Appendix 8.2 Lab Report



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Exova Jones Environmental

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Attention :	Deirdre Larkin
Date :	2nd October, 2018
Your reference :	5154251
Our reference :	Test Report 18/15007 Batch 7
Location :	5154251
Date samples received :	19th September, 2018
Status :	Final report
Issue :	1

Two samples were received for analysis on 19th September, 2018 of which two 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:

5.60-20

Simon Gomery BSc Project Manager

Client Name:
Reference:
Location:
Contact:
JE Job No.:

5154251 Deirdre Larkin 18/15007

Atkins

5154251

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle H=H_2SO_4, Z=ZnAc, N=NaOH, HN=HN0_3

J E Sample No.	1-6	7-12							
Sample ID	BH1	BH2							
Depth	2.72	3.45					Please se	o attached n	otos for all
COC No / misc							abbrevi	ations and a	cronyms
Containana									
Containers	JHNPG	JHNPG							
Sample Date	18/09/2018	18/09/2018							
Sample Type	Ground Water	Ground Water							
Batch Number	1	1							Method
Date of Receipt	19/09/2018	19/09/2018					LOD/LOR	Units	No.
Dissolved Arsenic [#]	<2.5	<2.5					<2.5	ug/l	TM30/PM14
Dissolved Barium [#]	77	62					<3	ug/l	TM30/PM14
Dissolved Beryllium	<0.5	<0.5					<0.5	ug/l	TM30/PM14
Dissolved Boron	34	24					<12	ug/l	TM30/PM14
Dissolved Cadmium [#]	<0.5	<0.5					<0.5	ug/l	TM30/PM14
Dissolved Calcium [#]	133.2	101.1					<0.2	mg/l	TM30/PM14
Total Dissolved Chromium [#]	<1.5	<1.5					<1.5	ug/l	TM30/PM14
Dissolved Copper [#]	<7	<7					<7	ug/l	TM30/PM14
Dissolved Lead #	<5	<5					<5	ug/l	TM30/PM14
Dissolved Magnesium [#]	13.9	8.9					<0.1	mg/l	TM30/PM14
Dissolved Mercury [#]	<1	<1					<1	ug/l	TM30/PM14
Dissolved Nickel [#]	4	<2					<2	ug/l	TM30/PM14
Dissolved Potassium [#]	1.7	1.4					<0.1	mg/l	TM30/PM14
Dissolved Selenium [#]	<3	<3					<3	ug/l	TM30/PM14
Dissolved Sodium [#]	45.3	62.7					<0.1	mg/l	TM30/PM14
Dissolved Vanadium [#]	<1.5	<1.5					<1.5	ug/l	TM30/PM14
Dissolved Zinc [#]	<3	<3					<3	ug/l	TM30/PM14
Total Hardness Dissolved (as CaCO3)	391	290					<1	mg/l	TM30/PM14
PAH MS									
Naphthalene #	<0.1	<0.1					<0.1	ug/l	TM4/PM30
Acenaphthylene #	<0.013	<0.013					<0.013	ug/l	TM4/PM30
Acenaphthene #	<0.013	<0.013					<0.013	ug/l	TM4/PM30
Fluorene #	<0.014	<0.014					<0.014	ug/l	TM4/PM30
Phenanthrene [#]	<0.011	<0.011					<0.011	ug/l	TM4/PM30
Anthracene #	<0.013	<0.013					<0.013	ug/l	TM4/PM30
Fluoranthene [#]	<0.012	<0.012					<0.012	ug/l	TM4/PM30
Pyrene [#]	<0.013	<0.013					<0.013	ug/l	TM4/PM30
Benzo(a)anthracene #	<0.015	<0.015					<0.015	ug/l	TM4/PM30
Chrysene [#]	<0.011	<0.011					<0.011	ug/l	TM4/PM30
Benzo(bk)fluoranthene #	<0.018	<0.018					<0.018	ug/l	TM4/PM30
Benzo(a)pyrene [#]	<0.016	<0.016					<0.016	ug/l	TM4/PM30
Indeno(123cd)pyrene#	<0.011	<0.011					<0.011	ug/l	TM4/PM30
Dibenzo(ah)anthracene #	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene #	<0.011	<0.011					<0.011	ug/l	TM4/PM30
PAH 16 Total [#]	<0.195	<0.195					<0.195	ug/l	TM4/PM30
Benzo(b)fluoranthene	<0.01	<0.01					<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	<0.01	<0.01					<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	81	84					<0	%	TM4/PM30
VOC TICs	ND	ND						None	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1					<0.1	ug/l	TM15/PM10
Benzene [#]	<0.5	<0.5					<0.5	ug/l	TM15/PM10
Toluene [#]	<5	<5					<5	ug/l	TM15/PM10

Client Name:	
Reference:	
Location:	
Contact:	
JE Job No.:	

5154251 Deirdre Larkin 18/15007

Atkins

5154251

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle H=H_2SO_4, Z=ZnAc, N=NaOH, HN=HN0_3

J E Sample No.	1-6	7-12					Ì				
Sample ID	BH1	BH2									
Depth	2.72	3.45									
000 No (miss							Please se abbrevi	e attached n ations and a	otes for all cronyms		
COC No / MISC								und und und und ordinying			
Containers	JHNPG	JHNPG									
Sample Date	18/09/2018	18/09/2018									
Sample Type	Ground Water	Ground Water									
Batch Number	1	1									
							LOD/LOR	Units	Method No.		
Date of Receipt	19/09/2018	19/09/2018									
Ethylbenzene *	<1	<1					<1	ug/l	TM15/PM10		
p/m-Xylene #	<2	<2					<2	ug/l	TM15/PM10		
o-Xylene *	<1	<1					<1	ug/l	TM15/PM10		
Surrogate Recovery Toluene D8	103	108					<0	%	TM15/PM10		
Surrogate Recovery 4-Bromonuorobenzene	107	104					<0	%	TIMT5/PINTU		
Destisides											
Pesticides											
Aldrin	<0.01	<0.01					<0.01	ug/l	TM140/DM30		
	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Beta-HCH (BHC)	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Delta-HCH (BHC)	< 0.01	<0.01					< 0.01	ug/l	TM149/PM30		
Dieldrin	<0.01	<0.01					< 0.01	ua/l	TM149/PM30		
Endosulphan I	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Endosulphan II	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Endosulphan sulphate	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Endrin	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Gamma-HCH (BHC)	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Heptachlor	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Heptachlor Epoxide	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
o,p'-Methoxychlor	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
p,p'-DDE	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
p,p'-DDT	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
p,p'-Methoxychlor	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
p,p'-TDE	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Organophosphorus Pesticides											
Azinphos methyl	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Diazinon	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Dichlorvos	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Disulfoton	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Ethion	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Ethyl Parathion (Parathion)	< 0.01	< 0.01					<0.01	ug/l	TM149/PM30		
Fenitrothion	<0.01	<0.01					<0.01	ug/l	TM149/PM30		
Mathud Derethian	<0.01	<0.01					<0.01	ug/i	TM149/PM30		
Metriyi Paratnion	<0.01	<0.01					<0.01	ug/i	TM149/PM30		
Nievilipiius	~0.01	\U.UT					<u><u></u> <u></u> </u>	ug/I	1 IVI 1 4 8/FIVI3U		

Exova Jones Environmental Atkins Client Name: Report : Liquid 5154251 Reference: 5154251 Location: Contact: Deirdre Larkin Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle JE Job No.: 18/15007 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	1-6	7-12								
Sample ID	BH1	BH2								
Depth	2.72	3.45						 Discourse		
COC No / misc								 abbrevia	e attached n ations and ad	otes for all cronyms
000 N07 Illiac										
Containers	JHNPG	JHNPG								
Sample Date	18/09/2018	18/09/2018								
Sample Type	Ground Water	Ground Water								
Batch Number	1	1								Method
Date of Receipt	19/09/2018	19/09/2018						LOD/LOR	Units	No.
TPH CWG										
Aliphatics										
>C5-C6 [#]	<10	<10						 <10	ug/l	TM36/PM12
>C6-C8 [#]	<10	<10						<10	ug/l	TM36/PM12
>C8-C10 [#]	<10	<10						<10	ug/l	TM36/PM12
>C10-C12 [#]	<5	<5						<5	ug/l	TM5/PM16/PM30
>C12-C16 [#]	<10	<10						<10	ug/l	TM5/PM16/PM30
>C16-C21 #	<10	<10						<10	ug/l	TM5/PM16/PM30
>C21-C35 [#]	<10	<10						<10	ug/l	TM5/PM16/PM30
>C35-C44	<10	<10						<10	ug/l	TM5/PM16/PM30
Total aliphatics C5-44	<10	<10						<10	ug/l	TM5/TM36/PM12/PM16/PM3
Aromatics	.10	.10						.10		TN00/DN40
>C5-EC7*	<10	<10						<10	ug/l	TM36/PM12
>EC7-EC8	<10	<10						 <10	ug/i	TM26/PM12
>EC10 EC12#	<5	<10						<5	ug/l	TM5/PM16/PM30
>EC12-EC16 [#]	<10	<10					 	 <10	ug/l	TM5/PM16/PM30
>EC16-EC21 #	<10	<10						<10	ug/l	TM5/PM16/PM30
>EC21-EC35 [#]	<10	<10						<10	ug/l	TM5/PM16/PM30
>EC35-EC44	<10	<10						 <10	ug/l	TM5/PM16/PM30
Total aromatics C5-44	<10	<10						<10	ug/l	TM5/TM38/PM12/PM18/PM30
Fotal aliphatics and aromatics(C5-44)	<10	<10						<10	ug/l	TM5/TM38/PM12/PM16/PM3
Fluoride	<0.3	<0.3						<0.3	mg/l	TM173/PM0
Sulphate as SO4 #	21.2	27.5						 <0.5	mg/l	TM38/PM0
Chloride [#]	39.6	55.3						<0.3	mg/l	TM38/PM0
Nitrate as NO3 *	0.9	23.0						 < 0.2	mg/l	1M38/PM0
Nitrite as NO2"	<0.02	0.11						<0.02	mg/i	TM38/PM0
Ortho Phosphate as $P^{#}$	<0.03	<0.03						<0.03	mg/l	TM38/PM0
Total Oxidised Nitrogen as N #	0.00	5.2						<0.03	mg/l	TM38/PM0
	0.2	0.2						0.2	g.	
Ammoniacal Nitrogen as N #	0.13	<0.03						 <0.03	mg/l	TM38/PM0
Ammoniacal Nitrogen as NH3 [#]	0.16	<0.03						<0.03	mg/l	TM38/PM0
Ammoniacal Nitrogen as NH4 #	0.17	0.03						<0.03	mg/l	TM38/PM0
Hexavalent Chromium	<6	<6						<6	ug/l	TM38/PM0
Total Dissolved Chromium III	<6	<6						<6	ug/l	TM0/PM0
Total Alkalinity as CaCO3 [#]	7100	3436						<1	mg/l	TM75/PM0
Dissolved Organic Carbon [#]	<2	<2						 <2	mg/l	TM60/PM0
Electrical Conductivity @25C *	861	/85						<2	us/cm	TMF4/DM0
onnaldenyde	<0.5	<0.5	1	1	1	1		SU.5	mg/i	TIVID I/PIMU

Exova Jones Environmental Atkins Client Name: Report : Liquid 5154251 Reference: Location: 5154251 Deirdre Larkin Contact: Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle JE Job No.: 18/15007 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃ J E Sample No. 1-6 7-12 Sample ID BH1 BH2 2.72 3.45 Depth Please see attached notes for all abbreviations and acronyms COC No / misc Containers JHNPG JHNPG Sample Date 18/09/2018 18/09/2018 Sample Type Ground Wate Ground Wate Batch Number 1 1 Method LOD/LOR Units No. Date of Receipt 19/09/2018 19/09/2018 TM73/PM0 pH [#] 6.45 7.58 <0.01 pH units TM60/PM0 Total Organic Carbon # <2 <2 <2 mg/l Total Dissolved Solids # TM20/PM0 574 520 <35 mg/l 37273 22848 TM37/PM0 Total Suspended Solids # <10 mg/l

Client Name: Reference: Location:	Atkins 5154251 5154251				SVOC Re	port :	Liquid			
Contact: JE Job No.:	Deirdre La 18/15007	arkin								
I E Sample No	1-6	7-12						1		
o E Sample No.	1-0	1-12								
Sample ID	BH1	BH2								
Depth	2.72	3.45						Please see	e attached n	otes for all
COC No / misc								abbrevia	ations and a	cronyms
Containers	JHNPG	JHNPG								
Sample Date	18/09/2018	18/09/2018								
Sample Type Batch Number	Ground water	Ground water								Method
Date of Receipt	19/09/2018	19/09/2018						LOD/LOR	Units	No.
SVOC MS										
Phenols										
2-Chlorophenol [#]	<1	<1						<1	ug/l	TM16/PM30
2-Methylphenol *	<0.5	<0.5						<0.5	ug/l	TM16/PM30
2 4 Dichlorophonol #	<0.5	<0.5						<0.5	ug/l	TM16/PM30
2,4-Dimethylphenol	<0.0	<0.0						<0.0	ug/l	TM16/PM30
2.4.5-Trichlorophenol [#]	<0.5	<0.5						<0.5	ug/l	TM16/PM30
2,4,6-Trichlorophenol	<1	<1						<1	ug/l	TM16/PM30
4-Chloro-3-methylphenol #	<0.5	<0.5						<0.5	ug/l	TM16/PM30
4-Methylphenol	<1	<1						<1	ug/l	TM16/PM30
4-Nitrophenol	<10	<10						<10	ug/l	TM16/PM30
Pentachlorophenol	<1	<1						<1	ug/l	TM16/PM30
Phenol	<1	<1						<1	ug/l	TM16/PM30
PAHS	-1	-1						-1		TM16/DM20
2-Chloronaphthalene #	<1	<1						<1	ug/i	TM16/PM30
Phthalates									ug.	
Bis(2-ethylhexyl) phthalate	<5	<5						<5	ug/l	TM16/PM30
Butylbenzyl phthalate	<1	<1						<1	ug/l	TM16/PM30
Di-n-butyl phthalate #	<1.5	<1.5						<1.5	ug/l	TM16/PM30
Di-n-Octyl phthalate	<1	<1						<1	ug/l	TM16/PM30
Diethyl phthalate #	<1	<1						<1	ug/l	TM16/PM30
Dimethyl phthalate	<1	<1						<1	ug/l	TM16/PM30
Other SVOCs	-1	-1						-1		TM16/DM20
1,2-Dichlorobenzene "	<1	<1						<1	ug/i	TM16/PM30
1,2,4-mchlorobenzene [#]	<1	<1						<1	ug/l	TM16/PM30
1.4-Dichlorobenzene [#]	<1	<1						<1	ug/l	TM16/PM30
2-Nitroaniline	<1	<1						<1	ug/l	TM16/PM30
2,4-Dinitrotoluene #	<0.5	<0.5						<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<1	<1						<1	ug/l	TM16/PM30
3-Nitroaniline	<1	<1						<1	ug/l	TM16/PM30
4-Bromophenylphenylether #	<1	<1						<1	ug/l	TM16/PM30
4-Chloroaniline	<1	<1						<1	ug/l	TM16/PM30
4-Chlorophenylphenylether "	<1	<1						<1	ug/i	TM16/PM30
	<0.5	<0.5						<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane #	<0.5	<0.5						<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether #	<1	<1						<1	ug/l	TM16/PM30
Carbazole [#]	<0.5	<0.5						<0.5	ug/l	TM16/PM30
Dibenzofuran [#]	<0.5	<0.5						<0.5	ug/l	TM16/PM30
Hexachlorobenzene #	<1	<1						<1	ug/l	TM16/PM30
Hexachlorobutadiene #	<1	<1						<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<1	<1						<1	ug/l	TM16/PM30
Hexachloroethane"	<1	<1						<1	ug/I	TM16/PM30
Isophorone "	<0.5	<0.5						<0.5	ug/i	TM16/PM30
Nitrobenzene [#]	<0.5	<0.5						<1	ug/l	TM16/PM30
Surrogate Recovery 2-Fluorobiphenyl	102	101						<0	%	TM16/PM30
Surrogate Recovery p-Terphenyl-d14	109	109						<0	%	TM16/PM30
										1
										1

Client Name: Reference: Location: Contact:	Atkins 5154251 5154251 Deirdre La	arkin			VOC Rep	ort :	Liquid			
JF Job No ·	18/15007									
	10/1000/	= 10						 		
J E Sample No.	1-6	7-12								
Sample ID	BH1	BH2								
Depth	2.72	3.45						Please se	e attached r	notes for all
COC No / misc								abbrevi	ations and a	cronyms
Containers	JHNPG	JHNPG								
Sample Date	18/09/2018	18/09/2018								
Sample Type	Ground Water	Ground Water								-
Batch Number	1	1						LOD/LOR	Units	Method No
VOC MS	19/09/2010	19/09/2010	 							
Dichlorodifluoromethane	<2	<2						<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1						<0.1	ug/l	TM15/PM10
Chloromethane [#]	<3	<3						<3	ug/l	TM15/PM10
Vinyl Chloride [#]	<0.1	<0.1						<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1						<1	ug/l	TM15/PM10
Chloroethane #	<3	<3						<3	ug/l	TM15/PM10
Trichlorofluoromethane *	<3	<3						<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE)"	<3	<3						<3	ug/i	TM15/PW10
trans 1.2 Dichloroothono #	<0	<0						<0	ug/l	TM15/PM10
1 1-Dichloroethane #	<3	<3						<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3						<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1						<1	ug/l	TM15/PM10
Bromochloromethane #	<2	<2						<2	ug/l	TM15/PM10
Chloroform #	<2	<2						<2	ug/l	TM15/PM10
1,1,1-Trichloroethane #	<2	<2						<2	ug/l	TM15/PM10
1,1-Dichloropropene #	<3	<3						<3	ug/l	TM15/PM10
Carbon tetrachloride *	<2	<2						<2	ug/l	TM15/PM10
1,2-Dichloroethane	<0.5	<0.5						<0.5	ug/l	TM15/PM10
Trichloroethene (TCE) [#]	<3	<3						<3	ug/l	TM15/PM10
1.2-Dichloropropane [#]	<2	<2						<2	ug/l	TM15/PM10
Dibromomethane [#]	<3	<3						<3	ug/l	TM15/PM10
Bromodichloromethane #	<2	<2						<2	ug/l	TM15/PM10
cis-1-3-Dichloropropene	<2	<2						<2	ug/l	TM15/PM10
Toluene [#]	<5	<5						<5	ug/l	TM15/PM10
trans-1-3-Dichloropropene	<2	<2						<2	ug/l	TM15/PM10
1,1,2-Trichloroethane*	<2	<2						<2	ug/l	TM15/PM10
Tetrachloroethene (PCE) "	<3	<3						<3	ug/l	TM15/PM10
1,3-Dicnioropropane	<2	<2						<2	ug/l	TM15/PM10
1 2-Dibromoethane [#]	<2	<2						<2	ug/l	TM15/PM10
Chlorobenzene [#]	<2	<2						<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane #	<2	<2						<2	ug/l	TM15/PM10
Ethylbenzene [#]	<1	<1						<1	ug/l	TM15/PM10
p/m-Xylene [#]	<2	<2						<2	ug/l	TM15/PM10
o-Xylene [#]	<1	<1						<1	ug/l	TM15/PM10
Styrene	<2	<2						<2	ug/l	TM15/PM10
Bromoform *	<2	<2						<2	ug/l	TM15/PM10
Isopropylbenzene	<3	<3						<3	ug/l	TM15/PW10
Bromobenzene [#]	<2	<2						<2	ug/l	TM15/PM10
1.2.3-Trichloropropane #	<3	<3						<3	ug/l	TM15/PM10
Propylbenzene [#]	<3	<3						<3	ug/l	TM15/PM10
2-Chlorotoluene [#]	<3	<3						<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3						<3	ug/l	TM15/PM10
4-Chlorotoluene #	<3	<3						<3	ug/l	TM15/PM10
tert-Butylbenzene #	<3	<3						<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene #	<3	<3						<3	ug/l	TM15/PM10
sec-Butylbenzene "	<3	<3						<3	ug/l	TM15/PM10
4-isopropyiloluene	< 3 < 3	<3 <3						< 3 < 3	ug/I	TM15/PM10
1,3-Dichlorobenzene	<3	<3						<3	ug/i	TM15/PM10
n-Butvlbenzene [#]	<3	<3						<3	ug/l	TM15/PM10
1,2-Dichlorobenzene [#]	<3	<3						<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2						<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3						<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3						<3	ug/l	TM15/PM10
Naphthalene	<2	<2						<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3						<3	ug/l	TM15/PM10
Surrogate Recovery 10/Uene D8	103	108						<u <0</u 	70 0/2	TM15/PM10

Client Name:AtkinsReference:5154251Location:5154251Contact:Deirdre Larkin

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
					No deviating sample report results for job 18/15007	

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.: 18/15007

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 HCI (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 overesitimate 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.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

ABBREVIATIONS and ACRONYMS USED

r	
#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa.
В	Indicates analyte found in associated method blank.
DR	Dilution required.
М	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 an Exova Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
СО	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
ТВ	Trip Blank Sample
OC	Outside Calibration Range

Method Code Appendix

JE Job No: 18/15007

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
тмо	Not available	PM0	No preparation is required.				
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.				
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.	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/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/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.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details				
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			

Method Code Appendix

JE Job No: 18/15007

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
TM20	Modified BS 1377-3: 1990/USEPA 160.3 Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.	Yes			
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	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, 6010B and BS EN ISO 11885 2009	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			
TM37	Modified methods USEPA 160.2, EN872:2005 and SMWW 2540D. Gravimetric determination of Total Suspended Solids. Sample is filtered through a 1.5um pore size glass fibre filter and the resulting residue is dried and weighed.	PM0	No preparation is required.	Yes			
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods 325.2 (Chloride), 375.4 (Sulphate), 365.2 (o-Phosphate), 353.1 (TON), 354.1 (Nitrite), 350.1 (NH4+) comparable to BS ISO 15923-1, 7196A (Hex Cr)	PM0	No preparation is required.				
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods 325.2 (Chloride), 375.4 (Sulphate), 365.2 (o-Phosphate), 353.1 (TON), 354.1 (Nitrite), 350.1 (NH4+) comparable to BS ISO 15923-1, 7196A (Hex Cr)	PM0	No preparation is required.	Yes			
TM51	Formaldehyde determination by reaction with Ammonium lons and acetylacetone which is analysed spectrophotometrically. This is a colourimetric determination based on ISO 15373:200 method A.	PM0	No preparation is required.				
TM60	TC/TOC analysis of Waters by High Temperature Combustion followed by NDIR detection. Based on the following modified standard methods: USEPA 9060, APHA Standard Methods for Examination of Water and Wastewater 5310B, ASTM D 7573, and USEPA 415.1.	PM0	No preparation is required.	Yes			
TM73	Modified US EPA methods 150.1 and 9045D and BS1377:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			

Method Code Appendix

JE Job No: 18/15007

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
TM75	Modified US EPA method 310.1. Determination of Alkalinity by Metrohm automated titration analyser.	PM0	No preparation is required.	Yes			
TM76	Modified US EPA method 120.1. Determination of Specific Conductance by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			
TM149	Determination of Pesticides by Large Volume Injection on GC Triple Quad MS, based upon USEPA method 8270	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 340.2	PM0	No preparation is required.				