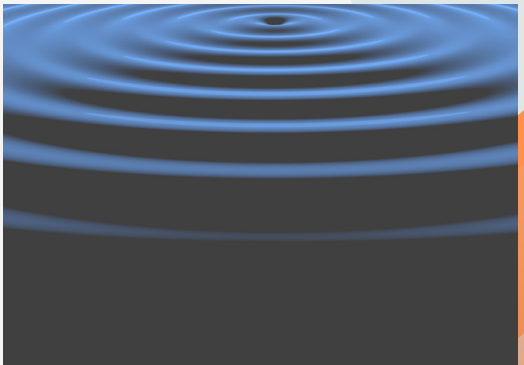
Groundwater Monitoring Report

Socomore



Executive Summary:

Socomore Ireland Ltd. is required as part of licence P0983-1 to conduct a biannual groundwater monitoring programme of four boreholes on-site (SB-01, SB-02, SB-03, SB-04). AXIS Environmental Services were commissioned to complete the survey after proposal acknowledgment and acceptance by Socomore EHS Environmental Department. Aaron Carway carried out the survey on the 17th of October 2024.

Analysis was subcontracted to an ISO 17025 accredited laboratory under controlled chain of custody.

The parameters analysed are compared with the EPA Guideline Values for the Protection of Groundwater in Ireland (IGV) and the Groundwater Threshold Values (GTV) as set out in the Report "*European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 366 of 2016).*

Table 1: Summary of Licence Requirements

Parameter	Monitoring Frequency	Analysis Method / Techniques
pH	Bi-annually	pH electrode / meter
COD	Bi-annually	Standard Method
Nitrate	Bi-annually	Standard Method
Total Nitrogen	Bi-annually	Standard Method
Conductivity	Bi-annually	Standard Method
Chloride	Bi-annually	Standard Method
Fluoride	Bi-annually	Standard Method
Relevant Hazardous Substances Note 1	Every Five Years	Standard Method

Note 1: Groundwater monitoring for relevant hazardous substances shall be in accordance with Condition 6.17

This is routine monitoring and not a contaminated land investigation.

This report is certified as accurate and representative of the sampling and associated analysis carried out.

All parameters were below the limits as outlined in EPA Guideline Values for the Protection of Groundwater in Ireland (IGV) and the Groundwater Threshold Values (GTV) as set out in the Report "European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010 as amended by S.I. No. 366 of 2016).

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Aaron Carway		Ruana Souza	Socomore
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2	25/11/2024	Background information and table 3.1	Date and data correction

1. Introduction

Socomore Ireland Ltd. is required as part of licence P0983-1 to conduct a biannual groundwater monitoring programme of four boreholes on-site (SB-01, SB-02, SB-03, SB-04). AXIS Environmental Services were commissioned to complete the survey after proposal acknowledgment and acceptance by Socomore Ireland Ltd. EHS Environmental Department. Aaron Carway carried out the survey on the 17th of October 2024.

Table 1.1: Sampling Personnel

Personnel	Experience
Aaron Carway	2 years

1.1 Background Information

This is the second round of monitoring completed in 2024 as part of groundwater monitoring assessments required in the Industrial Emissions Licence. The survey was carried out on the 17th of October 2024 to assess water quality of borehole wells at the installation.

1.2 Project Objectives

Routine monitoring work was undertaken in accordance with licence P0983-01 schedule C.6. The company is required to test at the same locations and for the same parameters as outlined in the IE Licence issued by the Agency.

2. Terms of Reference

2.1 Rational and Strategy

Sampling and analysis were carried out by Axis Environmental Services on behalf of Socomore Ireland Ltd as part of the environmental management program for the installation and in accordance with the requirements of the IE Licence.

Sampling was carried out to ISO standards and documented in-house standard operating procedures. The following standards were addressed as part of the sampling, management and handling programme prior to analysis in an accredited laboratory.

- ISO 5667-1: 2023: Water Quality – Sampling – Part 1: Guidance on the design of sampling programmes and sampling techniques;
- ISO 5667-3: 2024: Water Quality – Sampling – Part 3: Preservation and handling of water samples.
- ISO 5667-11: 2009: Water Quality – Sampling – Part 11: Guidance on sampling groundwater's.

2.2 Groundwater Sampling and Monitoring

Samples were collected using SOP 2013. This is summarised as follows:

- Water levels within the wells were obtained to determine the volume of purge water to remove.
- Wells were purged using submersible groundwater pumps.
- Three times the volume of water in the well was removed.
- After purging the wells were allowed to regenerate and settle prior to samples been collected for analysis.
- 1000 ml plastic bottles were used for inorganic fractions.
- 1000 ml glass bottles were used for pesticides and hydrocarbons.
- VOCs were collected in 40ml glass vials.
- Samples were uniquely labelled, refrigerated by use of cool boxes with frozen ice packs, logged onto chain of custody form and delivered to laboratory for analysis.

2.3 Laboratory Details

Element Materials Technology was used for the analysis. The scope of accreditation is available on the UKAS website. The following is the complete suite of parameters to be tested for:

Table 2.3: Testing Parameters

Parameter	Monitoring Frequency	Analysis Method / Techniques
pH	Bi-annually	pH electrode / meter
COD	Bi-annually	Standard Method
Nitrate	Bi-annually	Standard Method
Total Nitrogen	Bi-annually	Standard Method
Conductivity	Bi-annually	Standard Method
Chloride	Bi-annually	Standard Method
Fluoride	Bi-annually	Standard Method
Relevant Hazardous Substances Note 1	Every Five Years	Standard Method

2.4 Location of Boreholes

Table 2.4: Location of Boreholes

Borehole Identification	Location
SB-01	Upstream
SB-02	Upstream
SB-03	Downstream
SB-04	Downstream

2.5 Weather Conditions

Table 2.5: Weather Conditions

Date	Rainfall (mm)	Max Temp (^{O}C)	Min Temp (^{O}C)
16/10/2024	0.0	13	12

2.6 Field Measurements

Table 2.6: Field Measurements

Borehole	Total Depth Note 1 (mbpl)	Static Water Level (mbpl)	Recharge rate Note 2
SB-01	2.0	Dry	-
SB-02	4.78	4.23	5
SB-03	2.08	1.89	16
SB-04	2.92	2.48	3

Note 1: Meters below pipe level
Note 2: Rate of recharge of the well per cm/min

2.7 Equipment Used

Table 2.7: Equipment

Item	ID Number
Dip Meter	Asset ID:0554
Water pump	Asset ID:0595

3. Results

Table 3.1: Results of Analysis

Parameter	Units	SB-01	SB-02	SB-03	SB-04	S.I. 366 of 2016	EPA IGV
Field Measurements							
Visual Inspection	-	-	Brown water	Brown Water	Slight brown water	-	-
Solids / Silt	-	-	Silt present	Silt present	No silt	-	-
Odour	-	-	No Odour	No Odour	No Odour	-	-
Well Depth	metres	-	4.78	2.08	2.92	-	-
Water Level	metres	-	4.23	1.89	2.48	-	-
Recharge Rate	Sec/cm	-	5	16	3	-	-
Chemical Analysis							
VOC TICs	None	-	ND	ND	ND	-	100
SVOC TICs	None	-	ND	ND	ND	-	100
GRO (>C5-C10)	ug/l	-	<10	<10	<10	-	100
EPH >C8-C10	ug/l	-	<10	<10	<10	-	100
EPH >C10-C12 #	ug/l	-	<10	<10	<10	-	100
EPH >C12-C16 #	ug/l	-	<10	<10	<10	-	100
EPH >C16-C21 #	ug/l	-	<10	<10	<10	-	100
EPH >C21-C35 #	ug/l	-	<10	<10	<10	-	100
EPH >C35-C40 #	ug/l	-	<10	<10	<10	-	100
EPH >C8-C40	ug/l	-	<10	<10	<10	-	100
Fluoride	mg/l	-	0.3	<0.3	<0.3	-	100
Alcohols/Acetates							
Methyl Alcohol (Methanol)	ug/l	-	<500	<500	<500	-	-
Ethyl Alcohol (Ethanol)	ug/l	-	<500	<500	<500	-	-
i-Propyl Alcohol (Isopropanol)	ug/l	-	<100	<100	<100	-	-
n-Propyl Alcohol	ug/l	-	<100	<100	<100	-	-
n-Butyl Alcohol	ug/l	-	<100	<100	<100	-	-
n-Pentyl Alcohol	ug/l	-	<100	<100	<100	-	-
n-Hexyl Alcohol	ug/l	-	<100	<100	<100	-	-
n-Heptyl Alcohol	ug/l	-	<100	<100	<100	-	-
Methyl Acetate	ug/l	-	<100	<100	<100	-	-
Ethyl Acetate	ug/l	-	<100	<100	<100	-	-
i-Propyl Acetate	ug/l	-	<100	<100	<100	-	-
n-Propyl Acetate	ug/l	-	<100	<100	<100	-	-
n-Butyl Acetate	ug/l	-	<100	<100	<100	-	-
Acetone	ug/l	-	<50	<50	<50	-	-
Tetrahydrofuran	ug/l	-	<1	<1	<1	115	-
Sulphate as SO4	mg/l	-	8.0	3.8	3.8	187.5	200
Chloride	mg/l	-	4.4	4.2	4.0	187.5	-
Nitrate as N	mg/l	-	0.52	0.79	0.80	37.5	-
Total Alkalinity as CaCO3 #	mg/l	-	164	196	112	-	200

Methyl Isobutyl Ketone (MIBK)	ug/l	-	<500	<500	<500	-	-
COD (Settled)	mg/l	-	8	17	15	-	-
Electrical Conductivity @25C	uS/cm	-	299	201	191	1875	1000
pH	pH units	-	6.99	7.52	7.08	-	6.5 – 9.5
Total Nitrogen	mg/l	-	1.7	7.8	5.0	-	-
Total Suspended Solids	mg/l	-	580	18148	2762	-	-
SVOC MS							
Phenols							
2-Chlorophenol	ug/l	-	<1	<1	<1	-	200
2-Methylphenol	ug/l	-	<0.5	<0.5	<0.5	-	-
2-Nitrophenol	ug/l	-	<0.5	<0.5	<0.5	-	-
2,4-Dichlorophenol	ug/l	-	<0.5	<0.5	<0.5	-	-
2,4-Dimethylphenol	ug/l	-	<1	<1	<1	-	-
2,4,5-Trichlorophenol	ug/l	-	<0.5	<0.5	<0.5	-	-
2,4,6-Trichlorophenol	ug/l	-	<1	<1	<1	-	200
4-Chloro-3-methylphenol	ug/l	-	<0.5	<0.5	<0.5	-	-
4-Methylphenol	ug/l	-	<1	<1	<1	-	-
4-Nitrophenol	ug/l	-	<10	<10	<10	-	-
Pentachlorophenol	ug/l	-	<1	<1	<1	-	2.0
Phenol	ug/l	-	<1	<1	<1	-	0.5
PAHs							
2-Chloronaphthalene	ug/l	-	<1	<1	<1	-	-
2-Methylnaphthalene	ug/l	-	<1	<1	<1	-	-
Naphthalene	ug/l	-	<1	<1	<1	-	1.0
Acenaphthylene	ug/l	-	<0.5	<0.5	<0.5	-	-
Acenaphthene	ug/l	-	<1	<1	<1	-	-
Fluorene	ug/l	-	<0.5	<0.5	<0.5	-	-
Phenanthrene	ug/l	-	<0.5	<0.5	<0.5	-	-
Anthracene	ug/l	-	<0.5	<0.5	<0.5	-	10000
Fluoranthene	ug/l	-	<0.5	<0.5	<0.5	-	-
Pyrene	ug/l	-	<0.5	<0.5	<0.5	-	-
Benzo(a)anthracene	ug/l	-	<0.5	<0.5	<0.5	-	-
Chrysene	ug/l	-	<0.5	<0.5	<0.5	-	-
Benzo(bk)fluoranthene	ug/l	-	<1	<1	<1	-	0.05
Benzo(a)pyrene	ug/l	-	<1	<1	<1	-	0.1
Indeno(123cd)pyrene	ug/l	-	<1	<1	<1	-	0.05
Dibenzo(ah)anthracene	ug/l	-	<0.5	<0.5	<0.5	-	-
Benzo(ghi)perylene	ug/l	-	<0.5	<0.5	<0.5	-	0.05
Phthalates							
Bis(2-ethylhexyl) phthalate	ug/l	-	<5	<5	<5	-	8.0
Butylbenzyl phthalate	ug/l	-	<1	<1	<1	-	-
Di-n-butyl phthalate #	ug/l	-	<1.5	<1.5	<1.5	-	2.0
Di-n-Octyl phthalate	ug/l	-	<1	<1	<1	-	-
Diethyl phthalate #	ug/l	-	<1	<1	<1	-	-

Dimethyl phthalate	ug/l	-	<1	<1	<1	-	-
Other SVOC's							
1,2-Dichlorobenzene	ug/l	-	<1	<1	<1	-	-
1,2,4-Trichlorobenzene	ug/l	-	<1	<1	<1	-	-
1,3-Dichlorobenzene	ug/l	-	<1	<1	<1	-	-
1,4-Dichlorobenzene	ug/l	-	<1	<1	<1	-	-
2-Nitroaniline	ug/l	-	<1	<1	<1	-	-
2,4-Dinitrotoluene	ug/l	-	<0.5	<0.5	<0.5	-	-
2,6-Dinitrotoluene	ug/l	-	<1	<1	<1	-	-
3-Nitroaniline	ug/l	-	<1	<1	<1	-	-
4-Bromophenylphenylether	ug/l	-	<1	<1	<1	-	-
4-Chloroaniline	ug/l	-	<1	<1	<1	-	-
4-Chlorophenylphenylether	ug/l	-	<1	<1	<1	-	-
4-Nitroaniline	ug/l	-	<0.5	<0.5	<0.5	-	-
Azobenzene	ug/l	-	<0.5	<0.5	<0.5	-	-
Bis(2-chloroethoxy)methane	ug/l	-	<0.5	<0.5	<0.5	-	-
Bis(2-chloroethyl)ether	ug/l	-	<1	<1	<1	-	-
Carbazole	ug/l	-	<0.5	<0.5	<0.5	-	-
Dibenzofuran	ug/l	-	<0.5	<0.5	<0.5	-	-
Hexachlorobenzene	ug/l	-	<1	<1	<1	-	-
Hexachlorobutadiene	ug/l	-	<1	<1	<1	-	-
Hexachlorocyclopentadiene	ug/l	-	<1	<1	<1	-	-
Hexachloroethane	ug/l	-	<1	<1	<1	-	-
Isophorone	ug/l	-	<0.5	<0.5	<0.5	-	-
N-nitrosodi-n-propylamine	ug/l	-	<0.5	<0.5	<0.5	-	-
Nitrobenzene	ug/l	-	<1	<1	<1	-	-
Surrogate Recovery 2-Fluorobiphenyl	%	-	92	100	105	-	-
Surrogate Recovery p-Terphenyl-d14	%	-	129	132	136 Note 2	-	-
VOC MS							
Dichlorodifluoromethane	ug/l	-	<2	<2	<2	-	-
Methyl Tertiary Butyl Ether	ug/l	-	<0.1	<0.1	<0.1	10	-
Chloromethane	ug/l	-	<3	<3	<3	-	-
Vinyl Chloride	ug/l	-	<0.1	<0.1	<0.1	0.375	-
Bromomethane	ug/l	-	<1	<1	<1	-	-
Chloroethane	ug/l	-	<3	<3	<3	-	-
Trichlorofluoromethane	ug/l	-	<3	<3	<3	-	-
1,1-Dichloroethene (1,1 DCE)	ug/l	-	<3	<3	<3	-	-
Dichloromethane (DCM)	ug/l	-	<3	<3	<3	15	-
trans-1-2-Dichloroethene	ug/l	-	<3	<3	<3	-	-
1,1-Dichloroethane	ug/l	-	<3	<3	<3	-	-
cis-1-2-Dichloroethene	ug/l	-	<3	<3	<3	-	-
2,2-Dichloropropane	ug/l	-	<1	<1	<1	-	-
Bromochloromethane	ug/l	-	<2	<2	<2	-	-
Chloroform	ug/l	-	<2	<2	<2	-	-

1,1,1-Trichloroethane	ug/l	-	<2	<2	<2	-	-
1,1-Dichloropropene	ug/l	-	<3	<3	<3	-	-
Carbon tetrachloride	ug/l	-	<2	<2	<2	-	-
1,2-Dichloroethane	ug/l	-	<2	<2	<2	2.25	-
Benzene	ug/l	-	<0.5	<0.5	<0.5	0.75	-
Trichloroethene (TCE)	ug/l	-	<3	<3	<3	7.5	-
1,2-Dichloropropane	ug/l	-	<2	<2	<2	-	-
Dibromomethane	ug/l	-	<3	<3	<3	-	-
Bromodichloromethane	ug/l	-	<2	<2	<2	-	-
cis-1-3-Dichloropropene	ug/l	-	<2	<2	<2	-	-
Toluene	ug/l	-	<5	<5	<5	525	-
trans-1-3-Dichloropropene	ug/l	-	<2	<2	<2	-	-
1,1,2-Trichloroethane	ug/l	-	<2	<2	<2	-	-
Tetrachloroethene (PCE)	ug/l	-	<3	<3	<3	7.5	-
1,3-Dichloropropane	ug/l	-	<2	<2	<2	-	-
Dibromochloromethane	ug/l	-	<2	<2	<2	-	-
1,2-Dibromoethane	ug/l	-	<2	<2	<2	-	-
Chlorobenzene	ug/l	-	<2	<2	<2	-	-
1,1,1,2-Tetrachloroethane	ug/l	-	<2	<2	<2	-	-
Ethylbenzene	ug/l	-	<1	<1	<1	-	-
m/p-Xylene	ug/l	-	<2	<2	<2	-	-
o-Xylene	ug/l	-	<1	<1	<1	-	-
Styrene	ug/l	-	<2	<2	<2	-	-
Bromoform	ug/l	-	<2	<2	<2	-	-
Isopropylbenzene	ug/l	-	<3	<3	<3	-	-
1,1,2,2-Tetrachloroethane	ug/l	-	<4	<4	<4	-	-
Bromobenzene	ug/l	-	<2	<2	<2	-	-
1,2,3-Trichloropropane	ug/l	-	<3	<3	<3	-	-
Propylbenzene	ug/l	-	<3	<3	<3	-	-
2-Chlorotoluene	ug/l	-	<3	<3	<3	-	-
1,3,5-Trimethylbenzene	ug/l	-	<3	<3	<3	-	-
4-Chlorotoluene	ug/l	-	<3	<3	<3	-	-
tert-Butylbenzene	ug/l	-	<3	<3	<3	-	-
1,2,4-Trimethylbenzene	ug/l	-	<3	<3	<3	-	-
sec-Butylbenzene	ug/l	-	<3	<3	<3	-	-
4-Isopropyltoluene	ug/l	-	<3	<3	<3	-	-
1,3-Dichlorobenzene	ug/l	-	<3	<3	<3	-	-
1,4-Dichlorobenzene	ug/l	-	<3	<3	<3	-	-
n-Butylbenzene	ug/l	-	<3	<3	<3	-	-
1,2-Dichlorobenzene	ug/l	-	<3	<3	<3	-	-
1,2-Dibromo-3-chloropropane	ug/l	-	<2	<2	<2	-	-
1,2,4-Trichlorobenzene	ug/l	-	<3	<3	<3	-	-
Hexachlorobutadiene	ug/l	-	<3	<3	<3	-	-
Naphthalene	ug/l	-	<2	<2	<2	-	-

1,2,3-Trichlorobenzene	ug/l	-	<3	<3	<3	-	-
Surrogate Recovery Toluene D8	%	-	97	104	100	-	-
Surrogate Recovery 4-Bromofluorobenzene	%	-	100	102	99	-	-

Note 1: Guide Values refers to EPA Guideline Values for the Protection of Groundwater in Ireland, IGV = Interim Guideline Value. Note these standards are presented for guideline purposes only, therefore, due care should be exercised in cross-referencing these standards with the groundwater results obtained.
Note 2: Surrogate recovery outside the performance criteria. This may be due to a matrix effect.

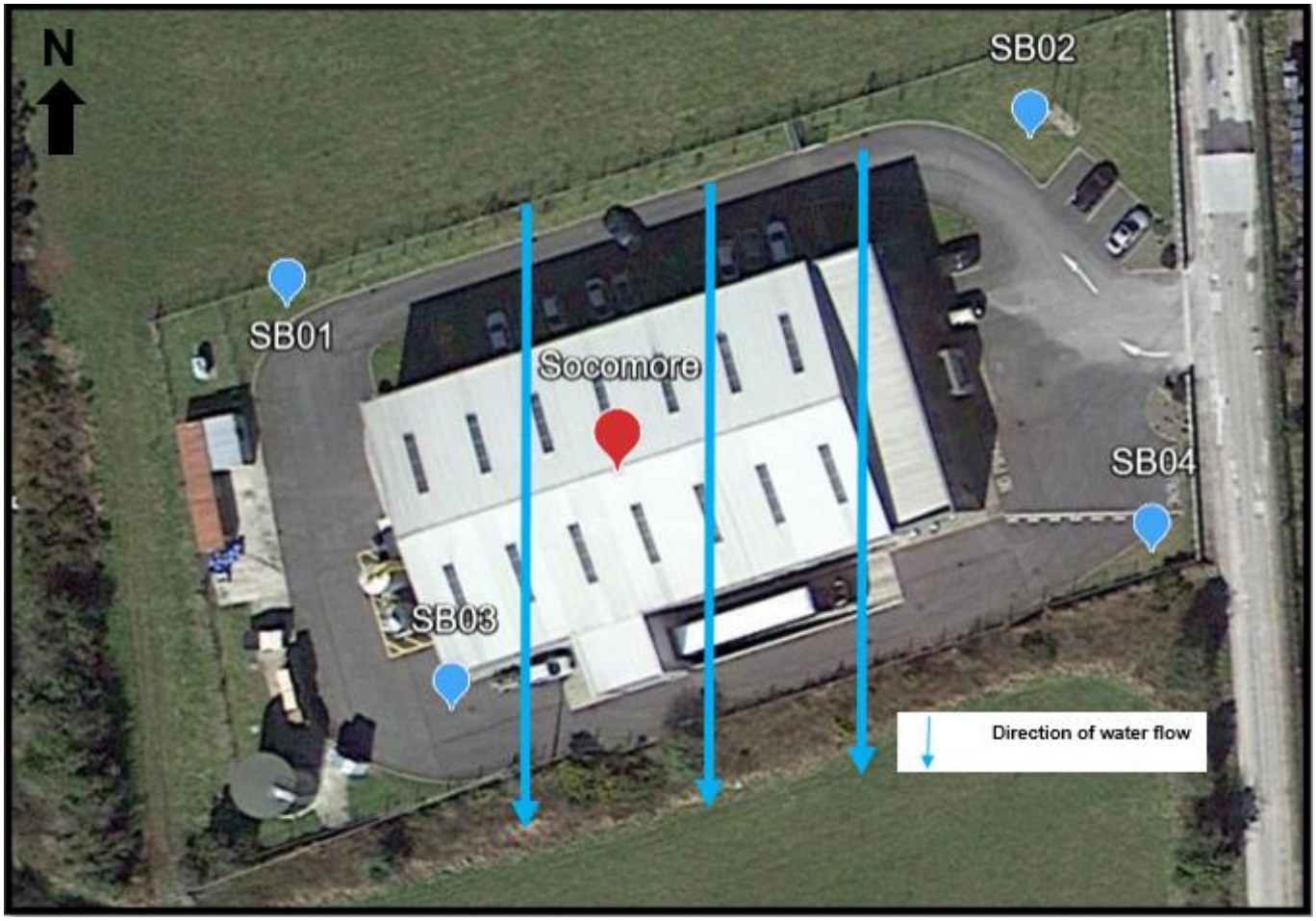
4. Discussion

All parameters were below the limits as outlined in EPA Guideline Values for the Protection of Groundwater in Ireland (IGV) and the Groundwater Threshold Values (GTV) as set out in the Report “European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010 as amended by S.I. No. 366 of 2016)

5. Recommendations

- Continue with this routine monitoring as per licence requirements.

Appendix I: Map of Locations



Appendix II: Certificate of Analysis

Element Materials Technology
Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

P: +44 (0) 1244 833780
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Axis Environmental Services Ltd
Unit 3 Westlink Industrial Estate
Clondrinagh
Limerick
Ireland
V94K6XK

Attention :	
Date :	31st October, 2024
Your reference :	Socomore
Our reference :	Test Report 24/17972 Batch 1
Location :	..
Date samples received :	21st October, 2024
Status :	Final Report
Issue :	202410311252

Four samples were received for analysis on 21st October, 2024 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 6.733 kg of CO2

Scope 1&2&3 emissions - 15.912 kg of CO2

Authorised By:

Phil Sommerton BSc
Senior Project Manager

Element Materials Technology

Client Name: Axis Environmental Services Ltd
Reference: Socomore
Location: ..
Contact:
EMT Job No: 24/17972

Report : Liquid

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

EMT Sample No.	3-4	5-6	7-8									
Sample ID	SB02	SB03	SB04									
Depth												
COC No / misc												
Containers	P G	P G	P G									
Sample Date	17/10/2024	17/10/2024	17/10/2024									
Sample Type	Liquid	Liquid	Liquid									
Batch Number	1	1	1									
Date of Receipt	21/10/2024	21/10/2024	21/10/2024									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC TICs	ND	ND	ND									None	TM15/PM10
SVOC TICs	ND	ND	ND									None	TM16/PM30
GRO (>C5-C10)	<10	<10	<10								<10	ug/l	TM36/PM12
EPH >C8-C10	<10	<10	<10								<10	ug/l	TM5/PM30
EPH >C10-C12	<10	<10	<10								<10	ug/l	TM5/PM30
EPH >C12-C16	<10	<10	<10								<10	ug/l	TM5/PM30
EPH >C16-C21	<10	<10	<10								<10	ug/l	TM5/PM30
EPH >C21-C35	<10	<10	<10								<10	ug/l	TM5/PM30
EPH >C35-C40	<10	<10	<10								<10	ug/l	TM5/PM30
EPH >C8-C40	<10	<10	<10								<10	ug/l	TM5/PM30
Fluoride	0.3	<0.3	<0.3								<0.3	mg/l	TM173/PM0
Alcohols/Acetates													
Methyl Alcohol (Methanol)	<500	<500	<500								<500	ug/l	TM83/PM10
Ethyl Alcohol (Ethanol)	<500	<500	<500								<500	ug/l	TM83/PM10
i-Propyl Alcohol (Isopropanol)	<100	<100	<100								<100	ug/l	TM83/PM10
n-Propyl Alcohol	<100	<100	<100								<100	ug/l	TM83/PM10
n-Butyl Alcohol	<100	<100	<100								<100	ug/l	TM83/PM10
n-Pentyl Alcohol	<100	<100	<100								<100	ug/l	TM83/PM10
n-Hexyl Alcohol	<100	<100	<100								<100	ug/l	TM83/PM10
n-Heptyl Alcohol	<100	<100	<100								<100	ug/l	TM83/PM10
Methyl Acetate	<100	<100	<100								<100	ug/l	TM83/PM10
Ethyl Acetate	<100	<100	<100								<100	ug/l	TM83/PM10
i-Propyl Acetate	<100	<100	<100								<100	ug/l	TM83/PM10
n-Propyl Acetate	<100	<100	<100								<100	ug/l	TM83/PM10
n-Butyl Acetate	<100	<100	<100								<100	ug/l	TM83/PM10
Acetone	<50	<50	<50								<50	ug/l	TM83/PM10
Tetrahydrofuran	<1	<1	<1								<1	ug/l	TM83/PM10
Sulphate as SO4	8.0	3.8	3.8								<0.5	mg/l	TM38/PM0
Chloride	4.4	4.2	4.0								<0.3	mg/l	TM38/PM0
Nitrate as N	0.52	0.79	0.80								<0.05	mg/l	TM38/PM0
Total Alkalinity as CaCO3	164	196	112								<1	mg/l	TM75/PM0
Methyl Isobutyl Ketone (MIBK)	<500	<500	<500								<500	ug/l	TM83/PM10
COD (Settled)	8	17	15								<7	mg/l	TM57/PM0
Electrical Conductivity @25C	299	201	191								<2	uS/cm	TM76/PM0
pH	6.99	7.52	7.08								<0.01	pH units	TM73/PM0

Element Materials Technology

Client Name: Axis Environmental Services Ltd
Reference: Socomore
Location: ..
Contact:
EMT Job No: 24/17972

Report : Liquid

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

EMT Sample No.	3-4	5-6	7-8									
Sample ID	SB02	SB03	SB04									
Depth												
COC No / misc												
Containers	P G	P G	P G									
Sample Date	17/10/2024	17/10/2024	17/10/2024									
Sample Type	Liquid	Liquid	Liquid									
Batch Number	1	1	1									
Date of Receipt	21/10/2024	21/10/2024	21/10/2024									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Total Nitrogen	1.7	7.8	5.0								<0.5	mg/l	TM38/TM125/PM0
Total Suspended Solids	580	18148	2762								<10	mg/l	TM37/PM0

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Axis Environmental Services Ltd
Reference: Socomore
Location: ..
Contact:
EMT Job No: 24/17972

SVOC Report : **Liquid**

EMT Sample No.	3-4	5-6	7-8									
Sample ID	SB02	SB03	SB04									
Depth										Please see attached notes for all abbreviations and acronyms		
COC No / misc												
Containers	P G	P G	P G									
Sample Date	17/10/2024	17/10/2024	17/10/2024									
Sample Type	Liquid	Liquid	Liquid									
Batch Number	1	1	1									
Date of Receipt	21/10/2024	21/10/2024	21/10/2024									
SVOC MS										LOD/LOR	Units	Method No.
Phenols												
2-Chlorophenol	<1	<1	<1							<1	ug/l	TM16/PM30
2-Methylphenol	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
2-Nitrophenol	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
2,4-Dichlorophenol	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
2,4-Dimethylphenol	<1	<1	<1							<1	ug/l	TM16/PM30
2,4,5-Trichlorophenol	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
2,4,6-Trichlorophenol	<1	<1	<1							<1	ug/l	TM16/PM30
4-Chloro-3-methylphenol	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
4-Methylphenol	<1	<1	<1							<1	ug/l	TM16/PM30
4-Nitrophenol	<10	<10	<10							<10	ug/l	TM16/PM30
Pentachlorophenol	<1	<1	<1							<1	ug/l	TM16/PM30
Phenol	<1	<1	<1							<1	ug/l	TM16/PM30
PAHs												
2-Chloronaphthalene	<1	<1	<1							<1	ug/l	TM16/PM30
2-Methylnaphthalene	<1	<1	<1							<1	ug/l	TM16/PM30
Naphthalene	<1	<1	<1							<1	ug/l	TM16/PM30
Acenaphthylene	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Acenaphthene	<1	<1	<1							<1	ug/l	TM16/PM30
Fluorene	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Phenanthrene	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Anthracene	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Fluoranthene	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Pyrene	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Benzo(a)anthracene	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Chrysene	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Benzo(bk)fluoranthene	<1	<1	<1							<1	ug/l	TM16/PM30
Benzo(a)pyrene	<1	<1	<1							<1	ug/l	TM16/PM30
Indeno(123cd)pyrene	<1	<1	<1							<1	ug/l	TM16/PM30
Dibenzo(ah)anthracene	<0.5+	<0.5+	<0.5+							<0.5	ug/l	TM16/PM30
Benzo(ghi)perylene	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Phthalates												
Bis(2-ethylhexyl) phthalate	<5	<5	<5							<5	ug/l	TM16/PM30
Butylbenzyl phthalate	<1	<1	<1							<1	ug/l	TM16/PM30
Di-n-butyl phthalate	<1.5	<1.5	<1.5							<1.5	ug/l	TM16/PM30
Di-n-Octyl phthalate	<1	<1	<1							<1	ug/l	TM16/PM30
Diethyl phthalate	<1	<1	<1							<1	ug/l	TM16/PM30
Dimethyl phthalate	<1	<1	<1							<1	ug/l	TM16/PM30

Client Name: Axis Environmental Services Ltd
Reference: Socomore
Location: ..
Contact:
EMT Job No: 24/17972

SVOC Report : **Liquid**

EMT Sample No.	3-4	5-6	7-8									
Sample ID	SB02	SB03	SB04									
Depth										Please see attached notes for all abbreviations and acronyms		
COC No / misc												
Containers	P G	P G	P G									
Sample Date	17/10/2024	17/10/2024	17/10/2024									
Sample Type	Liquid	Liquid	Liquid									
Batch Number	1	1	1									
Date of Receipt	21/10/2024	21/10/2024	21/10/2024									
SVOC MS										LOD/LOR	Units	Method No.
Other SVOCs												
1,2-Dichlorobenzene	<1	<1	<1							<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene	<1	<1	<1							<1	ug/l	TM16/PM30
1,3-Dichlorobenzene	<1	<1	<1							<1	ug/l	TM16/PM30
1,4-Dichlorobenzene	<1	<1	<1							<1	ug/l	TM16/PM30
2-Nitroaniline	<1	<1	<1							<1	ug/l	TM16/PM30
2,4-Dinitrotoluene	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<1	<1	<1							<1	ug/l	TM16/PM30
3-Nitroaniline	<1	<1	<1							<1	ug/l	TM16/PM30
4-Bromophenylphenylether	<1	<1	<1							<1	ug/l	TM16/PM30
4-Chloroaniline	<1	<1	<1							<1	ug/l	TM16/PM30
4-Chlorophenylphenylether	<1	<1	<1							<1	ug/l	TM16/PM30
4-Nitroaniline	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Azobenzene	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether	<1	<1	<1							<1	ug/l	TM16/PM30
Carbazole	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Dibenzofuran	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Hexachlorobenzene	<1	<1	<1							<1	ug/l	TM16/PM30
Hexachlorobutadiene	<1	<1	<1							<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<1	<1	<1							<1	ug/l	TM16/PM30
Hexachloroethane	<1	<1	<1							<1	ug/l	TM16/PM30
Isophorone	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine	<0.5	<0.5	<0.5							<0.5	ug/l	TM16/PM30
Nitrobenzene	<1	<1	<1							<1	ug/l	TM16/PM30
Surrogate Recovery 2-Fluorobiphenyl	92	100	105							<0	%	TM16/PM30
Surrogate Recovery p-Terphenyl-d14	126	132[SV]	136[SV]							<0	%	TM16/PM30

Client Name: Axis Environmental Services Ltd
Reference: Socomore
Location: ..
Contact:
EMT Job No: 24/17972

VOC Report : **Liquid**

EMT Sample No.	3-4	5-6	7-8									
Sample ID	SB02	SB03	SB04									
Depth										Please see attached notes for all abbreviations and acronyms		
COC No / misc												
Containers	P G	P G	P G									
Sample Date	17/10/2024	17/10/2024	17/10/2024									
Sample Type	Liquid	Liquid	Liquid									
Batch Number	1	1	1									
Date of Receipt	21/10/2024	21/10/2024	21/10/2024									
VOC MS										LOD/LOR	Units	Method No.
Dichlorodifluoromethane	<2	<2	<2							<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether	<0.1	<0.1	<0.1							<0.1	ug/l	TM15/PM10
Chloromethane	<3	<3	<3							<3	ug/l	TM15/PM10
Vinyl Chloride	<0.1	<0.1	<0.1							<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1	<1							<1	ug/l	TM15/PM10
Chloroethane	<3	<3	<3							<3	ug/l	TM15/PM10
Trichlorofluoromethane	<3	<3	<3							<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE)	<3	<3	<3							<3	ug/l	TM15/PM10
Dichloromethane (DCM)	<3	<3	<3							<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene	<3	<3	<3							<3	ug/l	TM15/PM10
1,1-Dichloroethane	<3	<3	<3							<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene	<3	<3	<3							<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1	<1							<1	ug/l	TM15/PM10
Bromochloromethane	<2	<2	<2							<2	ug/l	TM15/PM10
Chloroform	<2	<2	<2							<2	ug/l	TM15/PM10
1,1,1-Trichloroethane	<2	<2	<2							<2	ug/l	TM15/PM10
1,1-Dichloropropene	<3	<3	<3							<3	ug/l	TM15/PM10
Carbon tetrachloride	<2	<2	<2							<2	ug/l	TM15/PM10
1,2-Dichloroethane	<2	<2	<2							<2	ug/l	TM15/PM10
Benzene	<0.5	<0.5	<0.5							<0.5	ug/l	TM15/PM10
Trichloroethene (TCE)	<3	<3	<3							<3	ug/l	TM15/PM10
1,2-Dichloropropane	<2	<2	<2							<2	ug/l	TM15/PM10
Dibromomethane	<3	<3	<3							<3	ug/l	TM15/PM10
Bromodichloromethane	<2	<2	<2							<2	ug/l	TM15/PM10
cis-1-3-Dichloropropene	<2	<2	<2							<2	ug/l	TM15/PM10
Toluene	<5	<5	<5							<5	ug/l	TM15/PM10
trans-1-3-Dichloropropene	<2	<2	<2							<2	ug/l	TM15/PM10
1,1,2-Trichloroethane	<2	<2	<2							<2	ug/l	TM15/PM10
Tetrachloroethene (PCE)	<3	<3	<3							<3	ug/l	TM15/PM10
1,3-Dichloropropane	<2	<2	<2							<2	ug/l	TM15/PM10
Dibromochloromethane	<2	<2	<2							<2	ug/l	TM15/PM10
1,2-Dibromoethane	<2	<2	<2							<2	ug/l	TM15/PM10
Chlorobenzene	<2	<2	<2							<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane	<2	<2	<2							<2	ug/l	TM15/PM10
Ethylbenzene	<1	<1	<1							<1	ug/l	TM15/PM10
m/p-Xylene	<2	<2	<2							<2	ug/l	TM15/PM10
o-Xylene	<1	<1	<1							<1	ug/l	TM15/PM10
Styrene	<2	<2	<2							<2	ug/l	TM15/PM10
Bromoform	<2	<2	<2							<2	ug/l	TM15/PM10
Isopropylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4	<4							<4	ug/l	TM15/PM10
Bromobenzene	<2	<2	<2							<2	ug/l	TM15/PM10
1,2,3-Trichloropropane	<3	<3	<3							<3	ug/l	TM15/PM10
Propylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
2-Chlorotoluene	<3	<3	<3							<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
4-Chlorotoluene	<3	<3	<3							<3	ug/l	TM15/PM10
tert-Butylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
sec-Butylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
4-Isopropyltoluene	<3	<3	<3							<3	ug/l	TM15/PM10
1,3-Dichlorobenzene	<3	<3	<3							<3	ug/l	TM15/PM10
1,4-Dichlorobenzene	<3	<3	<3							<3	ug/l	TM15/PM10
n-Butylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
1,2-Dichlorobenzene	<3	<3	<3							<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2	<2							<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3	<3							<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3	<3							<3	ug/l	TM15/PM10
Naphthalene	<2	<2	<2							<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3	<3							<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	97	104	100							<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	100	102	99							<0	%	TM15/PM10

Client Name: Axis Environmental Services Ltd
Reference: Socomore
Location: ..
Contact:

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/17972						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/17972

SOILS and ASH

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

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

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

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

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

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

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 35°C ±5°C.

Where Mineral Oil is quoted, this refers to Total Aliphatics C10-C40.

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

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

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

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

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

WATERS

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

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

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

Where Mineral Oil is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

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

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory are not aware.

Tentatively Identified Compounds (TICs)

Where Tentatively Identified Compounds (TICs) are reported, up to 10 Tentatively Identified Compounds will be listed where there is found to be a greater than 80% match with the NIST library. The reported concentration is determined semi-quantitively, with a matrix specific limit of detection. Note, other compounds may be present but are not reported.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

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Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.				
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.				
TM37	Modified methods - TSS: USEPA 160.2 (1985), EN872:2005 and APHA SMEWW 2540D:1999 22nd Edition; VSS: USEPA 1684 (Jan 2001), USEPA 160.4 (1971) and SMEWW 2540E:1999 22nd Edition. Gravimetric determination of Total Suspended Solids (TSS) and Volatile Suspended Solids (VSS). Sample is filtered through a 1.5um pore size glass fibre filter and the resulting residue is dried and weighed at 105°C for TSS and 550°C for VSS.	PM0	No preparation is required.				
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) - All anions comparable to BS ISO 15923-1: 2013l	PM0	No preparation is required.				
TM38/TM125	Total Nitogen/Organic Nitrogen by calculation	PM0	No preparation is required.				
TM57	Modified US EPA Method 410.4. (Rev. 2.0 1993) Comparable with ISO 15705:2002. Chemical Oxygen Demand is determined by hot digestion with Potassium Dichromate and measured spectrophotometerically.	PM0	No preparation is required.				
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.				
TM75	Modified US EPA method 310.1 (1978). Determination of Alkalinity by Metrohm automated titration analyser.	PM0	No preparation is required.				

EMT Job No: 24/17972

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM76	Modified US EPA method 120.1 (1982). Determination of Specific Conductance by Metrohm automated probe analyser.	PM0	No preparation is required.				
TM83	Modified USEPA method 8260B v2:1996. Determination of Alcohols, Acetates, Acetone, Fuel Oxygenates, THF and Cyclohexane by Headspace GC-MS	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.				
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 9214 - 340.2 (EPA 1998)	PM0	No preparation is required.				