

Certificate of Analysis

Client: YGC

Project: 24022057

Quote: BEC240133694 V1.1

Project Ref: 8603

Site: Pwllheli Harbour Stockpile

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No. Samples Received: 6

Date Received: 19/02/2024

Analysis Date: 28/02/2024

Date Issued: 28/02/2024

Report Type: Final Version 01

This report supersedes any versions previously issued by the laboratory



Reported by Customer Service Co-Ordinator
Samantha Edwards



Client: YGC
Project Name: 8603-Pwllhgli Harbour Stockpile
Project No: 24022057
Date Issued: 28/02/2024

Samples Analysed

<u>Text ID</u>	<u>Sample Reference</u>	<u>Sampling Date</u>	<u>Sample Type</u>	<u>Sample Description</u>
24022057-001	SP1	15/02/2024 14:00:00	SOLID	Soil Sample
24022057-002	SP2	15/02/2024 14:05:00	SOLID	Soil Sample
24022057-003	SP3	15/02/2024 14:07:00	SOLID	Soil Sample
24022057-004	SP4	15/02/2024 14:15:00	SOLID	Soil Sample
24022057-005	SP5	15/02/2024 14:23:00	SOLID	Soil Sample
24022057-006	SP6	15/02/2024 14:29:00	SOLID	Soil Sample



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Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002	003	004	005	006
					Customer ID	SP1	SP2	SP3	SP4	SP5	SP6
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	15/02/2024	15/02/2024	15/02/2024	15/02/2024	15/02/2024	15/02/2024
Arsenic as As	ICPMSS	0.3	mg/kg^	UM		3.4	3.7	3.9	3.8	5.3	3.4
Cadmium as Cd	ICPMSS	0.2	mg/kg^	UM		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Copper as Cu	ICPMSS	1.6	mg/kg^	UM		3.4	3.2	6.4	3.2	3.0	2.9
Lead as Pb	ICPMSS	0.7	mg/kg^	UM		4.3	4.0	3.7	3.8	3.6	4.2
Mercury as Hg	ICPMSS	0.5	mg/kg^	UM		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel as Ni	ICPMSS	2	mg/kg^	UM		6.4	6.9	6.7	6.4	7.5	7.0
Selenium as Se	ICPMSS	0.5	mg/kg^	UM		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Chromium as Cr	ICPMSS	1.2	mg/kg^	UM		7.1	7.6	7.3	7.8	7.6	7.7
Zinc as Zn	ICPMSS	16	mg/kg^	UM		20.4	23.8	22.0	21.2	23.0	20.8
Boron as B	ICPBOR	0.5	mg/kg^	UM		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Acenaphthylene	PAHMSUS	0.08	mg/kg^	U		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Anthracene	PAHMSUS	0.08	mg/kg^	U		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Benzo[a]anthracene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Benzo[a]pyrene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Benzo[b]fluoranthene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Benzo[g,h,i]perylene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Benzo[k]fluoranthene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Chrysene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08



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					Customer ID	SP1	SP2	SP3	SP4	SP5	SP6
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	15/02/2024	15/02/2024	15/02/2024	15/02/2024	15/02/2024	15/02/2024
Dibenzo[a,h]anthracene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Fluoranthene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Fluorene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Indeno[1,2,3-cd]pyrene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Naphthalene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Phenanthrene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Pyrene	PAHMSUS	0.08	mg/kg^	UM		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Total PAH 16	PAHMSUS	1.28	mg/kg^	U		<1.34	<1.32	<1.34	<1.34	<1.33	<1.35
PCB 101	PCBECD	5	µg/kg^	UM		<5.25	<5.15	<5.22	<5.24	<5.20	<5.27
PCB 118	PCBECD	5	µg/kg^	UM		<5.25	<5.15	<5.22	<5.24	<5.20	<5.27
PCB 138	PCBECD	5	µg/kg^	UM		<5.25	<5.15	<5.22	<5.24	<5.20	<5.27
PCB 153	PCBECD	5	µg/kg^	UM		<5.25	<5.15	<5.22	<5.24	<5.20	<5.27
PCB 180	PCBECD	5	µg/kg^	UM		<5.25	<5.15	<5.22	<5.24	<5.20	<5.27
PCB 28	PCBECD	5	µg/kg^	UM		<5.25	<5.15	<5.22	<5.24	<5.20	<5.27
PCB 52	PCBECD	5	µg/kg^	UM		<5.25	<5.15	<5.22	<5.24	<5.20	<5.27
Dibutyltin as Sn	OGSNMS	1	µg Sn/kg^	N		<1	<1	<1	<1	<1	<1
Tributyltin as Sn	OGSNMS	1	µg Sn/kg^	N		<1	<1	<1	<1	<1	<1
Triphenyltin as Sn	OGSNMS	1	µg Sn/kg^	N		<1	<1	<1	<1	<1	<1
Total Moisture at 35°C	CLANDPREP	0.1	%	N		4.7	2.9	4.2	4.6	3.9	5.1



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					Sample ID	001	002	003	004	005	006
					Customer ID	SP1	SP2	SP3	SP4	SP5	SP6
					Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
					Sampling Date	15/02/2024	15/02/2024	15/02/2024	15/02/2024	15/02/2024	15/02/2024
					Analysis	Method Code	MDL	Units	Accred.		
Colour of Material	CLANDPREP		-	N	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Major Constituents	CLANDPREP		-	N	SAND	SAND	SAND	SAND	SAND	SAND	SAND
Minor Constituents	CLANDPREP		-	N	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
Miscellaneous Constituents	CLANDPREP		-	N	n/a	n/a	n/a	n/a	n/a	n/a	n/a



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Deviating Sample Report

All samples received in an appropriate condition with no deviancies noted with the samples.

Analysis Method

<u>Method Code</u>	<u>Method Description</u>	<u>Analysis Method</u>
CLANDPREP	DW35 - CLand Prep and Dry Weight Correction to 35°C	As Received
CLANDPREP	Solid Material Description	As Received
ICPBOR	Boron (Water Soluble) by ICPOES	Air Dried & Ground
ICPMSS	Arsenic in Solids by ICPMS	Air Dried & Ground
ICPMSS	Cadmium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Chromium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Copper in Solids by ICPMS	Air Dried & Ground
ICPMSS	Lead in Solids by ICPMS	Air Dried & Ground
ICPMSS	Mercury in Solids by ICPMS	Air Dried & Ground
ICPMSS	Nickel in Solids by ICPMS	Air Dried & Ground
ICPMSS	Selenium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Zinc in Solids by ICPMS	Air Dried & Ground
OGSNMS	Organotins Suite (DBT, TBT, TPhT)	As Received
PAHMSUS	16 PAHs by GCMS	As Received
PCBECD	PCBs, ICES 7 Congeners	As Received

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are as follows:

<u>Letter</u>	<u>Note</u>
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference, the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to the parameter value being beyond our calibration range (and following the maximum size of dilution allowed, where applicable), the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing. Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.



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HWOL Acronym Key

<u>Acronym</u>	<u>Description</u>
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Additional Information

This report refers to samples as received. SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

The accreditation codes are as follows:

- U = UKAS accredited analysis
- M = MCERT accredited analysis
- N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 35 °C.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35 °C.

This report shall not be reproduced except in full, without written approval of the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

- IS = Insufficient Sample to complete analysis
- NA = Sample is not amenable for the required analysis
- ND = Results cannot be determined

Items listed with a 'SUB' method code prefix have been carried out by an external subcontracted laboratory.

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the subcontracted lab for information regarding any deviancies for this analysis.

Summaries of analysis methods are available upon request.

End of Certificate of Analysis