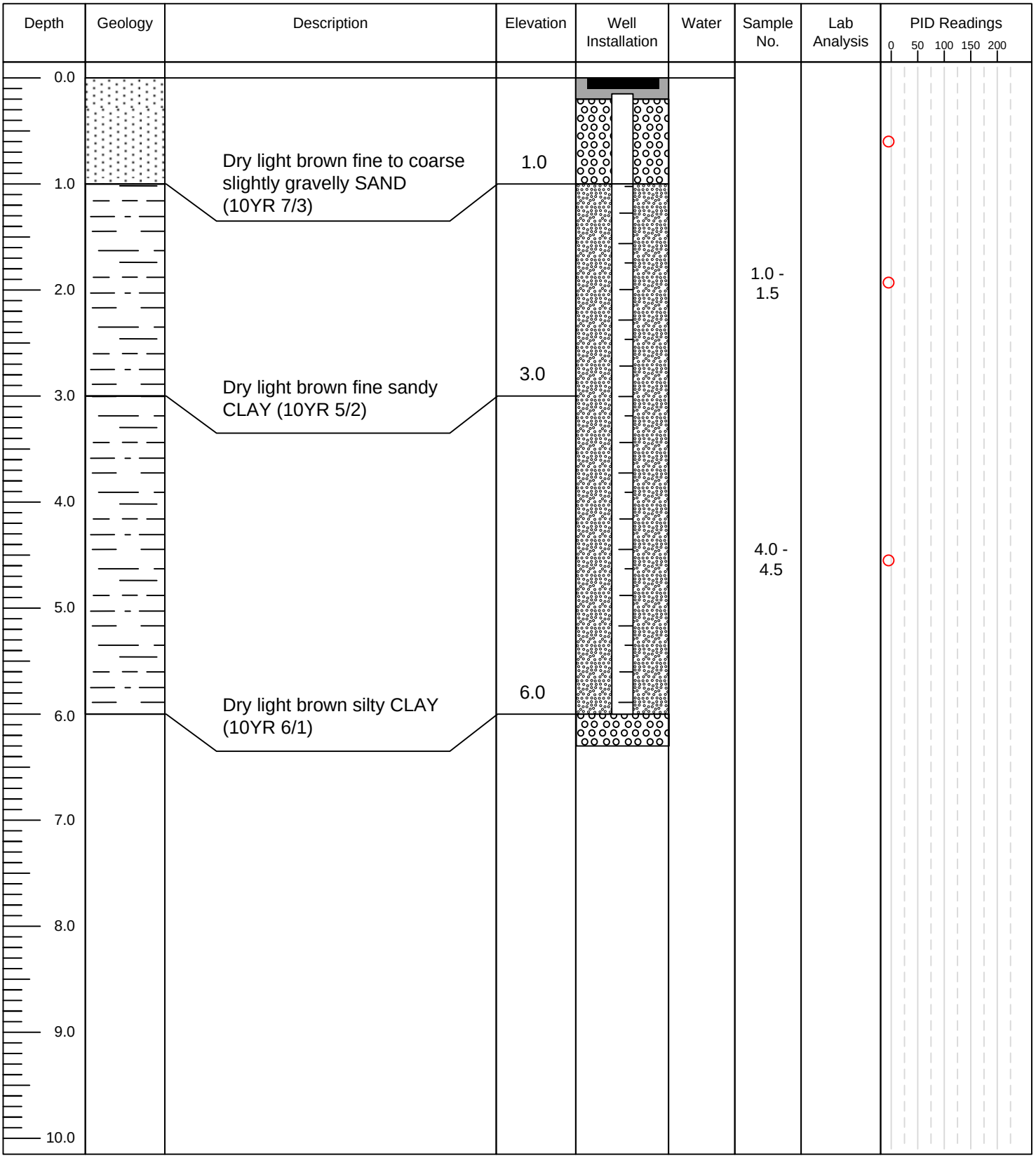
Appendix G: Chapter 6 Technical Reports

Appendix G1: Lithological Logs

Project	Date	Co-ordinates	Reference
ESIA Iraq Oil Terminal Project, Iraq	Start: 13/08/14 Finish: 13/08/14	30°10'32"N 47°53'28"E	BH01

Client	Project Ref.	Datum	Sheet
Waterway Trading and Petroleum Services LLC (WTPS)	014-1287	3.709 m IGRS	01 of 01

Plant and Equipment Used	Logged by
Continuous Flight Auger	David Wells



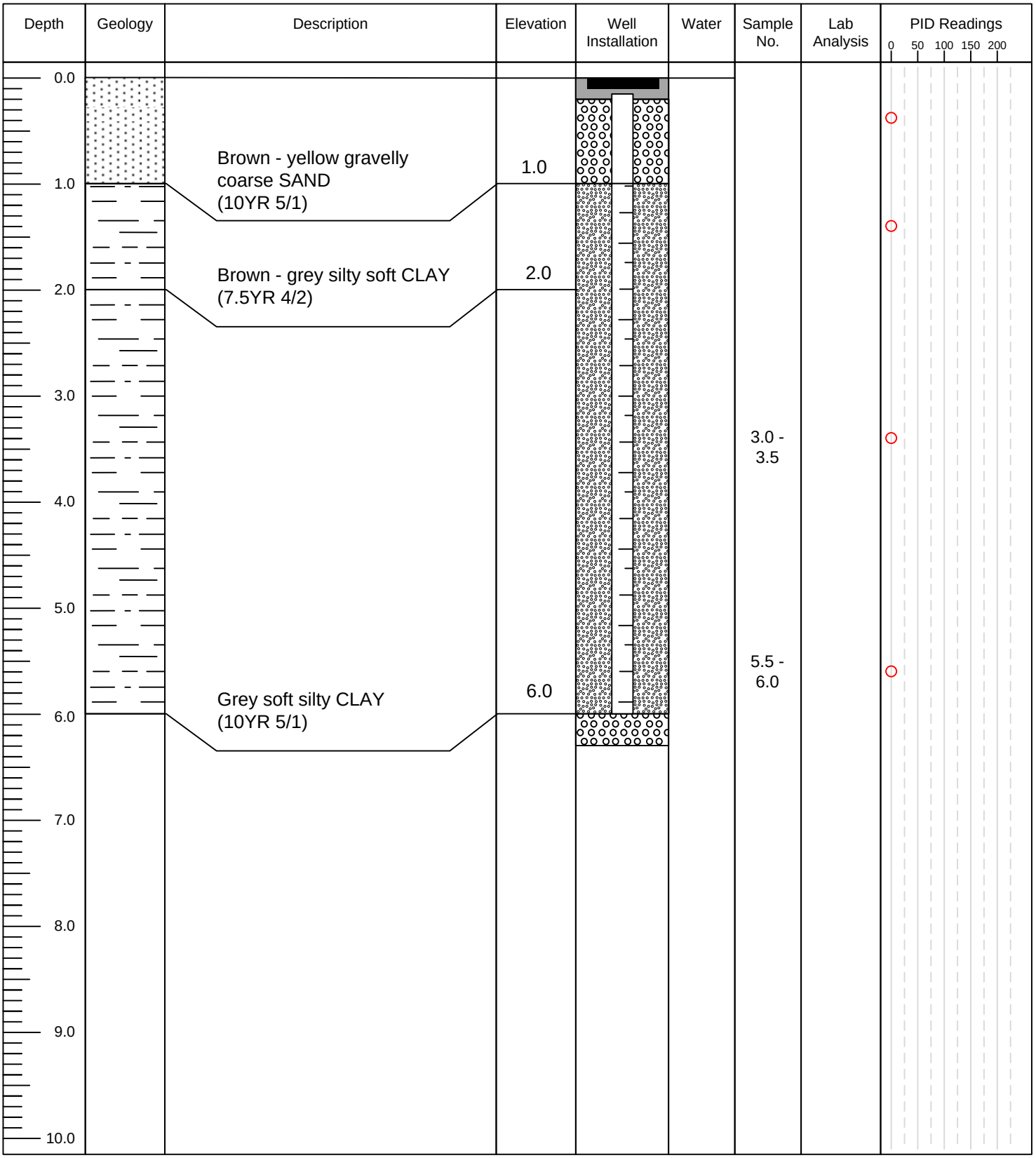
Remarks

No water observed during drilling phase.

EAME Earth & Marine Environmental Consultants

Note: These logs are based on driller/environmental observations and are logged generally in accordance with BS 5930:1999 Code of practice for site investigations. These field observations should not be used for design and/or engineering purposes.

Project		Date	Co-ordinates	Reference
ESIA Iraq Oil Terminal Project, Iraq		Start: 13/08/14 Finish: 13/08/14	30°10'40"N 47°53'31"E	BH02
Client	Project Ref.	Datum	Sheet	
Waterway Trading and Petroleum Services LLC (WTPS)	014-1287	4.628 m IGRS	01 of 01	
Plant and Equipment Used		Logged by		
Continuous Flight Auger		David Wells		



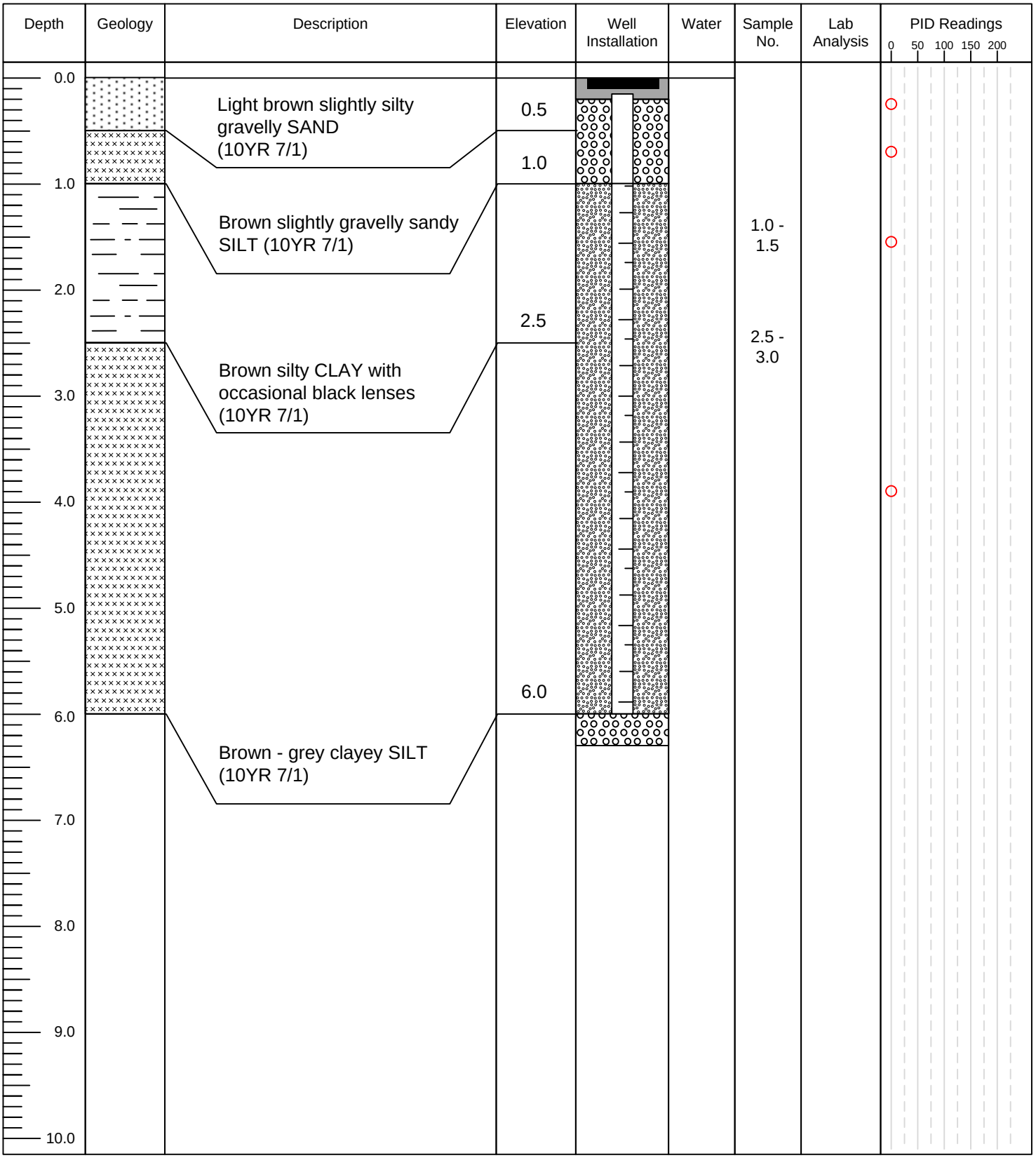
Remarks

No water observed during drilling phase.

EAME Earth & Marine Environmental Consultants

Note: These logs are based on driller/environmental observations and are logged generally in accordance with BS 5930:1999 Code of practice for site investigations. These field observations should not be used for design and/or engineering purposes.

Project		Date	Co-ordinates	Reference
ESIA Iraq Oil Terminal Project, Iraq		Start: 13/08/14 Finish: 13/08/14	30°10'45"N 47°53'27"E	BH03
Client	Project Ref.	Datum	Sheet	
Waterway Trading and Petroleum Services LLC (WTPS)	014-1287	5.228 m IGRS	01 of 01	
Plant and Equipment Used		Logged by		
Continuous Flight Auger		David Wells		



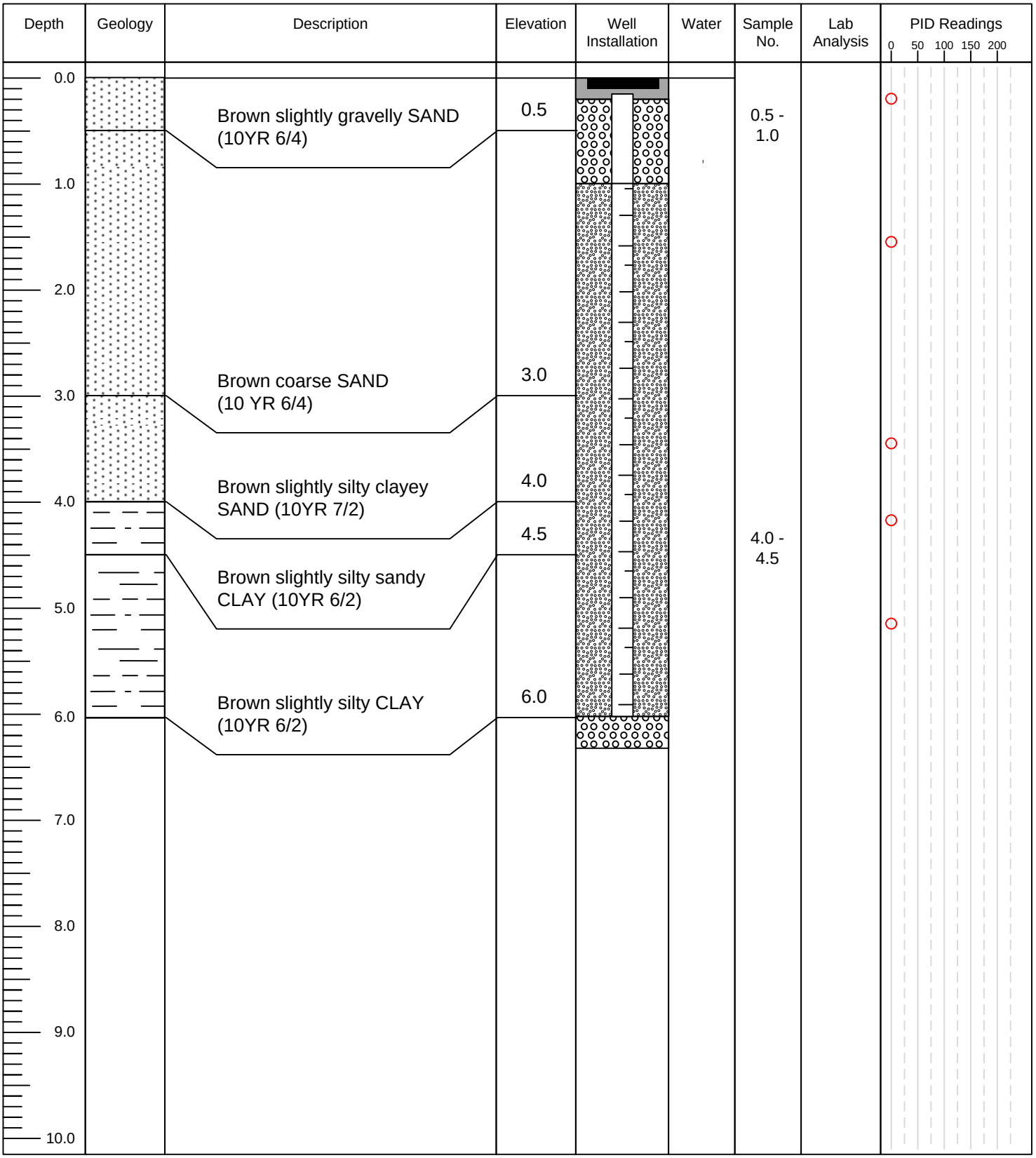
Remarks

No water observed during drilling phase.

EAME Earth & Marine Environmental Consultants

Note: These logs are based on driller/environmental observations and are logged generally in accordance with BS 5930:1999 Code of practice for site investigations. These field observations should not be used for design and/or engineering purposes.

Project		Date	Co-ordinates	Reference
ESIA Iraq Oil Terminal Project, Iraq		Start: 13/08/14 Finish: 13/08/14	30°10'38"N 47°53'25"E	BH04
Client	**Project Ref.**	**Datum**	**Sheet**	
Waterway Trading and Petroleum Services LLC (WTPS)	014-1287	4.276 m IGRS	01 of 01	
Plant and Equipment Used		**Logged by**		
Continuous Flight Auger		David Wells		



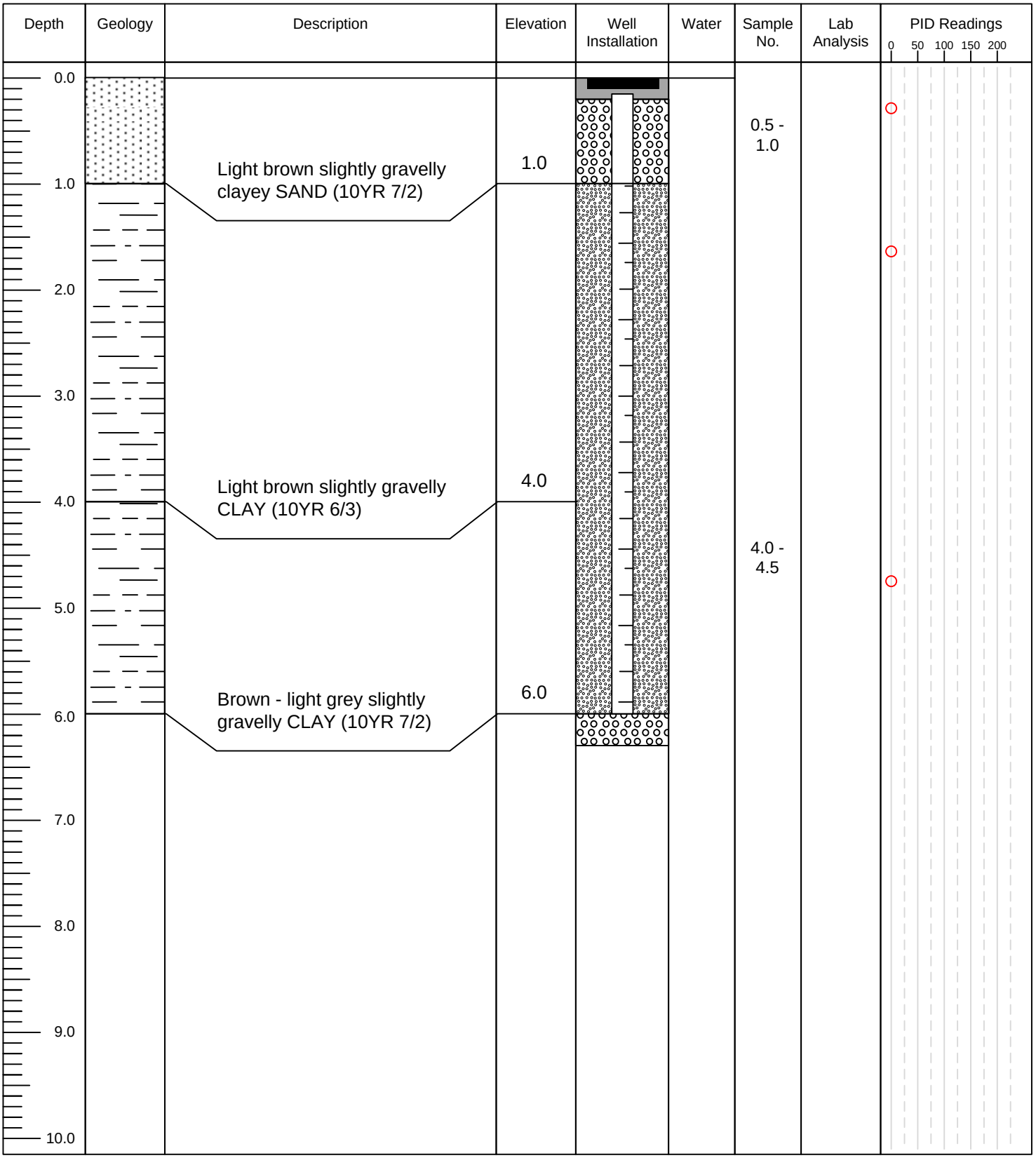
Remarks

No water observed during drilling phase.

EAME Earth & Marine Environmental Consultants

Note: These logs are based on driller/environmental observations and are logged generally in accordance with BS 5930:1999 Code of practice for site investigations. These field observations should not be used for design and/or engineering purposes.

Project		Date	Co-ordinates	Reference
ESIA Iraq Oil Terminal Project, Iraq		Start: 13/08/14 Finish: 13/08/14	30°10'09"N 47°53'27"E	BH05
Client	Project Ref.	Datum	Sheet	
Waterway Trading and Petroleum Services LLC (WTPS)	014-1287	4.09 m IGRS	01 of 01	
Plant and Equipment Used		Logged by		
Continuous Flight Auger		David Wells		



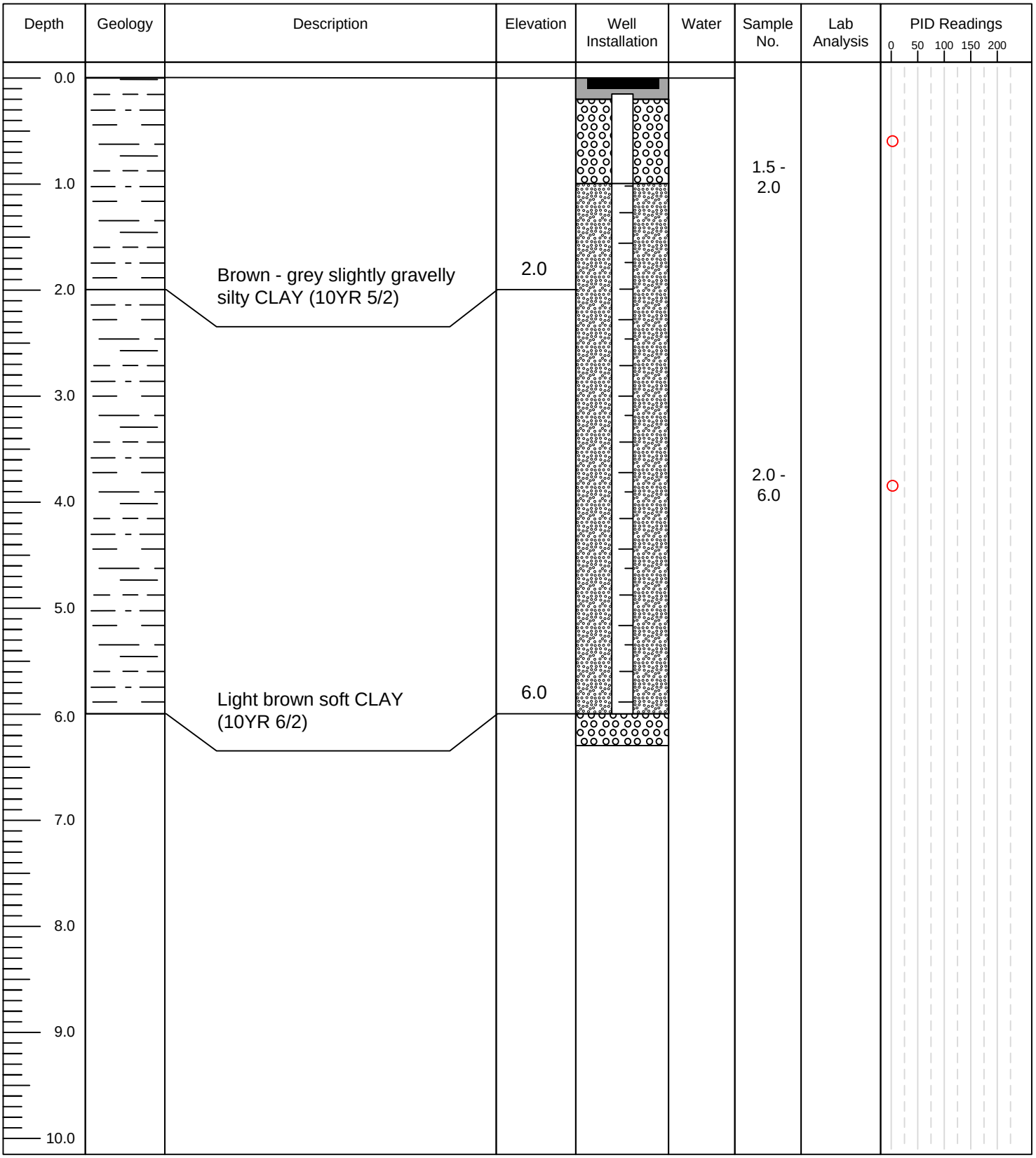
Remarks

No water observed during drilling phase.

EAME Earth & Marine Environmental Consultants

Note: These logs are based on driller/environmental observations and are logged generally in accordance with BS 5930:1999 Code of practice for site investigations. These field observations should not be used for design and/or engineering purposes.

Project		Date	Co-ordinates	Reference
ESIA Iraq Oil Terminal Project, Iraq		Start: 13/08/14 Finish: 13/08/14	30°10'38"N 47°53'25"E	BH06
Client	Project Ref.	Datum	Sheet	
Waterway Trading and Petroleum Services LLC (WTPS)	014-1287	4.686 m IGRS	01 of 01	
Plant and Equipment Used		Logged by		
Continuous Flight Auger		David Wells		



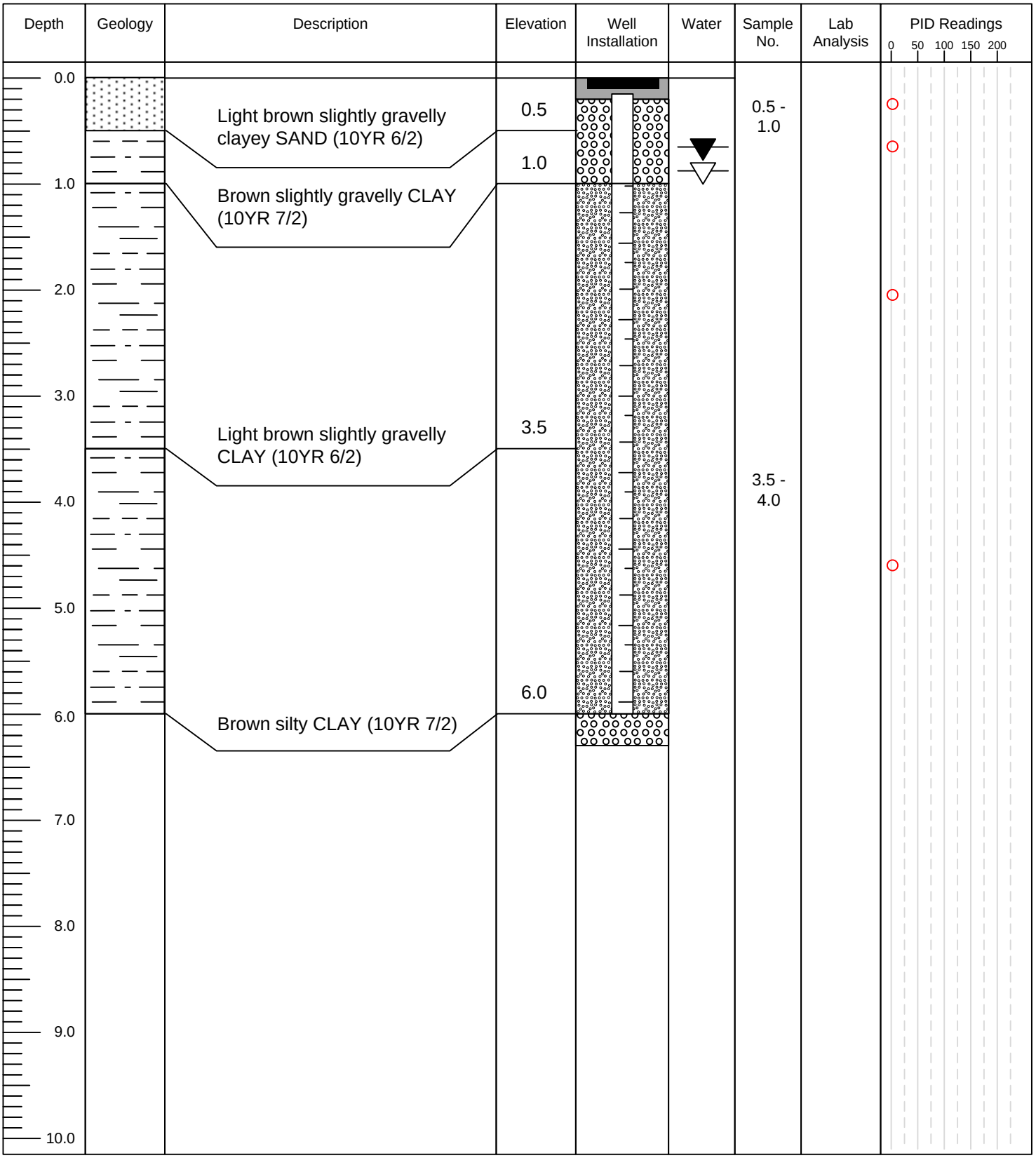
Remarks

No water observed during drilling phase.

EAME Earth & Marine Environmental Consultants

Note: These logs are based on driller/environmental observations and are logged generally in accordance with BS 5930:1999 Code of practice for site investigations. These field observations should not be used for design and/or engineering purposes.

Project		Date	Co-ordinates	Reference
ESIA Iraq Oil Terminal Project, Iraq		Start: 13/08/14 Finish: 13/08/14	30°10'32"N 47°53'28"E	BH07
Client	**Project Ref.**	**Datum**	**Sheet**	
Waterway Trading and Petroleum Services LLC (WTPS)	014-1287	4.851 m IGRS	01 of 01	
Plant and Equipment Used		**Logged by**		
Continuous Flight Auger		David Wells		



Remarks

Note: These logs are based on driller/environmental observations and are logged generally in accordance with BS 5930:1999 Code of practice for site investigations. These field observations should not be used for design and/or engineering purposes.

Symbols for Soils and Rocks
British Standards Institute (1999). BS 5930:1999
Code of practice for site investigations.

Soils	Sedimentary	Metamorphic	Igneous
Made Ground	Chalk	Coarse grained	Coarse grained
Gravel	Limestone	Medium grained	Medium grained
Sand	Sandstone	Fine grained	Fine grained
Silt	Siltstone	Pyroclastic	
Clay	Mudstone		
Peat	Shale		
Silty Sand	Coal		

Well Installation

- Well cover
- Plain pipework
- Slotted pipework
- Bentonite pellets
- Pea gravel
- Bentonite seal
- PID Reading
- Rest water level
- Water strike

Appendix G2: Soil Sample Laboratory Analytical Certificates

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i2 Analytical Ltd.
ul.Pionierów 39,
41-711 Ruda Slaska,
Poland

t: 004832 3426011
f: 004832 3426012

Analytical Report Number : 14-59242

Replaces Analytical Report Number : 14-59242, issue no. 1

Project / Site name:	WTPS ESIA	**Samples received on:**	29/08/2014
Your job number:		**Samples instructed on:**	01/09/2014
Your order number:		**Analysis completed by:**	08-09-2014
Report Issue Number:	2	**Report issued on:**	12/12/2014
Samples Analysed:	34 soil samples		

Dariusz Piotrowski
V-ce Dyrektor ds. Technicznych

Signed:

Dariusz Piotrowski
Technical Manager
For & on behalf of i2 Analytical Ltd.

i2 Analytical Limited Sp. z o.o.
Oddział w Polsce
ul. Pionierów 39
41-711 Ruda Śląska
NIP 2050000762

Agnieszka Pietrowska
Kierownik ds. jakości

Signed:

Agnieszka Pietrowska
Quality Manager
For & on behalf of i2 Analytical Ltd.

Other office located at: Building 19,BRE,Garston, Watford, WD25 9XX

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368151	368152	368153	368154	368155
Sample Reference			BH01	BH01	BH02	BH02	BH03
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			1.0-1.5	4.5-5.0	3.0-3.5	5.5-6.0	1.0-1.5
Date Sampled			13/08/2014	13/08/2014	13/08/2014	13/08/2014	13/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Moisture Content	%	N/A	17	16	19	20	14
Asbestos Identification Name	Type	N/A	-	-	-	-	-
Asbestos in Soil Screen	Type	N/A	-	-	-	-	-
General Inorganics							
pH	pH Units	N/A	7.4	8.0	8.0	8.1	7.9
Total Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	100	13000	6400	7900	4700	11000
Total Sulphate as SO_4	%	0.01	1.29	0.640	0.795	0.469	1.12
Total Chloride	mg/kg	5	14000	11000	16000	12000	13000
Water Soluble Phosphate as P (2:1)	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	0.59
Total Nitrogen (Kjeldahl)	mg/kg	5	280	220	620	450	220
Total Organic Carbon (TOC)	%	0.1	0.7	0.4	0.4	0.8	0.7
Total Phenols							
Total Phenols (monohydric)	mg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	1.6	< 1.60	< 1.60	< 1.60	< 1.60	< 1.60

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368151	368152	368153	368154	368155
Sample Reference			BH01	BH01	BH02	BH02	BH03
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			1.0-1.5	4.5-5.0	3.0-3.5	5.5-6.0	1.0-1.5
Date Sampled			13/08/2014	13/08/2014	13/08/2014	13/08/2014	13/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	2.6	2.3	2.7	2.4	4.2
Cadmium (aqua regia extractable)	mg/kg	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Copper (aqua regia extractable)	mg/kg	1	19	18	24	21	20
Iron (aqua regia extractable)	mg/kg	40	17000	15000	21000	18000	19000
Lead (aqua regia extractable)	mg/kg	1	2.2	1.8	2.1	2.2	2.4
Manganese (aqua regia extractable)	mg/kg	1	330	300	340	320	280
Mercury (aqua regia extractable)	mg/kg	0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	60	57	73	67	63
Tin (aqua regia extractable)	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	26	25	31	30	28
Magnesium (aqua regia extractable)	mg/kg	20	22000	19000	25000	22000	18000
Petroleum Hydrocarbons							
TPH1 (C10 - C40)	mg/kg	10	< 10	< 10	< 10	< 10	< 10
VOCs							
Chloromethane	µg/kg	1	< 1.0	-	< 1.0	-	-
Chloroethane	µg/kg	1	< 1.0	-	< 1.0	-	-
Bromomethane	µg/kg	1	< 1.0	-	< 1.0	-	-
Vinyl Chloride	µg/kg	1	< 1.0	-	< 1.0	-	-
Trichlorofluoromethane	µg/kg	1	< 1.0	-	< 1.0	-	-
1,1-dichloroethene	µg/kg	1	< 1.0	-	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	< 1.0	-	< 1.0	-	-
Cis-1,2-dichloroethene	µg/kg	1	< 1.0	-	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	< 1.0	-	< 1.0	-	-
1,1-dichloroethane	µg/kg	1	< 1.0	-	< 1.0	-	-
2,2-Dichloropropane	µg/kg	1	< 1.0	-	< 1.0	-	-
Trichloromethane	µg/kg	1	< 1.0	-	< 1.0	-	-
1,1,1-Trichloroethane	µg/kg	1	< 1.0	-	< 1.0	-	-
1,2-dichloroethane	µg/kg	1	< 1.0	-	< 1.0	-	-
1,1-Dichloropropene	µg/kg	1	< 1.0	-	< 1.0	-	-
Trans-1,2-dichloroethene	µg/kg	1	< 1.0	-	< 1.0	-	-
Benzene	µg/kg	1	< 1.0	-	< 1.0	-	-
Tetrachloromethane	µg/kg	1	< 1.0	-	< 1.0	-	-
1,2-dichloropropane	µg/kg	1	< 1.0	-	< 1.0	-	-
Trichloroethene	µg/kg	1	< 1.0	-	< 1.0	-	-
Dibromomethane	µg/kg	1	< 1.0	-	< 1.0	-	-
Bromodichloromethane	µg/kg	1	< 1.0	-	< 1.0	-	-
Cis-1,3-dichloropropene	µg/kg	1	< 1.0	-	< 1.0	-	-
Trans-1,3-dichloropropene	µg/kg	1	< 1.0	-	< 1.0	-	-
Toluene	µg/kg	1	< 1.0	-	< 1.0	-	-
1,1,2-Trichloroethane	µg/kg	1	< 1.0	-	< 1.0	-	-
1,3-Dichloropropane	µg/kg	1	< 1.0	-	< 1.0	-	-
Dibromochloromethane	µg/kg	1	< 1.0	-	< 1.0	-	-
Tetrachloroethene	µg/kg	1	< 1.0	-	< 1.0	-	-
1,2-Dibromoethane	µg/kg	1	< 1.0	-	< 1.0	-	-
Chlorobenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	< 1.0	-	< 1.0	-	-

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368151	368152	368153	368154	368155
Sample Reference			BH01	BH01	BH02	BH02	BH03
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			1.0-1.5	4.5-5.0	3.0-3.5	5.5-6.0	1.0-1.5
Date Sampled			13/08/2014	13/08/2014	13/08/2014	13/08/2014	13/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Ethylbenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
p & m-xylene	µg/kg	1	< 1.0	-	< 1.0	-	-
Styrene	µg/kg	1	< 1.0	-	< 1.0	-	-
Tribromomethane	µg/kg	1	< 1.0	-	< 1.0	-	-
o-xylene	µg/kg	1	< 1.0	-	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	< 1.0	-	< 1.0	-	-
Isopropylbenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
Bromobenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
N-Propylbenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
2-Chlorotoluene	µg/kg	1	< 1.0	-	< 1.0	-	-
4-Chlorotoluene	µg/kg	1	< 1.0	-	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
Tert-Butylbenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
Sec-Butylbenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
1,3-dichlorobenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
P-Isopropyltoluene	µg/kg	1	< 1.0	-	< 1.0	-	-
1,2-dichlorobenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
1,4-dichlorobenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
Butylbenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	< 1.0	-	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/kg	1	< 1.0	-	< 1.0	-	-
Hexachlorobutadiene	µg/kg	1	< 1.0	-	< 1.0	-	-
1,2,3-Trichlorobenzene	µg/kg	1	< 1.0	-	< 1.0	-	-

SVOCs

Aniline	mg/kg	0.1	-	-	-	-	< 0.1
Phenol	mg/kg	0.2	-	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	-	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	-	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	-	-	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	-	-	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	-	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	-	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	-	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	-	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	-	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	-	-	-	-	< 0.2
Isophorone	mg/kg	0.2	-	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	-	-	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	-	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	-	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	-	-	-	-	< 0.3
Naphthalene	mg/kg	0.1	-	-	-	-	< 0.10
2,4-Dichlorophenol	mg/kg	0.3	-	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	-	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	-	-	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	-	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	-	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	-	-	-	-	< 0.1

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368151	368152	368153	368154	368155
Sample Reference			BH01	BH01	BH02	BH02	BH03
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			1.0-1.5	4.5-5.0	3.0-3.5	5.5-6.0	1.0-1.5
Date Sampled			13/08/2014	13/08/2014	13/08/2014	13/08/2014	13/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
2-Chloronaphthalene	mg/kg	0.1	-	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	-	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	-	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.1	-	-	-	-	< 0.10
Acenaphthene	mg/kg	0.1	-	-	-	-	< 0.10
2,4-Dinitrotoluene	mg/kg	0.2	-	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	-	-	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	-	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	-	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	-	-	-	-	< 0.2
Fluorene	mg/kg	0.1	-	-	-	-	< 0.10
Azobenzene	mg/kg	0.3	-	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	-	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	-	-	-	-	< 0.3
Phenanthrene	mg/kg	0.1	-	-	-	-	< 0.10
Anthracene	mg/kg	0.1	-	-	-	-	< 0.10
Carbazole	mg/kg	0.3	-	-	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	-	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	-	-	-	-	< 0.3
Fluoranthene	mg/kg	0.1	-	-	-	-	< 0.10
Pyrene	mg/kg	0.1	-	-	-	-	< 0.10
Butyl benzyl phthalate	mg/kg	0.3	-	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.1	-	-	-	-	< 0.10
Chrysene	mg/kg	0.05	-	-	-	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	-	-	-	-	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	-	-	-	-	< 0.10
Benzo(a)pyrene	mg/kg	0.1	-	-	-	-	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	-	-	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	-	-	-	-	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	-	-	-	-	< 0.05
Radiation							
Radiation screening α+β+γ	µSv/h	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368156	368157	368158	368159	368160
Sample Reference			BH03	BH04	BH04	BH05	BH05
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			2.5-3.0	0.5-1.0	4.0-4.5	0.5-1.0	4.0-4.5
Date Sampled			13/08/2014	13/08/2014	13/08/2014	13/08/2014	13/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Moisture Content	%	N/A	21	9.8	17	27	24
Asbestos Identification Name	Type	N/A	-	-	-	-	-
Asbestos in Soil Screen	Type	N/A	-	-	-	-	-
General Inorganics							
pH	pH Units	N/A	8.2	8.2	8.1	8.4	8.2
Total Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	100	6500	72000	17000	5600	5800
Total Sulphate as SO_4	%	0.01	0.648	7.18	1.67	0.556	0.584
Total Chloride	mg/kg	5	17000	870	17000	22000	14000
Water Soluble Phosphate as P (2:1)	mg/kg	0.1	< 0.10	0.11	0.20	0.21	0.19
Total Nitrogen (Kjeldahl)	mg/kg	5	230	230	200	330	310
Total Organic Carbon (TOC)	%	0.1	0.8	0.4	0.4	0.4	0.6
Total Phenols							
Total Phenols (monohydric)	mg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	1.6	< 1.60	< 1.60	< 1.60	< 1.60	< 1.60

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368156	368157	368158	368159	368160
Sample Reference			BH03	BH04	BH04	BH05	BH05
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			2.5-3.0	0.5-1.0	4.0-4.5	0.5-1.0	4.0-4.5
Date Sampled			13/08/2014	13/08/2014	13/08/2014	13/08/2014	13/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	3.7	1.6	3.6	6.6	5.8
Cadmium (aqua regia extractable)	mg/kg	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Copper (aqua regia extractable)	mg/kg	1	25	5.8	27	29	24
Iron (aqua regia extractable)	mg/kg	40	23000	4500	22000	24000	23000
Lead (aqua regia extractable)	mg/kg	1	2.8	< 1.0	2.6	3.4	2.7
Manganese (aqua regia extractable)	mg/kg	1	380	79	310	380	320
Mercury (aqua regia extractable)	mg/kg	0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	75	12	69	81	68
Tin (aqua regia extractable)	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	33	11	32	41	33
Magnesium (aqua regia extractable)	mg/kg	20	23000	5100	31000	18000	20000
Petroleum Hydrocarbons							
TPH1 (C10 - C40)	mg/kg	10	< 10	< 10	< 10	< 10	< 10
VOCs							
Chloromethane	µg/kg	1	-	< 1.0	-	-	< 1.0
Chloroethane	µg/kg	1	-	< 1.0	-	-	< 1.0
Bromomethane	µg/kg	1	-	< 1.0	-	-	< 1.0
Vinyl Chloride	µg/kg	1	-	< 1.0	-	-	< 1.0
Trichlorofluoromethane	µg/kg	1	-	< 1.0	-	-	< 1.0
1,1-dichloroethene	µg/kg	1	-	< 1.0	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	-	< 1.0	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	-	< 1.0	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	-	< 1.0	-	-	< 1.0
1,1-dichloroethane	µg/kg	1	-	< 1.0	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	-	< 1.0	-	-	< 1.0
Trichloromethane	µg/kg	1	-	< 1.0	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	-	< 1.0	-	-	< 1.0
1,2-dichloroethane	µg/kg	1	-	< 1.0	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	-	< 1.0	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	-	< 1.0	-	-	< 1.0
Benzene	µg/kg	1	-	< 1.0	-	-	< 1.0
Tetrachloromethane	µg/kg	1	-	< 1.0	-	-	< 1.0
1,2-dichloropropane	µg/kg	1	-	< 1.0	-	-	< 1.0
Trichloroethene	µg/kg	1	-	< 1.0	-	-	< 1.0
Dibromomethane	µg/kg	1	-	< 1.0	-	-	< 1.0
Bromodichloromethane	µg/kg	1	-	< 1.0	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	-	< 1.0	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	-	< 1.0	-	-	< 1.0
Toluene	µg/kg	1	-	< 1.0	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	-	< 1.0	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	-	< 1.0	-	-	< 1.0
Dibromochloromethane	µg/kg	1	-	< 1.0	-	-	< 1.0
Tetrachloroethene	µg/kg	1	-	< 1.0	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	-	< 1.0	-	-	< 1.0
Chlorobenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	-	< 1.0	-	-	< 1.0

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368156	368157	368158	368159	368160
Sample Reference			BH03	BH04	BH04	BH05	BH05
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			2.5-3.0	0.5-1.0	4.0-4.5	0.5-1.0	4.0-4.5
Date Sampled			13/08/2014	13/08/2014	13/08/2014	13/08/2014	13/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Ethylbenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
p & m-xylene	µg/kg	1	-	< 1.0	-	-	< 1.0
Styrene	µg/kg	1	-	< 1.0	-	-	< 1.0
Tribromomethane	µg/kg	1	-	< 1.0	-	-	< 1.0
o-xylene	µg/kg	1	-	< 1.0	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	-	< 1.0	-	-	< 1.0
Isopropylbenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
Bromobenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
N-Propylbenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	-	< 1.0	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	-	< 1.0	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
Tert-Butylbenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
Sec-Butylbenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
1,3-dichlorobenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
P-Isopropyltoluene	µg/kg	1	-	< 1.0	-	-	< 1.0
1,2-dichlorobenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
1,4-dichlorobenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
Butylbenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	-	< 1.0	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	-	< 1.0	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	-	< 1.0	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	-	< 1.0	-	-	< 1.0

SVOCs

Aniline	mg/kg	0.1	-	< 0.1	-	-	-
Phenol	mg/kg	0.2	-	< 0.2	-	-	-
2-Chlorophenol	mg/kg	0.1	-	< 0.1	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	-	< 0.2	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	-	< 0.2	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	-	< 0.1	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	-	< 0.2	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	-	< 0.1	-	-	-
2-Methylphenol	mg/kg	0.3	-	< 0.3	-	-	-
Hexachloroethane	mg/kg	0.05	-	< 0.05	-	-	-
Nitrobenzene	mg/kg	0.3	-	< 0.3	-	-	-
4-Methylphenol	mg/kg	0.2	-	< 0.2	-	-	-
Isophorone	mg/kg	0.2	-	< 0.2	-	-	-
2-Nitrophenol	mg/kg	0.3	-	< 0.3	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	-	< 0.3	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	-	< 0.3	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	-	< 0.3	-	-	-
Naphthalene	mg/kg	0.1	-	< 0.10	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	-	< 0.3	-	-	-
4-Chloroaniline	mg/kg	0.1	-	< 0.1	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	< 0.1	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	-	< 0.1	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	-	< 0.1	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	-	< 0.2	-	-	-
2-Methylnaphthalene	mg/kg	0.1	-	< 0.1	-	-	-

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368156	368157	368158	368159	368160
Sample Reference			BH03	BH04	BH04	BH05	BH05
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			2.5-3.0	0.5-1.0	4.0-4.5	0.5-1.0	4.0-4.5
Date Sampled			13/08/2014	13/08/2014	13/08/2014	13/08/2014	13/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
2-Chloronaphthalene	mg/kg	0.1	-	< 0.1	-	-	-
Dimethylphthalate	mg/kg	0.1	-	< 0.1	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	-	< 0.1	-	-	-
Acenaphthylene	mg/kg	0.1	-	< 0.10	-	-	-
Acenaphthene	mg/kg	0.1	-	< 0.10	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	-	< 0.2	-	-	-
Dibenzofuran	mg/kg	0.2	-	< 0.2	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	-	< 0.3	-	-	-
Diethyl phthalate	mg/kg	0.2	-	< 0.2	-	-	-
4-Nitroaniline	mg/kg	0.2	-	< 0.2	-	-	-
Fluorene	mg/kg	0.1	-	< 0.10	-	-	-
Azobenzene	mg/kg	0.3	-	< 0.3	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	-	< 0.2	-	-	-
Hexachlorobenzene	mg/kg	0.3	-	< 0.3	-	-	-
Phenanthrene	mg/kg	0.1	-	< 0.10	-	-	-
Anthracene	mg/kg	0.1	-	< 0.10	-	-	-
Carbazole	mg/kg	0.3	-	< 0.3	-	-	-
Dibutyl phthalate	mg/kg	0.2	-	< 0.2	-	-	-
Anthraquinone	mg/kg	0.3	-	< 0.3	-	-	-
Fluoranthene	mg/kg	0.1	-	< 0.10	-	-	-
Pyrene	mg/kg	0.1	-	< 0.10	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	-	< 0.3	-	-	-
Benzo(a)anthracene	mg/kg	0.1	-	< 0.10	-	-	-
Chrysene	mg/kg	0.05	-	< 0.05	-	-	-
Benzo(b)fluoranthene	mg/kg	0.1	-	< 0.10	-	-	-
Benzo(k)fluoranthene	mg/kg	0.1	-	< 0.10	-	-	-
Benzo(a)pyrene	mg/kg	0.1	-	< 0.10	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	< 0.10	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.1	-	< 0.10	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	-	< 0.05	-	-	-
Radiation							
Radiation screening α+β+γ	µSv/h	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368161	368162	368163	368164	368165
Sample Reference			BH06	BH06	BH07	BH07	SS01
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			1.5-2.0	5.5-6.0	0.5-1.0	3.5-4.0	SURFACE
Date Sampled			13/08/2014	13/08/2014	13/08/2014	13/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Moisture Content	%	N/A	15	13	20	7.1	3.0
Asbestos Identification Name	Type	N/A	-	-	-	-	-
Asbestos in Soil Screen	Type	N/A	-	-	-	-	Not-detected
General Inorganics							
pH	pH Units	N/A	8.0	8.2	8.0	7.8	8.0
Total Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	100	5600	1900	2900	12000	32000
Total Sulphate as SO_4	%	0.01	0.560	0.193	0.291	1.21	3.19
Total Chloride	mg/kg	5	15000	5700	8700	16000	8800
Water Soluble Phosphate as P (2:1)	mg/kg	0.1	0.16	< 0.10	< 0.10	0.10	0.13
Total Nitrogen (Kjeldahl)	mg/kg	5	200	220	200	300	160
Total Organic Carbon (TOC)	%	0.1	0.9	0.3	0.3	0.9	0.9
Total Phenols							
Total Phenols (monohydric)	mg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	1.6	< 1.60	< 1.60	< 1.60	< 1.60	< 1.60

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368161	368162	368163	368164	368165
Sample Reference			BH06	BH06	BH07	BH07	SS01
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			1.5-2.0	5.5-6.0	0.5-1.0	3.5-4.0	SURFACE
Date Sampled			13/08/2014	13/08/2014	13/08/2014	13/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	5.3	1.5	1.6	5.1	3.4
Cadmium (aqua regia extractable)	mg/kg	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Copper (aqua regia extractable)	mg/kg	1	24	9.3	8.4	21	14
Iron (aqua regia extractable)	mg/kg	40	24000	8600	6500	16000	14000
Lead (aqua regia extractable)	mg/kg	1	3.5	2.3	2.0	8.5	2.5
Manganese (aqua regia extractable)	mg/kg	1	370	180	150	260	220
Mercury (aqua regia extractable)	mg/kg	0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	72	21	21	52	38
Tin (aqua regia extractable)	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	36	16	12	30	22
Magnesium (aqua regia extractable)	mg/kg	20	24000	5000	4800	13000	25000
Petroleum Hydrocarbons							
TPH1 (C10 - C40)	mg/kg	10	< 10	< 10	< 10	< 10	< 10
VOCs							
Chloromethane	µg/kg	1	-	-	< 1.0	-	-
Chloroethane	µg/kg	1	-	-	< 1.0	-	-
Bromomethane	µg/kg	1	-	-	< 1.0	-	-
Vinyl Chloride	µg/kg	1	-	-	< 1.0	-	-
Trichlorofluoromethane	µg/kg	1	-	-	< 1.0	-	-
1,1-dichloroethene	µg/kg	1	-	-	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	-	-	< 1.0	-	-
Cis-1,2-dichloroethene	µg/kg	1	-	-	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	-	-	< 1.0	-	-
1,1-dichloroethane	µg/kg	1	-	-	< 1.0	-	-
2,2-Dichloropropane	µg/kg	1	-	-	< 1.0	-	-
Trichloromethane	µg/kg	1	-	-	< 1.0	-	-
1,1,1-Trichloroethane	µg/kg	1	-	-	< 1.0	-	-
1,2-dichloroethane	µg/kg	1	-	-	< 1.0	-	-
1,1-Dichloropropene	µg/kg	1	-	-	< 1.0	-	-
Trans-1,2-dichloroethene	µg/kg	1	-	-	< 1.0	-	-
Benzene	µg/kg	1	-	-	< 1.0	-	-
Tetrachloromethane	µg/kg	1	-	-	< 1.0	-	-
1,2-dichloropropane	µg/kg	1	-	-	< 1.0	-	-
Trichloroethene	µg/kg	1	-	-	< 1.0	-	-
Dibromomethane	µg/kg	1	-	-	< 1.0	-	-
Bromodichloromethane	µg/kg	1	-	-	< 1.0	-	-
Cis-1,3-dichloropropene	µg/kg	1	-	-	< 1.0	-	-
Trans-1,3-dichloropropene	µg/kg	1	-	-	< 1.0	-	-
Toluene	µg/kg	1	-	-	< 1.0	-	-
1,1,2-Trichloroethane	µg/kg	1	-	-	< 1.0	-	-
1,3-Dichloropropane	µg/kg	1	-	-	< 1.0	-	-
Dibromochloromethane	µg/kg	1	-	-	< 1.0	-	-
Tetrachloroethene	µg/kg	1	-	-	< 1.0	-	-
1,2-Dibromoethane	µg/kg	1	-	-	< 1.0	-	-
Chlorobenzene	µg/kg	1	-	-	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	-	-	< 1.0	-	-

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368161	368162	368163	368164	368165
Sample Reference			BH06	BH06	BH07	BH07	SS01
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			1.5-2.0	5.5-6.0	0.5-1.0	3.5-4.0	SURFACE
Date Sampled			13/08/2014	13/08/2014	13/08/2014	13/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Ethylbenzene	µg/kg	1	-	-	< 1.0	-	-
p & m-xylene	µg/kg	1	-	-	< 1.0	-	-
Styrene	µg/kg	1	-	-	< 1.0	-	-
Tribromomethane	µg/kg	1	-	-	< 1.0	-	-
o-xylene	µg/kg	1	-	-	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	-	-	< 1.0	-	-
Isopropylbenzene	µg/kg	1	-	-	< 1.0	-	-
Bromobenzene	µg/kg	1	-	-	< 1.0	-	-
N-Propylbenzene	µg/kg	1	-	-	< 1.0	-	-
2-Chlorotoluene	µg/kg	1	-	-	< 1.0	-	-
4-Chlorotoluene	µg/kg	1	-	-	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/kg	1	-	-	< 1.0	-	-
Tert-Butylbenzene	µg/kg	1	-	-	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/kg	1	-	-	< 1.0	-	-
Sec-Butylbenzene	µg/kg	1	-	-	< 1.0	-	-
1,3-dichlorobenzene	µg/kg	1	-	-	< 1.0	-	-
P-Isopropyltoluene	µg/kg	1	-	-	< 1.0	-	-
1,2-dichlorobenzene	µg/kg	1	-	-	< 1.0	-	-
1,4-dichlorobenzene	µg/kg	1	-	-	< 1.0	-	-
Butylbenzene	µg/kg	1	-	-	< 1.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	-	-	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/kg	1	-	-	< 1.0	-	-
Hexachlorobutadiene	µg/kg	1	-	-	< 1.0	-	-
1,2,3-Trichlorobenzene	µg/kg	1	-	-	< 1.0	-	-

SVOCs

Aniline	mg/kg	0.1	< 0.1	-	-	-	< 0.1
Phenol	mg/kg	0.2	< 0.2	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	< 0.1	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	< 0.2	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	< 0.2	-	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	< 0.1	-	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	< 0.2	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	< 0.1	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	< 0.3	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	< 0.05	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	< 0.3	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	< 0.2	-	-	-	< 0.2
Isophorone	mg/kg	0.2	< 0.2	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	< 0.3	-	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	< 0.3	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	< 0.3	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	< 0.3	-	-	-	< 0.3
Naphthalene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
2,4-Dichlorophenol	mg/kg	0.3	< 0.3	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	< 0.1	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	< 0.1	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	< 0.1	-	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	< 0.1	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	< 0.2	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	< 0.1	-	-	-	< 0.1

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368161	368162	368163	368164	368165
Sample Reference			BH06	BH06	BH07	BH07	SS01
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			1.5-2.0	5.5-6.0	0.5-1.0	3.5-4.0	SURFACE
Date Sampled			13/08/2014	13/08/2014	13/08/2014	13/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
2-Chloronaphthalene	mg/kg	0.1	< 0.1	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	< 0.1	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	< 0.1	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
Acenaphthene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
2,4-Dinitrotoluene	mg/kg	0.2	< 0.2	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	< 0.2	-	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	< 0.3	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	< 0.2	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	< 0.2	-	-	-	< 0.2
Fluorene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
Azobenzene	mg/kg	0.3	< 0.3	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	< 0.2	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	< 0.3	-	-	-	< 0.3
Phenanthrene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
Anthracene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
Carbazole	mg/kg	0.3	< 0.3	-	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	< 0.2	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	< 0.3	-	-	-	< 0.3
Fluoranthene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
Pyrene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
Butyl benzyl phthalate	mg/kg	0.3	< 0.3	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
Chrysene	mg/kg	0.05	< 0.05	-	-	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
Benzo(a)pyrene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	< 0.10	-	-	-	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	< 0.05	-	-	-	< 0.05
Radiation							
Radiation screening α+β+γ	µSv/h	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368166	368167	368168	368169	368170
Sample Reference			SS02	SS03	SS04	SS05	SS06
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Moisture Content	%	N/A	0.51	0.67	1.1	6.0	4.2
Asbestos Identification Name	Type	N/A	-	Chrysotile- Loose fibres	-	-	-
Asbestos in Soil Screen	Type	N/A	Not-detected	Detected	Not-detected	-	-
General Inorganics							
pH	pH Units	N/A	8.0	8.1	8.3	8.0	7.5
Total Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	100	11000	18000	130000	53000	44000
Total Sulphate as SO_4	%	0.01	1.09	1.82	12.7	5.25	4.39
Total Chloride	mg/kg	5	10000	9200	8700	10000	11000
Water Soluble Phosphate as P (2:1)	mg/kg	0.1	0.19	0.28	0.16	0.13	< 0.10
Total Nitrogen (Kjeldahl)	mg/kg	5	160	270	300	490	380
Total Organic Carbon (TOC)	%	0.1	0.8	1.4	0.7	1.7	1.5
Total Phenols							
Total Phenols (monohydric)	mg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	1.6	< 1.60	< 1.60	< 1.60	< 1.60	< 1.60

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368166	368167	368168	368169	368170
Sample Reference			SS02	SS03	SS04	SS05	SS06
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	5.6	3.4	3.0	4.1	6.6
Cadmium (aqua regia extractable)	mg/kg	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Copper (aqua regia extractable)	mg/kg	1	20	25	10	27	27
Iron (aqua regia extractable)	mg/kg	40	18000	7100	7800	26000	25000
Lead (aqua regia extractable)	mg/kg	1	4.4	46	< 1.0	1.7	2.6
Manganese (aqua regia extractable)	mg/kg	1	260	270	130	330	330
Mercury (aqua regia extractable)	mg/kg	0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	52	57	28	79	77
Tin (aqua regia extractable)	mg/kg	1	< 1.0	< 1.0	1.3	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	43	120	13	36	37
Magnesium (aqua regia extractable)	mg/kg	20	21000	9700	11000	37000	33000
Petroleum Hydrocarbons							
TPH1 (C10 - C40)	mg/kg	10	< 10	< 10	< 10	< 10	< 10
VOCs							
Chloromethane	µg/kg	1	-	-	< 1.0	-	-
Chloroethane	µg/kg	1	-	-	< 1.0	-	-
Bromomethane	µg/kg	1	-	-	< 1.0	-	-
Vinyl Chloride	µg/kg	1	-	-	< 1.0	-	-
Trichlorofluoromethane	µg/kg	1	-	-	< 1.0	-	-
1,1-dichloroethene	µg/kg	1	-	-	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	-	-	< 1.0	-	-
Cis-1,2-dichloroethene	µg/kg	1	-	-	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	-	-	< 1.0	-	-
1,1-dichloroethane	µg/kg	1	-	-	< 1.0	-	-
2,2-Dichloropropane	µg/kg	1	-	-	< 1.0	-	-
Trichloromethane	µg/kg	1	-	-	< 1.0	-	-
1,1,1-Trichloroethane	µg/kg	1	-	-	< 1.0	-	-
1,2-dichloroethane	µg/kg	1	-	-	< 1.0	-	-
1,1-Dichloropropene	µg/kg	1	-	-	< 1.0	-	-
Trans-1,2-dichloroethene	µg/kg	1	-	-	< 1.0	-	-
Benzene	µg/kg	1	-	-	< 1.0	-	-
Tetrachloromethane	µg/kg	1	-	-	< 1.0	-	-
1,2-dichloropropane	µg/kg	1	-	-	< 1.0	-	-
Trichloroethene	µg/kg	1	-	-	< 1.0	-	-
Dibromomethane	µg/kg	1	-	-	< 1.0	-	-
Bromodichloromethane	µg/kg	1	-	-	< 1.0	-	-
Cis-1,3-dichloropropene	µg/kg	1	-	-	< 1.0	-	-
Trans-1,3-dichloropropene	µg/kg	1	-	-	< 1.0	-	-
Toluene	µg/kg	1	-	-	< 1.0	-	-
1,1,2-Trichloroethane	µg/kg	1	-	-	< 1.0	-	-
1,3-Dichloropropane	µg/kg	1	-	-	< 1.0	-	-
Dibromochloromethane	µg/kg	1	-	-	< 1.0	-	-
Tetrachloroethene	µg/kg	1	-	-	< 1.0	-	-
1,2-Dibromoethane	µg/kg	1	-	-	< 1.0	-	-
Chlorobenzene	µg/kg	1	-	-	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	-	-	< 1.0	-	-

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368166	368167	368168	368169	368170
Sample Reference			SS02	SS03	SS04	SS05	SS06
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Ethylbenzene	µg/kg	1	-	-	< 1.0	-	-
p & m-xylene	µg/kg	1	-	-	< 1.0	-	-
Styrene	µg/kg	1	-	-	< 1.0	-	-
Tribromomethane	µg/kg	1	-	-	< 1.0	-	-
o-xylene	µg/kg	1	-	-	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	-	-	< 1.0	-	-
Isopropylbenzene	µg/kg	1	-	-	< 1.0	-	-
Bromobenzene	µg/kg	1	-	-	< 1.0	-	-
N-Propylbenzene	µg/kg	1	-	-	< 1.0	-	-
2-Chlorotoluene	µg/kg	1	-	-	< 1.0	-	-
4-Chlorotoluene	µg/kg	1	-	-	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/kg	1	-	-	< 1.0	-	-
Tert-Butylbenzene	µg/kg	1	-	-	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/kg	1	-	-	< 1.0	-	-
Sec-Butylbenzene	µg/kg	1	-	-	< 1.0	-	-
1,3-dichlorobenzene	µg/kg	1	-	-	< 1.0	-	-
P-Isopropyltoluene	µg/kg	1	-	-	< 1.0	-	-
1,2-dichlorobenzene	µg/kg	1	-	-	< 1.0	-	-
1,4-dichlorobenzene	µg/kg	1	-	-	< 1.0	-	-
Butylbenzene	µg/kg	1	-	-	< 1.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	-	-	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/kg	1	-	-	< 1.0	-	-
Hexachlorobutadiene	µg/kg	1	-	-	< 1.0	-	-
1,2,3-Trichlorobenzene	µg/kg	1	-	-	< 1.0	-	-

SVOCs

Aniline	mg/kg	0.1	-	-	-	-	< 0.1
Phenol	mg/kg	0.2	-	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	-	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	-	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	-	-	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	-	-	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	-	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	-	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	-	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	-	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	-	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	-	-	-	-	< 0.2
Isophorone	mg/kg	0.2	-	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	-	-	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	-	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	-	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	-	-	-	-	< 0.3
Naphthalene	mg/kg	0.1	-	-	-	-	< 0.10
2,4-Dichlorophenol	mg/kg	0.3	-	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	-	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	-	-	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	-	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	-	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	-	-	-	-	< 0.1

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368166	368167	368168	368169	368170
Sample Reference			SS02	SS03	SS04	SS05	SS06
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
2-Chloronaphthalene	mg/kg	0.1	-	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	-	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	-	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.1	-	-	-	-	< 0.10
Acenaphthene	mg/kg	0.1	-	-	-	-	< 0.10
2,4-Dinitrotoluene	mg/kg	0.2	-	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	-	-	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	-	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	-	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	-	-	-	-	< 0.2
Fluorene	mg/kg	0.1	-	-	-	-	< 0.10
Azobenzene	mg/kg	0.3	-	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	-	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	-	-	-	-	< 0.3
Phenanthrene	mg/kg	0.1	-	-	-	-	< 0.10
Anthracene	mg/kg	0.1	-	-	-	-	< 0.10
Carbazole	mg/kg	0.3	-	-	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	-	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	-	-	-	-	< 0.3
Fluoranthene	mg/kg	0.1	-	-	-	-	< 0.10
Pyrene	mg/kg	0.1	-	-	-	-	< 0.10
Butyl benzyl phthalate	mg/kg	0.3	-	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.1	-	-	-	-	< 0.10
Chrysene	mg/kg	0.05	-	-	-	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	-	-	-	-	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	-	-	-	-	< 0.10
Benzo(a)pyrene	mg/kg	0.1	-	-	-	-	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	-	-	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	-	-	-	-	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	-	-	-	-	< 0.05
Radiation							
Radiation screening α+β+γ	µSv/h	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368171	368172	368173	368174	368175
Sample Reference			SS07	SS08	SS09	SS10	SS11
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Moisture Content	%	N/A	5.7	4.7	0.91	4.2	1.9
Asbestos Identification Name	Type	N/A	-	-	-	-	-
Asbestos in Soil Screen	Type	N/A	-	-	-	-	-
General Inorganics							
pH	pH Units	N/A	7.8	7.9	7.8	7.9	8.1
Total Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	100	38000	22000	35000	42000	45000
Total Sulphate as SO_4	%	0.01	3.84	2.18	3.49	4.19	4.55
Total Chloride	mg/kg	5	12000	15000	15000	9200	9700
Water Soluble Phosphate as P (2:1)	mg/kg	0.1	< 0.10	< 0.10	0.16	0.28	0.21
Total Nitrogen (Kjeldahl)	mg/kg	5	420	280	300	330	350
Total Organic Carbon (TOC)	%	0.1	0.9	1.2	2.0	1.5	1.2
Total Phenols							
Total Phenols (monohydric)	mg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	1.6	< 1.60	< 1.60	< 1.60	< 1.60	< 1.60

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368171	368172	368173	368174	368175
Sample Reference			SS07	SS08	SS09	SS10	SS11
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	5.1	5.0	5.5	4.3	3.6
Cadmium (aqua regia extractable)	mg/kg	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Copper (aqua regia extractable)	mg/kg	1	34	24	23	28	20
Iron (aqua regia extractable)	mg/kg	40	30000	23000	20000	25000	18000
Lead (aqua regia extractable)	mg/kg	1	4.1	2.7	2.5	2.9	2.3
Manganese (aqua regia extractable)	mg/kg	1	440	330	250	360	300
Mercury (aqua regia extractable)	mg/kg	0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	100	62	57	86	58
Tin (aqua regia extractable)	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	42	34	30	37	26
Magnesium (aqua regia extractable)	mg/kg	20	35000	25000	28000	33000	26000
Petroleum Hydrocarbons							
TPH1 (C10 - C40)	mg/kg	10	< 10	< 10	< 10	< 10	< 10
VOCs							
Chloromethane	µg/kg	1	-	-	< 1.0	-	-
Chloroethane	µg/kg	1	-	-	< 1.0	-	-
Bromomethane	µg/kg	1	-	-	< 1.0	-	-
Vinyl Chloride	µg/kg	1	-	-	< 1.0	-	-
Trichlorofluoromethane	µg/kg	1	-	-	< 1.0	-	-
1,1-dichloroethene	µg/kg	1	-	-	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	-	-	< 1.0	-	-
Cis-1,2-dichloroethene	µg/kg	1	-	-	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	-	-	< 1.0	-	-
1,1-dichloroethane	µg/kg	1	-	-	< 1.0	-	-
2,2-Dichloropropane	µg/kg	1	-	-	< 1.0	-	-
Trichloromethane	µg/kg	1	-	-	< 1.0	-	-
1,1,1-Trichloroethane	µg/kg	1	-	-	< 1.0	-	-
1,2-dichloroethane	µg/kg	1	-	-	< 1.0	-	-
1,1-Dichloropropene	µg/kg	1	-	-	< 1.0	-	-
Trans-1,2-dichloroethene	µg/kg	1	-	-	< 1.0	-	-
Benzene	µg/kg	1	-	-	< 1.0	-	-
Tetrachloromethane	µg/kg	1	-	-	< 1.0	-	-
1,2-dichloropropane	µg/kg	1	-	-	< 1.0	-	-
Trichloroethene	µg/kg	1	-	-	< 1.0	-	-
Dibromomethane	µg/kg	1	-	-	< 1.0	-	-
Bromodichloromethane	µg/kg	1	-	-	< 1.0	-	-
Cis-1,3-dichloropropene	µg/kg	1	-	-	< 1.0	-	-
Trans-1,3-dichloropropene	µg/kg	1	-	-	< 1.0	-	-
Toluene	µg/kg	1	-	-	< 1.0	-	-
1,1,2-Trichloroethane	µg/kg	1	-	-	< 1.0	-	-
1,3-Dichloropropane	µg/kg	1	-	-	< 1.0	-	-
Dibromochloromethane	µg/kg	1	-	-	< 1.0	-	-
Tetrachloroethene	µg/kg	1	-	-	< 1.0	-	-
1,2-Dibromoethane	µg/kg	1	-	-	< 1.0	-	-
Chlorobenzene	µg/kg	1	-	-	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	-	-	< 1.0	-	-

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368171	368172	368173	368174	368175
Sample Reference			SS07	SS08	SS09	SS10	SS11
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Ethylbenzene	µg/kg	1	-	-	< 1.0	-	-
p & m-xylene	µg/kg	1	-	-	< 1.0	-	-
Styrene	µg/kg	1	-	-	< 1.0	-	-
Tribromomethane	µg/kg	1	-	-	< 1.0	-	-
o-xylene	µg/kg	1	-	-	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	-	-	< 1.0	-	-
Isopropylbenzene	µg/kg	1	-	-	< 1.0	-	-
Bromobenzene	µg/kg	1	-	-	< 1.0	-	-
N-Propylbenzene	µg/kg	1	-	-	< 1.0	-	-
2-Chlorotoluene	µg/kg	1	-	-	< 1.0	-	-
4-Chlorotoluene	µg/kg	1	-	-	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/kg	1	-	-	< 1.0	-	-
Tert-Butylbenzene	µg/kg	1	-	-	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/kg	1	-	-	< 1.0	-	-
Sec-Butylbenzene	µg/kg	1	-	-	< 1.0	-	-
1,3-dichlorobenzene	µg/kg	1	-	-	< 1.0	-	-
P-Isopropyltoluene	µg/kg	1	-	-	< 1.0	-	-
1,2-dichlorobenzene	µg/kg	1	-	-	< 1.0	-	-
1,4-dichlorobenzene	µg/kg	1	-	-	< 1.0	-	-
Butylbenzene	µg/kg	1	-	-	< 1.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	-	-	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/kg	1	-	-	< 1.0	-	-
Hexachlorobutadiene	µg/kg	1	-	-	< 1.0	-	-
1,2,3-Trichlorobenzene	µg/kg	1	-	-	< 1.0	-	-

SVOCs

Aniline	mg/kg	0.1	-	-	-	-	< 0.1
Phenol	mg/kg	0.2	-	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	-	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	-	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	-	-	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	-	-	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	-	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	-	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	-	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	-	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	-	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	-	-	-	-	< 0.2
Isophorone	mg/kg	0.2	-	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	-	-	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	-	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	-	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	-	-	-	-	< 0.3
Naphthalene	mg/kg	0.1	-	-	-	-	< 0.10
2,4-Dichlorophenol	mg/kg	0.3	-	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	-	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	-	-	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	-	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	-	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	-	-	-	-	< 0.1

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368171	368172	368173	368174	368175
Sample Reference			SS07	SS08	SS09	SS10	SS11
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
2-Chloronaphthalene	mg/kg	0.1	-	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	-	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	-	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.1	-	-	-	-	< 0.10
Acenaphthene	mg/kg	0.1	-	-	-	-	< 0.10
2,4-Dinitrotoluene	mg/kg	0.2	-	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	-	-	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	-	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	-	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	-	-	-	-	< 0.2
Fluorene	mg/kg	0.1	-	-	-	-	< 0.10
Azobenzene	mg/kg	0.3	-	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	-	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	-	-	-	-	< 0.3
Phenanthrene	mg/kg	0.1	-	-	-	-	< 0.10
Anthracene	mg/kg	0.1	-	-	-	-	< 0.10
Carbazole	mg/kg	0.3	-	-	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	-	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	-	-	-	-	< 0.3
Fluoranthene	mg/kg	0.1	-	-	-	-	< 0.10
Pyrene	mg/kg	0.1	-	-	-	-	< 0.10
Butyl benzyl phthalate	mg/kg	0.3	-	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.1	-	-	-	-	< 0.10
Chrysene	mg/kg	0.05	-	-	-	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	-	-	-	-	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	-	-	-	-	< 0.10
Benzo(a)pyrene	mg/kg	0.1	-	-	-	-	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	-	-	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	-	-	-	-	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	-	-	-	-	< 0.05
Radiation							
Radiation screening α+β+γ	µSv/h	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368176	368177	368178	368179	368180
Sample Reference			SS12	SS13	SS14	SS15	SS16
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Moisture Content	%	N/A	5.2	4.6	10	6.9	5.3
Asbestos Identification Name	Type	N/A	-	-	-	-	-
Asbestos in Soil Screen	Type	N/A	-	-	-	-	-
General Inorganics							
pH	pH Units	N/A	8.1	8.0	8.2	8.1	7.9
Total Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	100	21000	45000	30000	35000	40000
Total Sulphate as SO_4	%	0.01	2.12	4.49	3.04	3.54	4.03
Total Chloride	mg/kg	5	11000	11000	17000	16000	15000
Water Soluble Phosphate as P (2:1)	mg/kg	0.1	< 0.10	0.12	0.14	0.19	0.19
Total Nitrogen (Kjeldahl)	mg/kg	5	510	160	380	410	330
Total Organic Carbon (TOC)	%	0.1	1.0	0.7	0.9	1.0	1.2
Total Phenols							
Total Phenols (monohydric)	mg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	1.6	< 1.60	< 1.60	< 1.60	< 1.60	< 1.60

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368176	368177	368178	368179	368180
Sample Reference			SS12	SS13	SS14	SS15	SS16
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	5.7	4.0	4.2	2.8	3.9
Cadmium (aqua regia extractable)	mg/kg	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Copper (aqua regia extractable)	mg/kg	1	19	20	24	26	25
Iron (aqua regia extractable)	mg/kg	40	17000	19000	23000	23000	22000
Lead (aqua regia extractable)	mg/kg	1	2.8	2.4	2.8	1.9	1.6
Manganese (aqua regia extractable)	mg/kg	1	270	310	340	330	310
Mercury (aqua regia extractable)	mg/kg	0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	52	67	75	72	66
Tin (aqua regia extractable)	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	34	28	36	32	31
Magnesium (aqua regia extractable)	mg/kg	20	21000	26000	30000	32000	37000
Petroleum Hydrocarbons							
TPH1 (C10 - C40)	mg/kg	10	< 10	< 10	< 10	< 10	< 10
VOCs							
Chloromethane	µg/kg	1	-	< 1.0	-	-	-
Chloroethane	µg/kg	1	-	< 1.0	-	-	-
Bromomethane	µg/kg	1	-	< 1.0	-	-	-
Vinyl Chloride	µg/kg	1	-	< 1.0	-	-	-
Trichlorofluoromethane	µg/kg	1	-	< 1.0	-	-	-
1,1-dichloroethene	µg/kg	1	-	< 1.0	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	-	< 1.0	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	-	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	-	< 1.0	-	-	-
1,1-dichloroethane	µg/kg	1	-	< 1.0	-	-	-
2,2-Dichloropropane	µg/kg	1	-	< 1.0	-	-	-
Trichloromethane	µg/kg	1	-	< 1.0	-	-	-
1,1,1-Trichloroethane	µg/kg	1	-	< 1.0	-	-	-
1,2-dichloroethane	µg/kg	1	-	< 1.0	-	-	-
1,1-Dichloropropene	µg/kg	1	-	< 1.0	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	-	< 1.0	-	-	-
Benzene	µg/kg	1	-	< 1.0	-	-	-
Tetrachloromethane	µg/kg	1	-	< 1.0	-	-	-
1,2-dichloropropane	µg/kg	1	-	< 1.0	-	-	-
Trichloroethene	µg/kg	1	-	< 1.0	-	-	-
Dibromomethane	µg/kg	1	-	< 1.0	-	-	-
Bromodichloromethane	µg/kg	1	-	< 1.0	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	-	< 1.0	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	-	< 1.0	-	-	-
Toluene	µg/kg	1	-	< 1.0	-	-	-
1,1,2-Trichloroethane	µg/kg	1	-	< 1.0	-	-	-
1,3-Dichloropropane	µg/kg	1	-	< 1.0	-	-	-
Dibromochloromethane	µg/kg	1	-	< 1.0	-	-	-
Tetrachloroethene	µg/kg	1	-	< 1.0	-	-	-
1,2-Dibromoethane	µg/kg	1	-	< 1.0	-	-	-
Chlorobenzene	µg/kg	1	-	< 1.0	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	-	< 1.0	-	-	-

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368176	368177	368178	368179	368180
Sample Reference			SS12	SS13	SS14	SS15	SS16
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Ethylbenzene	µg/kg	1	-	< 1.0	-	-	-
p & m-xylene	µg/kg	1	-	< 1.0	-	-	-
Styrene	µg/kg	1	-	< 1.0	-	-	-
Tribromomethane	µg/kg	1	-	< 1.0	-	-	-
o-xylene	µg/kg	1	-	< 1.0	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	-	< 1.0	-	-	-
Isopropylbenzene	µg/kg	1	-	< 1.0	-	-	-
Bromobenzene	µg/kg	1	-	< 1.0	-	-	-
N-Propylbenzene	µg/kg	1	-	< 1.0	-	-	-
2-Chlorotoluene	µg/kg	1	-	< 1.0	-	-	-
4-Chlorotoluene	µg/kg	1	-	< 1.0	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	-	< 1.0	-	-	-
Tert-Butylbenzene	µg/kg	1	-	< 1.0	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	-	< 1.0	-	-	-
Sec-Butylbenzene	µg/kg	1	-	< 1.0	-	-	-
1,3-dichlorobenzene	µg/kg	1	-	< 1.0	-	-	-
P-Isopropyltoluene	µg/kg	1	-	< 1.0	-	-	-
1,2-dichlorobenzene	µg/kg	1	-	< 1.0	-	-	-
1,4-dichlorobenzene	µg/kg	1	-	< 1.0	-	-	-
Butylbenzene	µg/kg	1	-	< 1.0	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	-	< 1.0	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	-	< 1.0	-	-	-
Hexachlorobutadiene	µg/kg	1	-	< 1.0	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	-	< 1.0	-	-	-

SVOCs

Aniline	mg/kg	0.1	-	-	-	-	-
Phenol	mg/kg	0.2	-	-	-	-	-
2-Chlorophenol	mg/kg	0.1	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	-	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	-	-	-	-	-
2-Methylphenol	mg/kg	0.3	-	-	-	-	-
Hexachloroethane	mg/kg	0.05	-	-	-	-	-
Nitrobenzene	mg/kg	0.3	-	-	-	-	-
4-Methylphenol	mg/kg	0.2	-	-	-	-	-
Isophorone	mg/kg	0.2	-	-	-	-	-
2-Nitrophenol	mg/kg	0.3	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	-	-	-	-	-
Naphthalene	mg/kg	0.1	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	-	-	-	-	-
4-Chloroaniline	mg/kg	0.1	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	-	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	-	-	-	-	-

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368176	368177	368178	368179	368180
Sample Reference			SS12	SS13	SS14	SS15	SS16
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
2-Chloronaphthalene	mg/kg	0.1	-	-	-	-	-
Dimethylphthalate	mg/kg	0.1	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	-	-	-	-	-
Acenaphthylene	mg/kg	0.1	-	-	-	-	-
Acenaphthene	mg/kg	0.1	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	-	-	-	-	-
Dibenzofuran	mg/kg	0.2	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	-	-	-	-	-
Diethyl phthalate	mg/kg	0.2	-	-	-	-	-
4-Nitroaniline	mg/kg	0.2	-	-	-	-	-
Fluorene	mg/kg	0.1	-	-	-	-	-
Azobenzene	mg/kg	0.3	-	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	-	-	-	-	-
Phenanthrene	mg/kg	0.1	-	-	-	-	-
Anthracene	mg/kg	0.1	-	-	-	-	-
Carbazole	mg/kg	0.3	-	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	-	-	-	-	-
Anthraquinone	mg/kg	0.3	-	-	-	-	-
Fluoranthene	mg/kg	0.1	-	-	-	-	-
Pyrene	mg/kg	0.1	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.1	-	-	-	-	-
Chrysene	mg/kg	0.05	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.1	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.1	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.1	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.1	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	-	-	-	-	-
Radiation							
Radiation screening α+β+γ	µSv/h	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368181	368182	368183	368184
Sample Reference			SS17	SS18	SS19	SS20
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**				
Moisture Content	%	N/A	0.24	1.1	1.9	0.72
Asbestos Identification Name	Type	N/A	-	-	-	-
Asbestos in Soil Screen	Type	N/A	Not-detected	-	-	-
General Inorganics						
pH	pH Units	N/A	8.0	8.3	8.1	8.0
Total Cyanide	mg/kg	1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	100	72000	69000	39000	58000
Total Sulphate as SO_4	%	0.01	7.18	6.91	3.94	5.82
Total Chloride	mg/kg	5	9800	12000	14000	8400
Water Soluble Phosphate as P (2:1)	mg/kg	0.1	0.16	0.13	< 0.10	< 0.10
Total Nitrogen (Kjeldahl)	mg/kg	5	290	280	340	410
Total Organic Carbon (TOC)	%	0.1	1.4	1.5	1.5	2.0
Total Phenols						
Total Phenols (monohydric)	mg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0
Speciated PAHs						
Naphthalene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH						
Speciated Total EPA-16 PAHs	mg/kg	1.6	< 1.60	< 1.60	< 1.60	< 1.60

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368181	368182	368183	368184
Sample Reference			SS17	SS18	SS19	SS20
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**				
Heavy Metals / Metalloids						
Arsenic (aqua regia extractable)	mg/kg	1	3.8	3.5	3.4	2.9
Cadmium (aqua regia extractable)	mg/kg	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	< 4.0	< 4.0	< 4.0	< 4.0
Copper (aqua regia extractable)	mg/kg	1	17	15	23	19
Iron (aqua regia extractable)	mg/kg	40	15000	14000	20000	18000
Lead (aqua regia extractable)	mg/kg	1	1.3	1.8	2.4	1.9
Manganese (aqua regia extractable)	mg/kg	1	220	190	300	230
Mercury (aqua regia extractable)	mg/kg	0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	45	36	65	51
Tin (aqua regia extractable)	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	24	21	30	25
Magnesium (aqua regia extractable)	mg/kg	20	33000	25000	26000	36000
Petroleum Hydrocarbons						
TPH1 (C10 - C40)	mg/kg	10	< 10	< 10	< 10	< 10
VOCs						
Chloromethane	µg/kg	1	-	< 1.0	-	-
Chloroethane	µg/kg	1	-	< 1.0	-	-
Bromomethane	µg/kg	1	-	< 1.0	-	-
Vinyl Chloride	µg/kg	1	-	< 1.0	-	-
Trichlorofluoromethane	µg/kg	1	-	< 1.0	-	-
1,1-dichloroethene	µg/kg	1	-	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	-	< 1.0	-	-
Cis-1,2-dichloroethene	µg/kg	1	-	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	-	< 1.0	-	-
1,1-dichloroethane	µg/kg	1	-	< 1.0	-	-
2,2-Dichloropropane	µg/kg	1	-	< 1.0	-	-
Trichloromethane	µg/kg	1	-	< 1.0	-	-
1,1,1-Trichloroethane	µg/kg	1	-	< 1.0	-	-
1,2-dichloroethane	µg/kg	1	-	< 1.0	-	-
1,1-Dichloropropene	µg/kg	1	-	< 1.0	-	-
Trans-1,2-dichloroethene	µg/kg	1	-	< 1.0	-	-
Benzene	µg/kg	1	-	< 1.0	-	-
Tetrachloromethane	µg/kg	1	-	< 1.0	-	-
1,2-dichloropropane	µg/kg	1	-	< 1.0	-	-
Trichloroethene	µg/kg	1	-	< 1.0	-	-
Dibromomethane	µg/kg	1	-	< 1.0	-	-
Bromodichloromethane	µg/kg	1	-	< 1.0	-	-
Cis-1,3-dichloropropene	µg/kg	1	-	< 1.0	-	-
Trans-1,3-dichloropropene	µg/kg	1	-	< 1.0	-	-
Toluene	µg/kg	1	-	< 1.0	-	-
1,1,2-Trichloroethane	µg/kg	1	-	< 1.0	-	-
1,3-Dichloropropane	µg/kg	1	-	< 1.0	-	-
Dibromochloromethane	µg/kg	1	-	< 1.0	-	-
Tetrachloroethene	µg/kg	1	-	< 1.0	-	-
1,2-Dibromoethane	µg/kg	1	-	< 1.0	-	-
Chlorobenzene	µg/kg	1	-	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	-	< 1.0	-	-

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368181	368182	368183	368184
Sample Reference			SS17	SS18	SS19	SS20
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**				
Ethylbenzene	µg/kg	1	-	< 1.0	-	-
p & m-xylene	µg/kg	1	-	< 1.0	-	-
Styrene	µg/kg	1	-	< 1.0	-	-
Tribromomethane	µg/kg	1	-	< 1.0	-	-
o-xylene	µg/kg	1	-	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	-	< 1.0	-	-
Isopropylbenzene	µg/kg	1	-	< 1.0	-	-
Bromobenzene	µg/kg	1	-	< 1.0	-	-
N-Propylbenzene	µg/kg	1	-	< 1.0	-	-
2-Chlorotoluene	µg/kg	1	-	< 1.0	-	-
4-Chlorotoluene	µg/kg	1	-	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/kg	1	-	< 1.0	-	-
Tert-Butylbenzene	µg/kg	1	-	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/kg	1	-	< 1.0	-	-
Sec-Butylbenzene	µg/kg	1	-	< 1.0	-	-
1,3-dichlorobenzene	µg/kg	1	-	< 1.0	-	-
P-Isopropyltoluene	µg/kg	1	-	< 1.0	-	-
1,2-dichlorobenzene	µg/kg	1	-	< 1.0	-	-
1,4-dichlorobenzene	µg/kg	1	-	< 1.0	-	-
Butylbenzene	µg/kg	1	-	< 1.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	-	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/kg	1	-	< 1.0	-	-
Hexachlorobutadiene	µg/kg	1	-	< 1.0	-	-
1,2,3-Trichlorobenzene	µg/kg	1	-	< 1.0	-	-

SVOCs

Aniline	mg/kg	0.1	-	< 0.1	-	-
Phenol	mg/kg	0.2	-	< 0.2	-	-
2-Chlorophenol	mg/kg	0.1	-	< 0.1	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	-	< 0.2	-	-
1,3-Dichlorobenzene	mg/kg	0.2	-	< 0.2	-	-
1,2-Dichlorobenzene	mg/kg	0.1	-	< 0.1	-	-
1,4-Dichlorobenzene	mg/kg	0.2	-	< 0.2	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	-	< 0.1	-	-
2-Methylphenol	mg/kg	0.3	-	< 0.3	-	-
Hexachloroethane	mg/kg	0.05	-	< 0.05	-	-
Nitrobenzene	mg/kg	0.3	-	< 0.3	-	-
4-Methylphenol	mg/kg	0.2	-	< 0.2	-	-
Isophorone	mg/kg	0.2	-	< 0.2	-	-
2-Nitrophenol	mg/kg	0.3	-	< 0.3	-	-
2,4-Dimethylphenol	mg/kg	0.3	-	< 0.3	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	-	< 0.3	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	-	< 0.3	-	-
Naphthalene	mg/kg	0.1	-	< 0.10	-	-
2,4-Dichlorophenol	mg/kg	0.3	-	< 0.3	-	-
4-Chloroaniline	mg/kg	0.1	-	< 0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	-	< 0.1	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	-	< 0.1	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	-	< 0.1	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	-	< 0.2	-	-
2-Methylnaphthalene	mg/kg	0.1	-	< 0.1	-	-

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Lab Sample Number			368181	368182	368183	368184
Sample Reference			SS17	SS18	SS19	SS20
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			SURFACE	SURFACE	SURFACE	SURFACE
Date Sampled			11/08/2014	11/08/2014	11/08/2014	11/08/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**				
2-Chloronaphthalene	mg/kg	0.1	-	< 0.1	-	-
Dimethylphthalate	mg/kg	0.1	-	< 0.1	-	-
2,6-Dinitrotoluene	mg/kg	0.1	-	< 0.1	-	-
Acenaphthylene	mg/kg	0.1	-	< 0.10	-	-
Acenaphthene	mg/kg	0.1	-	< 0.10	-	-
2,4-Dinitrotoluene	mg/kg	0.2	-	< 0.2	-	-
Dibenzofuran	mg/kg	0.2	-	< 0.2	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	-	< 0.3	-	-
Diethyl phthalate	mg/kg	0.2	-	< 0.2	-	-
4-Nitroaniline	mg/kg	0.2	-	< 0.2	-	-
Fluorene	mg/kg	0.1	-	< 0.10	-	-
Azobenzene	mg/kg	0.3	-	< 0.3	-	-
Bromophenyl phenyl ether	mg/kg	0.2	-	< 0.2	-	-
Hexachlorobenzene	mg/kg	0.3	-	< 0.3	-	-
Phenanthrene	mg/kg	0.1	-	< 0.10	-	-
Anthracene	mg/kg	0.1	-	< 0.10	-	-
Carbazole	mg/kg	0.3	-	< 0.3	-	-
Dibutyl phthalate	mg/kg	0.2	-	< 0.2	-	-
Anthraquinone	mg/kg	0.3	-	< 0.3	-	-
Fluoranthene	mg/kg	0.1	-	< 0.10	-	-
Pyrene	mg/kg	0.1	-	< 0.10	-	-
Butyl benzyl phthalate	mg/kg	0.3	-	< 0.3	-	-
Benzo(a)anthracene	mg/kg	0.1	-	< 0.10	-	-
Chrysene	mg/kg	0.05	-	< 0.05	-	-
Benzo(b)fluoranthene	mg/kg	0.1	-	< 0.10	-	-
Benzo(k)fluoranthene	mg/kg	0.1	-	< 0.10	-	-
Benzo(a)pyrene	mg/kg	0.1	-	< 0.10	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	< 0.10	-	-
Dibenz(a,h)anthracene	mg/kg	0.1	-	< 0.10	-	-
Benzo(ghi)perylene	mg/kg	0.05	-	< 0.05	-	-
Radiation						
Radiation screening α+β+γ	µSv/h	0.2	< 0.2	< 0.2	< 0.2	< 0.2

Analytical Report Number: 14-59242

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* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 2 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
368151	BH01	None Supplied	1.0-1.5	Brown clay and sand.
368152	BH01	None Supplied	4.5-5.0	Brown clay.
368153	BH02	None Supplied	3.0-3.5	Brown clay and sand.
368154	BH02	None Supplied	5.5-6.0	Brown clay and sand.
368155	BH03	None Supplied	1.0-1.5	Brown clay and sand.
368156	BH03	None Supplied	2.5-3.0	Light grey clay and sand.
368157	BH04	None Supplied	0.5-1.0	Light brown sand.
368158	BH04	None Supplied	4.0-4.5	Brown clay and sand.
368159	BH05	None Supplied	0.5-1.0	Light brown clay and sand.
368160	BH05	None Supplied	4.0-4.5	Brown clay and sand.
368161	BH06	None Supplied	1.5-2.0	Brown clay and sand.
368162	BH06	None Supplied	5.5-6.0	Brown clay and sand.
368163	BH07	None Supplied	0.5-1.0	Brown clay and sand.
368164	BH07	None Supplied	3.5-4.0	Brown clay and sand.
368165	SS01	None Supplied	SURFACE	Light brown sandy topsoil with gravel.
368166	SS02	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368167	SS03	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368168	SS04	None Supplied	SURFACE	Light brown sandy topsoil with gravel.
368169	SS05	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368170	SS06	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368171	SS07	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368172	SS08	None Supplied	SURFACE	Light brown sandy topsoil with gravel.
368173	SS09	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368174	SS10	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368175	SS11	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368176	SS12	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368177	SS13	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368178	SS14	None Supplied	SURFACE	Brown clay and sand.
368179	SS15	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368180	SS16	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368181	SS17	None Supplied	SURFACE	Brown sandy topsoil with gravel.
368182	SS18	None Supplied	SURFACE	Light brown sandy topsoil with gravel.
368183	SS19	None Supplied	SURFACE	Brown sandy gravel with gravel.
368184	SS20	None Supplied	SURFACE	Light brown sandy topsoil with gravel.

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Sampling

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Date Sampled	Time Taken	Sample type	Sample state (odour, color etc)	Sampling personel	Sampling plan No.	Reference document
368151	BH01	None Supplied	1.0-1.5	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368152	BH01	None Supplied	4.5-5.0	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368153	BH02	None Supplied	3.0-3.5	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368154	BH02	None Supplied	5.5-6.0	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368155	BH03	None Supplied	1.0-1.5	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368156	BH03	None Supplied	2.5-3.0	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368157	BH04	None Supplied	0.5-1.0	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368158	BH04	None Supplied	4.0-4.5	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368159	BH05	None Supplied	0.5-1.0	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368160	BH05	None Supplied	4.0-4.5	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368161	BH06	None Supplied	1.5-2.0	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368162	BH06	None Supplied	5.5-6.0	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368163	BH07	None Supplied	0.5-1.0	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368164	BH07	None Supplied	3.5-4.0	13/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368165	SS01	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368166	SS02	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368167	SS03	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368168	SS04	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368169	SS05	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368170	SS06	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368171	SS07	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368172	SS08	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368173	SS09	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368174	SS10	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368175	SS11	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368176	SS12	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368177	SS13	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368178	SS14	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368179	SS15	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368180	SS16	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368181	SS17	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368182	SS18	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368183	SS19	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
368184	SS20	None Supplied	SURFACE	11/08/2014	None Supplied	soil	None Supplied	As specified by the client	As specified by the client	As specified by the client

Uncertainty	10%
Samples were collected and delivered to the laboratory by the client	

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	ISO 17025
Chloride in soil	Determination of acid soluble chloride in soil by extraction with nitric acid, addition of silver nitrate followed by titration against thiocyanate.	In-house method	L075-PL	D	NONE
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	D	ISO 17025
Kjeldahl nitrogen in soil	Determination of total nitrogen using the Kjeldahl-digestion method and colorimetric determination.	In house method based on BS 7755-3.7:1995 &	L087-PL	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
Radiation Screen	Determined using a Geiger counter.	In-house method		W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the	In-house method based on British Standard Methods and ISO 17025 requirements.	L019-UK/PL	D	NONE

Analytical Report Number: 14-59242

Project / Site name: WTPS ESIA

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	ISO 17025
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPH1 (Soil)	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	ISO 17025
Water Soluble Phosphate as P in soil	Determination of phosphate in soil by extraction with water then by addition of ammonium molybdate, potassium antimonyl tartrate and ascorbic acid followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L048-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Appendix G3: Sediment Sample Laboratory Analytical Certificates

David Wells
Earth & Marine Enviromental Consultants
6 Bell Yard
WC2A 2JR
London

t: 01322 665566
f: 01322 661480
e: david.wells@eame.co.uk

i2 Analytical Ltd.
ul.Pionierów 39,
41-711 Ruda Slaska,
Poland

t: 004832 3426011
f: 004832 3426012

Analytical Report Number : 14-60552A

Project / Site name:	WTPS ESIA	**Samples received on:**	29/09/2014
Your job number:		**Samples instructed on:**	29/09/2014
Your order number:		**Analysis completed by:**	10-10-2014
Report Issue Number:	1	**Report issued on:**	10-10-2014
Samples Analysed:	5 soil samples		

Dariusz Piotrowski
V-ce Dyrektor ds. Technicznych

Signed:

Dariusz Piotrowski
Technical Manager
For & on behalf of i2 Analytical Ltd.

i2 Analytical Limited Sp. z o.o.
Oddział w Polsce
ul. Pionierów 39
41-711 Ruda Śląska
NIP 2050000762

Agnieszka Pietrowska
Kierownik ds. jakości

Signed:

Agnieszka Pietrowska
Quality Manager
For & on behalf of i2 Analytical Ltd.

Other office located at: Building 19,BRE,Garston, Watford, WD25 9XX

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Analytical Report Number: 14-60552A

Project / Site name: WTPS ESIA

Lab Sample Number			376261	376262	376263	376264	376265
Sample Reference			SWO1	SWO2	SWO3	SWO4	SWO5
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled			13/09/2014	13/09/2014	13/09/2014	13/09/2014	13/09/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Moisture Content	%	N/A	8.8	4.4	43	37	46
General Inorganics							
pH	pH Units	N/A	7.5	8.0	7.9	8.0	7.9
Total Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	100	1720	1060	4470	4450	5280
Total Sulphate as SO_4	%	0.01	0.172	0.106	0.447	0.445	0.528
Total Chloride	mg/kg	5	2200	1200	10000	11000	9200
Water Soluble Phosphate as P (2:1)	mg/kg	0.1	< 0.10	< 0.10	< 0.10	0.11	0.12
Total Nitrogen (Kjeldahl)	mg/kg	5	1200	270	260	300	340
Total Organic Carbon (TOC)	%	0.1	0.2	0.2	0.6	0.7	0.7
Total Phenols							
Total Phenols (monohydric)	mg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	1.6	< 1.60	< 1.60	< 1.60	< 1.60	< 1.60

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Lab Sample Number			376261	376262	376263	376264	376265
Sample Reference			SWO1	SWO2	SWO3	SWO4	SWO5
Sample Number			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled			13/09/2014	13/09/2014	13/09/2014	13/09/2014	13/09/2014
Time Taken			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**					
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	3.0	4.3	3.4	3.6	2.8
Cadmium (aqua regia extractable)	mg/kg	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Copper (aqua regia extractable)	mg/kg	1	4.4	6.1	24	26	26
Iron (aqua regia extractable)	mg/kg	40	4800	7200	31000	34000	32000
Lead (aqua regia extractable)	mg/kg	1	1.4	2.8	4.4	4.6	3.9
Manganese (aqua regia extractable)	mg/kg	1	100	140	360	400	390
Mercury (aqua regia extractable)	mg/kg	0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	8.6	8.8	81	89	88
Tin (aqua regia extractable)	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	11	12	38	41	40
Magnesium (aqua regia extractable)	mg/kg	20	2800	2600	32000	35000	35000
Petroleum Hydrocarbons							
TPH1 (C10 - C40)	mg/kg	10	< 10	< 10	< 10	< 10	< 10

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* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 2 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
376261	SWO1	None Supplied	None Supplied	Light brown gravelly sand.
376262	SWO2	None Supplied	None Supplied	Light brown gravelly sand.
376263	SWO3	None Supplied	None Supplied	Light grey sandy clay.
376264	SWO4	None Supplied	None Supplied	Light grey sandy clay.
376265	SWO5	None Supplied	None Supplied	Light grey sandy clay.

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Sampling

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Date Sampled	Time Taken	Sample type	Sample state (odour, color etc)	Sampling personel	Sampling plan No.	Reference document
376261	SWO1	None Supplied	None Supplied	13/09/2014	None Supplied	Soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
376262	SWO2	None Supplied	None Supplied	13/09/2014	None Supplied	Soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
376263	SWO3	None Supplied	None Supplied	13/09/2014	None Supplied	Soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
376264	SWO4	None Supplied	None Supplied	13/09/2014	None Supplied	Soil	None Supplied	As specified by the client	As specified by the client	As specified by the client
376265	SWO5	None Supplied	None Supplied	13/09/2014	None Supplied	Soil	None Supplied	As specified by the client	As specified by the client	As specified by the client

Uncertainty	10%

Samples were collected and delivered to the laboratory by the client

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Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	ISO 17025
Chloride in soil	Determination of acid soluble chloride in soil by extraction with nitric acid, addition of silver nitrate followed by titration against thiocyanate.	In-house method	L075-PL	D	NONE
Complex cyanide in soil	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	D	ISO 17025
Kjeldahl nitrogen in soil	Determination of total nitrogen using the Kjeldahl-digestion method and colorimetric determination.	In house method based on BS 7755-3.7:1995 &	L087-PL	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	ISO 17025
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-UK	D	ISO 17025

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Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPH1 (Soil)	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method	L064-PL	D	ISO 17025
Water Soluble Phosphate as P in soil	Determination of phosphate in soil by extraction with water then by addition of ammonium molybdate, potassium antimonyl tartrate and ascorbic acid followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L048-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.