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Richard Lewis
WEPA UK Ltd
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CF34 9RS

Date	21st December 2023
Date Samples Received	13th December 2023
Date Samples Tested	14th to 20th December 2023
Reference No.	106248/1 & 2

Test Report ALL61700/23/HW-1

2 Samples of Effluent, labelled: -

106248/1	Sample 1 - 14:00
106248/2	Sample 2 - 14:15

Not sampled by us

An analysis has been undertaken on the above samples as requested and a copy of the sub-contracting report is as follows: -

Reviewed A Pettman Authorised

H Williams (Director)

For Anchem Laboratories Limited

UKAS TESTING
4041

Analytical i2 Environmental Science

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Analytical Report Number : 23-74837

Project / Site name:	Wepa	**Samples received on:**	14/12/2023
Your job number:	106248	**Samples instructed on/ Analysis started on:**	14/12/2023
Your order number:	2023-309	**Analysis completed by:**	20/12/2023
Report Issue Number:	1	**Report issued on:**	20/12/2023
Samples Analysed:	2 water samples		

Signed: JSzwagrak

Joanna Szwagrzak
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

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
asbestos	- 6 months from reporting

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

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

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Analytical i2 Environmental Science

Analytical Report Number: 23-74837
Project / Site name: Wepa

Your Order No: 2023-309

Lab Sample Number				2910755	2910756
Sample Reference				106248/01	106248/02
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				12/12/2023	12/12/2023
Time Taken				1400	1415
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Heavy Metals / Metalloids					
Mercury (dissolved) CV-AFS	µg/l	0.005	ISO 17025	0.0058	< 0.0050
Cadmium (total)	µg/l	0.02	ISO 17025	0.03	< 0.02
Lead (total)	µg/l	0.2	ISO 17025	0.4	0.4
Nickel (total)	µg/l	0.5	ISO 17025	1.7	1.8
Zinc (total)	µg/l	0.5	ISO 17025	18	25
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.03	< 0.02
Copper (dissolved)	µg/l	0.5	ISO 17025	3.7	4.4
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	1.6	1.8
Zinc (dissolved)	µg/l	0.5	ISO 17025	11	15
Copper (total)	mg/l	0.0005	ISO 17025	0.0044	0.0042
SVOCs					
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05

Analytical Report Number: 23-74837
Project / Site name: Wepa

Your Order No: 2023-309

Lab Sample Number				2910755	2910756
Sample Reference				106248/01	106248/02
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				12/12/2023	12/12/2023
Time Taken				1400	1415
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
3&4-Methylphenol	µg/l	0.1	NONE	< 0.10	< 0.10
Environmental Forensics					
Headspace Broadscan		N/A	NONE	See Appendix	See Appendix

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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Analytical Report Number : 23-74837
Project / Site name: Wepa

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-MS (total)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Mercury Low Level (Dissolved) in Water	Dissolved mercury in water by CV-AFS, accredited matrices GW, SW, and PW.	In-house method based on USEPA method 1631	L085-PL	W	ISO 17025
TO - Headspace Broadscan in water	Qualitative GC-MS scan based on the NIST and Wiley Library.	In house method - GC-MS broadscan.		W	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' 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.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Environmental Science

Analytical Report Number:

23-74837

Project / Site Name:	**WEPA**	**Samples received on:**	**14.12.2023**
Your job number:	**23-74837**	**Samples instructed on:**	**14.12.2023**
Your order number:	**2023-309**	**Analysis completed by:**	**20.12.2023**
Report issue number:	**1**	**Report issued on:**	**20.12.2023**
Samples Analysed:	**2**	**Pages (inc):**	**Page 2 of 6**

Signed:

Małgorzata van Eersel

Environmental Forensics Head of Section

For & on behalf of i2 Analytical Ltd.

Report 23-74837

Laboratory Reference	Client reference
2910755	106248/01
2910756	106248/02

GC-MS Broadscan

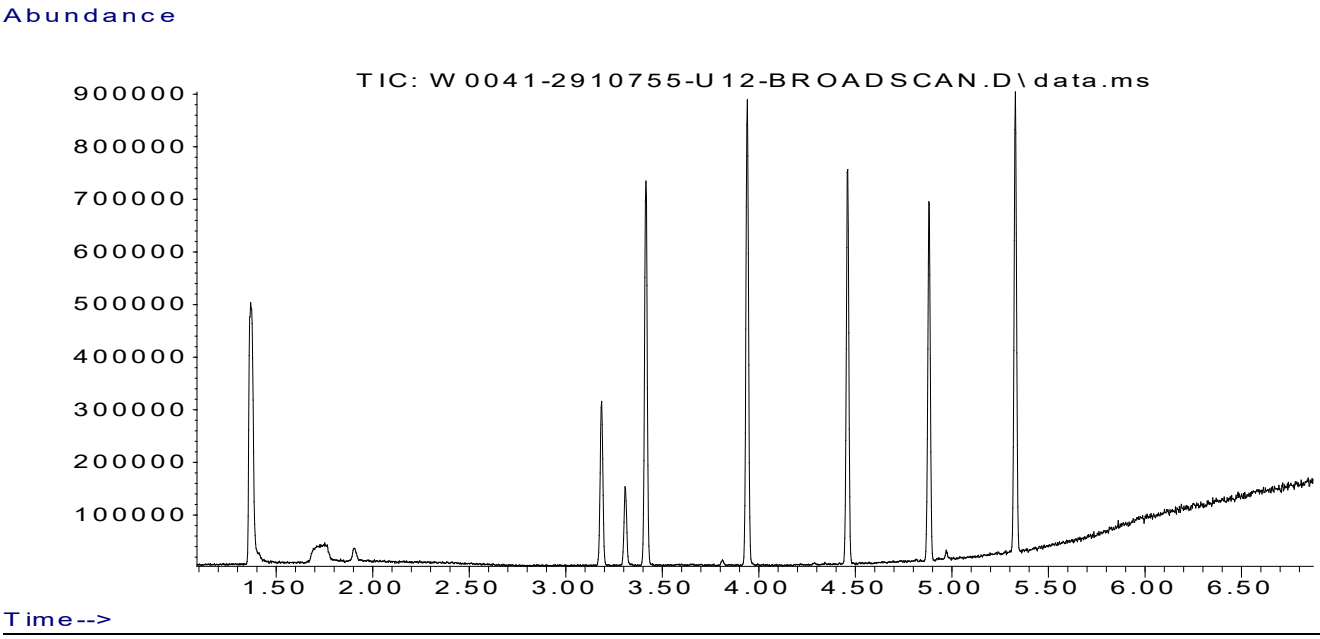
Two water samples were received. The samples were transparent without any odour. 10ml of each sample was transferred to a headspace vial and spiked with 200µl of mixture of internal standards (20µg/ml). The samples were extracted by heat and agitation in a sealed vial to reach equilibrium with the headspace. The resulting volatile materials are analysed by HS/GC-MS, and quantified using the internal standards Toluene-d8, Chlorobenzene-d5, 4-Bromofluorobenzene, 1,4-Dichlorobenzene-d4 that are added to the samples prior to extraction. These values are as estimates and should be used as indicative only.
Owing to the scope of the testing, gas chromatography coupled with Mass Spectrometry Headspace (GC-MS HS) was used. The GC-MS method covers a range of analytes, with boiling points from approximately 35°C to over 250°C.

Although comprehensive, the suite above is only able to detect and identify those compounds amenable to each particular technique and therefore would not be able to cover every possible compound.

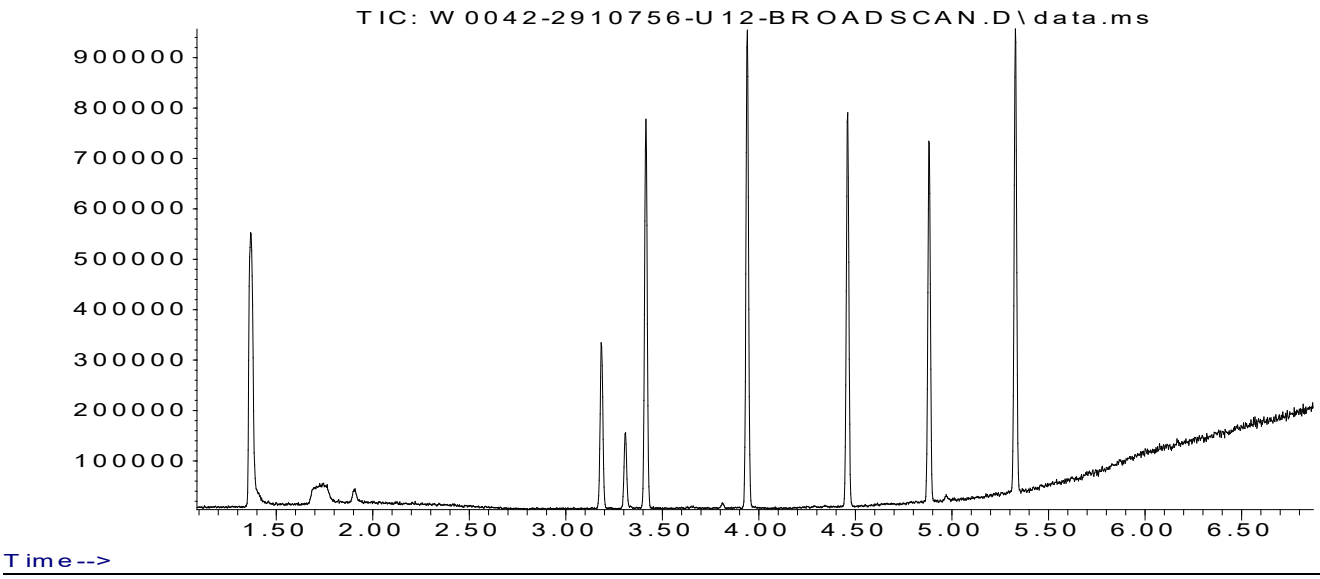
Qualification each individual component was compared against the NIST mass spectral libraries for identification. For confidence in compound identification, names and CAS numbers will only be given in the report to compound that obtain a quality match factor of > 80%.

The detection limit for this technique is typically 0.1mg/l for most none water miscible compounds and circa 1 mg/l for fully water miscible compounds.

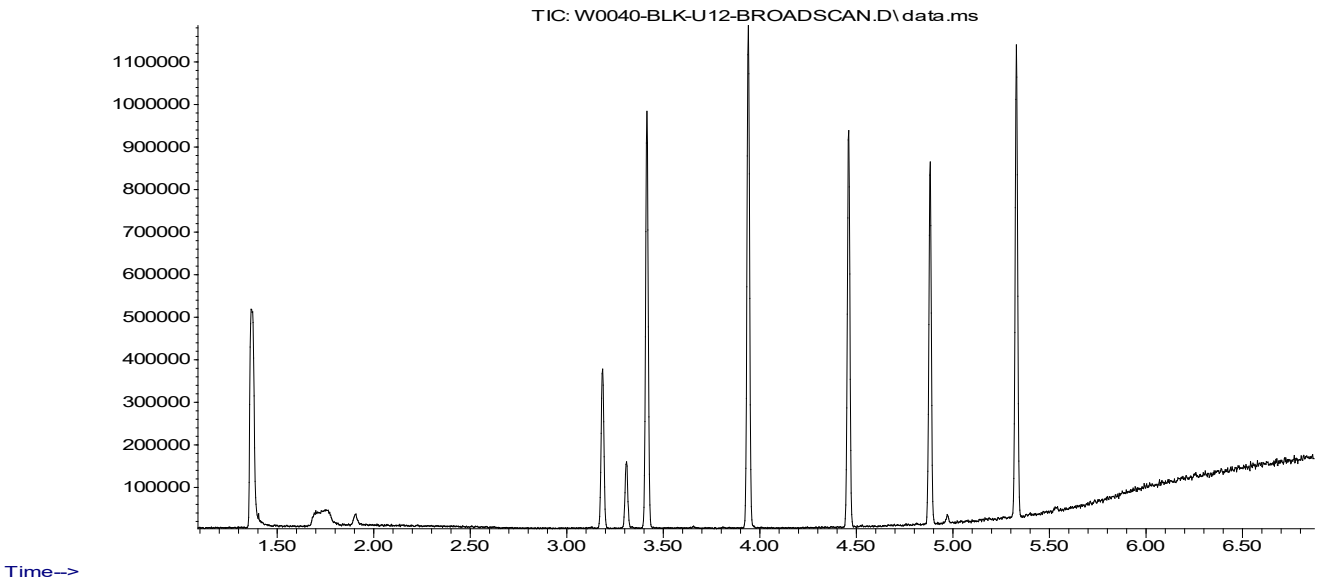
2910755



2910756



Blank



Results:

The chromatographic profiles above show no significant peaks within the chromatograms.
All of the significant peaks are from the internal standard marker compounds added to the samples as part of the analysis.

The blank chromatogram is also shown which includes the same internal standard reference compounds.

Conclusion:

There were no compounds detected in the samples above the limits of detection of 0.1mg/L.

Disclaimer

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.