8	0.67	0.65	0.62	NORMAL	-0.10	1.54	1.40	1.54	2.20	0.50	0.79	1.36	1.909	NO	NO	Fail

Zone 5 - Human Health Assessment
Soil Statistical Analysis (Outliers Included)

Parameter	TSV	BH103 (1.2m) MG Cohesive	BH104 (0.5m) MG Granular	TP117 (0.5m) MG Cohesive	TP117 (1.2m) MG Granular	TP118 (0.1m) MG Cohesive	TP133 (0.4m) MG Cohesive	TP134 (0.5m) MG Granular	TP135 (1.0m) MG Cohesive	TP136 (0.2m) MG Cohesive	TP137 (0.5m) MG Cohesive	TP138 (0.2m) MG Cohesive	TP139 (0.5m) MG Cohesive	TP139 (1.2m) MG Cohesive	DS10HP (0.4m) Natural Granular	DS11 (0.5m) MG Cohesive	DS25 (0.5m) MG Granular	DS26 (0.6m) MG Cohesive	DS26 (1.8m) MG Granular	No. of Samples	UCL	Arithmetic Mean	Geometric Mean	No. of LN Samples	Standard Deviation	LN Standard Deviation	Coeff. Variability	Distribution	LN Arithmetic Mean	Applicable 95% UCL	95% UCL LogNormal	95% UCL Normal	Max	Min	Max Ln	Tcalc	Tcrit (10%)	Critical Value Test	(Max val test) Outlier?	Mean Value Test
Lead	200	84	33	104	9	348	125	9	23	38	45	89	34	200	145	22	19	139	35	18	0.95	83.39	51.77	18	86.15	1.04	1.03	LOGNORMAL	3.95	79.35	79.35	118.71	348.00	9.00	5.85	1.83	2.335	NO	NO	Pass
Arsenic	37	12.7	7.3	33.9	6.9	29.8	17.9	19.4	15.4	22.6	15.6	18	107	54.5	28.8	4.2	51.2	21.7	10.8	18	0.95	26.54	19.62	18	24.39	0.79	0.92	NORMAL	2.98	36.54	27.13	36.54	107.00	4.20	4.67	2.15	2.335	NO	NO	Pass
Beryllium	1.2	2.1	1.1	1.4	0.9	1.5	1.1	1	1	1.3	1	1.2	1.5	3	1.7	0.5	1.9	1.8	2.3	18	0.95	1.46	1.35	18	0.60	0.41	0.41	NORMAL	0.30	1.71	1.60	1.71	3.00	0.50	1.10	1.93	2.335	NO	NO	Fail