



# Final Report

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**Report No.:** 22-18129-1  
**Initial Date of Issue:** 20-May-2022  
**Client:** Mayer Environmental Ltd  
**Client Address:** Transport Avenue  
Brentford  
TW8 9HA  
**Contact(s):** Reshma Prajapati  
Sam Smith  
**Project:** 129-001905-01 EMR Boreham  
**Quotation No.:** Q20-22081 **Date Received:** 16-May-2022  
**Order No.:** 129003502 **Date Instructed:** 16-May-2022  
**No. of Samples:** 3  
**Turnaround (Wkdays):** 5 **Results Due:** 20-May-2022  
**Date Approved:** 20-May-2022

**Approved By:**

**Details:** Stuart Henderson, Technical  
Manager

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## Results - Water

**Project: 129-001905-01 EMR Boreham**

Client: Mayer Environmental Ltd		Chemtest Job No.:		22-18129	22-18129	22-18129	
Quotation No.: Q20-22081		Chemtest Sample ID.:		1429642	1429643	1429644	
Order No.: 129003502		Client Sample Ref.:		UPST	DP	DNST	
		Sample Location:		Upstream	Discharge P	Downstream	
		Sample Type:		WATER	WATER	WATER	
		Date Sampled:		12-May-2022	12-May-2022	12-May-2022	
Determinand	Accred.	SOP	Units	LOD			
pH	U	1010		N/A	7.5	7.2	7.7
Electrical Conductivity	U	1020	µS/cm	1.0	200	300	250
Suspended Solids At 105C	U	1030	mg/l	5.0	300	70	12
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	[B] < 4.0	[B] 160	[B] < 4.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	[B] 17	[B] 660	[B] 27
Alkalinity (Total)	U	1220	mg/l	10	240	690	260
Chloride	U	1220	mg/l	1.0	54	140	59
Ammonia (Free)	N	1220	mg/l	0.050	< 0.050	1.3	0.12
Ammoniacal Nitrogen	U	1220	mg/l	0.050	1.8	140	4.7
Nitrate	U	1220	mg/l	0.50	19	< 0.50	40
Phosphate	U	1220	mg/l	0.200	< 0.20	0.47	< 0.20
Sulphate	U	1220	mg/l	1.0	69	120	72
Cyanide (Total) Low-Level	N	1300	mg/l	0.0050	< 0.0050	< 0.0050	< 0.0050
Sulphide	U	1325	mg/l	0.050	[B] < 0.050	[B] < 0.050	[B] < 0.050
Arsenic (Dissolved)	U	1455	µg/l	0.20	1.4	2.0	1.4
Boron (Dissolved)	U	1455	µg/l	10.0	63	580	69
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11	0.34	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	8.3	7.7	8.7
Copper (Dissolved)	U	1455	µg/l	0.50	2.5	11	2.6
Iron (Dissolved)	N	1455	µg/l	5.0	8.7	1200	9.4
Manganese (Dissolved)	U	1455	µg/l	0.50	6.2	120	1.1
Nickel (Dissolved)	U	1455	µg/l	0.50	6.4	24	6.4
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50	45	< 0.50
Selenium (Dissolved)	U	1455	µg/l	0.50	0.62	150	1.1
Zinc (Dissolved)	U	1455	µg/l	2.5	6.7	300	3.1
Mercury Low Level	U	1460	mg/l	0.000010	< 0.00001	0.00005	< 0.00001
Total TPH >C10-C40	U	1670	µg/l	10	< 10	4000	< 10
Total Phenols	N	1900	µg/l	5.00	< 5.0	< 5.0	< 5.0

## Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

<b>Sample:</b>	<b>Sample Ref:</b>	<b>Sample ID:</b>	<b>Sample Location:</b>	<b>Sampled Date:</b>	<b>Deviation Code(s):</b>	<b>Containers Received:</b>
1429642	UPST		Upstream	12-May-2022	B	Coloured Winchester 1000ml
1429642	UPST		Upstream	12-May-2022	B	Plastic Bottle 1000ml
1429643	DP		Discharge P	12-May-2022	B	Coloured Winchester 1000ml
1429643	DP		Discharge P	12-May-2022	B	Plastic Bottle 1000ml
1429644	DNST		Downstream	12-May-2022	B	Coloured Winchester 1000ml
1429644	DNST		Downstream	12-May-2022	B	Plastic Bottle 1000ml

## Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N-dimethyl-pphenylenediamine.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1460	Mercury low-level in Waters by AFS	Mercury	Atomic Fluorescence Spectrometry, with collimated UV source, wavelength 253.7 nm.
1670	Total Petroleum Hydrocarbons (TPH) in Waters by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO	Pentane extraction / GC FID detection
1900	Phenols in Waters by GC-MS	Approximately 24 substituted Phenols, including Chlorophenols	Solvent extraction / GCMS detection

## **Report Information**

### **Key**

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N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

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Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

### **Sample Deviation Codes**

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A - Date of sampling not supplied

B - Sample age exceeds stability time (sampling to extraction)

C - Sample not received in appropriate containers

D - Broken Container

E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

### **Sample Retention and Disposal**

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All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

[customerservices@chemtest.com](mailto:customerservices@chemtest.com)



# Final Report

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**Report No.:** 21-40192-1  
**Initial Date of Issue:** 29-Nov-2021  
**Client:** Mayer Environmental Ltd  
**Client Address:** Transport Avenue  
Brentford  
TW8 9HA  
**Contact(s):** landquality@mayer-enviro.com;  
Sam.Smith@mayer-enviro.com  
**Project:** EMR Boreham Nov Discharge  
**Quotation No.:** Q20-22081  
**Date Received:** 16-Nov-2021  
**Order No.:** 129002424  
**Date Instructed:** 16-Nov-2021  
**No. of Samples:** 3  
**Turnaround (Wkdays):** 10  
**Results Due:** 29-Nov-2021  
**Date Approved:** 29-Nov-2021

**Approved By:**

**Details:** Glynn Harvey, Technical Manager

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## Results - Water

**Project: EMR Boreham Nov Discharge**

Client: Mayer Environmental Ltd	Chemtest Job No.:		21-40192	21-40192	21-40192		
Quotation No.: Q20-22081	Chemtest Sample ID.:		1320683	1320684	1320685		
Order No.: 129002424	Client Sample Ref.:		UPST2	DNST2	DP2		
	Client Sample ID.:		129-001115-01	129-001115-01	129-001115-01		
	Sample Type:		WATER	WATER	WATER		
	Date Sampled:		15-Nov-2021	15-Nov-2021	15-Nov-2021		
	Time Sampled:		12:00	12:00	12:00		
Determinand	Accred.	SOP	Units	LOD			
pH	U	1010		N/A	7.8	7.9	8.4
Electrical Conductivity	U	1020	µS/cm	1.0	780	780	1300
Suspended Solids At 105C	U	1030	mg/l	5.0	510	< 5.0	< 5.0
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	< 4.0	< 4.0	11
Chemical Oxygen Demand	U	1100	mg O2/l	10	< 10	< 10	91
Alkalinity (Total)	U	1220	mg/l	10	340	360	540
Chloride	U	1220	mg/l	1.0	65	65	59
Ammonia (Free)	N	1220	mg/l	0.050	< 0.050	< 0.050	12
Ammoniacal Nitrogen	U	1220	mg/l	0.050	0.16	1.1	93
Nitrate	U	1220	mg/l	0.50	18	18	< 0.50
Phosphate	U	1220	mg/l	0.200	< 0.20	< 0.20	< 0.20
Sulphate	U	1220	mg/l	1.0	72	72	80
Cyanide (Total) Low-Level	N	1300	mg/l	0.0050	< 0.0050	< 0.0050	< 0.0050
Sulphide	U	1325	mg/l	0.050	< 0.050	< 0.050	< 0.050
Arsenic (Dissolved)	U	1455	µg/l	0.20	1.2	1.4	1.5
Boron (Dissolved)	U	1455	µg/l	10.0	82	68	510
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	< 0.50	< 0.50	1.2
Copper (Dissolved)	U	1455	µg/l	0.50	2.2	1.8	76
Iron (Dissolved)	N	1455	µg/l	5.0	15	27	670
Manganese (Dissolved)	U	1455	µg/l	0.50	26	43	38
Nickel (Dissolved)	U	1455	µg/l	0.50	4.4	4.4	13
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50	< 0.50	20
Selenium (Dissolved)	U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50
Zinc (Dissolved)	U	1455	µg/l	2.5	< 2.5	< 2.5	110
Mercury Low Level	U	1460	mg/l	0.000010	< 0.00001	< 0.00001	0.00002
Total TPH >C10-C40	U	1670	µg/l	10	< 10	< 10	< 10
Total Phenols	N	1900	µg/l	5.00	< 5.0	< 5.0	< 5.0

## Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.
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1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N-dimethyl-pphenylenediamine.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1460	Mercury low-level in Waters by AFS	Mercury	Atomic Fluorescence Spectrometry, with collimated UV source, wavelength 253.7 nm.
1670	Total Petroleum Hydrocarbons (TPH) in Waters by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO	Pentane extraction / GC FID detection
1900	Phenols in Waters by GC-MS	Approximately 24 substituted Phenols, including Chlorophenols	Solvent extraction / GCMS detection



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### **Sample Deviation Codes**

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- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

### **Sample Retention and Disposal**

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All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

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[customerservices@chemtest.com](mailto:customerservices@chemtest.com)



# Final Report

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**Report No.:** 21-29564-1  
**Initial Date of Issue:** 01-Sep-2021  
**Client:** Mayer Environmental Ltd  
**Client Address:** Transport Avenue  
Brentford  
TW8 9HA  
**Contact(s):** Sam.Smith@mayer-enviro.com;  
landquality@mayer-enviro.com  
**Project:** EMR Boreham Discharge Analysis -  
August  
**Quotation No.:** Q20-22081 **Date Received:** 25-Aug-2021  
**Order No.:** 129002038 **Date Instructed:** 25-Aug-2021  
**No. of Samples:** 3  
**Turnaround (Wkdays):** 5 **Results Due:** 01-Sep-2021  
**Date Approved:** 01-Sep-2021

**Approved By:**

**Details:** Glynn Harvey, Technical Manager

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## Results - Water

**Project: EMR Boreham Discharge Analysis - August**

Client: Mayer Environmental Ltd		Chemtest Job No.:		21-29564	21-29564	21-29564	
Quotation No.: Q20-22081		Chemtest Sample ID.:		1267051	1267052	1267053	
Order No.: 129002038		Client Sample Ref.:		UPST 1	DP 1	DNST 1	
		Client Sample ID.:		129-001115	129-001115	129-001115	
		Sample Type:		WATER	WATER	WATER	
		Date Sampled:		23-Aug-2021	23-Aug-2021	23-Aug-2021	
		Time Sampled:		8:00	8:00	8:00	
Determinand	Accred.	SOP	Units	LOD			
pH	U	1010		N/A	7.8	7.4	7.9
Electrical Conductivity	U	1020	µS/cm	1.0	730	1100	760
Suspended Solids At 105C	U	1030	mg/l	5.0	14	23	8.0
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	< 4.0	30	< 4.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	< 10	130	16
Alkalinity (Total)	U	1220	mg/l	10	220	220	210
Chloride	U	1220	mg/l	1.0	70	120	69
Ammonia (Free)	N	1220	mg/l	0.050	< 0.050	0.24	< 0.050
Ammoniacal Nitrogen	U	1220	mg/l	0.050	0.11	19	0.58
Nitrate	U	1220	mg/l	0.50	9.9	< 0.50	9.7
Phosphate	U	1220	mg/l	0.200	< 0.20	4.4	0.26
Sulphate	U	1220	mg/l	1.0	59	130	63
Cyanide (Total) Low-Level	N	1300	mg/l	0.0050	0.33	0.35	0.35
Sulphide	U	1325	mg/l	0.050	< 0.050	< 0.050	< 0.050
Arsenic (Dissolved)	U	1455	µg/l	0.20	2.8	2.6	2.8
Boron (Dissolved)	U	1455	µg/l	10.0	57	540	48
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11	0.65	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	1.6	100	4.3
Copper (Dissolved)	U	1455	µg/l	0.50	2.4	29	3.1
Iron (Dissolved)	N	1455	µg/l	5.0	17	1900	100
Manganese (Dissolved)	U	1455	µg/l	0.50	4.3	270	53
Nickel (Dissolved)	U	1455	µg/l	0.50	5.1	99	9.8
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50	38	1.1
Selenium (Dissolved)	U	1455	µg/l	0.50	< 0.50	< 0.50	0.61
Zinc (Dissolved)	U	1455	µg/l	2.5	< 2.5	570	13
Mercury Low Level	U	1460	mg/l	0.000010	< 0.00001	< 0.00001	0.00003
Total TPH >C10-C40	U	1670	µg/l	10	< 10	1100	< 10
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## Test Methods

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