



Immingham Green Energy Terminal

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9.98 Environmental Statement Survey Update for
Deadline 7

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Regulation 5(2)(a)

Infrastructure Planning (Applications: Prescribed
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amended)

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9.98 Environmental Statement Survey Update for Deadline 7

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1 Introduction

1.1 Background

- 1.1.1 This Technical Note provides details of further groundwater monitoring undertaken and the data collected, in connection with ES Chapter 21: Ground Conditions and Land Quality [APP-063].
- 1.1.2 The additional information has been provided to satisfy the commitment in Paragraph 21.6.31 of Chapter 21: Ground Conditions and Land Quality [APP-063] of the Environmental Statement, as follows – “...*additional groundwater monitoring is ongoing, but the additional data, which will be submitted into the examination at the appropriate time, are not expected to change the conclusions of the assessment presented in this chapter, which is based on a ‘realistic worst case’ approach.*”
- 1.1.3 At paragraph 4.3.9 and 4.3.13 of Environmental Statement Survey Updates for Deadline 1 [REP1-044] the Applicant indicated that further ground water modelling rounds had been undertaken and a further survey update would be submitted into the examination when the survey data became available. This technical note provides that further data.
- 1.1.4 The Applicant can confirm that the additional information does not change any of the conclusions reached in respect of likely significant effects reached in the Environmental Statement (“ES”).

2 Survey Update to Chapter 21: Ground Conditions and Land Quality (Groundwater Monitoring)

2.1 Introduction

2.1.1 A ground investigation (GI) covering the East Site and West Site was undertaken between November 2022 and February 2023. The GI did not include areas along the pipeline corridors due to access constraints. Findings of the 2022 – 2023 GI and subsequent monitoring were presented in the AECOM (2023) Ground Investigation Report (GIR) Immingham Ammonia Import [APP-216]. Only one round of groundwater monitoring was undertaken during this GI and as such the GIR recommended further monitoring to establish a more robust analysis of groundwater baseline data for the site. A further GI was undertaken between May and June 2023 along the pipeline corridor and the findings of the GI and subsequent monitoring of the pipeline corridor were presented in the Environmental Statement Survey Updates for Deadline 1 [REP1-044].

2.1.2 As recommended in the 2023 GIR [APP-216], additional groundwater monitoring was undertaken in December 2023 at the monitoring wells installed at the East and West Site as well as those along the pipeline corridor (Work No. 6). This Technical Note provides the details of the additional groundwater monitoring and the findings of the chemical analyses undertaken and should be read in conjunction with both the AECOM (2023) GIR and Deadline 1 Survey Updates [REP1-044].

2.1.3 This Technical Note provides additional groundwater baseline data for the site, to support the conclusions presented in the AECOM (2023) Ground Investigation Report (GIR) [APP-216] and summarises the findings and interpretation from results of the further groundwater monitoring undertaken.

2.2 Summary of Additional Groundwater Monitoring

Groundwater Monitoring and Sampling Programme

2.2.1 A groundwater monitoring programme comprising three monitoring visits over a period of three weeks between 4th and 19th December 2023 was undertaken at the site. Groundwater level measurements and groundwater sampling were planned to be undertaken from the 22 boreholes installed with 50mm internal diameter standpipes (monitoring wells) during the two AECOM ground investigations referred to at **Paragraph 2.1.5** above.

2.2.2 Groundwater samples were obtained using Low-Flow sampling techniques alongside a water quality meter to determine the groundwater parameter. Boreholes under artesian conditions could not be sampled through low flow methods and 'grab samples' were taken directly from the water flowing from the well.

2.2.3 Borehole W-BH20 was inaccessible on all three monitoring visits. During the second monitoring visit, boreholes E-BH07 and E-BH10 were inaccessible to

monitor and during the third monitoring visit, only E-BH10 was inaccessible in the East Site.

2.2.4 **Table 2-1** details the stratum in which the response zone was located for the monitoring wells and summarises the monitored groundwater levels.

Table 2-1: Summary of Additional Groundwater Level Data

Borehole Locations	Groundwater Levels			Response Zone Stratum [1]
	Average (m bgl)	Maximum (m bgl)	Minimum (m bgl)	
East Site Boreholes				
E-BH02	0.45	0.45	0.45	FCF
E-BH04	0.451	0.451	0.451	FCF
E-BH07	1.07	1.07	1.07	GGTD
E-BH10	1.151	1.151	1.151	FCF
E-BH11	0.452	0.452	0.452	GTD
E-BH14A	0.737	0.737	0.737	TFD
E-BH15	0.45	0.45	0.45	MG
E-BH20	0.89	0.89	0.89	MG
E-BH22	0.509	0.509	0.509	MG
E-BH25	1.027	1.027	1.027	GTD
West Site Boreholes				
W-BH01	-	Artesian	-	FCF
W-BH10A	-	Artesian	-	FCF
W-BH14	-	Artesian	-	GTD
W-BH18	-	Artesian	-	GTD
W-BH20	-	-	-	FCF
W-BH21	-	Artesian	-	FCF
W-BH24	-	Artesian	-	GGTD

Borehole Locations	Groundwater Levels			Response Zone Stratum [1]
	Average (m bgl)	Maximum (m bgl)	Minimum (m bgl)	
W-BH26	0.03	0.03	0.03	TFD
W-BH34	-	Artesian	-	FCF
W-BH35	-	Artesian	-	FCF
East to West Sire Pipeline Area Boreholes				
P-BH03C	0.45	0.45	0.45	MG
P-BH05A	-	Dry	-	MG

MG: Made Ground

GGTD: Gravel Glacial Till Deposits

GTD: Glacial Till Deposits

TFD: Tidal Flat Deposits

FCF: Flamborough Chalk Formation

Evidence of Potential Contamination during Monitoring

2.2.5 During the monitoring visits, the site engineers recorded any visual or olfactory evidence of contamination. The observations are summarised within **Table 2-2**.

Table 2-2: Evidence of Potential Contamination during Monitoring

Borehole Location	Response Zone [1]	Details of Visual / Olfactory Evidence of Contamination
East Site Boreholes		
E-BH02	WFCF / FCF	Hydrogen sulphide odour with black particles suspended in the water
E-BH14A	TFD / TFD2	Yellow colouring to groundwater and unknown odour.
Wet Site Boreholes		
W-BH14	GGTD	Black particles suspended in groundwater.
East to West Site Pipeline Area Boreholes		
P-BH03C	MG	Strong unknown odour.

Borehole Location	Response Zone [1]	Details of Visual / Olfactory Evidence of Contamination
[1] Firm Tidal Flat Deposits (TFD2), Tidal Flat Deposits (TFD), Glacial Till Deposits (GTD), Granular Glacial Till Deposits (GGTD), Weathered Flamborough Chalk Formation (WFCF) & Flamborough Chalk Formation (FCF)		

Laboratory Testing

2.2.6 A total of 57no. groundwater samples (27no. from the West Site, 27no. from the East Site and 3no. from Work No. 6) were obtained during the December 2023 groundwater monitoring. All groundwater samples were sent to ALS Laboratories (UK) Ltd for chemical analyses. The range of analyses undertaken on the samples includes the following:

- a. **Dissolved metals and inorganics:** arsenic, barium, beryllium, boron, cadmium, copper, total chromium, hexavalent chromium, lead, magnesium, mercury, nickel, selenium, vanadium, zinc, cyanide (total), cyanide (free), pH, ammoniacal nitrogen as N, ammonium as NH₄, cyanide, sulphate (water soluble), nitrate, nitrite, hardness and electrical conductivity.
- b. **Organics:** Polycyclic Aromatic Hydrocarbon (PAH), Total Petroleum Hydrocarbon (TPH), Volatile Organic Compound (VOC), Semi-Volatile Organic Compound (SVOC) and Phenols.
- c. **Polychlorinated biphenyl (PCB):** PCB 7 congeners and PCB WHO 12 congeners (dioxin like PCBs).

2.3 Generic Quantitative Risk Assessment – Controlled Waters

Summary of Groundwater Screening Results

2.3.1 The exceedances of the DWS and EQS (as explained in **Paragraph 2.3.2** below) are identified in the Screening Tables in **Appendix C** and are summarised in the following sections.

Contaminant Distribution in Groundwater

2.3.2 The groundwater samples obtained as part of the groundwater monitoring regime in December 2023 were subject to chemical testing by a UKAS accredited laboratory, the determinands that were tested for are listed in **Paragraph Error! Reference source not found.2.2.6**. The laboratory testing certificates and results are included within **Appendix B**, with the GQRA screening tables included within **Appendix C**. The groundwater data was screened against two Generic Assessment Criteria (GACs) for drinking water standards (DWS) and coastal environmental quality standards (EQS). Exceedances of the GACs were identified in samples taken from boreholes from across the site areas for a number of determinands, as discussed in the following subsections.

2.3.3 It should be noted that the majority of the boreholes within the West Site were encountered with artesian conditions during the December 2023 monitoring period. The groundwater was observed to flow out of the top-hat and likely mixed with accumulated rainwater in the top hat and other potential contaminants from rusting of the top-hat. This could have potentially affected the chemical characteristics of the groundwater samples, for example altering the ionic composition and pH as well as increasing the concentrations of some metals within the samples.

TPHs

2.3.4 One DWS exceedance of Aromatic >EC12-C16 was identified within the Tidal Flat Deposits at E-BH14A. The exceedance was considered marginal at 100 µg/L when compared to the GAC of 90 µg/L. The results were noted to fluctuate around the GAC for samples taken at separate monitoring visits and was below the GAC in the sample taken during the last visit. No exceedances of DWS for TPHs were identified in the Made Ground, Glacial Till or Chalk.

PAHs

- 2.3.5 DWS GAC exceedances of Naphthalene, Fluorene, Phenanthrene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, and Dibenz(a,h)anthracene were identified in samples collected from boreholes from across the site. The exceedances were predominantly identified in groundwater obtained from monitoring wells screened in the Made Ground with isolated marginal exceedances in groundwater obtained from monitoring wells screened in the Tidal Flat Deposits and Glacial Till.
- 2.3.6 Exceedances of the Coastal EQS were identified for Anthracene, Fluoranthene and Benzo(g,h,i)perylene in groundwater samples from monitoring wells screened in the Made Ground, Tidal Flat Deposits, Glacial Till and Chalk, again with the exceedances predominantly in groundwater from the Made Ground response zone, which also recorded the highest concentrations.
- 2.3.7 Exceedances of both DWS and EQS have been identified for Naphthalene, Benzo(a)pyrene, Benzo(g,h,i)perylene, Benzo(b)fluoranthene, Benzo(k)fluoranthene in groundwater from the Made Ground response zone at E-BH15 and P-BH03A, Tidal Flat Deposits response zone at E-BH14, and Glacial Till Deposits response zone at E-BH25.
- 2.3.8 Benzo(a)pyrene was also identified within groundwater from the Made Ground response zone at E-BH15, Tidal Flat Deposits response zone at E-BH14, and Glacial Till Deposits response zone at E-BH25, but not within the Chalk response zone.
- 2.3.9 PAH exceedances of GAC were predominantly noted within in the East site at locations EBH14 in groundwater from the Made Ground, in the Tidal Flat Deposits at EBH14, in the Glacial Till Deposits at EBH07 and EBH25 and in the Chalk at EBH04, which suggests there may be a potential pathway for PAHs to the Chalk aquifer.

Phenolics

- 2.3.10 One EQS exceedance of Phenol was identified in groundwater from E-BH15 screened in the Made Ground. This was considered marginal as it is only one order of magnitude above the GAC.

Metals

Arsenic

- 2.3.11 Arsenic was recorded above the DWS and EQS in groundwater samples from Made Ground, Tidal Flat Deposits and Glacial Till Deposits across the East Site and East to West Site Pipeline Area. No exceedances were noted in the West Site. The highest concentrations and greatest number of exceedances were in groundwater from the Made Ground. Overall, the exceedances were at the same order of magnitude as their respective GAC and so are considered marginal.

Boron

- 2.3.12 Exceedances of Boron for the DWS were identified in groundwater samples obtained during each monitoring visit at E-BH04 (Chalk) and E-BH14 (Glacial Till Deposits). A single isolated exceedance was identified in groundwater sampled during the first round at E-BH22 (Made Ground). All of the exceedances recorded were at the same order of magnitude and are considered to be marginal.

Copper

- 2.3.13 Exceedances of Copper for the Coastal EQS (3.76 µg/l) were identified groundwater at E-BH15 (Made Ground) during each monitoring round. The value recorded decreased overall from the first to last rounds and the highest recorded value (17 µg/l) was at the same order of magnitude as the GAC and so was considered marginal. One sample identified a marginal exceedance of Coastal EQS in the Tidal Flat Deposits at E-BH14A (4.4 µg/l). Two samples identified marginal exceedances of Coastal EQS in the Glacial Till Deposits at E-BH11 4.8 µg/l and E-BH25 4.2 µg/l.

Nickel

- 2.3.14 Exceedances of Nickel for the EQS were identified within groundwater samples from the Made Ground, Tidal Flat Deposits and Glacial Till in the East Site and East to West Site Pipeline Area. Exceedances of the DWS were also identified at E-BH15 within groundwater from the Made Ground. The exceedances were at the same order of magnitude or one above the respective GACs and so are considered to be marginal.

Selenium

- 2.3.15 Exceedances of the DWS for Selenium was identified in groundwater from the East Site (E-BH15) with the response zone located within the Made Ground. The exceedances were at the same order of magnitude as the GAC and so are considered to be marginal.

Zinc

- 2.3.16 Exceedances of the Coastal EQS for zinc were identified in groundwater samples across each of the site areas and within each strata. The exceedances were also identified across each of the monitoring visits. The highest recorded exceedance at 36.2 µg/L (P-BH03A within the Made Ground) was one order of magnitude above the GAC and is considered to be marginal.

Inorganics

Sodium

- 2.3.17 Exceedances of the DWS for Sodium were recorded groundwater samples across the East and West Site areas. The exceedances were identified in groundwater from each strata. The highest recorded value was within E-BH14A with a response zone in the Tidal Flat Deposits where a value of 16,000 µg/L was recorded.

Chloride

- 2.3.18 Exceedances of the DWS of 250 mg/l for Chloride was identified in groundwater from each site area and in all strata. The maximum concentrations were noted to generally be present in the East of the site. The maximum concentrations are summarised in **Table 2-3**. The highest recorded concentration was 6,530 mg/l at E-BH14A located within the Tidal Flat Deposits, which was one order of magnitude above the DWS.

Table 2-3: Maximum concentration recordings of Chloride

Strata	DWS (mg/l)	Min (mg/l)	Max (mg/l)	Location
Made Ground	250	253	1,510	EBH20
Tidal Flat Deposits	250	44.6	6,530	EBH14
Glacial Till Deposits	250	18	850	EBH11
Chalk	250	26.6	718	EBH02
Made Ground	250	253	1,510	EBH20

Nitrate as NO₃

- 2.3.19 Four exceedances of DWS for Nitrate as NO₃ were identified in groundwater obtained during the monitoring rounds at E-BH15, which was screened within the Made Ground. The highest recorded value was at 1,660 mg/l which was 2 orders of magnitude above the DWS, and the concentration was noted to reduce between the first and last monitoring visits.

2.4 Risk to Groundwater Quality

2.4.1 A number of the exceedances of the DWS were identified as part of the screening assessment for chemical testing of groundwater samples obtained during the December 2023 monitoring period. Exceedances of TPHs, PAHs, Metals and Inorganics in groundwater were identified across the site areas. The majority of the determinands identified were noted to be marginal and either at or one order of magnitude above the GAC, some determinands were also isolated exceedances.

Organics

2.4.2 PAHs were noted to exceed the DWS and EQS GACs in groundwater obtained from across all monitoring rounds and all strata in the East Site, although during the first monitoring round the exceedances were considered marginal; the recorded concentrations generally increased during each monitoring round. There is considered a potential risk to the Principal Aquifer of the Chalk bedrock from PAHs (in particular, Benzo(a)pyrene Fluoranthene, Benzo(g,h,i)perylene, Benzo(b)fluoranthene, Benzo(k)fluoranthene) in groundwater within Made Ground in the East Site. **Table 2-4** summarises the PAHs identified in Made Ground at E-BH15.

Table 2-4: Summary of PAHs identified in E-BH15

PAH	DWS (µg/l)	EQS (µg/l)	Min Concentration recorded (µg/l)	Max Concentration recorded (µg/l)	Exceedance Criteria
Naphthalene	6	2	7.5	22.4	DWS & EQS
Phenanthrene	4	-	0.482	7.03	DWS
Anthracene	90	0.1	0.083	0.992	EQS
Fluoranthene	4	0.0063	0.066	0.885	EQS
Benzo(a)pyrene	0.01	0.00017	0.0112	0.44	DWS & EQS
Indeno(1,2,3-c,d)pyrene	0.1	-	0.0188	0.212	DWS
Dibenz(a,h)anthracene	0.7	-	0.132	0.132	DWS
Benzo(g,h,i)perylene	0.1	0.00082	0.0192	0.23	DWS & EQS
Benzo(b)fluoranthene	0.1	0.017	0.0153	0.568	DWS & EQS
Benzo(k)fluoranthene	0.1	0.017	0.0126	0.227	DWS & EQS

2.4.3 AECOM (2023) GIR [APP-216], identified that groundwater flows in a north easterly direction towards the Humber Estuary. There is possible hydraulic

continuity between groundwater in the Made Ground and Tidal Flat Deposits. The groundwater data from the AECOM 2023 GI indicates that the Glacial Till is not in hydraulic continuity with the Tidal Flat Deposits or the Flamborough Chalk Formation.

2.4.4 Borehole location E-BH15 identified by the red circle in Figure 1 is the location where PAHs have been identified as exceeding GAC within Made Ground. Further occurrences of PAH exceedances have been recorded south of E-BH15 in Tidal Flat Deposits at E-BH14 (green circle). To the north of E-BH15, exceedances above GAC for PAHs were recorded within Glacial Till Deposits at E-BH25 (light blue circle) and to west of E-BH15 at E-BH07 (light blue circle). Marginal exceedances of GAC for PAH have been recorded in Chalk at E-BH04 (black circle) west of E-BH15.

2.4.5 There may be a potential linkage from the PAHs identified in the Made Ground to the underlying strata of the Tidal Flat Deposits and Glacial Till.

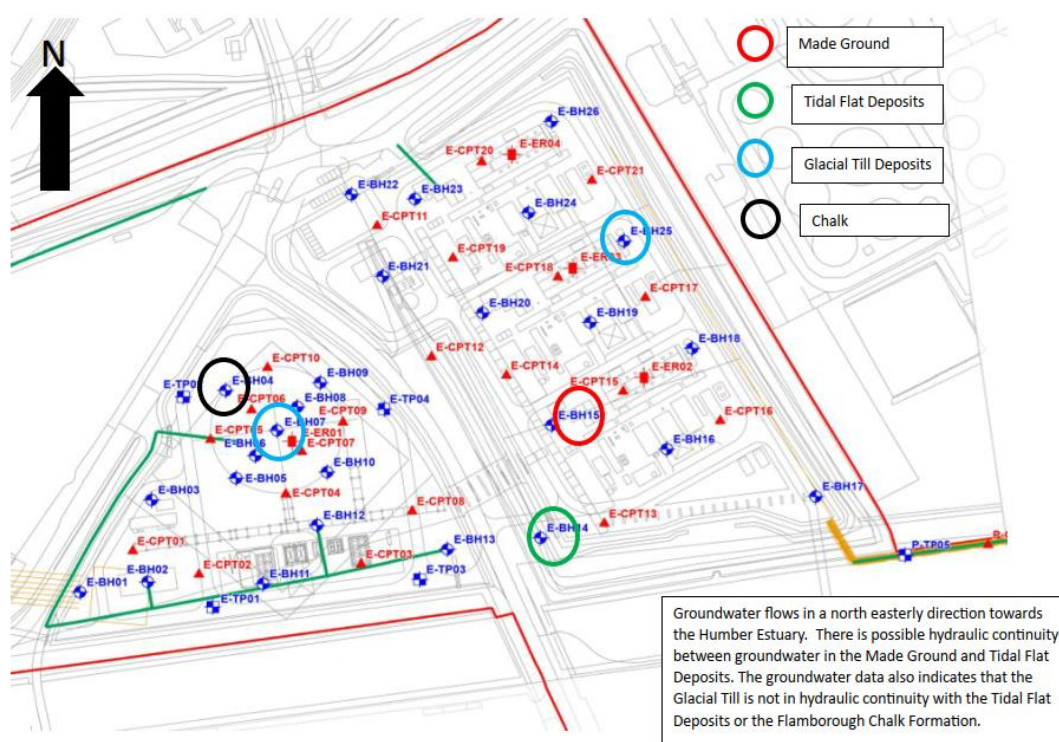


Figure 1 Borehole locations where exceedances of PAH have been identified

Metals

2.4.6 Exceedances of the DWS for metals (arsenic, boron, nickel and selenium) within groundwater for Made Ground, Tidal Flat Deposits and Chalk were identified within the GIR [APP-216] during the first round of monitoring. During the December 2023 monitoring period, the same determinands (arsenic, boron, nickel and selenium) exhibited exceedances in groundwater from monitoring

wells located in the East Site and Work No 6.. It may be that the baseline / background concentrations of metals (BGS Baseline Report Series: 10 The Chalk Aquifer of Yorkshire and North Humberside, 2004) at the site are contributing to the concentrations exceeding the relevant GAC. It is considered that the exceedances are generally marginal and that elevated concentrations in the natural strata are likely to be of natural origin therefore no further assessment is required.

Inorganics

2.4.7 As part of the December 2023 monitoring, inorganics (Cyanide Total, Chloride, Ammonium and Nitrate) were identified in samples exceeding the DWS across the site area, generally during each monitoring round in the East Site and East to West Site Pipeline Area, and only during the first monitoring round in the West Site. Exceedances of Chloride and Sodium were also identified within boreholes monitored as part of the GIR [APP-216]. Elevated concentrations were identified across all of the monitoring periods and within all strata. The concentrations of chloride and sodium were noted to fluctuate in samples obtained from across the locations, where the two were present. During the monitoring visit for the Survey Update at P-BH03C, concentrations of Sodium (filtered), Chloride (filtered) and Ammonium (as NH₄ BRE) were identified in exceedance of the DWS. Chloride (filtered) concentration was observed to increase over the monitoring periods at all locations. Ammonium (as NH₄ BRE) was not recorded groundwater samples in exceedance of the respective GAC, during December 2023, for P-BH03C, or at any other monitoring location. The Sodium concentrations were observed to fall and the Chloride concentrations fluctuated from the GIR [APP-216] monitoring rounds compared to the December 2023 monitoring period, at E-BH14A. The concentrations recorded are not considered to pose a significant risk to controlled waters given that the elevated and fluctuating concentrations can be attributed to saltwater intrusions from the Humber Estuary as stated in the AECOM 2023 GIR [APP-216].

Summary

- 2.4.8 With regard to potential risk to groundwater, exceedances of the DWS were identified in groundwater for PAHs metals and inorganics in the East Site.
- 2.4.9 Elevated concentrations of Naphthalene, Phenanthrene, Anthracene, Fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene, Benzo(b)fluoranthene, Benzo(k)fluoranthene have been identified in Made Ground at E-BH15. Marginal exceedances of PAHs have been identified within Tidal Flat Deposits, Glacial Till Deposits and Chalk.
- 2.4.10 Exceedances of DWS for metals have been identified in various strata. However, as the exceedance are generally marginal and potentially natural background concentrations (BGS The Baseline Report Series: 10 The Chalk Aquifer of Yorkshire and North Humberside) no further assessment is necessary.
- 2.4.11 Inorganics are not considered to pose significant risk given the conditions can be attributed to saltwater intrusion from the Humber Estuary.

2.4.12 Given the artesian conditions encountered during the groundwater monitoring and groundwater identified within all geological units beneath the site, it is considered plausible for construction workers to come into contact with potentially contaminated groundwaters during groundworks. However, safe working practices during construction will mitigate any risks to construction workers, this is secured in the Outline Construction Environmental Management Plan [REP6-009].

2.5 Risk to Surface Waters

2.5.1 Exceedances of the Coastal EQS were identified within a number of groundwater samples from all strata for PAHs, Phenolics, Phenols, PCBs, Metals and Inorganics. The exceedances were noted across each of the East, West and Work No 6.

Organics

2.5.2 Elevated concentrations of Naphthalene, Anthracene, Fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, Benzo(b)fluoranthene, and Benzo(k)fluoranthene were identified in Made Ground. Elevated concentrations of Fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, Benzo(b)fluoranthene, and Benzo(k)fluoranthene were identified in Tidal Flat deposits and Glacial Till Deposits. Elevated concentrations of Fluoranthene and Benzo(b)fluoranthene were identified within the Chalk. Groundwater at the site has been identified to flow in a north easterly direction towards the Humber Estuary. Hydraulic continuity is feasible between groundwater in the Made Ground and Tidal Flat Deposits, although not between the Glacial Till and Tidal Flat Deposits or the Flamborough Chalk Formation. It is considered that shallow groundwater is in continuity with watercourses.

Metals

2.5.3 Copper, Lead, Nickel and Zinc were identified across the site areas within groundwater from the Made Ground, Tidal Flat Deposits and the Glacial Till Deposits. Exceedances of the corresponding GAC for these metals were also identified during the previous groundwater monitoring period for the GIR [APP-216], as well as within leachate samples obtained for the GIR and within Work No. 6.

2.5.4 Copper concentrations within the confined Chalk aquifer can be up to 40µg/L (Whitehead and Lawrence, 2006). The concentrations of copper recorded ranged from 0.3 µg/l to 17 µg/l in Made Ground, 0.3 µg/l to 4.4 µg/l in Tidal Flat Deposits, 0.3 µg/l to 4.8 µg/l in Glacial Till Deposits and 0.37 µg/l to 3.5 µg/l in Chalk. Therefore, whilst exceeding the GAC, the Copper exceedances may be attributed to natural concentrations.

2.5.5 One exceedance of Lead (2.58 µg/l) was identified within Glacial Till Deposits during the December 2023 monitoring period within the West Site at W-BH14, (EQS 1.3 µg/l). Lead was also identified within leachate samples obtained for the GIR [APP-216]. The Baseline Report Series: 10 The Chalk Aquifer of Yorkshire

and North Humberside (British Geological Survey and Environment Agency, 2004) notes that in reducing groundwaters, trace elements such as Lead have a large range of concentrations as a result of geochemical processes, redox-driven processes and saline intrusion. Although the exceedances was recorded within Glacial Till Deposits, it is considered plausible that Lead could be representative of background concentrations and could be attributed to intrusions within the Glacial Till Deposits from the Humber Estuary. The exceedance of Lead was identified at one location within the groundwater and is therefore not widespread.

- 2.5.6 The elevated concentrations of Nickel and Zinc were identified during both monitoring periods in the East Site and West Site. It is likely that there has been some degradation to the groundwater within the area given the industrial history of the site.
- 2.5.7 The other exceedances of metals (arsenic, cadmium, mercury and chromium) were identified in samples obtained during one monitoring period and not during previous or subsequent monitoring rounds and are considered to be an isolated occurrence. Therefore, the risk to surface waters from these metals is considered low and no further assessment is required.

Inorganics

- 2.5.8 Cyanide (Free) and Cyanide (Total) were recorded above their respective GAC in monitoring locations across the site. The exceedances were identified across the first monitoring period and within groundwater from all strata at a concentration of 0.05 mg/l. These exceedances are not considered significant given that the GAC for Cyanide Free and Total are both 0.001 mg/l and the limit of detection is 0.05 mg/l. One location, E-BH15 (Made Ground) identified an elevated concentration of 0.13 mg/l during the GIR [APP-216] monitoring period. This concentration dropped during the first December 2023 monitoring visit to being at the LOD and was below the LOD by the last monitoring visit. The data does not show significant exceedances across the site and where this was identified, the concentrations were shown to decrease over a period of time.

Summary

- 2.5.9 With regard to potential risk to surface waters exceedances of the EQS were identified in groundwater for organics, metals and inorganic determinands across the site.
- 2.5.10 Elevated concentrations of PAHs have been identified in Made Ground, Tidal Flat Deposits, Glacial Till Deposits and Chalk across the site, the majority of which were identified within the East Site.
- 2.5.11 It is considered that marginal exceedances of EQS for arsenic, cadmium, mercury and chromium are isolated occurrences and pose a low risk to surface waters. Elevated concentrations of copper and lead have been attributed to background concentrations and therefore are considered to pose a low risk to surface waters.
- 2.5.12 Inorganics are not considered to pose significant risk to surface waters.

2.5.13 It is considered plausible for construction workers to potentially come into contact with contaminated groundwaters during groundworks as artesian conditions were encountered during the groundwater monitoring and groundwater was present within all geological units beneath the Site.

2.6 Conclusions

2.6.1 The purpose of this additional groundwater monitoring was to provide additional groundwater baseline data for the site, to support the conclusions presented in the AECOM (2023) Ground Investigation Report (GIR) [APP-216].

2.6.2 The following conclusions have been made, based on the groundwater monitoring programme undertaken at the site:

- a. There is a possible risk to deeper groundwater quality and surface waters from PAHs in the leachate from Made Ground in the East Site. This possible risk is addressed through control measures secured in the Outline Construction Environmental Management Plan [REP6-009].
- b. In the East Site and Work No 6, there is considered to be a low risk to groundwater quality and surface waters from metals. This is due to isolated occurrences and marginal exceedances above the GAC.
- c. The exceedances of the DWS for inorganics (sodium and chloride) are considered to be attributable to saltwater intrusions from the estuarine section of the River Humber.
- d. Artesian conditions were observed in the West Site within the Chalk and Glacial Till Deposits suggest that the aquifers in this area are confined. Groundwater was identified within all geological units beneath the site areas.
- e.

2.6.3 The conclusions, presented above do not change the conclusions presented in the AECOM (2023) Ground Investigation Report (GIR) Immingham Ammonia Import [APP-216] or the conclusions of the Environmental Statement [APP-063] .

Annex A: Monitoring Data

Groundwater Monitoring Visit Notes 18th – 19th December 2023

Borehole No.	Depth to Water (m bgl)	Depth to Base (m bgl)	Details
E-BH02	0.45	31.3	Hydrogen sulphide odour with black particles suspended in water
E-BH04	0.451	33.13	
E-BH07	1.07	22.21	
E-BH10	-	31.74	Unsafe to approach due to deep water and uneven ground, could not see where we were walking and too many trip hazards from uneven ground, brick and demolition waste, would not be safe to set up equipment, BH abandoned
E-BH11	0.452	23.05	
E-BH14A	0.737	4.26	Yellow colour and odour
E-BH15	0.45	1.311	
E-BH20	0.89	3.76	
E-BH22	0.509	34.83	
E-BH25	1.027	23.04	
W-BH01	-	-	Grab sample, artesian conditions, milky colour, water flowing out of locked BH well
W-BH10A	-	-	Grab sample, artesian conditions
W-BH14	-	-	Grab sample, artesian conditions
W-BH18	-	-	Grab sample, artesian conditions
W-BH20	-	-	Unsafe to approach due to deep water and uneven ground, could not see where we were walking, would not be safe to set up equipment, BH abandoned
W-BH21	-	-	Grab sample, artesian conditions
W-BH24	-	-	Grab sample, artesian conditions, black particles
W-BH26	0.03	2.02	Only location in west site able to low flow
W-BH34	-	-	GW flowing out of locked well, grab sample, sub-artesian conditions
W-BH35	-	-	Grab sample, artesian conditions
P-BH03A	0.45	4.06	Odour
P-BH05C	Dry	2.01	Dry

Groundwater Monitoring Visit Notes 12th – 13th December 2023

Borehole No.	Depth to Water (m bgl)	Depth to Base (m bgl)	Details
E-BH02	0.45	31.3	Hydrogen sulphide odour with black particles suspended in water
E-BH04	0.451	33.13	
E-BH07	-	22.21	Unsafe to approach due to deep water and uneven ground, could not see where we were walking and too many trip hazards from uneven ground, brick and demolition waste, would not be safe to set up equipment, BH abandoned
E-BH10	-	31.74	Unsafe to approach due to deep water and uneven ground, could not see where we were walking and too many trip hazards from uneven ground, brick and demolition waste, would not be safe to set up equipment, BH abandoned
E-BH11	0.452	23.05	
E-BH14A	0.737	4.26	
E-BH15	0.45	1.311	
E-BH20	0.89	3.76	
E-BH22	0.509	34.83	
E-BH25	1.027	23.04	
W-BH01	-	-	Grab sample, sub-artesian conditions, milky colour
W-BH10A	-	-	Grab sample, sub-artesian conditions
W-BH14	-	-	Grab sample, sub-artesian conditions
W-BH18	-	-	Grab sample, sub-artesian conditions
W-BH20	-	-	Unsafe to approach due to deep water and uneven ground, could not see where we were walking, would not be safe to set up equipment, BH abandoned
W-BH21	-	-	Grab sample, sub-artesian conditions
W-BH24	-	-	Grab sample, sub-artesian conditions, black particles
W-BH26	0.03	2.02	Only location in west site able to low flow, 1 large green bottle smashed post monitoring
W-BH34	-	-	GW flowing out of locked well, grab sample, sub-artesian conditions
W-BH35	-	-	Grab sample, sub-artesian conditions
P-BH03A	0.45	4.06	
P-BH05C	Dry	2.01	Dry

Groundwater Monitoring Visit Notes 4th - 6th December 2023

Borehole No.	Depth to Water (m bgl)	Depth to Base (m bgl)	Details
E-BH02	1.929	31.30	Hydrogen sulphide odour with black particles suspended in water
E-BH04	1.621	33.13	
E-BH07	1.08	22.21	
E-BH10	1.151	31.74	
E-BH11	1.101	23.05	
E-BH14A	0.756	4.26	
E-BH15	0.2	1.311	
E-BH20	0.665	3.76	
E-BH22	0.83	34.83	
E-BH25	1.348	23.04	
W-BH01	-	-	Grab sample, artesian conditions
W-BH10A	-	-	Grab sample, artesian conditions
W-BH14	-	-	Grab sample, artesian conditions
W-BH18	-	-	Grab sample, artesian conditions
W-BH20	-	-	Unsafe to approach due to deep water and uneven ground, could not see where we were walking, would not be safe to set up equipment, BH abandoned
W-BH21	-	-	Grab sample, artesian conditions
W-BH24	-	-	Grab sample, artesian conditions
W-BH26	0.04	2.02	Only location in west site able to low flow, 1 large green bottle smashed post monitoring
W-BH34	-	-	GW flowing out of locked well, grab sample, artesian conditions
W-BH35	-	-	Grab sample, artesian conditions
P-BH03A	1.10	4.06	
P-BH05C	-	2.01	Dry

Annex B: Laboratory Testing



Unit 7-8 Hawarden Business Park
 Manor Road (off Manor Lane)
 Hawarden
 Deeside
 CH5 3US

Tel: [REDACTED]

Website: [REDACTED]

Aecom
 Royal Court
 Basil Close
 Chesterfield
 Derbyshire
 S41 7SL

Attention: Sarah Blackburn

CERTIFICATE OF ANALYSIS

Date of report Generation: 19 December 2023
Customer: Aecom
Sample Delivery Group (SDG): 231208-56
Your Reference: Immingham
Location: Immingham
Report No: 714902
Order Number: 1626116

We received 20 samples on Friday December 08, 2023 and 20 of these samples were scheduled for analysis which was completed on Tuesday December 19, 2023. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

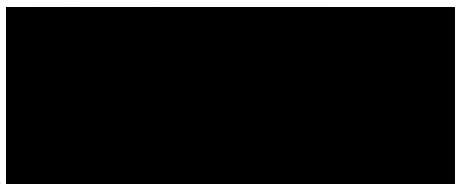
Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



So
 Operations Manager



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
29069234	E-BH02	GW		05/12/2023
29069228	E-BH04	GW		04/12/2023
29069231	E-BH07	GW		05/12/2023
29069232	E-BH10	GW		05/12/2023
29069233	E-BH11	GW		05/12/2023
29069224	E-BH14	GW		04/12/2023
29069222	E-BH15	GW		04/12/2023
29069216	E-BH20	GW		04/12/2023
29069214	E-BH22	GW		04/12/2023
29069226	E-BH25	GW		04/12/2023
29069212	PBH03A	GW		04/12/2023
29069241	W-BH01	GW		06/12/2023
29069242	W-BH10	GW		06/12/2023
29069236	W-BH14	GW		06/12/2023
29069237	W-BH18	GW		06/12/2023
29069240	W-BH21	GW		06/12/2023
29069238	W-BH24	GW		05/12/2023
29069235	W-BH-26	GW		05/12/2023
29069243	W-BH34	GW		05/12/2023
29069239	W-BH35	GW		06/12/2023

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Results Legend	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container										Sample Type						
	X Test	N No Determination Possible	29069234	E-BH02	29069228	E-BH04	GW	GW			HNO3 Unfiltered (ALE204)	HNO3 Filtered (ALE204)	H2SO4 (ALE244)	330ml plastic bottle (ALE503)	0.5l glass bottle (ALE227)	Vial (ALE297)	NaOH (ALE245)	HNO3 Unfiltered (ALE204)	HNO3 Filtered (ALE204)	H2SO4 (ALE244)	330ml plastic bottle (ALE503)	0.5l glass bottle (ALE227)	UNL		
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 20		X																					
Anions by Kone (w)	All	NDPs: 0 Tests: 20		X																					
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 20																							
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 20																							
EPH and CWG by FID	All	NDPs: 0 Tests: 20																							
GRO by GC-FID (W)	All	NDPs: 0 Tests: 20																							
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 20		X																					
Mercury Dissolved	All	NDPs: 1 Tests: 19																							
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 20		X																					
PCB Congeners - Aqueous (W)	All	NDPs: 0 Tests: 20		X																					
pH Value	All	NDPs: 0 Tests: 20		X																					
Phenols by HPLC (W)	All	NDPs: 0 Tests: 20																							
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 20		X																					
Total Metals by ICP-MS	All	NDPs: 0 Tests: 20																							
TPH CWG (W)	All	NDPs: 0 Tests: 20		X																					



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Results Legend	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
<p>X Test</p> <p>N No Determination Possible</p> <p>Sample Types -</p> <p>S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other</p>	29069234	E-BH02	GW		HNO3 Unfiltered (ALE204) HNO3 Filtered (ALE204) H2SO4 (ALE244) 330ml plastic bottle (ALE503) 0.5l glass bottle (ALE227)	UNL
	29069228	E-BH04	GW		HNO3 Unfiltered (ALE204) HNO3 Filtered (ALE204) H2SO4 (ALE244) 330ml plastic bottle (ALE503) 0.5l glass bottle (ALE227) Vial (ALE297) NaOH (ALE245)	UNL
	29069231	E-BH07	GW		HNO3 Unfiltered (ALE204) HNO3 Filtered (ALE204) H2SO4 (ALE244) 330ml plastic bottle (ALE503) 0.5l glass bottle (ALE227)	UNL
VOC MS (W)	All	NDPs: 0 Tests: 20				

29069224	E-BH14	GW		HNO3 Unfiltered (ALE204)	UNL			
				HNO3 Filtered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				HNO3 Filtered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
29069233	E-BH11	GW		330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				HNO3 Filtered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			
29069232	E-BH10	GW		Vial (ALE297)	UNL			
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				HNO3 Filtered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
29069231	E-BH07	GW		Vial (ALE297)	UNL			
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				HNO3 Filtered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Results Legend	Lab Sample No(s)		29069224		29069222		29069216		29069214													
	Customer Sample Reference		E-BH14		E-BH15		E-BH20		E-BH22													
	AGS Reference		GW		GW		GW		GW													
Depth (m)																						
Container		NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE503)	330ml plastic bottle (ALE503)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	HNO3 Unfiltered (ALE204)	HNO3 Filtered (ALE204)	H2SO4 (ALE244)	330ml plastic bottle (ALE503)	0.5l glass bottle (ALE227)	Vial (ALE297)	NaOH (ALE245)	HNO3 Unfiltered (ALE204)	HNO3 Filtered (ALE204)	H2SO4 (ALE244)	330ml plastic bottle (ALE503)	0.5l glass bottle (ALE227)	Vial (ALE297)	
Sample Type		UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 20			X					X										X		
Anions by Kone (w)	All	NDPs: 0 Tests: 20		X						X										X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 20	X					X							X							
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 20				X				X												X
EPH and CWG by FID	All	NDPs: 0 Tests: 20		X						X										X		
GRO by GC-FID (W)	All	NDPs: 0 Tests: 20	X							X										X		
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 20			X					X										X		
Mercury Dissolved	All	NDPs: 1 Tests: 19				X				X												X
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 20		X						X										X		
PCB Congeners - Aqueous (W)	All	NDPs: 0 Tests: 20		X						X										X		
pH Value	All	NDPs: 0 Tests: 20			X					X										X		
Phenols by HPLC (W)	All	NDPs: 0 Tests: 20				X				X												X
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 20		X						X										X		
Total Metals by ICP-MS	All	NDPs: 0 Tests: 20			X					X										X		
TPH CWG (W)	All	NDPs: 0 Tests: 20		X						X										X		

29069241	W-BH01	GW		NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				HNO3 Filtered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
29069212	PBH03A	GW		330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				HNO3 Filtered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			
29069226	E-BH25	GW		NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				HNO3 Filtered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				HNO3 Filtered (ALE204)	UNL			
29069214	E-BH22	GW		330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				HNO3 Filtered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			

29069243	W-BH34	GW		H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			X
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			X
29069238	W-BH24	GW		NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			X
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
29069240	W-BH21	GW		Vial (ALE297)	UNL			
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
				330ml plastic bottle (ALE503)	UNL			
				0.5l glass bottle (ALE227)	UNL			
				Vial (ALE297)	UNL			X
				NaOH (ALE245)	UNL			
				HNO3 Unfiltered (ALE204)	UNL			
				H2SO4 (ALE244)	UNL			
330ml plastic bottle (ALE503)	UNL							
0.5l glass bottle (ALE227)	UNL							



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Results Legend	Lab Sample No(s)	29069243	29069239								
<p>X Test</p> <p>N No Determination Possible</p> <p>Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other</p>	Customer Sample Reference	W-BH34	W-BH35								
	AGS Reference	GW	GW								
	Depth (m)										
	Container	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	330ml plastic bottle (ALE503)	H2SO4 (ALE244)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	UNL
	Sample Type	HNO3 Filtered (ALE204)	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL	UNL
	VOC MS (W)	All	NDPs: 0 Tests: 20								
				X						X	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.	E-BH02	E-BH04	E-BH07	E-BH10	E-BH11	E-BH14
# ISO17025 accredited.			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL) 05/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 05/12/2023	Unspecified Liquid (UNL) 05/12/2023	Unspecified Liquid (UNL) 05/12/2023	Unspecified Liquid (UNL) 04/12/2023
M mCERTS accredited.									
aq Aqueous / settled sample.									
diss.filt Dissolved / filtered sample.									
tot.unfilt Total / unfiltered sample.									
* Subcontracted - refer to subcontractor report for accreditation status.									
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
(F) Trigger breach confirmed									
1-4*\$@Sample deviation (see appendix)									
Component	LOD/Units	Method							
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099		0.416	0.594	0.348	3.62	<0.2	16.8
Arsenic (diss.filt)	<0.5 µg/l	TM152		4.84	1.64	29.2	1.97	<0.5	39.2
Barium (diss.filt)	<0.2 µg/l	TM152		84.9	54.3	162	362	90.5	344
Beryllium (diss.filt)	<0.1 µg/l	TM152		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron (diss.filt)	<10 µg/l	TM152		321	1220	319	227	138	2600
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Chromium (diss.filt)	<1 µg/l	TM152		<1	<1	<1	5.47	<1	1.95
Copper (diss.filt)	<0.3 µg/l	TM152		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Lead (diss.filt)	<0.2 µg/l	TM152		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel (diss.filt)	<0.4 µg/l	TM152		2.51	3.15	1.36	5.56	4.43	3.37
Selenium (diss.filt)	<1 µg/l	TM152		1.83	<1	<1	<1	<1	<1
Vanadium (diss.filt)	<1 µg/l	TM152		<1	<1	<1	<1	<1	3.18
Zinc (diss.filt)	<1 µg/l	TM152		1.96	8.71	5.39	9.08	4.28	11.3
Sodium (Dis.Filt)	<0.076 mg/l	TM152		287	352	214	750	340	2970
Magnesium (Dis.Filt)	<0.036 mg/l	TM152		21.3	90	26.4	83.5	23	434
Potassium (Dis.Filt)	<0.2 mg/l	TM152		8.88	57.4	21.5	17.1	4.56	141
Calcium (Dis.Filt)	<0.2 mg/l	TM152		137	115	185	228	165	253
Hardness, Total as CaCO3 unfiltered	<0.35 mg/l	TM152		443	677	591	931	533	2680
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01	<0.01	<0.01	<0.01	<0.01	
Chloride	<2 mg/l	TM184		515	482	290	2620	673	6530
Nitrate as NO3	<0.3 mg/l	TM184		<0.3	<0.3	<0.3	<0.3	8.41	<0.3
PCB congener 28	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.075
PCB congener 52	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.075
PCB congener 101	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.075
PCB congener 118	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.075
PCB congener 138	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.075
PCB congener 153	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.075
PCB congener 180	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.075
Sum of detected EC7 PCB's	<0.105 µg/l	TM197		<0.105	<0.105	<0.105	<0.105	<0.105	<0.525
PCB congener 77	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.075
PCB congener 81	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.075
PCB congener 105	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.075
PCB congener 114	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.075



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.		E-BH15	E-BH20	E-BH22	E-BH25	PBH03A	W-BH01
# ISO17025 accredited.	M mCERTS accredited.	aq Aqueous / settled sample.	Depth (m)	Sample Type	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)
diss.filt Dissolved / filtered sample.	tot.unfilt Total / unfiltered sample.	* Subcontracted - refer to subcontractor report for accreditation status.	Date Sampled	Sample Time	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023	06/12/2023
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	(F) Trigger breach confirmed	1-4*\$@Sample deviation (see appendix)	Date Received	SDG Ref	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
			Lab Sample No.(s)	AGS Reference	231208-56	231208-56	231208-56	231208-56	231208-56	231208-56
					29069222	29069216	29069214	29069226	29069212	29069241
					GW	GW	GW	GW	GW	GW
Component	LOD/Units	Method								
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	633	7.86	<0.2	<0.2	14.9	<0.2		
Arsenic (diss.filt)	<0.5 µg/l	TM152	26.6	34.8	<3	1.6	11.2	<0.5		2
Barium (diss.filt)	<0.2 µg/l	TM152	54.7	207	205	21.4	300	76		2
Beryllium (diss.filt)	<0.1 µg/l	TM152	<0.1	<0.1	<0.6	<0.1	<0.1	<0.1		2
Boron (diss.filt)	<10 µg/l	TM152	105	925	66.3	97.8	869	34.9		2
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08	<0.08	<0.48	<0.08	<0.08	<0.08		2
Chromium (diss.filt)	<1 µg/l	TM152	5.97	<1	<6	6.45	2.7	<1		2
Copper (diss.filt)	<0.3 µg/l	TM152	9.33	<0.3	<1.8	0.925	<0.3	<0.3		2
Lead (diss.filt)	<0.2 µg/l	TM152	<0.2	<0.2	<1.2	<0.2	<0.2	<0.2		2
Nickel (diss.filt)	<0.4 µg/l	TM152	28.5	2.69	<2.4	2.69	10.7	1.02		2
Selenium (diss.filt)	<1 µg/l	TM152	18.1	<1	<6	<1	<1	<1		2
Vanadium (diss.filt)	<1 µg/l	TM152	40.4	1.83	<6	25.2	8.27	<1		2
Zinc (diss.filt)	<1 µg/l	TM152	8.59	12.1	<6	10.1	7.58	3.59		2
Sodium (Dis.Filt)	<0.076 mg/l	TM152	310	971	109	17.2	173	13.2		2
Magnesium (Dis.Filt)	<0.036 mg/l	TM152	0.202	78.5	14.1	1.76	99.5	6.6		2
Potassium (Dis.Filt)	<0.2 mg/l	TM152	172	44.2	3.86	18.1	59.5	1.53		2
Calcium (Dis.Filt)	<0.2 mg/l	TM152	267	134	140	96.9	327	108		2
Hardness, Total as CaCO3 unfiltered	<0.35 mg/l	TM152	710	554	397	280	1450	5480		2
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01		2
Chloride	<2 mg/l	TM184	512	1490	253	24.5	313	37.3		
Nitrate as NO3	<0.3 mg/l	TM184	1010	<0.3	<0.3	<0.3	<0.3	42.6		
PCB congener 28	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.075	<0.075		
PCB congener 52	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.075	<0.075		
PCB congener 101	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.075	<0.075		
PCB congener 118	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.075	<0.075		
PCB congener 138	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.075	<0.075		
PCB congener 153	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.075	<0.075		
PCB congener 180	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.075	<0.075		
Sum of detected EC7 PCB's	<0.105 µg/l	TM197	<0.105	<0.105	<0.105	<0.105	<0.525	<0.525		
PCB congener 77	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.075	<0.075		
PCB congener 81	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.075	<0.075		
PCB congener 105	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.075	<0.075		
PCB congener 114	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.075	<0.075		



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.	E-BH15	E-BH20	E-BH22	E-BH25	PBH03A	W-BH01
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery.								
(F)	Trigger breach confirmed								
1-4*@\$	Sample deviation (see appendix)								
Component	LOD/Units	Method							
PCB congener 123	<0.015 µg/l	TM197							
PCB congener 126	<0.015 µg/l	TM197							
PCB congener 156	<0.015 µg/l	TM197							
PCB congener 157	<0.015 µg/l	TM197							
PCB congener 167	<0.015 µg/l	TM197							
PCB congener 169	<0.015 µg/l	TM197							
PCB congener 189	<0.015 µg/l	TM197							
Cyanide, Total	<0.05 mg/l	TM227							
Cyanide, Free	<0.05 mg/l	TM227							
Chromium, Hexavalent	<0.03 mg/l	TM241							
Conductivity @ 20 deg.C	<0.02 mS/cm	TM256	3.52	4.5	1.21	0.553	2.89	0.601	
Phenol	<0.002 mg/l	TM259	0.02	<0.002	<0.002	<0.002	<0.002	<0.002	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.		W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26
#	ISO17025 accredited.		Depth (m)	Sample Type	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)
M	mCERTS accredited.				06/12/2023	06/12/2023	06/12/2023	06/12/2023	05/12/2023	05/12/2023
aq	Aqueous / settled sample.		Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
diss.filt	Dissolved / filtered sample.		Sample Time	Sample Time	Sample Time	Sample Time	Sample Time	Sample Time	Sample Time	Sample Time
tot.unfilt	Total / unfiltered sample.		Date Received	Date Received	Date Received	Date Received	Date Received	Date Received	Date Received	Date Received
* Subcontracted - refer to subcontractor report for accreditation status.			SDG Ref	SDG Ref	SDG Ref	SDG Ref	SDG Ref	SDG Ref	SDG Ref	SDG Ref
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery			Lab Sample No.(s)	Lab Sample No.(s)	Lab Sample No.(s)	Lab Sample No.(s)	Lab Sample No.(s)	Lab Sample No.(s)	Lab Sample No.(s)	Lab Sample No.(s)
(F) Trigger breach confirmed			AGS Reference	AGS Reference	AGS Reference	AGS Reference	AGS Reference	AGS Reference	AGS Reference	AGS Reference
1-4*\$@Sample deviation (see appendix)										
Component	LOD/Units	Method								
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	<0.2	<0.2	<0.2	<0.2	<0.2	0.83	<0.2	
Arsenic (diss.filt)	<0.5 µg/l	TM152	<0.5	0.938	<0.5	<0.5	<0.5	<0.5	2.21	
Barium (diss.filt)	<0.2 µg/l	TM152	81.1	101	141	75.2	136	63.4		
Beryllium (diss.filt)	<0.1 µg/l	TM152	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Boron (diss.filt)	<10 µg/l	TM152	<10	<10	<10	18	14	697		
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08	0.0852	<0.08	<0.08	<0.08	<0.08	<0.08	
Chromium (diss.filt)	<1 µg/l	TM152	<1	<1	<1	<1	<1	<1	<1	
Copper (diss.filt)	<0.3 µg/l	TM152	<0.3	2.02	<0.3	<0.3	0.379	1.42		
Lead (diss.filt)	<0.2 µg/l	TM152	<0.2	2.58	<0.2	<0.2	0.242	<0.2		
Nickel (diss.filt)	<0.4 µg/l	TM152	0.746	1.52	0.646	0.809	0.918	11.9		
Selenium (diss.filt)	<1 µg/l	TM152	<1	<1	<1	<1	<1	<1	<1	
Vanadium (diss.filt)	<1 µg/l	TM152	<1	1.2	<1	<1	<1	<1	<1	
Zinc (diss.filt)	<1 µg/l	TM152	4.72	6.83	1.75	2.19	8.48	18.2		
Sodium (Dis.Filt)	<0.076 mg/l	TM152	11.6	12.1	16.1	13.6	13.3	126		
Magnesium (Dis.Filt)	<0.036 mg/l	TM152	6.25	7.06	7.61	6.1	7.34	104		
Potassium (Dis.Filt)	<0.2 mg/l	TM152	1.55	1.6	1.79	1.62	1.63	19.4		
Calcium (Dis.Filt)	<0.2 mg/l	TM152	103	133	92.5	99.4	84.9	306		
Hardness, Total as CaCO3 unfiltered	<0.35 mg/l	TM152	1090	327	278	489	314	1160		
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Chloride	<2 mg/l	TM184	34.2	21	24.6	30.5	18	63.3		
Nitrate as NO3	<0.3 mg/l	TM184	35.6	<0.3	<0.3	26.1	<0.3	<0.3		
PCB congener 28	<0.015 µg/l	TM197	<0.075	<0.015	<0.015	<0.015	<0.015	<0.015	<0.075	
PCB congener 52	<0.015 µg/l	TM197	<0.075	<0.015	<0.015	<0.015	<0.015	<0.015	<0.075	
PCB congener 101	<0.015 µg/l	TM197	<0.075	<0.015	<0.015	<0.015	<0.015	<0.015	<0.075	
PCB congener 118	<0.015 µg/l	TM197	<0.075	<0.015	<0.015	<0.015	<0.015	<0.015	<0.075	
PCB congener 138	<0.015 µg/l	TM197	<0.075	<0.015	<0.015	<0.015	<0.015	<0.015	<0.075	
PCB congener 153	<0.015 µg/l	TM197	<0.075	<0.015	<0.015	<0.015	<0.015	<0.015	<0.075	
PCB congener 180	<0.015 µg/l	TM197	<0.075	<0.015	<0.015	<0.015	<0.015	<0.015	<0.075	
Sum of detected EC7 PCB's	<0.105 µg/l	TM197	<0.525	<0.105	<0.105	<0.105	<0.105	<0.105	<0.525	
PCB congener 77	<0.015 µg/l	TM197	<0.075	<0.015	<0.015	<0.015	<0.015	<0.015	<0.075	
PCB congener 81	<0.015 µg/l	TM197	<0.075	<0.015	<0.015	<0.015	<0.015	<0.015	<0.075	
PCB congener 105	<0.015 µg/l	TM197	<0.075	<0.015	<0.015	<0.015	<0.015	<0.015	<0.075	
PCB congener 114	<0.015 µg/l	TM197	<0.075	<0.015	<0.015	<0.015	<0.015	<0.015	<0.075	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.					
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@ Sample deviation (see appendix)	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		W-BH34	W-BH35				
			Unspecified Liquid (UNL)	Unspecified Liquid (UNL)				
			05/12/2023	06/12/2023				
			08/12/2023	08/12/2023				
			231208-56	231208-56				
			29069243	29069239				
			GW	GW				
Component	LOD/Units	Method						
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	<0.2	<0.2				
Arsenic (diss.filt)	<0.5 µg/l	TM152	<3	1.37				
Barium (diss.filt)	<0.2 µg/l	TM152	85.1	77.5				
Beryllium (diss.filt)	<0.1 µg/l	TM152	<0.6	<0.1				
Boron (diss.filt)	<10 µg/l	TM152	<60	14.8				
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.48	<0.08				
Chromium (diss.filt)	<1 µg/l	TM152	<6	<1				
Copper (diss.filt)	<0.3 µg/l	TM152	<1.8	<0.3				
Lead (diss.filt)	<0.2 µg/l	TM152	<1.2	<0.2				
Nickel (diss.filt)	<0.4 µg/l	TM152	<2.4	6.36				
Selenium (diss.filt)	<1 µg/l	TM152	<6	<1				
Vanadium (diss.filt)	<1 µg/l	TM152	<6	<1				
Zinc (diss.filt)	<1 µg/l	TM152	<6	8.05				
Sodium (Dis.Filt)	<0.076 mg/l	TM152	10.7	10.9				
Magnesium (Dis.Filt)	<0.036 mg/l	TM152	5.76	6.19				
Potassium (Dis.Filt)	<0.2 mg/l	TM152	1.52	1.59				
Calcium (Dis.Filt)	<0.2 mg/l	TM152	99.7	89.1				
Hardness, Total as CaCO3 unfiltered	<0.35 mg/l	TM152	284	1150				
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01	<0.01				
Chloride	<2 mg/l	TM184	26.6	19				
Nitrate as NO3	<0.3 mg/l	TM184	26.9	3.53				
PCB congener 28	<0.015 µg/l	TM197	<0.015	<0.015				
PCB congener 52	<0.015 µg/l	TM197	<0.015	<0.015				
PCB congener 101	<0.015 µg/l	TM197	<0.015	<0.015				
PCB congener 118	<0.015 µg/l	TM197	<0.015	<0.015				
PCB congener 138	<0.015 µg/l	TM197	<0.015	<0.015				
PCB congener 153	<0.015 µg/l	TM197	<0.015	<0.015				
PCB congener 180	<0.015 µg/l	TM197	<0.015	<0.015				
Sum of detected EC7 PCB's	<0.105 µg/l	TM197	<0.105	<0.105				
PCB congener 77	<0.015 µg/l	TM197	<0.015	<0.015				
PCB congener 81	<0.015 µg/l	TM197	<0.015	<0.015				
PCB congener 105	<0.015 µg/l	TM197	<0.015	<0.015				
PCB congener 114	<0.015 µg/l	TM197	<0.015	<0.015				



CERTIFICATE OF ANALYSIS

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.	W-BH34	W-BH35				
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)				
M	mCERTS accredited.			05/12/2023	06/12/2023				
aq	Aqueous / settled sample.								
dis.filt	Dissolved / filtered sample.			08/12/2023	08/12/2023				
tot.unfilt	Total / unfiltered sample.			231208-56	231208-56				
*	Subcontracted - refer to subcontractor report for accreditation status.			29069243	29069239				
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery			GW	GW				
(F)	Trigger breach confirmed 1-4* @ Sample deviation (see appendix)								
Component	LOD/Units	Method							
PCB congener 123	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 126	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 156	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 157	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 167	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 169	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 189	<0.015 µg/l	TM197	<0.015	<0.015					
Cyanide, Total	<0.05 mg/l	TM227	<0.05	<0.05					
Cyanide, Free	<0.05 mg/l	TM227	<0.05	<0.05					
Chromium, Hexavalent	<0.03 mg/l	TM241	<0.03	<0.03					
Conductivity @ 20 deg.C	<0.02 mS/cm	TM256	0.53	0.501					
Phenol	<0.002 mg/l	TM259	<0.002	<0.002					



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

PAH Spec MS - Aqueous (W)

Results Legend

- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- (F) Trigger breach confirmed
- 1-4*\$@ Sample deviation (see appendix)

Customer Sample Ref.

Depth (m)

Sample Type

Date Sampled

Sample Time

Date Received

SDG Ref

Lab Sample No.(s)

AGS Reference

Customer Sample Ref.	E-BH02	E-BH04	E-BH07	E-BH10	E-BH11	E-BH14
	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)
	05/12/2023	04/12/2023	05/12/2023	05/12/2023	05/12/2023	04/12/2023
	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
	231208-56	231208-56	231208-56	231208-56	231208-56	231208-56
	29069234	29069228	29069231	29069232	29069233	29069224
	GW	GW	GW	GW	GW	GW

Component	LOD/Units	Method	E-BH02	E-BH04	E-BH07	E-BH10	E-BH11	E-BH14
Naphthalene (aq)	<0.01 µg/l	TM178	<0.01	<0.01	0.0117	<0.01	0.0121	<0.05
Acenaphthene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005	<0.005	<0.025
Acenaphthylene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005	<0.005	<0.025
Fluoranthene (aq)	<0.005 µg/l	TM178	<0.005	0.0119	0.00557	<0.005	<0.005	<0.025
Anthracene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005	<0.005	<0.025
Phenanthrene (aq)	<0.005 µg/l	TM178	<0.005	0.0181	0.00966	<0.005	<0.005	<0.025
Fluorene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005	<0.005	<0.025
Chrysene (aq)	<0.005 µg/l	TM178	0.00989	0.0642	0.0266	<0.005	<0.005	<0.025
Pyrene (aq)	<0.005 µg/l	TM178	0.00623	0.0246	0.01	<0.005	<0.005	<0.025
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178	<0.005	0.0053	<0.005	<0.005	<0.005	<0.025
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178	<0.005	0.0176	0.00724	<0.005	<0.005	<0.025
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005	<0.005	<0.025
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178	<0.002	<0.002	0.00603	<0.002	<0.002	<0.01
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	0.0111	<0.005	<0.005	<0.025
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	0.00612	<0.005	<0.005	<0.025
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	0.0114	<0.005	<0.005	<0.025
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178	<0.082	0.142	0.105	<0.082	<0.082	<0.41



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

PAH Spec MS - Aqueous (W)

Results Legend			Customer Sample Ref.	W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)
M	mCERTS accredited.			06/12/2023	06/12/2023	06/12/2023	06/12/2023	05/12/2023	05/12/2023
aq	Aqueous / settled sample.		08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
diss.filt	Dissolved / filtered sample.		231208-56	231208-56	231208-56	231208-56	231208-56	231208-56	231208-56
tot.unfilt	Total / unfiltered sample.		29069242	29069236	29069237	29069240	29069238	29069235	29069235
*	Subcontracted - refer to subcontractor report for accreditation status.		GW	GW	GW	GW	GW	GW	GW
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-4*\$	Sample deviation (see appendix)								
Component	LOD/Units	Method							
Naphthalene (aq)	<0.01 µg/l	TM178		<0.05	<0.01	<0.01	<0.01	<0.01	<0.02
Acenaphthene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Acenaphthylene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Fluoranthene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Anthracene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Phenanthrene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Fluorene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Chrysene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Pyrene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		<0.01	<0.002	<0.002	<0.002	<0.002	<0.004
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		<0.025	<0.005	<0.005	<0.005	<0.005	<0.01
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		<0.41	<0.082	<0.082	<0.082	<0.082	<0.164



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

PAH Spec MS - Aqueous (W)

Results Legend			Customer Sample Ref.		W-BH34	W-BH35			
#	ISO17025 accredited.		Depth (m)	Sample Type	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)			
M	mCERTS accredited.								
aq	Aqueous / settled sample.		Date Sampled	Sample Time	05/12/2023	06/12/2023			
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.		Date Received	SDG Ref	08/12/2023	08/12/2023			
	** Subcontracted - refer to subcontractor report for accreditation status.		Lab Sample No.(s)	AGS Reference	231208-56	231208-56			
	** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed		1-4*§@ Sample deviation (see appendix)		29069243	29069239			
Component	LOD/Units	Method							
Naphthalene (aq)	<0.01 µg/l	TM178			<0.01	<0.01			
Acenaphthene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Acenaphthylene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Fluoranthene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Anthracene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Phenanthrene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Fluorene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Chrysene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Pyrene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178			<0.002	<0.002			
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178			<0.005	<0.005			
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178			<0.082	<0.082			



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	E-BH02	E-BH04	E-BH07	E-BH10	E-BH11	E-BH14
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)
M	mCERTS accredited.			05/12/2023	04/12/2023	05/12/2023	05/12/2023	05/12/2023	04/12/2023
aq	Aqueous / settled sample.			23/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
diss.filt	Dissolved / filtered sample.			231208-56	231208-56	231208-56	231208-56	231208-56	231208-56
tot.unfilt	Total / unfiltered sample.			29069234	29069228	29069231	29069232	29069233	29069224
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)				GW	GW	GW	GW	GW	
Component	LOD/Units	Method							
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
2-Chlorophenol (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
2-Methylphenol (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
2-Nitroaniline (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
2-Nitrophenol (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
3-Nitroaniline (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
4-Chloroaniline (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
4-Methylphenol (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
4-Nitroaniline (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
4-Nitrophenol (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
Azobenzene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
Acenaphthylene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
Acenaphthene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
Anthracene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<4	<2	<2	<2	<2	<80
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40
Benzo(a)anthracene (aq)	<1 µg/l	TM176		<2	<1	<1	<1	<1	<40



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	E-BH02	E-BH04	E-BH07	E-BH10	E-BH11	E-BH14
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery.								
(F)	Trigger breach confirmed								
1-4*@	Sample deviation (see appendix)								
	Depth (m)								
	Sample Type								
	Date Sampled								
	Sample Time								
	Date Received								
	SDG Ref								
	Lab Sample No.(s)								
	AGS Reference								
Component	LOD/Units	Method							
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Benzo(a)pyrene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Carbazole (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Chrysene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Dibenzofuran (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Diethyl phthalate (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Dimethyl phthalate (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<10	<5	<5	<5	<5	<5	<200
Fluoranthene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Fluorene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Hexachlorobenzene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Pentachlorophenol (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Phenol (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Hexachloroethane (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Nitrobenzene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Naphthalene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Isophorone (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Phenanthrene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40
Pyrene (aq)	<1 µg/l	TM176	<2	<1	<1	<1	<1	<1	<40



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	E-BH15	E-BH20	E-BH22	E-BH25	PBH03A	W-BH01	
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	
M	mCERTS accredited.			04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023	06/12/2023
aq	Aqueous / settled sample.			231208-56	231208-56	231208-56	231208-56	231208-56	231208-56	231208-56
diss.filt	Dissolved / filtered sample.			29069222	29069216	29069214	29069226	29069212	29069241	29069241
tot.unfilt	Total / unfiltered sample.			GW	GW	GW	GW	GW	GW	GW
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)										
Component	LOD/Units	Method								
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
2-Chlorophenol (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
2-Methylphenol (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
2-Nitroaniline (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
2-Nitrophenol (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
3-Nitroaniline (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
4-Chloroaniline (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
4-Methylphenol (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
4-Nitroaniline (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
4-Nitrophenol (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
Azobenzene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
Acenaphthylene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
Acenaphthene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
Anthracene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<4	<4	<2	<2	<16	<40	
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	
Benzo(a)anthracene (aq)	<1 µg/l	TM176		<2	<2	<1	<1	<8	<20	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	E-BH15	E-BH20	E-BH22	E-BH25	PBH03A	W-BH01
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery.								
(F)	Trigger breach confirmed								
1-4*	@ Sample deviation (see appendix)								
Component	LOD/Units	Method	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 06/12/2023
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069222 GW	<2	<2	<1	<1	<8	<20
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069216 GW	<2	<2	<1	<1	<8	<20
Benzo(a)pyrene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069214 GW	<2	<2	<1	<1	<8	<20
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069226 GW	<2	<2	<1	<1	<8	<20
Carbazole (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Chrysene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Dibenzofuran (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Diethyl phthalate (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Dimethyl phthalate (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<10	<10	<5	<5	<40	<100
Fluoranthene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Fluorene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Hexachlorobenzene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Hexachlorobutadiene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Pentachlorophenol (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Phenol (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	12.5	<2	<1	<1	<8	<20
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Hexachloroethane (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Nitrobenzene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Naphthalene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	4.24	<2	<1	<1	<8	<20
Isophorone (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Phenanthrene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20
Pyrene (aq)	<1 µg/l	TM176	08/12/2023 231208-56 29069212 GW	<2	<2	<1	<1	<8	<20



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)
M	mCERTS accredited.			06/12/2023	06/12/2023	06/12/2023	06/12/2023	05/12/2023	05/12/2023
aq	Aqueous / settled sample.			08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
diss.filt	Dissolved / filtered sample.			231208-56	231208-56	231208-56	231208-56	231208-56	231208-56
tot.unfilt	Total / unfiltered sample.			29069242	29069236	29069237	29069240	29069238	29069235
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)				GW	GW	GW	GW	GW	
Component	LOD/Units	Method							
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
2-Chlorophenol (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
2-Methylphenol (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
2-Nitroaniline (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
2-Nitrophenol (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
3-Nitroaniline (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
4-Chloroaniline (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
4-Methylphenol (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
4-Nitroaniline (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
4-Nitrophenol (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Azobenzene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Acenaphthylene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Acenaphthene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Anthracene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<20	<4	<2	<8	<16	<2
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Benzo(a)anthracene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-4	@ Sample deviation (see appendix)								
Component	LOD/Units	Method	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL) 06/12/2023	Unspecified Liquid (UNL) 06/12/2023	Unspecified Liquid (UNL) 06/12/2023	Unspecified Liquid (UNL) 06/12/2023	Unspecified Liquid (UNL) 05/12/2023	Unspecified Liquid (UNL) 05/12/2023
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Benzo(a)pyrene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Carbazole (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Chrysene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Dibenzofuran (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Diethyl phthalate (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Dimethyl phthalate (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<50	<10	<5	<20	<40	<5
Fluoranthene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Fluorene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Hexachlorobenzene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Pentachlorophenol (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Phenol (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Hexachloroethane (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Nitrobenzene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Naphthalene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Isophorone (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Phenanthrene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1
Pyrene (aq)	<1 µg/l	TM176		<10	<2	<1	<4	<8	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend		Customer Sample Ref.	W-BH34	W-BH35			
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)			
M	mCERTS accredited.		05/12/2023	06/12/2023			
aq	Aqueous / settled sample.		08/12/2023	08/12/2023			
diss.filt	Dissolved / filtered sample.		231208-56	231208-56			
tot.unfilt	Total / unfiltered sample.		29069243	29069239			
	* Subcontracted - refer to subcontractor report for accreditation status.		GW	GW			
	** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery						
	(F) Trigger breach confirmed						
	1-4*\$@Sample deviation (see appendix)						
Component	LOD/Units		Method				
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<1	<1			
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<1			
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<1			
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<1			
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<1	<1			
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<1	<1			
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<1	<1			
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<1	<1			
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	<1			
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	<1			
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<1	<1			
2-Chlorophenol (aq)	<1 µg/l	TM176	<1	<1			
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<1	<1			
2-Methylphenol (aq)	<1 µg/l	TM176	<1	<1			
2-Nitroaniline (aq)	<1 µg/l	TM176	<1	<1			
2-Nitrophenol (aq)	<1 µg/l	TM176	<1	<1			
3-Nitroaniline (aq)	<1 µg/l	TM176	<1	<1			
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<1	<1			
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<1	<1			
4-Chloroaniline (aq)	<1 µg/l	TM176	<1	<1			
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<1	<1			
4-Methylphenol (aq)	<1 µg/l	TM176	<1	<1			
4-Nitroaniline (aq)	<1 µg/l	TM176	<1	<1			
4-Nitrophenol (aq)	<1 µg/l	TM176	<1	<1			
Azobenzene (aq)	<1 µg/l	TM176	<1	<1			
Acenaphthylene (aq)	<1 µg/l	TM176	<1	<1			
Acenaphthene (aq)	<1 µg/l	TM176	<1	<1			
Anthracene (aq)	<1 µg/l	TM176	<1	<1			
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<1	<1			
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<1	<1			
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<2	<2			
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<1	<1			
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<1	<1			



Validated

CERTIFICATE OF ANALYSIS

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend		Customer Sample Ref.	W-BH34	W-BH35			
#	ISO17025 accredited.						
M	mCERTS accredited.						
aq	Aqueous / settled sample.						
dis.filt	Dissolved / filtered sample.						
tot.unfilt	Total / unfiltered sample.						
*	Subcontracted - refer to subcontractor report for accreditation status.						
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery						
(F)	Trigger breach confirmed						
1-4**@	Sample deviation (see appendix)						
Component	LOD/Units	Method	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received
			231208-56	Unspecified Liquid (UNL)	05/12/2023	06/12/2023	08/12/2023
			29069243	Unspecified Liquid (UNL)			08/12/2023
			GW				231208-56
							29069239
							GW
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176			<1	<1	
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176			<1	<1	
Benzo(a)pyrene (aq)	<1 µg/l	TM176			<1	<1	
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176			<1	<1	
Carbazole (aq)	<1 µg/l	TM176			<1	<1	
Chrysene (aq)	<1 µg/l	TM176			<1	<1	
Dibenzofuran (aq)	<1 µg/l	TM176			<1	<1	
n-Dibutyl phthalate (aq)	<1 µg/l	TM176			<1	<1	
Diethyl phthalate (aq)	<1 µg/l	TM176			<1	<1	
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176			<1	<1	
Dimethyl phthalate (aq)	<1 µg/l	TM176			<1	<1	
n-Dioctyl phthalate (aq)	<5 µg/l	TM176			<5	<5	
Fluoranthene (aq)	<1 µg/l	TM176			<1	<1	
Fluorene (aq)	<1 µg/l	TM176			<1	<1	
Hexachlorobenzene (aq)	<1 µg/l	TM176			<1	<1	
Hexachlorobutadiene (aq)	<1 µg/l	TM176			<1	<1	
Pentachlorophenol (aq)	<1 µg/l	TM176			<1	<1	
Phenol (aq)	<1 µg/l	TM176			<1	<1	
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176			<1	<1	
Hexachloroethane (aq)	<1 µg/l	TM176			<1	<1	
Nitrobenzene (aq)	<1 µg/l	TM176			<1	<1	
Naphthalene (aq)	<1 µg/l	TM176			<1	<1	
Isophorone (aq)	<1 µg/l	TM176			<1	<1	
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176			<1	<1	
Phenanthrene (aq)	<1 µg/l	TM176			<1	<1	
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176			<1	<1	
Pyrene (aq)	<1 µg/l	TM176			<1	<1	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

TPH CWG (W)

Results Legend			Customer Sample Ref.	E-BH02	E-BH04	E-BH07	E-BH10	E-BH11	E-BH14
# ISO17025 accredited.	M mCERTS accredited.	aq Aqueous / settled sample.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)
diss.filter Dissolved / filtered sample.	tot.unfilt Total / unfiltered sample.	** Subcontracted - refer to subcontractor report for accreditation status.		05/12/2023	04/12/2023	05/12/2023	05/12/2023	05/12/2023	04/12/2023
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery				08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
(F) Trigger breach confirmed				231208-56	231208-56	231208-56	231208-56	231208-56	231208-56
1-4*@\$@ Sample deviation (see appendix)				29069234	29069228	29069231	29069232	29069233	29069224
				GW	GW	GW	GW	GW	GW
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM245		100	95	98	104	92	94
								3	
GRO >C5-C12 (HS_1D_TOTAL)	<50 µg/l	TM245		<50	<50	<50	<50	<50	<50
								3	
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
								3	
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
								3	
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
								3	
Aliphatics >C10-C12 (HS_1D_AL)	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
								3	
Aliphatics >C12-C16 (aq) (SPECED_AL1_W)	<10 µg/l	TM439		<10	<10	<10	<10	<10	<50
Aliphatics >C16-C21 (aq) (SPECED_AL2_W)	<10 µg/l	TM439		<10	<10	<10	<10	<10	<50
Aliphatics >C21-C35 (aq) (SPECED_AL3_W)	<10 µg/l	TM439		<10	<10	<10	<10	<10	<50
Total Aliphatics >C12-C35 (aq) (EPHAL12_35T_GC_W)	<10 µg/l	TM439		<10	<10	<10	<10	<10	<50
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
								3	
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
								3	
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
								3	
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
								3	
Aromatics >EC12-EC16 (aq) (SPECED_AROM1_W)	<10 µg/l	TM439		<10	<10	<10	<10	<10	<50
Aromatics >EC16-EC21 (aq) (SPECED_AROM2_W)	<10 µg/l	TM439		<10	<10	<10	10	<10	<50
Aromatics >EC21-EC35 (aq) (SPECED_AROM3_W)	<10 µg/l	TM439		<10	<10	<10	<10	<10	<50
Total Aromatics >EC12-EC35 (aq) (EPHAR12_35T_GC_W)	<10 µg/l	TM439		<10	<10	<10	10	<10	<50
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM439		<10	<10	<10	10	<10	<50



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

TPH CWG (W)

Results Legend			Customer Sample Ref.	E-BH15	E-BH20	E-BH22	E-BH25	PBH03A	W-BH01
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*@\$@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 06/12/2023
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM245	97	99	99	96	88	95	
GRO >C5-C12 (HS_1D_TOTAL)	<50 µg/l	TM245	<50	<50	<50	<50	<50	<50	
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aliphatics >C10-C12 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aliphatics >C12-C16 (aq) (SPECED_AL1_W)	<10 µg/l	TM439	<10	<10	<10	<10	<50	<10	
Aliphatics >C16-C21 (aq) (SPECED_AL2_W)	<10 µg/l	TM439	<10	<10	<10	<10	<50	<10	
Aliphatics >C21-C35 (aq) (SPECED_AL3_W)	<10 µg/l	TM439	<10	<10	<10	<10	<50	<10	
Total Aliphatics >C12-C35 (aq) (EPHAL12_35T_GC_W)	<10 µg/l	TM439	<10	<10	<10	<10	<50	<10	
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aromatics >EC8-EC10	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aromatics >EC10-EC12	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aromatics >EC12-EC16 (aq) (SPECED_AROM1_W)	<10 µg/l	TM439	48	14	<10	21	<50	<10	
Aromatics >EC16-EC21 (aq) (SPECED_AROM2_W)	<10 µg/l	TM439	<10	<10	10	<10	<50	<10	
Aromatics >EC21-EC35 (aq) (SPECED_AROM3_W)	<10 µg/l	TM439	35	<10	<10	17	<50	<10	
Total Aromatics >EC12-EC35 (aq) (EPHAR12_35T_GC_W)	<10 µg/l	TM439	83	14	10	38	<50	<10	
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM439	83	14	10	38	<10	<10	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

TPH CWG (W)

Results Legend			Customer Sample Ref.	W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.fltr Dissolved / filtered sample. tot.unfltr Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL) 06/12/2023	Unspecified Liquid (UNL) 06/12/2023	Unspecified Liquid (UNL) 06/12/2023	Unspecified Liquid (UNL) 06/12/2023	Unspecified Liquid (UNL) 05/12/2023	Unspecified Liquid (UNL) 05/12/2023
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM245	88	99	99	97	99	87	
GRO >C5-C12 (HS_1D_TOTAL)	<50 µg/l	TM245	<50	<50	<50	<50	<50	<50	
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aliphatics >C10-C12 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aliphatics >C12-C16 (aq) (SPEC_D_AL1_W)	<10 µg/l	TM439	<50	<10	<10	<10	<50	<10	
Aliphatics >C16-C21 (aq) (SPEC_D_AL2_W)	<10 µg/l	TM439	<50	<10	<10	<10	<50	<10	
Aliphatics >C21-C35 (aq) (SPEC_D_AL3_W)	<10 µg/l	TM439	<50	<10	<10	<10	<50	<10	
Total Aliphatics >C12-C35 (aq) (EPHAL12_35T_GC_W)	<10 µg/l	TM439	<50	<10	<10	<10	<50	<10	
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aromatics >EC8-EC10	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aromatics >EC10-EC12	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	
Aromatics >EC12-EC16 (aq) (SPEC_D_AROM1_W)	<10 µg/l	TM439	<50	<10	<10	<10	<50	<10	
Aromatics >EC16-EC21 (aq) (SPEC_D_AROM2_W)	<10 µg/l	TM439	<50	<10	<10	<10	<50	<10	
Aromatics >EC21-EC35 (aq) (SPEC_D_AROM3_W)	<10 µg/l	TM439	58	<10	<10	<10	60	<10	
Total Aromatics >EC12-EC35 (aq) (EPHAR12_35T_GC_W)	<10 µg/l	TM439	58	<10	<10	<10	60	<10	
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM439	58	<10	<10	<10	60	<10	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

TPH CWG (W)

Results Legend	Customer Sample Ref.	W-BH34	W-BH35			
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*@\$@Sample deviation (see appendix)	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL) 05/12/2023	Unspecified Liquid (UNL) 06/12/2023			
		08/12/2023 231208-56 29069243 GW	08/12/2023 231208-56 29069239 GW			
Component	LOD/Units	Method				
GRO Surrogate % recovery**	%	TM245	71	102		
GRO >C5-C12 (HS_1D_TOTAL)	<50 µg/l	TM245	<50	<50		
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/l	TM245	<10	<10		
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/l	TM245	<10	<10		
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/l	TM245	<10	<10		
Aliphatics >C10-C12 (HS_1D_AL)	<10 µg/l	TM245	<10	<10		
Aliphatics >C12-C16 (aq) (SPECD_AL1_W)	<10 µg/l	TM439	<10	<10		
Aliphatics >C16-C21 (aq) (SPECD_AL2_W)	<10 µg/l	TM439	<10	<10		
Aliphatics >C21-C35 (aq) (SPECD_AL3_W)	<10 µg/l	TM439	<10	<10		
Total Aliphatics >C12-C35 (aq) (EPHAL12_35T_GC_W)	<10 µg/l	TM439	<10	<10		
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/l	TM245	<10	<10		
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/l	TM245	<10	<10		
Aromatics >EC8-EC10	<10 µg/l	TM245	<10	<10		
Aromatics >EC10-EC12	<10 µg/l	TM245	<10	<10		
Aromatics >EC12-EC16 (aq) (SPECD_AROM1_W)	<10 µg/l	TM439	<10	<10		
Aromatics >EC16-EC21 (aq) (SPECD_AROM2_W)	<10 µg/l	TM439	<10	<10		
Aromatics >EC21-EC35 (aq) (SPECD_AROM3_W)	<10 µg/l	TM439	<10	<10		
Total Aromatics >EC12-EC35 (aq) (EPHAR12_35T_GC_W)	<10 µg/l	TM439	<10	<10		
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM439	<10	<10		



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	E-BH02	E-BH04	E-BH07	E-BH10	E-BH11	E-BH14	
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	
M	mCERTS accredited.			05/12/2023	04/12/2023	05/12/2023	05/12/2023	05/12/2023	05/12/2023	04/12/2023
aq	Aqueous / settled sample.			08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
diss.filt	Dissolved / filtered sample.			231208-56	231208-56	231208-56	231208-56	231208-56	231208-56	231208-56
tot.unfilt	Total / unfiltered sample.			29069234	29069228	29069231	29069232	29069233	29069224	29069224
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)										
Component	LOD/Units	Method								
Dibromofluoromethane**	%	TM208		109	106	109	109	110	105	
								3		
Toluene-d8**	%	TM208		99.6	99.8	99.9	99.4	99.9	99.4	
								3		
4-Bromofluorobenzene**	%	TM208		99.4	102	98.9	99.1	102	99.9	
								3		
Dichlorodifluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Chloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Vinyl chloride	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Bromomethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Chloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Trichlorofluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
1,1-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Carbon disulphide	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Dichloromethane	<3 µg/l	TM208		<3	<3	<3	<3	<3	<3	
								3		
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
1,1-Dichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Bromochloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Chloroform	<1 µg/l	TM208		1	<1	<1	<1	<1	<1	
								3		
1,1,1-Trichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
1,1-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Carbontetrachloride	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
1,2-Dichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Benzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Trichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
1,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Dibromomethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Bromodichloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
Toluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
1,1,2-Trichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		
1,3-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
								3		



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	E-BH02	E-BH04	E-BH07	E-BH10	E-BH11	E-BH14
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)
M	mCERTS accredited.			05/12/2023	04/12/2023	05/12/2023	05/12/2023	05/12/2023	04/12/2023
aq	Aqueous / settled sample.		08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
diss.filt	Dissolved / filtered sample.		231208-56	231208-56	231208-56	231208-56	231208-56	231208-56	231208-56
tot.unfilt	Total / unfiltered sample.		29069234	29069228	29069231	29069232	29069233	29069224	29069224
* Subcontracted - refer to subcontractor report for accreditation status.				GW	GW	GW	GW	GW	GW
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
(F) Trigger breach confirmed									
1-4* Sample deviation (see appendix)									
Component	LOD/Units	Method							
Tetrachloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Dibromochloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dibromoethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Ethylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
m,p-Xylene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
o-Xylene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Styrene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromoform	<1 µg/l	TM208		<1	<1	<2	<2	<1	<1
Isopropylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Propylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
2-Chlorotoluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
4-Chlorotoluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
tert-Butylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
sec-Butylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
4-iso-Propyltoluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
n-Butylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Naphthalene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	E-BH15	E-BH20	E-BH22	E-BH25	PBH03A	W-BH01	
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	
M	mCERTS accredited.			04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023	06/12/2023
aq	Aqueous / settled sample.			08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
diss.filt	Dissolved / filtered sample.			231208-56	231208-56	231208-56	231208-56	231208-56	231208-56	231208-56
tot.unfilt	Total / unfiltered sample.		29069222	29069216	29069214	29069226	29069212	29069241	29069241	
	* Subcontracted - refer to subcontractor report for accreditation status.			GW	GW	GW	GW	GW	GW	
	** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
(F)	Trigger breach confirmed									
1-4	Sample deviation (see appendix)									
Component	LOD/Units	Method								
Dibromofluoromethane**	%	TM208		18.3	105	108	108	111	102	
Toluene-d8**	%	TM208		99.6	99.1	100	100	99.3	100	
4-Bromofluorobenzene**	%	TM208		100	99.2	97.6	98.9	96.9	99.4	
Dichlorodifluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Chloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Vinyl chloride	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Bromomethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Chloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Trichlorofluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
1,1-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Carbon disulphide	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Dichloromethane	<3 µg/l	TM208		<3	<3	<3	<3	<3	<3	
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
1,1-Dichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Bromochloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Chloroform	<1 µg/l	TM208		1.42	<1	<1	<1	<1	<1	
1,1,1-Trichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
1,1-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Carbontetrachloride	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
1,2-Dichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Benzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Trichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
1,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Dibromomethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Bromodichloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
Toluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
1,1,2-Trichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	
1,3-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	E-BH15	E-BH20	E-BH22	E-BH25	PBH03A	W-BH01
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
dis.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-4	@ Sample deviation (see appendix)								
Component	LOD/Units	Method	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 04/12/2023	Unspecified Liquid (UNL) 06/12/2023
Tetrachloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Dibromochloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dibromoethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Ethylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
m,p-Xylene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
o-Xylene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Styrene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromoform	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Isopropylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Propylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
2-Chlorotoluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
4-Chlorotoluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
tert-Butylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
sec-Butylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
4-iso-Propyltoluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
n-Butylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Naphthalene	<1 µg/l	TM208		4.89	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)
M	mCERTS accredited.			06/12/2023	06/12/2023	06/12/2023	06/12/2023	05/12/2023	05/12/2023
aq	Aqueous / settled sample.			08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
diss.filt	Dissolved / filtered sample.			231208-56	231208-56	231208-56	231208-56	231208-56	231208-56
tot.unfilt	Total / unfiltered sample.			29069242	29069236	29069237	29069240	29069238	29069235
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*@\$@ Sample deviation (see appendix)				GW	GW	GW	GW	GW	
Component	LOD/Units	Method							
Dibromofluoromethane**	%	TM208		107	109	108	119	107	109
Toluene-d8**	%	TM208		99.6	99.8	99.4	99.3	100	99.9
4-Bromofluorobenzene**	%	TM208		99.1	100	98.9	100	99.1	101
Dichlorodifluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Vinyl chloride	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromomethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Carbon disulphide	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Dichloromethane	<3 µg/l	TM208		<3	<3	<3	<3	<3	<3
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chloroform	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Carbontetrachloride	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Benzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Trichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Dibromomethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Toluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)	Unspecified Liquid (UNL)
M	mCERTS accredited.			06/12/2023	06/12/2023	06/12/2023	06/12/2023	05/12/2023	05/12/2023
aq	Aqueous / settled sample.								
dis.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-4	% Sample deviation (see appendix)								
Component	LOD/Units	Method							
Tetrachloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Dibromochloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dibromoethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Ethylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
m,p-Xylene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
o-Xylene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Styrene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromoform	<1 µg/l	TM208		<2	<1	<1	<1	<1	<1
Isopropylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Propylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
2-Chlorotoluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
4-Chlorotoluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
tert-Butylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
sec-Butylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
4-iso-Propyltoluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
n-Butylbenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Naphthalene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend		Customer Sample Ref.	W-BH34	W-BH35			
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@ Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Unspecified Liquid (UNL) 05/12/2023	Unspecified Liquid (UNL) 06/12/2023			
Component	LOD/Units	Method					
Dibromofluoromethane**	%	TM208	108	107			
Toluene-d8**	%	TM208	99.8	99.1			
4-Bromofluorobenzene**	%	TM208	97	99.3			
Dichlorodifluoromethane	<1 µg/l	TM208	<1	<1			
Chloromethane	<1 µg/l	TM208	<1	<1			
Vinyl chloride	<1 µg/l	TM208	<1	<1			
Bromomethane	<1 µg/l	TM208	<1	<1			
Chloroethane	<1 µg/l	TM208	<1	<1			
Trichlorofluoromethane	<1 µg/l	TM208	<1	<1			
1,1-Dichloroethene	<1 µg/l	TM208	<1	<1			
Carbon disulphide	<1 µg/l	TM208	<1	<1			
Dichloromethane	<3 µg/l	TM208	<3	<3			
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1	<1			
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1	<1			
1,1-Dichloroethane	<1 µg/l	TM208	<1	<1			
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1	<1			
2,2-Dichloropropane	<1 µg/l	TM208	<1	<1			
Bromochloromethane	<1 µg/l	TM208	<1	<1			
Chloroform	<1 µg/l	TM208	<1	<1			
1,1,1-Trichloroethane	<1 µg/l	TM208	<1	<1			
1,1-Dichloropropene	<1 µg/l	TM208	<1	<1			
Carbontetrachloride	<1 µg/l	TM208	<1	<1			
1,2-Dichloroethane	<1 µg/l	TM208	<1	<1			
Benzene	<1 µg/l	TM208	<1	<1			
Trichloroethene	<1 µg/l	TM208	<1	<1			
1,2-Dichloropropane	<1 µg/l	TM208	<1	<1			
Dibromomethane	<1 µg/l	TM208	<1	<1			
Bromodichloromethane	<1 µg/l	TM208	<1	<1			
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1	<1			
Toluene	<1 µg/l	TM208	<1	<1			
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1	<1			
1,1,2-Trichloroethane	<1 µg/l	TM208	<1	<1			
1,3-Dichloropropane	<1 µg/l	TM208	<1	<1			



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend		Customer Sample Ref.	W-BH34	W-BH35			
#	ISO17025 accredited.						
M	mCERTS accredited.						
aq	Aqueous / settled sample.						
diss.filt	Dissolved / filtered sample.						
tot.unfilt	Total / unfiltered sample.						
*	Subcontracted - refer to subcontractor report for accreditation status.						
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery						
(F)	Trigger breach confirmed						
1-4	@ Sample deviation (see appendix)						
Component	LOD/Units	Method	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received
				Unspecified Liquid (UNL)	05/12/2023		06/12/2023
				Unspecified Liquid (UNL)	08/12/2023		08/12/2023
				231208-56			231208-56
				29069243			29069239
				GW			GW
				AGS Reference			
Tetrachloroethene	<1 µg/l	TM208	<1	<1			
Dibromochloromethane	<1 µg/l	TM208	<1	<1			
1,2-Dibromoethane	<1 µg/l	TM208	<1	<1			
Chlorobenzene	<1 µg/l	TM208	<1	<1			
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1			
Ethylbenzene	<1 µg/l	TM208	<1	<1			
m,p-Xylene	<1 µg/l	TM208	<1	<1			
o-Xylene	<1 µg/l	TM208	<1	<1			
Styrene	<1 µg/l	TM208	<1	<1			
Bromoform	<1 µg/l	TM208	<1	<1			
Isopropylbenzene	<1 µg/l	TM208	<1	<1			
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1			
1,2,3-Trichloropropane	<1 µg/l	TM208	<1	<1			
Bromobenzene	<1 µg/l	TM208	<1	<1			
Propylbenzene	<1 µg/l	TM208	<1	<1			
2-Chlorotoluene	<1 µg/l	TM208	<1	<1			
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1	<1			
4-Chlorotoluene	<1 µg/l	TM208	<1	<1			
tert-Butylbenzene	<1 µg/l	TM208	<1	<1			
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1	<1			
sec-Butylbenzene	<1 µg/l	TM208	<1	<1			
4-iso-Propyltoluene	<1 µg/l	TM208	<1	<1			
1,3-Dichlorobenzene	<1 µg/l	TM208	<1	<1			
1,4-Dichlorobenzene	<1 µg/l	TM208	<1	<1			
n-Butylbenzene	<1 µg/l	TM208	<1	<1			
1,2-Dichlorobenzene	<1 µg/l	TM208	<1	<1			
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1	<1			
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1	<1			
Hexachlorobutadiene	<1 µg/l	TM208	<1	<1			
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1	<1			
Naphthalene	<1 µg/l	TM208	<1	<1			
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1	<1			
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1	<1			



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Notification of NDPs (No determination possible)

Date Received : 08/12/2023 09:35:02

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
29069224	E-BH14 GWZ		Mercury Dissolved	Insufficient sample supplied



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Table of Results - Appendix

Method No	Description
TM183	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM241	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM245	Determination of GRO by Headspace in waters
TM178	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM439	Determination of Extractable Petroleum Hydrocarbons (EPH) CWG banding by GC-FID on liquids
TM152	Analysis of Aqueous Samples by ICP-MS
TM208	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM256	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM099	Determination of Ammonium in Water Samples using the Kone Analyser
TM176	Determination of SVOCs in Water by GCMS
TM197	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Waters
TM259	Determination of Phenols in Waters and Leachates by HPLC

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



CERTIFICATE OF ANALYSIS

Validated

SDG: 231208-56
Client Ref.: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Test Completion Dates

Lab Sample No(s) Customer Sample Ref.	29069234	29069228	29069231	29069232	29069233	29069224	29069222	29069216	29069214	29069226
AGS Ref.	E-BH02	E-BH04	E-BH07	E-BH10	E-BH11	E-BH14	E-BH15	E-BH20	E-BH22	E-BH25
Depth	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Type	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified
Ammoniacal Nitrogen	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023
Anions by Kone (w)	12-Dec-2023	13-Dec-2023	13-Dec-2023	12-Dec-2023	12-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023
Cyanide Comp/Free/Total/Thiocyanate	12-Dec-2023	11-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	11-Dec-2023	12-Dec-2023
Dissolved Metals by ICP-MS	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023
EPH and CWG by FID	16-Dec-2023	14-Dec-2023	15-Dec-2023	14-Dec-2023	15-Dec-2023	14-Dec-2023	16-Dec-2023	15-Dec-2023	14-Dec-2023	15-Dec-2023
GRO by GC-FID (W)	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	13-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023
Hexavalent Chromium (w)	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023
Mercury Dissolved	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023
Nitrite by Kone (w)	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023
PAH Spec MS - Aqueous (W)	15-Dec-2023	18-Dec-2023	17-Dec-2023	15-Dec-2023	18-Dec-2023	15-Dec-2023	18-Dec-2023	15-Dec-2023	18-Dec-2023	18-Dec-2023
PCB Congeners - Aqueous (W)	18-Dec-2023	19-Dec-2023	18-Dec-2023	18-Dec-2023	19-Dec-2023	18-Dec-2023	19-Dec-2023	18-Dec-2023	19-Dec-2023	19-Dec-2023
pH Value	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023
Phenols by HPLC (W)	13-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	13-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023
SVOC MS (W) - Aqueous	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023
Total Metals by ICP-MS	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	12-Dec-2023	13-Dec-2023	12-Dec-2023	13-Dec-2023
TPH CWG (W)	16-Dec-2023	14-Dec-2023	15-Dec-2023	14-Dec-2023	15-Dec-2023	14-Dec-2023	16-Dec-2023	15-Dec-2023	14-Dec-2023	15-Dec-2023
VOC MS (W)	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023

Lab Sample No(s) Customer Sample Ref.	29069212	29069241	29069242	29069236	29069237	29069240	29069238	29069243	29069239	29069235
AGS Ref.	PBH03A	W-BH01	W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH34	W-BH35	W-BH-26
Depth	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Type	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified
Ammoniacal Nitrogen	12-Dec-2023	12-Dec-2023	12-Dec-2023	13-Dec-2023	12-Dec-2023	13-Dec-2023	13-Dec-2023	12-Dec-2023	13-Dec-2023	12-Dec-2023
Anions by Kone (w)	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	12-Dec-2023
Cyanide Comp/Free/Total/Thiocyanate	11-Dec-2023	14-Dec-2023	14-Dec-2023	14-Dec-2023	14-Dec-2023	14-Dec-2023	12-Dec-2023	14-Dec-2023	14-Dec-2023	11-Dec-2023
Dissolved Metals by ICP-MS	13-Dec-2023	13-Dec-2023	12-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	11-Dec-2023
EPH and CWG by FID	15-Dec-2023	16-Dec-2023	14-Dec-2023	14-Dec-2023	14-Dec-2023	14-Dec-2023	14-Dec-2023	16-Dec-2023	13-Dec-2023	16-Dec-2023
GRO by GC-FID (W)	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	13-Dec-2023
Hexavalent Chromium (w)	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	11-Dec-2023	13-Dec-2023
Mercury Dissolved	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023
Nitrite by Kone (w)	11-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	11-Dec-2023
PAH Spec MS - Aqueous (W)	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023
PCB Congeners - Aqueous (W)	18-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023
pH Value	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023
Phenols by HPLC (W)	12-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	12-Dec-2023
SVOC MS (W) - Aqueous	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023
Total Metals by ICP-MS	13-Dec-2023	12-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023	13-Dec-2023
TPH CWG (W)	15-Dec-2023	16-Dec-2023	14-Dec-2023	14-Dec-2023	14-Dec-2023	14-Dec-2023	14-Dec-2023	16-Dec-2023	13-Dec-2023	16-Dec-2023
VOC MS (W)	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023	12-Dec-2023



CERTIFICATE OF ANALYSIS

SDG: 231208-56
Client Ref: Immingham

Report Number: 714902
Location: Immingham

Superseded Report:

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of 15 days after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



Tel: [REDACTED]
[REDACTED]
[REDACTED]

Aecom
Royal Court
Basil Close
Chesterfield
Derbyshire
S41 7SL

Attention: Sarah Blackburn

CERTIFICATE OF ANALYSIS

Date of report Generation:	27 December 2023
Customer:	Aecom
Sample Delivery Group (SDG):	231214-118
Your Reference:	Immingham
Location:	Immingham
Report No:	715509
Order Number:	1626116

We received 14 samples on Thursday December 14, 2023 and 14 of these samples were scheduled for analysis which was completed on Wednesday December 27, 2023. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

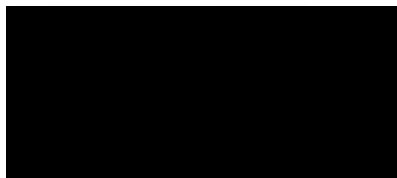
Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
29109673	E-BH02			12/12/2023
29109671	E-BH04			13/12/2023
29109672	E-BH11			13/12/2023
29109675	E-BH22			13/12/2023
29109676	P-BH03A			12/12/2023
29109670	W-BH01			12/12/2023
29109668	W-BH10			12/12/2023
29109667	W-BH14			12/12/2023
29109665	W-BH18			12/12/2023
29109666	W-BH21			12/12/2023
29109662	W-BH24			12/12/2023
29109663	W-BH26			12/12/2023
29109659	W-BH34			12/12/2023
29109661	W-BH35			12/12/2023

Only received samples which have had analysis scheduled will be shown on the following pages.

29109670	W-BH01			250ml Amber Gl.	GW		
				PTFE/PE (ALE219)	GW		
				0.5l glass bottle (ALE227)	GW		
				Vial (ALE297)	GW	X	
				NaOH (ALE245)	GW		
				H2SO4 (ALE244)	GW		
				500ml Plastic (ALE208)	GW		
				330ml plastic bottle (ALE503)	GW		
				0.5l glass bottle (ALE227)	GW		
				Vial (ALE297)	GW	X	
29109675	E-BH22			NaOH (ALE245)	GW		
				HNO3 Filtered (ALE204)	GW		
				H2SO4 (ALE244)	GW		
				500ml Plastic (ALE208)	GW		
				330ml plastic bottle (ALE503)	GW		
				250ml Amber Gl. PTFE/PE (ALE219)	GW		
				0.5l glass bottle (ALE227)	GW		
				Vial (ALE297)	GW	X	
				NaOH (ALE245)	GW		
				HNO3 Filtered (ALE204)	GW		
29109672	E-BH11			NaOH (ALE245)	GW		
				HNO3 Filtered (ALE204)	GW		
				H2SO4 (ALE244)	GW		
				500ml Plastic (ALE208)	GW		
				330ml plastic bottle (ALE503)	GW		
				250ml Amber Gl. PTFE/PE (ALE219)	GW		
				0.5l glass bottle (ALE227)	GW		
				Vial (ALE297)	GW	X	
				NaOH (ALE245)	GW		
				HNO3 Filtered (ALE204)	GW		

29109662	W-BH24			330ml plastic bottle (ALE503)	GW		
				250ml Amber Gl. PTFE/PE (ALE219)	GW		
				0.5l glass bottle (ALE227)	GW		
				Vial (ALE297)	GW		
				NaOH (ALE245)	GW		
				H2SO4 (ALE244)	GW		
				500ml Plastic (ALE208)	GW		
				330ml plastic bottle (ALE503)	GW		
				250ml Amber Gl. PTFE/PE (ALE219)	GW		
				0.5l glass bottle (ALE227)	GW		
29109665	W-BH18			Vial (ALE297)	GW		
				NaOH (ALE245)	GW	X	
				HNO3 Filtered (ALE204)	GW		
				H2SO4 (ALE244)	GW		
				500ml Plastic (ALE208)	GW		
				330ml plastic bottle (ALE503)	GW		
				250ml Amber Gl. PTFE/PE (ALE219)	GW		
				0.5l glass bottle (ALE227)	GW		
				Vial (ALE297)	GW		
				NaOH (ALE245)	GW		
29109667	W-BH14			HNO3 Unfiltered (ALE204)	GW		
				NaOH (ALE245)	GW		
				Vial (ALE297)	GW		
				0.5l glass bottle (ALE227)	GW		
				PTFE/PE (ALE219)	GW		
				250ml Amber Gl. PTFE/PE (ALE219)	GW		
				330ml plastic bottle (ALE503)	GW		
				330ml plastic bottle (ALE503)	GW		
				500ml Plastic (ALE208)	GW		
				H2SO4 (ALE244)	GW		

29109659	W-BH35			Vial (ALE297)	GW		X
				NaOH (ALE245)	GW		
				HNO3 Unfiltered (ALE204)	GW		
				H2SO4 (ALE244)	GW		
				500ml Plastic (ALE208)	GW		
				330ml plastic bottle (ALE503)	GW		
				250ml Amber Gl. PTFE/PE (ALE219)	GW		
				0.5l glass bottle (ALE227)	GW		
				Vial (ALE297)	GW		X
				NaOH (ALE245)	GW		
29109659	W-BH34						



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.		E-BH02	E-BH04	E-BH11	E-BH22	P-BH03A	W-BH01
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 12/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 12/12/2023	Ground Water (GW) 12/12/2023
M	mCERTS accredited.									
aq	Aqueous / settled sample.									
diss.filt	Dissolved / filtered sample.									
tot.unfilt	Total / unfiltered sample.									
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*@\$@Sample deviation (see appendix)										
Component	LOD/Units	Method								
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099		0.36	0.6	<0.2	<0.2	19.9	<0.2	
Arsenic (diss.filt)	<0.5 µg/l	TM152		8.67	1.26	<0.5	1.42	7.81	<0.5	
Barium (diss.filt)	<0.2 µg/l	TM152		112	51.2	84.4	206	269	81.4	
Beryllium (diss.filt)	<0.1 µg/l	TM152		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Boron (diss.filt)	<10 µg/l	TM152		309	1330	141	59.7	916	19.1	
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	
Chromium (diss.filt)	<1 µg/l	TM152		<1	<1	<1	<1	<1	<1	
Copper (diss.filt)	<0.3 µg/l	TM152		<0.3	<0.3	<0.3	<0.3	<0.3	0.732	
Lead (diss.filt)	<0.2 µg/l	TM152		<0.2	<0.2	<0.2	<0.2	<0.2	0.251	
Nickel (diss.filt)	<0.4 µg/l	TM152		1.11	2.52	4.43	0.626	10.6	0.817	
Selenium (diss.filt)	<1 µg/l	TM152		1.67	<1	<1	<1	<1	<1	
Vanadium (diss.filt)	<1 µg/l	TM152		<1	<1	<1	<1	2.36	<1	
Zinc (diss.filt)	<1 µg/l	TM152		3.14	2.33	4.2	2.96	9.48	6.51	
Sodium (Dis.Filt)	<0.076 mg/l	TM152		364	362	343	103	156	14	
Magnesium (Dis.Filt)	<0.036 mg/l	TM152		23.4	90.7	22.5	14	123	6.69	
Potassium (Dis.Filt)	<0.2 mg/l	TM152		7.39	57.8	4.51	3.55	71.6	1.61	
Calcium (Dis.Filt)	<0.2 mg/l	TM152		142	118	163	137	437	108	
Hardness, Total as CaCO3 unfiltered	<0.35 mg/l	TM152		471	674	515	407	1560	1540	
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Chloride	<2 mg/l	TM184		718	480	674	273	265	36.9	
Nitrate as NO3	<0.3 mg/l	TM184		<0.3	<0.3	9.28	1.96	<0.3	34.9	
PCB congener 28	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.03	<0.075	
PCB congener 52	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.03	<0.075	
PCB congener 101	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.03	<0.075	
PCB congener 118	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.03	<0.075	
PCB congener 138	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.03	<0.075	
PCB congener 153	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.03	<0.075	
PCB congener 180	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.03	<0.075	
Sum of detected EC7 PCB's	<0.105 µg/l	TM197		<0.105	<0.105	<0.105	<0.105	<0.21	<0.525	
PCB congener 77	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.03	<0.075	
PCB congener 81	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.03	<0.075	
PCB congener 105	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.03	<0.075	
PCB congener 114	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.03	<0.075	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.		W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		Ground Water (GW) 12/12/2023 14/12/2023 231214-118 29109668	Ground Water (GW) 12/12/2023 14/12/2023 231214-118 29109667	Ground Water (GW) 12/12/2023 14/12/2023 231214-118 29109665	Ground Water (GW) 12/12/2023 14/12/2023 231214-118 29109666	Ground Water (GW) 12/12/2023 14/12/2023 231214-118 29109662	Ground Water (GW) 12/12/2023 14/12/2023 231214-118 29109663
Component	LOD/Units	Method								
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	<0.2	<0.2	<0.2	<0.2	0.779	<0.2	<0.2	<0.2
Arsenic (diss.filt)	<0.5 µg/l	TM152	<0.5	0.987	<0.5	<0.5	<0.5	4.95	<0.5	4.95
Barium (diss.filt)	<0.2 µg/l	TM152	77.1	102	133	65.1	138	36.1	77.1	102
Beryllium (diss.filt)	<0.1 µg/l	TM152	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron (diss.filt)	<10 µg/l	TM152	73.5	22.7	18.1	19.6	21	576	73.5	22.7
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Chromium (diss.filt)	<1 µg/l	TM152	<1	<1	<1	2.18	<1	<1	<1	<1
Copper (diss.filt)	<0.3 µg/l	TM152	0.499	1.17	<0.3	1.25	1.92	0.871	0.499	1.17
Lead (diss.filt)	<0.2 µg/l	TM152	<0.2	1.15	<0.2	0.34	0.546	<0.2	<0.2	1.15
Nickel (diss.filt)	<0.4 µg/l	TM152	0.853	1.06	0.532	4.94	1.21	8.17	0.853	1.06
Selenium (diss.filt)	<1 µg/l	TM152	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium (diss.filt)	<1 µg/l	TM152	<1	1.2	<1	<1	<1	<1	<1	1.2
Zinc (diss.filt)	<1 µg/l	TM152	9.47	8.86	1.96	14.2	9.71	6.98	9.47	8.86
Sodium (Dis.Filt)	<0.076 mg/l	TM152	10.6	11.9	15.3	98.9	14.2	124	10.6	11.9
Magnesium (Dis.Filt)	<0.036 mg/l	TM152	5.6	6.54	6.94	6.6	7.36	84.9	5.6	6.54
Potassium (Dis.Filt)	<0.2 mg/l	TM152	1.44	1.64	1.85	3.51	1.67	20.7	1.44	1.64
Calcium (Dis.Filt)	<0.2 mg/l	TM152	99	101	94.3	61.2	89.9	276	99	101
Hardness, Total as CaCO3 unfiltered	<0.35 mg/l	TM152	922	281	264	339	499	971	922	281
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloride	<2 mg/l	TM184	37.5	23.7	24.9	29.2	18.4	62.2	37.5	23.7
Nitrate as NO3	<0.3 mg/l	TM184	35.8	<0.3	1.26	21.2	<0.3	<0.3	35.8	<0.3
PCB congener 28	<0.015 µg/l	TM197	<0.03	<0.03	<0.03	<0.015	<0.075	<0.015	<0.03	<0.03
PCB congener 52	<0.015 µg/l	TM197	<0.03	<0.03	<0.03	<0.015	<0.075	<0.015	<0.03	<0.03
PCB congener 101	<0.015 µg/l	TM197	<0.03	<0.03	<0.03	<0.015	<0.075	<0.015	<0.03	<0.03
PCB congener 118	<0.015 µg/l	TM197	<0.03	<0.03	<0.03	<0.015	<0.075	<0.015	<0.03	<0.03
PCB congener 138	<0.015 µg/l	TM197	<0.03	<0.03	<0.03	<0.015	<0.075	<0.015	<0.03	<0.03
PCB congener 153	<0.015 µg/l	TM197	<0.03	<0.03	<0.03	<0.015	<0.075	<0.015	<0.03	<0.03
PCB congener 180	<0.015 µg/l	TM197	<0.03	<0.03	<0.03	<0.015	<0.075	<0.015	<0.03	<0.03
Sum of detected EC7 PCB's	<0.105 µg/l	TM197	<0.21	<0.21	<0.21	<0.105	<0.525	<0.105	<0.21	<0.21
PCB congener 77	<0.015 µg/l	TM197	<0.03	<0.03	<0.03	<0.015	<0.075	<0.015	<0.03	<0.03
PCB congener 81	<0.015 µg/l	TM197	<0.03	<0.03	<0.03	<0.015	<0.075	<0.015	<0.03	<0.03
PCB congener 105	<0.015 µg/l	TM197	<0.03	<0.03	<0.03	<0.015	<0.075	<0.015	<0.03	<0.03
PCB congener 114	<0.015 µg/l	TM197	<0.03	<0.03	<0.03	<0.015	<0.075	<0.015	<0.03	<0.03



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.		W-BH34	W-BH35			
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		W-BH34	W-BH35					
			Ground Water (GW)	Ground Water (GW)					
			12/12/2023	12/12/2023					
			14/12/2023	14/12/2023					
			231214-118	231214-118					
			29109659	29109661					
Component	LOD/Units	Method							
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	<0.2	<0.2	#	#			
Arsenic (diss.filt)	<0.5 µg/l	TM152	<0.5	1.04	#	2 #			
Barium (diss.filt)	<0.2 µg/l	TM152	81.6	83.3	#	2 #			
Beryllium (diss.filt)	<0.1 µg/l	TM152	<0.1	<0.1	#	2 #			
Boron (diss.filt)	<10 µg/l	TM152	19.5	18.1	#	2 #			
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08	<0.08	#	2 #			
Chromium (diss.filt)	<1 µg/l	TM152	<1	<1	#	2 #			
Copper (diss.filt)	<0.3 µg/l	TM152	0.538	0.752	#	2 #			
Lead (diss.filt)	<0.2 µg/l	TM152	<0.2	0.219	#	2 #			
Nickel (diss.filt)	<0.4 µg/l	TM152	1.06	6.26	#	2 #			
Selenium (diss.filt)	<1 µg/l	TM152	<1	<1	#	2 #			
Vanadium (diss.filt)	<1 µg/l	TM152	<1	<1	#	2 #			
Zinc (diss.filt)	<1 µg/l	TM152	2.07	10.1	#	2 #			
Sodium (Dis.Filt)	<0.076 mg/l	TM152	10.2	11.4	#	2 #			
Magnesium (Dis.Filt)	<0.036 mg/l	TM152	5.5	6.2	#	2 #			
Potassium (Dis.Filt)	<0.2 mg/l	TM152	1.39	1.63	#	2 #			
Calcium (Dis.Filt)	<0.2 mg/l	TM152	97.7	94.7	#	2 #			
Hardness, Total as CaCO3 unfiltered	<0.35 mg/l	TM152	268	268	2				
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01	<0.01	#	2 #			
Chloride	<2 mg/l	TM184	26.8	20.1	#	#			
Nitrate as NO3	<0.3 mg/l	TM184	25.4	8.36	#	#			
PCB congener 28	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 52	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 101	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 118	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 138	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 153	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 180	<0.015 µg/l	TM197	<0.015	<0.015					
Sum of detected EC7 PCB's	<0.105 µg/l	TM197	<0.105	<0.105					
PCB congener 77	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 81	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 105	<0.015 µg/l	TM197	<0.015	<0.015					
PCB congener 114	<0.015 µg/l	TM197	<0.015	<0.015					



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.	W-BH34	W-BH35					
#	ISO17025 accredited.									
M	mCERTS accredited.									
aq	Aqueous / settled sample.									
diss.filt	Dissolved / filtered sample.									
tot.unfilt	Total / unfiltered sample.									
*	Subcontracted - refer to subcontractor report for accreditation status.									
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
(F)	Trigger breach confirmed									
1-4*	@ Sample deviation (see appendix)									
Component	LOD/Units	Method	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
PCB congener 123	<0.015 µg/l	TM197		Ground Water (GW)	12/12/2023		12/12/2023			
PCB congener 126	<0.015 µg/l	TM197		Ground Water (GW)	12/12/2023		12/12/2023			
PCB congener 156	<0.015 µg/l	TM197		Ground Water (GW)	12/12/2023		12/12/2023			
PCB congener 157	<0.015 µg/l	TM197		Ground Water (GW)	12/12/2023		12/12/2023			
PCB congener 167	<0.015 µg/l	TM197		Ground Water (GW)	12/12/2023		12/12/2023			
PCB congener 169	<0.015 µg/l	TM197		Ground Water (GW)	12/12/2023		12/12/2023			
PCB congener 189	<0.015 µg/l	TM197		Ground Water (GW)	12/12/2023		12/12/2023			
Cyanide, Total	<0.05 mg/l	TM227								
				#					#	
Cyanide, Free	<0.05 mg/l	TM227								
				#					#	
Chromium, Hexavalent	<0.03 mg/l	TM241								
				#					#	
Conductivity @ 20 deg.C	<0.02 mS/cm	TM256			0.526		0.49			
				#					#	
Phenol	<0.002 mg/l	TM259			<0.002		<0.002			
				#					#	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

PAH Spec MS - Aqueous (W)

Results Legend			Customer Sample Ref.	E-BH02	E-BH04	E-BH11	E-BH22	P-BH03A	W-BH01
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*@\$@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 12/12/2023 14/12/2023 231214-118 29109673	Ground Water (GW) 13/12/2023 14/12/2023 231214-118 29109671	Ground Water (GW) 13/12/2023 14/12/2023 231214-118 29109672	Ground Water (GW) 13/12/2023 14/12/2023 231214-118 29109675	Ground Water (GW) 12/12/2023 14/12/2023 231214-118 29109676	Ground Water (GW) 12/12/2023 14/12/2023 231214-118 29109670
Component	LOD/Units	Method							
Naphthalene (aq)	<0.01 µg/l	TM178	<0.01 #	<0.01 #	<0.01 #	<0.01 #	0.0523 #	<0.05 #	
Acenaphthene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	0.0314 #	<0.025 #	
Acenaphthylene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.01 #	<0.025 #	
Fluoranthene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	0.164 #	<0.025 #	
Anthracene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	0.0237 #	<0.025 #	
Phenanthrene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	0.111 #	<0.025 #	
Fluorene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	0.0203 #	<0.025 #	
Chrysene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	0.094 #	<0.025 #	
Pyrene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	0.164 #	<0.025 #	
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	0.0662 #	<0.025 #	
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	0.0708 #	<0.025 #	
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	0.0511 #	<0.025 #	
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178	<0.002 #	<0.002 #	<0.002 #	<0.002 #	0.0878 #	<0.01 #	
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.01 #	<0.025 #	
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	0.0683 #	<0.025 #	
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	0.0414 #	<0.025 #	
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178	<0.082 #	<0.082 #	<0.082 #	<0.082 #	1.05 #	<0.41 #	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	E-BH02	E-BH04	E-BH11	E-BH22	P-BH03A	W-BH01
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
M	mCERTS accredited.			12/12/2023	13/12/2023	13/12/2023	13/12/2023	12/12/2023	12/12/2023
aq	Aqueous / settled sample.			14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
diss.filt	Dissolved / filtered sample.			231214-118	231214-118	231214-118	231214-118	231214-118	231214-118
tot.unfilt	Total / unfiltered sample.			29109673	29109671	29109672	29109675	29109676	29109670
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*@\$@Sample deviation (see appendix)									
Component	LOD/Units	Method							
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
2-Chlorophenol (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
2-Methylphenol (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
2-Nitroaniline (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
2-Nitrophenol (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
3-Nitroaniline (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
4-Chloroaniline (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
4-Methylphenol (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
4-Nitroaniline (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
4-Nitrophenol (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
Azobenzene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
Acenaphthylene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
Acenaphthene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
Anthracene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<2	<2	<2	<2	<2	<8	<4
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1	<4	<2



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
M	mCERTS accredited.			12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
aq	Aqueous / settled sample.			14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
diss.filt	Dissolved / filtered sample.			231214-118	231214-118	231214-118	231214-118	231214-118	231214-118
tot.unfilt	Total / unfiltered sample.			29109668	29109667	29109665	29109666	29109662	29109663
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)									
Component	LOD/Units	Method							
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
2-Chlorophenol (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
2-Methylphenol (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
2-Nitroaniline (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
2-Nitrophenol (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
3-Nitroaniline (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
4-Chloroaniline (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
4-Methylphenol (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
4-Nitroaniline (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
4-Nitrophenol (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
Azobenzene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
Acenaphthylene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
Acenaphthene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
Anthracene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<4	<4	<2	<2	<8	<2	
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<2	<2	<1	<1	<4	<1	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend		Customer Sample Ref.	W-BH34	W-BH35			
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)			
M	mCERTS accredited.		12/12/2023	12/12/2023			
aq	Aqueous / settled sample.		14/12/2023	14/12/2023			
diss.filt	Dissolved / filtered sample.		231214-118	231214-118			
tot.unfilt	Total / unfiltered sample.		29109659	29109661			
	* Subcontracted - refer to subcontractor report for accreditation status.						
	** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery						
	(F) Trigger breach confirmed						
	1-4*\$@Sample deviation (see appendix)						
Component	LOD/Units		Method				
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<1	<1	#	#	
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<1	#	#	
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<1	#	#	
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<1	#	#	
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<1	<1	#	#	
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<1	<1	#	#	
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<1	<1	#	#	
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<1	<1	#	#	
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	<1	#	#	
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	<1	#	#	
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<1	<1	#	#	
2-Chlorophenol (aq)	<1 µg/l	TM176	<1	<1	#	#	
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<1	<1	#	#	
2-Methylphenol (aq)	<1 µg/l	TM176	<1	<1	#	#	
2-Nitroaniline (aq)	<1 µg/l	TM176	<1	<1	#	#	
2-Nitrophenol (aq)	<1 µg/l	TM176	<1	<1	#	#	
3-Nitroaniline (aq)	<1 µg/l	TM176	<1	<1	#	#	
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<1	<1	#	#	
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<1	<1	#	#	
4-Chloroaniline (aq)	<1 µg/l	TM176	<1	<1	#	#	
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<1	<1	#	#	
4-Methylphenol (aq)	<1 µg/l	TM176	<1	<1	#	#	
4-Nitroaniline (aq)	<1 µg/l	TM176	<1	<1	#	#	
4-Nitrophenol (aq)	<1 µg/l	TM176	<1	<1	#	#	
Azobenzene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Acenaphthylene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Acenaphthene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Anthracene (aq)	<1 µg/l	TM176	<1	<1	#	#	
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<1	<1	#	#	
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<1	<1	#	#	
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<2	<2	#	#	
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<1	<1	#	#	
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<1	<1	#	#	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

TPH CWG (W)

Results Legend			Customer Sample Ref.	E-BH02	E-BH04	E-BH11	E-BH22	P-BH03A	W-BH01
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*@\$@Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 12/12/2023 14/12/2023 231214-118 29109673	Ground Water (GW) 13/12/2023 14/12/2023 231214-118 29109671	Ground Water (GW) 13/12/2023 14/12/2023 231214-118 29109672	Ground Water (GW) 13/12/2023 14/12/2023 231214-118 29109675	Ground Water (GW) 12/12/2023 14/12/2023 231214-118 29109676	Ground Water (GW) 12/12/2023 14/12/2023 231214-118 29109670
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM245	95	80	93	83	71	92	
GRO >C5-C12 (HS_1D_TOTAL)	<50 µg/l	TM245	<50 #	<50 #	<50 #	<50 #	<50 #	<50 #	<50 #
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C12-C16 (aq) (SPEC_D_AL1_W)	<10 µg/l	TM439	<10	<10	<10	<10	<50	<10	<10
Aliphatics >C16-C21 (aq) (SPEC_D_AL2_W)	<10 µg/l	TM439	<10	<10	<10	<10	<50	<10	<10
Aliphatics >C21-C35 (aq) (SPEC_D_AL3_W)	<10 µg/l	TM439	<10	<10	<10	<10	<50	<10	<10
Total Aliphatics >C12-C35 (aq) (EPHAR12_35T_GC_W)	<10 µg/l	TM439	<10	<10	<10	<10	<50	<10	<10
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq) (SPEC_D_AROM1_W)	<10 µg/l	TM439	<10	<10	<10	<10	<50	<10	<10
Aromatics >EC16-EC21 (aq) (SPEC_D_AROM2_W)	<10 µg/l	TM439	<10	<10	<10	<10	<50	<10	<10
Aromatics >EC21-EC35 (aq) (SPEC_D_AROM3_W)	<10 µg/l	TM439	<10	<10	<10	<10	<50	<10	<10
Total Aromatics >EC12-EC35 (aq) (EPHAR12_35T_GC_W)	<10 µg/l	TM439	<10	<10	<10	<10	<50	<10	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM439	<10	<10	<10	<10	<10	<10	<10



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	E-BH02	E-BH04	E-BH11	E-BH22	P-BH03A	W-BH01
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*@\$@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 12/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 12/12/2023	Ground Water (GW) 12/12/2023
Component	LOD/Units	Method							
Dibromofluoromethane**	%	TM208	106	112	105	112	111	104	
Toluene-d8**	%	TM208	96	99.7	98.2	99.6	100	98.1	
4-Bromofluorobenzene**	%	TM208	98.3	102	104	104	105	104	
Dichlorodifluoromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Chloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Vinyl chloride	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Bromomethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Chloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Trichlorofluoromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,1-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Carbon disulphide	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Dichloromethane	<3 µg/l	TM208	<3	<3	<3	<3	<3	<3	
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,1-Dichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
2,2-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Bromochloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Chloroform	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,1,1-Trichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,1-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Carbontetrachloride	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,2-Dichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Benzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Trichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,2-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Dibromomethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Bromodichloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Toluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,1,2-Trichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,3-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	E-BH02	E-BH04	E-BH11	E-BH22	P-BH03A	W-BH01
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
M	mCERTS accredited.			12/12/2023	13/12/2023	13/12/2023	13/12/2023	12/12/2023	12/12/2023
aq	Aqueous / settled sample.			14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
diss.filt	Dissolved / filtered sample.			231214-118	231214-118	231214-118	231214-118	231214-118	231214-118
tot.unfilt	Total / unfiltered sample.			29109673	29109671	29109672	29109675	29109676	29109670
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery. (F) Trigger breach confirmed 1-4* @ Sample deviation (see appendix)									
Component	LOD/Units	Method							
Tetrachloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
m,p-Xylene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
o-Xylene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Styrene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1 µg/l	TM208	<1	<2	<1	<1	<2	<1.1	<1.1
Isopropylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Bromobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Propylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
4-Chlorotoluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
4-iso-Propyltoluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Naphthalene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 12/12/2023	Ground Water (GW) 12/12/2023	Ground Water (GW) 12/12/2023	Ground Water (GW) 12/12/2023	Ground Water (GW) 12/12/2023	Ground Water (GW) 12/12/2023
Component	LOD/Units	Method							
Dibromofluoromethane**	%	TM208	104	110	106	107	110	108	
Toluene-d8**	%	TM208	98.4	99.4	96	95.7	99.2	95.3	
4-Bromofluorobenzene**	%	TM208	104	106	97.8	98.5	104	99.3	
Dichlorodifluoromethane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Chloromethane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Vinyl chloride	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Bromomethane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Chloroethane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Trichlorofluoromethane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
1,1-Dichloroethene	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Carbon disulphide	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Dichloromethane	<3 µg/l	TM208	<3	<30	<3	<3	<3	<3	
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
1,1-Dichloroethane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
2,2-Dichloropropane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Bromochloromethane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Chloroform	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
1,1,1-Trichloroethane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
1,1-Dichloropropene	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Carbontetrachloride	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
1,2-Dichloroethane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Benzene	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Trichloroethene	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
1,2-Dichloropropane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Dibromomethane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Bromodichloromethane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
Toluene	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
1,1,2-Trichloroethane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	
1,3-Dichloropropane	<1 µg/l	TM208	<1	<10	<1	<1	<1	<1	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
M	mCERTS accredited.			12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
aq	Aqueous / settled sample.			14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
diss.filt	Dissolved / filtered sample.			231214-118	231214-118	231214-118	231214-118	231214-118	231214-118
tot.unfilt	Total / unfiltered sample.			29109668	29109667	29109665	29109666	29109662	29109663
* Subcontracted - refer to subcontractor report for accreditation status.									
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
(F) Trigger breach confirmed									
1-4* @ Sample deviation (see appendix)									
Component	LOD/Units	Method							
Tetrachloroethene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
Dibromochloromethane	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,2-Dibromoethane	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
Chlorobenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
Ethylbenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
m,p-Xylene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
o-Xylene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
Styrene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
Bromoform	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
Isopropylbenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,2,3-Trichloropropane	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
Bromobenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
Propylbenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
2-Chlorotoluene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
4-Chlorotoluene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
tert-Butylbenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
sec-Butylbenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
4-iso-Propyltoluene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,3-Dichlorobenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,4-Dichlorobenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
n-Butylbenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,2-Dichlorobenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
Hexachlorobutadiene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
Naphthalene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<10	<1	<1	<1	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

VOC MS (W)

<small> # ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*#@ Sample deviation (see appendix) </small>			Customer Sample Ref.	W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26
	Depth (m)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
	Sample Type	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	
	Date Sampled	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023	
	Sample Time	231214-118	231214-118	231214-118	231214-118	231214-118	231214-118	231214-118	
	Date Received	SDG Ref	29109668	29109667	29109665	29109666	29109662	29109663	
	Lab Sample No.(s)	AGS Reference							
	Method								
Component	LOD/Units	Method							
Sum of detected Xylenes	<2 µg/l	TM208	<2	<20	<2	<2	<2	<2	
Sum of BTEX	<5 µg/l	TM208	<5	<50	<5	<5	<5	<5	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.		W-BH34		W-BH35	
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		Ground Water (GW) 12/12/2023		Ground Water (GW) 12/12/2023	
Component	LOD/Units	Method						
Dibromofluoromethane**	%	TM208	109		108			
Toluene-d8**	%	TM208	96.4		96.8			
4-Bromofluorobenzene**	%	TM208	98.3		98.9			
Dichlorodifluoromethane	<1 µg/l	TM208	<1		<1			
Chloromethane	<1 µg/l	TM208	<1	#	<1	#		
Vinyl chloride	<1 µg/l	TM208	<1	#	<1	#		
Bromomethane	<1 µg/l	TM208	<1	#	<1	#		
Chloroethane	<1 µg/l	TM208	<1	#	<1	#		
Trichlorofluoromethane	<1 µg/l	TM208	<1	#	<1	#		
1,1-Dichloroethene	<1 µg/l	TM208	<1	#	<1	#		
Carbon disulphide	<1 µg/l	TM208	<1	#	<1	#		
Dichloromethane	<3 µg/l	TM208	<3	#	<3	#		
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1	#	<1	#		
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1	#	<1	#		
1,1-Dichloroethane	<1 µg/l	TM208	<1	#	<1	#		
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1	#	<1	#		
2,2-Dichloropropane	<1 µg/l	TM208	<1		<1			
Bromochloromethane	<1 µg/l	TM208	<1	#	<1	#		
Chloroform	<1 µg/l	TM208	<1	#	<1	#		
1,1,1-Trichloroethane	<1 µg/l	TM208	<1	#	<1	#		
1,1-Dichloropropene	<1 µg/l	TM208	<1	#	<1	#		
Carbontetrachloride	<1 µg/l	TM208	<1	#	<1	#		
1,2-Dichloroethane	<1 µg/l	TM208	<1	#	<1	#		
Benzene	<1 µg/l	TM208	<1	#	<1	#		
Trichloroethene	<1 µg/l	TM208	<1	#	<1	#		
1,2-Dichloropropane	<1 µg/l	TM208	<1	#	<1	#		
Dibromomethane	<1 µg/l	TM208	<1	#	<1	#		
Bromodichloromethane	<1 µg/l	TM208	<1	#	<1	#		
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1	#	<1	#		
Toluene	<1 µg/l	TM208	<1	#	<1	#		
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1	#	<1	#		
1,1,2-Trichloroethane	<1 µg/l	TM208	<1	#	<1	#		
1,3-Dichloropropane	<1 µg/l	TM208	<1	#	<1	#		



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend		Customer Sample Ref.	W-BH34	W-BH35			
#	ISO17025 accredited.						
M	mCERTS accredited.						
aq	Aqueous / settled sample.						
diss.filt	Dissolved / filtered sample.						
tot.unfilt	Total / unfiltered sample.						
*	Subcontracted - refer to subcontractor report for accreditation status.						
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery						
(F)	Trigger breach confirmed						
1-4	@ Sample deviation (see appendix)						
Component	LOD/Units	Method					
Tetrachloroethene	<1 µg/l	TM208	<1 #	<1 #			
Dibromochloromethane	<1 µg/l	TM208	<1 #	<1 #			
1,2-Dibromoethane	<1 µg/l	TM208	<1 #	<1 #			
Chlorobenzene	<1 µg/l	TM208	<1 #	<1 #			
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #			
Ethylbenzene	<1 µg/l	TM208	<1 #	<1 #			
m,p-Xylene	<1 µg/l	TM208	<1 #	<1 #			
o-Xylene	<1 µg/l	TM208	<1 #	<1 #			
Styrene	<1 µg/l	TM208	<1 #	<1 #			
Bromoform	<1 µg/l	TM208	<1 #	<1 #			
Isopropylbenzene	<1 µg/l	TM208	<1 #	<1 #			
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1 #	<1 #			
1,2,3-Trichloropropane	<1 µg/l	TM208	<1 #	<1 #			
Bromobenzene	<1 µg/l	TM208	<1 #	<1 #			
Propylbenzene	<1 µg/l	TM208	<1 #	<1 #			
2-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #			
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1 #	<1 #			
4-Chlorotoluene	<1 µg/l	TM208	<1 #	<1 #			
tert-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #			
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1 #	<1 #			
sec-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #			
4-iso-Propyltoluene	<1 µg/l	TM208	<1 #	<1 #			
1,3-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #			
1,4-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #			
n-Butylbenzene	<1 µg/l	TM208	<1 #	<1 #			
1,2-Dichlorobenzene	<1 µg/l	TM208	<1 #	<1 #			
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1 #	<1 #			
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #			
Hexachlorobutadiene	<1 µg/l	TM208	<1 #	<1 1 #			
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1 #	<1 #			
Naphthalene	<1 µg/l	TM208	<1 #	<1 #			
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #			
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1 #	<1 #			



CERTIFICATE OF ANALYSIS

SDG: 231214-118
 Client Ref.: Immingham

Report Number: 715509
 Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	W-BH34	W-BH35						
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 12/12/2023	Ground Water (GW) 12/12/2023						
M	mCERTS accredited.										
aq	Aqueous / settled sample.										
diss.filt	Dissolved / filtered sample.										
tot.unfilt	Total / unfiltered sample.										
*	Subcontracted - refer to subcontractor report for accreditation status.										
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery										
(F)	Trigger breach confirmed										
1-4*\$	Sample deviation (see appendix)										
Component	LOD/Units	Method									
Sum of detected Xylenes	<2 µg/l	TM208		<2	<2						
Sum of BTEX	<5 µg/l	TM208		<5	<5						



SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

Table of Results - Appendix

Method No	Description
TM099	Determination of Ammonium in Water Samples using the Kone Analyser
TM152	Analysis of Aqueous Samples by ICP-MS
TM176	Determination of SVOCs in Water by GCMS
TM178	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM197	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Waters
TM208	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM241	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM245	Determination of GRO by Headspace in waters
TM256	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM259	Determination of Phenols in Waters and Leachates by HPLC
TM439	Determination of Extractable Petroleum Hydrocarbons (EPH) CWG banding by GC-FID on liquids

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



CERTIFICATE OF ANALYSIS

Validated

SDG: 231214-118
Client Ref.: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

Test Completion Dates

Lab Sample No(s) Customer Sample Ref.	29109673	29109671	29109672	29109675	29109676	29109670	29109668	29109667	29109665	29109666
AGS Ref.										
Depth										
Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Ammoniacal Nitrogen	15-Dec-2023	18-Dec-2023	18-Dec-2023	15-Dec-2023	15-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023
Anions by Kone (w)	21-Dec-2023	20-Dec-2023	20-Dec-2023	21-Dec-2023	20-Dec-2023	20-Dec-2023	21-Dec-2023	21-Dec-2023	20-Dec-2023	20-Dec-2023
Cyanide Comp/Free/Total/Thiocyanate	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023
Dissolved Metals by ICP-MS	18-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023	19-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023	19-Dec-2023	18-Dec-2023
EPH and CWG by FID	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023
GRO by GC-FID (W)	15-Dec-2023	18-Dec-2023	15-Dec-2023	18-Dec-2023	18-Dec-2023	15-Dec-2023	15-Dec-2023	18-Dec-2023	15-Dec-2023	15-Dec-2023
Hexavalent Chromium (w)	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023
Mercury Dissolved	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023
Nitrite by Kone (w)	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023	19-Dec-2023	21-Dec-2023	20-Dec-2023	20-Dec-2023	19-Dec-2023
PAH Spec MS - Aqueous (W)	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023
PCB Congeners - Aqueous (W)	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023
pH Value	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023
Phenols by HPLC (W)	19-Dec-2023	20-Dec-2023	20-Dec-2023	19-Dec-2023	19-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023
SVOC MS (W) - Aqueous	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023
Total Metals by ICP-MS	19-Dec-2023	18-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023	18-Dec-2023	19-Dec-2023	18-Dec-2023	18-Dec-2023
TPH CWG (W)	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023
VOC MS (W)	18-Dec-2023	18-Dec-2023	15-Dec-2023	18-Dec-2023	18-Dec-2023	15-Dec-2023	15-Dec-2023	18-Dec-2023	18-Dec-2023	19-Dec-2023

Lab Sample No(s) Customer Sample Ref.	29109662	29109663	29109659	29109661
AGS Ref.				
Depth				
Type	Ground Water	Ground Water	Ground Water	Ground Water
Ammoniacal Nitrogen	18-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023
Anions by Kone (w)	20-Dec-2023	20-Dec-2023	21-Dec-2023	20-Dec-2023
Cyanide Comp/Free/Total/Thiocyanate	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023
Dissolved Metals by ICP-MS	18-Dec-2023	18-Dec-2023	20-Dec-2023	18-Dec-2023
EPH and CWG by FID	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023
GRO by GC-FID (W)	18-Dec-2023	15-Dec-2023	15-Dec-2023	15-Dec-2023
Hexavalent Chromium (w)	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023
Mercury Dissolved	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023
Nitrite by Kone (w)	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023
PAH Spec MS - Aqueous (W)	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023
PCB Congeners - Aqueous (W)	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023
pH Value	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023
Phenols by HPLC (W)	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023
SVOC MS (W) - Aqueous	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023
Total Metals by ICP-MS	19-Dec-2023	18-Dec-2023	18-Dec-2023	19-Dec-2023
TPH CWG (W)	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023
VOC MS (W)	18-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023



CERTIFICATE OF ANALYSIS

SDG: 231214-118
Client Ref: Immingham

Report Number: 715509
Location: Immingham

Superseded Report:

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of 15 days after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
◆	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



Unit 7-8 Hawarden Business Park
 Manor Road (off Manor Lane)
 Hawarden
 Deeside
 CH5 3US

Tel: [REDACTED]
 [REDACTED]
 [REDACTED]

Aecom
 1 New York Street
 Manchester
 M1 4HD
Attention: Sarah Blackburn

CERTIFICATE OF ANALYSIS

Date of report Generation: 27 December 2023
Customer: Aecom
Sample Delivery Group (SDG): 231215-61
Your Reference: 60687114
Location: Immingham
Report No: 715561
Order Number:

We received 4 samples on Friday December 15, 2023 and 4 of these samples were scheduled for analysis which was completed on Wednesday December 27, 2023. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

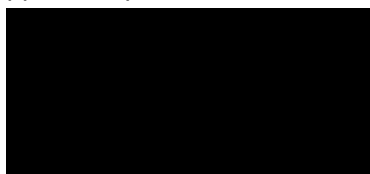
Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan
 Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 231215-61
Client Ref.: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
29113315	E-BH14			13/12/2023
29113316	E-BH15			13/12/2023
29113317	E-BH20			13/12/2023
29113318	E-BH25			13/12/2023

Only received samples which have had analysis scheduled will be shown on the following pages.



Validated

CERTIFICATE OF ANALYSIS

SDG: 231215-61
Client Ref.: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

Results Legend  Test  No Determination Possible Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type																	
		291 13315	E-BH14			330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227)	GW																
		291 13316	E-BH15			Vial (ALE297) NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244)	GW																
		291 13317	E-BH20			330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227)	GW																
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 4				X	X																
Anions by Kone (w)	All	NDPs: 0 Tests: 4							X				X										X
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 4									X												
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 4									X												
EPH and CWG by FID	All	NDPs: 0 Tests: 4								X												X	
GRO by GC-FID (W)	All	NDPs: 0 Tests: 4																					
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 4																					X
Mercury Dissolved	All	NDPs: 0 Tests: 4																					
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 4																				X	
PCB Congeners - Aqueous (W)	All	NDPs: 0 Tests: 4																					X
pH Value	All	NDPs: 0 Tests: 4																					X
Phenols by HPLC (W)	All	NDPs: 0 Tests: 4																					
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 4																				X	
Total Metals by ICP-MS	All	NDPs: 0 Tests: 4																					
TPH CWG (W)	All	NDPs: 0 Tests: 4																				X	

15:15:12 27/12/2023

Page 3 of 18

29113318	E:RH25			Vial (ALE297)	GW																			
				NaOH (ALE245)	GW																			
				HNO3 Filtered (ALE204)	GW					X														
				H2SO4 (ALE244)	GW		X																	
				330ml plastic bottle (ALE503)	GW			X																
				250ml Amber Cl. PTFE/PE (ALE219)	GW					X														
				0.5l glass bottle (ALE227)	GW						X													
				Vial (ALE297)	GW							X												
				NaOH (ALE245)	GW							X												
				HNO3 Unfiltered (ALE204)	GW								X											
				H2SO4 (ALE244)	GW									X										
				500ml Plastic (ALE208)	GW					X														



CERTIFICATE OF ANALYSIS

SDG: 231215-61
Client Ref.: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

Results Legend <div style="display: flex; flex-direction: column; gap: 5px;"> <div>X Test</div> <div>N No Determination Possible</div> </div> Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type	
		29113315	E-BH14			Vial (ALE297) NaOH (ALE245) HNO3 Unfiltered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227)	GW
		29113316	E-BH15			Vial (ALE297) NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227)	GW
	29113317	E-BH20			330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227) Vial (ALE297) NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227)	GW	
VOC MS (W)	All	NDPs: 0 Tests: 4					
						X	
						X	

29113318	E-BH25			Vial (ALE297)	GW	X
				NaOH (ALE245)	GW	
				HNO3 Filtered (ALE204)	GW	
				H2SO4 (ALE244)	GW	
				330ml plastic bottle (ALE503)	GW	
				250ml Amber Cl. PTFE/PE (ALE219)	GW	
				0.5l glass bottle (ALE227)	GW	
				Vial (ALE297)	GW	
				NaOH (ALE245)	GW	X
				HNO3 Unfiltered (ALE204)	GW	
29113317	E-BH20			H2SO4 (ALE244)	GW	
				500ml Plastic (ALE208)	GW	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231215-61
Client Ref.: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.			
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*@\$@Sample deviation (see appendix)	Customer Sample Ref.	E-BH14	E-BH15	E-BH20	E-BH25	
Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023	
		15/12/2023 231215-61 29113315	15/12/2023 231215-61 29113316	15/12/2023 231215-61 29113317	15/12/2023 231215-61 29113318	
Component	LOD/Units	Method				
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	8.71	636	8.38	0.2
			#	#	#	#
Arsenic (diss.filt)	<0.5 µg/l	TM152	3.91	27.7	23.4	2.32
			2 #	#	2 #	#
Barium (diss.filt)	<0.2 µg/l	TM152	104	82	157	27
			2 #	#	2 #	#
Beryllium (diss.filt)	<0.1 µg/l	TM152	<0.1	<0.1	<0.1	<0.1
			2 #	#	2 #	#
Boron (diss.filt)	<10 µg/l	TM152	1280	73.4	760	98.3
			2 #	#	2 #	#
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08	<0.08	<0.08	<0.08
			2 #	#	2 #	#
Chromium (diss.filt)	<1 µg/l	TM152	<1	<1	<1	<1
			2 #	#	2 #	#
Copper (diss.filt)	<0.3 µg/l	TM152	<0.3	4.11	<0.3	0.786
			2 #	#	2 #	#
Lead (diss.filt)	<0.2 µg/l	TM152	<0.2	<0.2	<0.2	0.327
			2 #	#	2 #	#
Nickel (diss.filt)	<0.4 µg/l	TM152	13.8	20.1	5.47	6.38
			2 #	#	2 #	#
Selenium (diss.filt)	<1 µg/l	TM152	<1	14.3	<1	<1
			2 #	#	2 #	#
Vanadium (diss.filt)	<1 µg/l	TM152	<1	35.9	1.42	17.7
			2 #	#	2 #	#
Zinc (diss.filt)	<1 µg/l	TM152	13.6	2.83	12.1	26.9
			2 #	#	2 #	#
Sodium (Dis.Filt)	<0.076 mg/l	TM152	1210	292	725	23.1
			2 #	#	2 #	#
Magnesium (Dis.Filt)	<0.036 mg/l	TM152	257	0.0835	59.3	1.64
			2 #	#	2 #	#
Potassium (Dis.Filt)	<0.2 mg/l	TM152	65.8	192	38.2	20.9
			2 #	#	2 #	#
Calcium (Dis.Filt)	<0.2 mg/l	TM152	319	351	109	93.2
			2 #	#	2 #	#
Hardness, Total as CaCO3 unfiltered	<0.35 mg/l	TM152	2020	922	570	263
				2		2
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01	<0.1	<0.01	<0.01
			2 #	#	2 #	#
Chloride	<2 mg/l	TM184	2500	526	1510	32.6
			#	#	#	#
Nitrate as NO3	<0.3 mg/l	TM184	<0.3	1120	<0.3	<0.3
			#	#	#	#
PCB congener 28	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015
PCB congener 52	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015
PCB congener 101	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015
PCB congener 118	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015
PCB congener 138	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015
PCB congener 153	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015
PCB congener 180	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015
Sum of detected EC7 PCB's	<0.105 µg/l	TM197	<1.05	<0.105	<0.105	<0.105
PCB congener 77	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015
PCB congener 81	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015
PCB congener 105	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015
PCB congener 114	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015



CERTIFICATE OF ANALYSIS

SDG: 231215-61
Client Ref.: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

Results Legend # ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfiltTotal / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery. (F) Trigger breach confirmed 1-4* Sample deviation (see appendix)			Customer Sample Ref.	E-BH14	E-BH15	E-BH20	E-BH25		
			Depth (m)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)		
			Sample Type	Date Sampled	Date Sampled	Date Sampled	Date Sampled		
			Sample Time	Date Received	Date Received	Date Received	Date Received		
			SDG Ref	SDG Ref	SDG Ref	SDG Ref	SDG Ref		
			Lab Sample No.(s)	Lab Sample No.(s)	Lab Sample No.(s)	Lab Sample No.(s)	Lab Sample No.(s)		
			AGS Reference	AGS Reference	AGS Reference	AGS Reference	AGS Reference		
Component	LOD/Units	Method							
PCB congener 123	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015	<0.015		
PCB congener 126	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015	<0.015		
PCB congener 156	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015	<0.015		
PCB congener 157	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015	<0.015		
PCB congener 167	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015	<0.015		
PCB congener 169	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015	<0.015		
PCB congener 189	<0.015 µg/l	TM197	<0.15	<0.015	<0.015	<0.015	<0.015		
Cyanide, Total	<0.05 mg/l	TM227	<0.05	<0.05	<0.05	<0.05	<0.05	#	#
Cyanide, Free	<0.05 mg/l	TM227	<0.05	<0.05	<0.05	<0.05	<0.05	#	#
Chromium, Hexavalent	<0.03 mg/l	TM241	<0.03	<0.03	<0.03	<0.03	<0.03	#	#
Conductivity @ 20 deg.C	<0.02 mS/cm	TM256	8.79	4.03	4.81	0.619		#	#
Phenol	<0.002 mg/l	TM259	<0.002	0.02	0.01	<0.002		#	#



CERTIFICATE OF ANALYSIS

SDG: 231215-61
Client Ref.: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

PAH Spec MS - Aqueous (W)

Results Legend		Customer Sample Ref.	E-BH14	E-BH15	E-BH20	E-BH25		
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*@\$ Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023		
Component	LOD/Units	Method						
Naphthalene (aq)	<0.01 µg/l	TM178	<0.1 #	22.4 #	<0.1 #	0.0444 #		
Acenaphthene (aq)	<0.005 µg/l	TM178	<0.05 #	6.61 #	<0.05 #	0.0112 #		
Acenaphthylene (aq)	<0.005 µg/l	TM178	<0.05 #	0.0212 #	<0.05 #	<0.005 #		
Fluoranthene (aq)	<0.005 µg/l	TM178	<0.05 #	0.885 #	<0.05 #	0.0491 #		
Anthracene (aq)	<0.005 µg/l	TM178	<0.05 #	0.992 #	<0.05 #	0.00921 #		
Phenanthrene (aq)	<0.005 µg/l	TM178	<0.05 #	7.03 #	<0.05 #	0.0347 #		
Fluorene (aq)	<0.005 µg/l	TM178	<0.05 #	3.4 #	<0.05 #	0.00752 #		
Chrysene (aq)	<0.005 µg/l	TM178	<0.05 #	0.0496 #	<0.05 #	0.118 #		
Pyrene (aq)	<0.005 µg/l	TM178	<0.05 #	0.545 #	<0.05 #	0.0706 #		
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178	<0.05 #	0.0172 #	<0.05 #	0.0419 #		
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178	<0.05 #	0.0153 #	<0.05 #	0.0543 #		
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178	<0.05 #	0.0126 #	<0.05 #	0.0373 #		
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178	<0.02 #	0.0112 #	<0.02 #	0.049 #		
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178	<0.05 #	0.0187 #	<0.05 #	0.034 #		
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178	<0.05 #	0.0192 #	<0.05 #	0.0648 #		
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178	<0.05 #	0.0188 #	<0.05 #	0.0532 #		
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178	<0.82 #	42 #	<0.82 #	0.679 #		



CERTIFICATE OF ANALYSIS

Validated

SDG: 231215-61
Client Ref.: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	E-BH14	E-BH15	E-BH20	E-BH25			
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)			
M	mCERTS accredited.			13/12/2023	13/12/2023	13/12/2023	13/12/2023			
aq	Aqueous / settled sample.			15/12/2023	15/12/2023	15/12/2023	15/12/2023			
diss.filt	Dissolved / filtered sample.			231215-61	231215-61	231215-61	231215-61			
tot.unfilt	Total / unfiltered sample.			29113315	29113316	29113317	29113318			
	Subcontracted - refer to subcontractor report for accreditation status.									
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
(F)	Trigger breach confirmed									
1-4*	@Sample deviation (see appendix)									
Component	LOD/Units	Method								
1,2-Trichlorobenzene (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
2-Chlorophenol (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<2	#	2.59	#	<4	#	<2	#
2-Methylphenol (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
2-Nitroaniline (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
2-Nitrophenol (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
3-Nitroaniline (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
4-Chloroaniline (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
4-Methylphenol (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
4-Nitroaniline (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
4-Nitrophenol (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
Azobenzene (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
Acenaphthylene (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
Acenaphthene (aq)	<1 µg/l	TM176	<2	#	5.15	#	<4	#	<2	#
Anthracene (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<4	#	<4	#	<8	#	<4	#
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<2	#	<2	#	<4	#	<2	#



CERTIFICATE OF ANALYSIS

Validated

SDG: 231215-61
 Client Ref.: 60687114

Report Number: 715561
 Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	E-BH14	E-BH15	E-BH20	E-BH25			
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4* Sample deviation (see appendix)										
Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference										
Component			LOD/Units	Method						
		Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Benzo(a)pyrene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Carbazole (aq)	<1 µg/l	TM176	<2 #	5.93	<4 #	<2 #		
		Chrysene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Dibenzofuran (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Diethyl phthalate (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Dimethyl phthalate (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<10 #	<10 #	<20 #	<10 #		
		Fluoranthene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Fluorene (aq)	<1 µg/l	TM176	<2 #	2.65	<4 #	<2 #		
		Hexachlorobenzene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Hexachlorobutadiene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Pentachlorophenol (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Phenol (aq)	<1 µg/l	TM176	<2 #	13.7	<4 #	<2 #		
		n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Hexachloroethane (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Nitrobenzene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Naphthalene (aq)	<1 µg/l	TM176	<2 #	17.8	<4 #	<2 #		
		Isophorone (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Phenanthrene (aq)	<1 µg/l	TM176	<2 #	5.57	<4 #	<2 #		
		Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		
		Pyrene (aq)	<1 µg/l	TM176	<2 #	<2 #	<4 #	<2 #		



CERTIFICATE OF ANALYSIS

Validated

SDG: 231215-61
Client Ref.: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

TPH CWG (W)

Results Legend			Customer Sample Ref.	E-BH14	E-BH15	E-BH20	E-BH25		
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference	
Component	LOD/Units	Method		Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023	Ground Water (GW) 13/12/2023		
GRO Surrogate % recovery**	%	TM245	78	88	95	84			
GRO >C5-C12 (HS_1D_TOTAL)	<50 µg/l	TM245	<50	# 117	<50	# <50	# <50		
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10		
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/l	TM245	<10	22	<10	<10	<10		
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/l	TM245	<10	23	<10	<10	<10		
Aliphatics >C10-C12 (HS_1D_AL)	<10 µg/l	TM245	<10	29	<10	<10	<10		
Aliphatics >C12-C16 (aq) (SPEC_D_AL1_W)	<10 µg/l	TM439	<10	<10	<10	<10	<10		
Aliphatics >C16-C21 (aq) (SPEC_D_AL2_W)	<10 µg/l	TM439	<10	<10	<10	<10	<10		
Aliphatics >C21-C35 (aq) (SPEC_D_AL3_W)	<10 µg/l	TM439	<10	<10	<10	<10	<10		
Total Aliphatics >C12-C35 (aq) (EPHAL12_35T_GC_W)	<10 µg/l	TM439	<10	<10	<10	<10	<10		
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/l	TM245	<10	<10	<10	<10	<10		
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/l	TM245	<10	<10	<10	<10	<10		
Aromatics >EC8-EC10	<10 µg/l	TM245	<10	15	<10	<10	<10		
Aromatics >EC10-EC12	<10 µg/l	TM245	<10	20	<10	<10	<10		
Aromatics >EC12-EC16 (aq) (SPEC_D_AROM1_W)	<10 µg/l	TM439	100	39	<10	54	<10		
Aromatics >EC16-EC21 (aq) (SPEC_D_AROM2_W)	<10 µg/l	TM439	<10	14	<10	<10	<10		
Aromatics >EC21-EC35 (aq) (SPEC_D_AROM3_W)	<10 µg/l	TM439	11	15	<10	29	<10		
Total Aromatics >EC12-EC35 (aq) (EPHAR12_35T_GC_W)	<10 µg/l	TM439	111	68	<10	83	<10		
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM439	111	185	<10	83	<10		



CERTIFICATE OF ANALYSIS

Validated

SDG: 231215-61
Client Ref.: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	E-BH14	E-BH15	E-BH20	E-BH25		
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)		
M	mCERTS accredited.			13/12/2023	13/12/2023	13/12/2023	13/12/2023		
aq	Aqueous / settled sample.			15/12/2023	15/12/2023	15/12/2023	15/12/2023		
diss.filt	Dissolved / filtered sample.			231215-61	231215-61	231215-61	231215-61		
tot.unfilt	Total / unfiltered sample.			29113315	29113316	29113317	29113318		
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-4*	@Sample deviation (see appendix)								
Component	LOD/Units	Method							
Dibromofluoromethane**	%	TM208		114	5.14	109	111		
Toluene-d8**	%	TM208		99.6	99.8	99.1	99.8		
4-Bromofluorobenzene**	%	TM208		100	98.7	100	101		
Dichlorodifluoromethane	<1 µg/l	TM208		<1	<1	<1	<1		
Chloromethane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Vinyl chloride	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Bromomethane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Chloroethane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Trichlorofluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
1,1-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Carbon disulphide	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Dichloromethane	<3 µg/l	TM208		<3	<3	<3	<3	#	#
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1	<1	<1	<1	#	#
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	#	#
1,1-Dichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	#	#
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Bromochloromethane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Chloroform	<1 µg/l	TM208		<1	<1	<1	<1	#	#
1,1,1-Trichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
1,1-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Carbontetrachloride	<1 µg/l	TM208		<1	<1	<1	<1	#	#
1,2-Dichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Benzene	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Trichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	#	#
1,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Dibromomethane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Bromodichloromethane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	#	#
Toluene	<1 µg/l	TM208		<1	<1	<1	<1	#	#
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	#	#
1,1,2-Trichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	#	#
1,3-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	#	#



CERTIFICATE OF ANALYSIS

Validated

SDG: 231215-61
Client Ref.: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	E-BH14	E-BH15	E-BH20	E-BH25		
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4* @ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 13/12/2023 15/12/2023 231215-61 29113315	Ground Water (GW) 13/12/2023 15/12/2023 231215-61 29113316	Ground Water (GW) 13/12/2023 15/12/2023 231215-61 29113317	Ground Water (GW) 13/12/2023 15/12/2023 231215-61 29113318		
Component	LOD/Units	Method							
Tetrachloroethene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
Dibromochloromethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
1,2-Dibromoethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
Chlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
Ethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
m,p-Xylene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
o-Xylene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
Styrene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
Bromoform	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
Isopropylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
1,2,3-Trichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
Bromobenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
Propylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
2-Chlorotoluene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1	1.04	<1	<1	#	#	#
4-Chlorotoluene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
tert-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1	1.88	<1	<1	#	#	#
sec-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
4-iso-Propyltoluene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
1,3-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
1,4-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
n-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
1,2-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
Hexachlorobutadiene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
Naphthalene	<1 µg/l	TM208	<1	15.6	<1	<1	#	#	#
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	#	#	#



CERTIFICATE OF ANALYSIS

Validated

SDG: 231215-61
Client Ref.: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

Table of Results - Appendix

Method No	Description
TM099	Determination of Ammonium in Water Samples using the Kone Analyser
TM152	Analysis of Aqueous Samples by ICP-MS
TM176	Determination of SVOCs in Water by GCMS
TM178	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM197	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Waters
TM208	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM241	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM245	Determination of GRO by Headspace in waters
TM256	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM259	Determination of Phenols in Waters and Leachates by HPLC
TM439	Determination of Extractable Petroleum Hydrocarbons (EPH) CWG banding by GC-FID on liquids

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



CERTIFICATE OF ANALYSIS

Validated

SDG: 231215-61
Client Ref.: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

Test Completion Dates

Lab Sample No(s) Customer Sample Ref.	29113315	29113316	29113317	29113318
	E-BH14	E-BH15	E-BH20	E-BH25
AGS Ref.				
Depth				
Type	Ground Water	Ground Water	Ground Water	Ground Water
Ammoniacal Nitrogen	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023
Anions by Kone (w)	20-Dec-2023	21-Dec-2023	20-Dec-2023	20-Dec-2023
Cyanide Comp/Free/Total/Thiocyanate	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023
Dissolved Metals by ICP-MS	20-Dec-2023	19-Dec-2023	20-Dec-2023	20-Dec-2023
EPH and CWG by FID	21-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023
GRO by GC-FID (W)	18-Dec-2023	18-Dec-2023	18-Dec-2023	18-Dec-2023
Hexavalent Chromium (w)	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023
Mercury Dissolved	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023
Nitrite by Kone (w)	20-Dec-2023	20-Dec-2023	20-Dec-2023	20-Dec-2023
PAH Spec MS - Aqueous (W)	27-Dec-2023	23-Dec-2023	27-Dec-2023	23-Dec-2023
PCB Congeners - Aqueous (W)	21-Dec-2023	22-Dec-2023	21-Dec-2023	22-Dec-2023
pH Value	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023
Phenols by HPLC (W)	21-Dec-2023	20-Dec-2023	21-Dec-2023	21-Dec-2023
SVOC MS (W) - Aqueous	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023
Total Metals by ICP-MS	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023
TPH CWG (W)	21-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023
VOC MS (W)	19-Dec-2023	19-Dec-2023	19-Dec-2023	19-Dec-2023



CERTIFICATE OF ANALYSIS

SDG: 231215-61
Client Ref: 60687114

Report Number: 715561
Location: Immingham

Superseded Report:

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of 15 days after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



Tel: [REDACTED]

Aecom
Royal Court
Basil Close
Chesterfield
Derbyshire
S41 7SL

Attention: Sarah Blackburn

CERTIFICATE OF ANALYSIS

Date of report Generation:	02 January 2024
Customer:	Aecom
Sample Delivery Group (SDG):	231220-66
Your Reference:	
Location:	Immingham
Report No:	715981
Order Number:	1626116

We received 21 samples on Wednesday December 20, 2023 and 21 of these samples were scheduled for analysis which was completed on Tuesday January 02, 2024. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

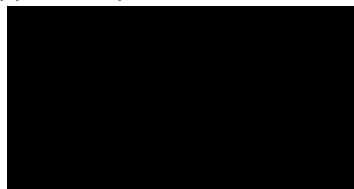
Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



So
Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
29138620	E-BH02			18/12/2023
29138622	E-BH07			18/12/2023
29138621	E-BH11			18/12/2023
29138631	E-BH14			19/12/2023
29138630	E-BH15			19/12/2023
29138628	E-BH20			19/12/2023
29138626	E-BH22			19/12/2023
29138632	E-BH25			19/12/2023
29138625	E-BH03A			19/12/2023
29138633	NO ID (ALE219)			
29138634	NO ID (ALE227)			
29138623	P-BH04			18/12/2023
29138618	W-BH01			18/12/2023
29138617	W-BH10			18/12/2023
29138615	W-BH14			18/12/2023
29138613	W-BH18			18/12/2023
29138614	W-BH21			18/12/2023
29138609	W-BH24			18/12/2023
29138611	W-BH26			18/12/2023
29138607	W-BH34			18/12/2023
29138608	W-BH35			18/12/2023

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66

Report Number: 715981

Superseded Report:

Client Ref.:

Location: Immingham

Results Legend



Test



No Determination Possible

Sample Types -

- S - Soil/Solid
- UNS - Unspecified Solid
- GW - Ground Water
- SW - Surface Water
- LE - Land Leachate
- PL - Prepared Leachate
- PR - Process Water
- SA - Saline Water
- TE - Trade Effluent
- TS - Treated Sewage
- US - Untreated Sewage
- RE - Recreational Water
- DW - Drinking Water
- Non-regulatory
- UNL - Unspecified Liquid
- SL - Sludge
- G - Gas
- OTH - Other

Results Legend	Lab Sample No(s)	29138620	29138622	29138621
	Customer Sample Reference	E:RH02	E:RH07	E:RH11
AGS Reference				
Depth (m)				
Container		Vial (ALE297)	Vial (ALE297)	330ml plastic bottle (ALE503)
Sample Type		GW	GW	GW
VOC MS (W)	All	NDPs: 0 Tests: 19	X	X

29138628	E-BH20			0.5l glass bottle (ALE227)	GW		
				Vial (ALE297)	GW	X	
				NaOH (ALE245)	GW		
				HNO3 Unfiltered (ALE204)	GW		
				H2SO4 (ALE244)	GW		
				500ml Plastic (ALE208)	GW		
				330ml plastic bottle (ALE503)	GW		
				0.5l glass bottle (ALE227)	GW		
				Vial (ALE297)	GW	X	
				NaOH (ALE245)	GW		
29138631	E-BH14			HNO3 Filtered (ALE204)	GW		
				H2SO4 (ALE244)	GW		
				500ml Plastic (ALE208)	GW		
				330ml plastic bottle (ALE503)	GW		
				250ml Amber Cl. PTFE/PE (ALE219)	GW		
				0.5l glass bottle (ALE227)	GW		
				Vial (ALE297)	GW		
				NaOH (ALE245)	GW		
				HNO3 Filtered (ALE204)	GW		
				H2SO4 (ALE244)	GW		
29138621	E-BH11			Vial (ALE297)	GW		X
				NaOH (ALE245)	GW		
				HNO3 Filtered (ALE204)	GW		
				H2SO4 (ALE244)	GW		
				500ml Plastic (ALE208)	GW		
				500ml Plastic (ALE208)	GW		



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

Results Legend	Lab Sample No(s)		29138628										29138626										29138632												
	Customer Sample Reference		E-BH20										E-BH22										E-BH25												
	AGS Reference																																		
Depth (m)																																			
Container		PTFE/PE (ALE219)	250ml Amber Gl. bottle (ALE503)	330ml plastic (ALE208)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HN03 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	PTFE/PE (ALE219)	250ml Amber Gl. bottle (ALE503)	330ml plastic (ALE208)	500ml Plastic (ALE208)	H2SO4 (ALE244)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	PTFE/PE (ALE219)	250ml Amber Gl. bottle (ALE503)	330ml plastic (ALE208)	500ml Plastic (ALE208)	H2SO4 (ALE244)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	PTFE/PE (ALE219)	250ml Amber Gl. bottle (ALE503)	330ml plastic (ALE208)	500ml Plastic (ALE208)	H2SO4 (ALE244)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	PTFE/PE (ALE219)
Sample Type		GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 19				X								X																				X	
Anions by Kone (w)	All	NDPs: 0 Tests: 19	X								X										X														
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 19						X							X																				
Dissolved Metals by ICP-MS	All	NDPs: 1 Tests: 18				X							X											X											
EPH and CWG by FID	All	NDPs: 0 Tests: 19								X												X													
GRO by GC-FID (W)	All	NDPs: 0 Tests: 19							X								X																		
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 19	X									X										X													
Mercury Dissolved	All	NDPs: 1 Tests: 18				X								X																				X	
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 19	X								X										X													X	
PCB Congeners - Aqueous (W)	All	NDPs: 0 Tests: 19	X								X										X														
pH Value	All	NDPs: 0 Tests: 19		X								X										X													
Phenols by HPLC (W)	All	NDPs: 0 Tests: 19				X									X																				X
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 19								X											X														
Total Metals by ICP-MS	All	NDPs: 0 Tests: 19			X									X																					
TPH CWG (W)	All	NDPs: 0 Tests: 19								X												X													

29138623	P-BH04			330ml plastic bottle (ALE503)	GW		
				250ml Amber Gl. PTFE/PE (ALE219)	GW		
				Vial (ALE297)	GW	X	
				NaOH (ALE245)	GW		
				HNO3 Filtered (ALE204)	GW		
				H2SO4 (ALE244)	GW		
				500ml Plastic (ALE208)	GW		
				330ml plastic bottle (ALE503)	GW		
				250ml Amber Gl. PTFE/PE (ALE219)	GW		
				0.5l glass bottle (ALE227)	GW		
29138625	E-BH03A			Vial (ALE297)	GW	X	
				NaOH (ALE245)	GW		
				HNO3 Unfiltered (ALE204)	GW		
				H2SO4 (ALE244)	GW		
				500ml Plastic (ALE208)	GW		
				330ml plastic bottle (ALE503)	GW		
				250ml Amber Gl. PTFE/PE (ALE219)	GW		
				0.5l glass bottle (ALE227)	GW		
				Vial (ALE297)	GW		
				NaOH (ALE245)	GW		
29138632	E-BH25			NaOH (ALE245)	GW		X
				HNO3 (ALE204) Unspecified	GW		



CERTIFICATE OF ANALYSIS

SDG: 231220-66 **Report Number:** 715981 **Superseded Report:**
Client Ref.: **Location:** Immingham

Results Legend <div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;"> X Test </div> <div style="display: flex; align-items: center;"> N No Determination Possible </div> </div> Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type	
		29138618	W-BH01			NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227) Vial (ALE297) NaOH (ALE245) HNO3 Unfiltered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 0.5l glass bottle (ALE227) Vial (ALE297)	GW
		29138617	W-BH10			NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227) Vial (ALE297) NaOH (ALE245) HNO3 Unfiltered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 0.5l glass bottle (ALE227) Vial (ALE297)	GW
		29138615	W-BH14			NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227) Vial (ALE297) NaOH (ALE245) HNO3 Unfiltered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 0.5l glass bottle (ALE227) Vial (ALE297)	GW
						NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227) Vial (ALE297) NaOH (ALE245) HNO3 Unfiltered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 0.5l glass bottle (ALE227) Vial (ALE297)	GW
						NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227) Vial (ALE297) NaOH (ALE245) HNO3 Unfiltered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 0.5l glass bottle (ALE227) Vial (ALE297)	GW
VOC MS (W)	All	NDPs: 0 Tests: 19			NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227) Vial (ALE297) NaOH (ALE245) HNO3 Unfiltered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 0.5l glass bottle (ALE227) Vial (ALE297)	GW	

29138614	W-BH21			500ml Plastic (ALE208)	GW	
				330ml plastic bottle (ALE503)	GW	
				250ml Amber Gl. PTFE/PE (ALE219)	GW	
				0.5l glass bottle (ALE227)	GW	
				Vial (ALE297)	GW	X
				NaOH (ALE245)	GW	
				HNO3 Filtered (ALE204)	GW	
				H2SO4 (ALE244)	GW	
				500ml Plastic (ALE208)	GW	
				330ml plastic bottle (ALE503)	GW	
29138613	W-BH18			250ml Amber Gl. PTFE/PE (ALE219)	GW	
				0.5l glass bottle (ALE227)	GW	
				Vial (ALE297)	GW	X
				NaOH (ALE245)	GW	
				HNO3 Unfiltered (ALE204)	GW	
				H2SO4 (ALE244)	GW	
				500ml Plastic (ALE208)	GW	
				330ml plastic bottle (ALE503)	GW	
				250ml Amber Gl. PTFE/PE (ALE219)	GW	
				0.5l glass bottle (ALE227)	GW	
29138615	W-BH14			Vial (ALE297)	GW	X



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

Results Legend	Lab Sample No(s)		29138609										29138611										29138607									
	Customer Sample Reference		W-BH24										W-BH26										W-BH34									
AGS Reference																																
Depth (m)																																
Container		H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	PTFE/PE (ALE219)	250ml Amber Gl. bottle (ALE503)	330ml plastic bottle (ALE508)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	PTFE/PE (ALE219)	250ml Amber Gl. bottle (ALE503)	330ml plastic bottle (ALE508)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	PTFE/PE (ALE219)	250ml Amber Gl. bottle (ALE503)	330ml plastic bottle (ALE508)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)
Sample Type		GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 19	X							X										X												
Anions by Kone (w)	All	NDPs: 0 Tests: 19						X									X															
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 19			X							X																		X		
Dissolved Metals by ICP-MS	All	NDPs: 1 Tests: 18	N									X																	X			
EPH and CWG by FID	All	NDPs: 0 Tests: 19				X									X																	
GRO by GC-FID (W)	All	NDPs: 0 Tests: 19			X									X																		
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 19						X									X															
Mercury Dissolved	All	NDPs: 1 Tests: 18	N									X																	X			
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 19					X									X																
PCB Congeners - Aqueous (W)	All	NDPs: 0 Tests: 19					X									X																
pH Value	All	NDPs: 0 Tests: 19						X									X															
Phenols by HPLC (W)	All	NDPs: 0 Tests: 19	X								X																		X			
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 19				X									X																	
Total Metals by ICP-MS	All	NDPs: 0 Tests: 19								X								X														
TPH CWG (W)	All	NDPs: 0 Tests: 19				X									X																	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

Results Legend <div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;">X Test</div> <div style="display: flex; align-items: center;">N No Determination Possible</div> </div> Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type	
		29138609	W-BH24			Vial (ALE297) NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244)	GW
		29138611	W-BH26			Vial (ALE297) NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227)	GW
		29138607	W-BH34			NaOH (ALE245) HNO3 Filtered (ALE204) H2SO4 (ALE244) 500ml Plastic (ALE208) 330ml plastic bottle (ALE503) 250ml Amber Gl. PTFE/PE (ALE219) 0.5l glass bottle (ALE227)	GW
VOC MS (W)	All	NDPs: 0 Tests: 19					

29138608	W-BH35			Vial (ALE297)	GW		X
				NaOH (ALE245)	GW		
				HNO3 Filtered (ALE204)	GW		
				H2SO4 (ALE244)	GW		
				500ml Plastic (ALE208)	GW		
				330ml plastic bottle (ALE503)	GW		
				250ml Amber Cl. PTFE/PE (ALE219)	GW		
				0.5l glass bottle (ALE227)	GW		
				Vial (ALE297)	GW		
29138607	W-BH34						



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.		E-BH02	E-BH07	E-BH11	E-BH14	E-BH15	E-BH20
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023
M	mCERTS accredited.									
aq	Aqueous / settled sample.									
diss.filt	Dissolved / filtered sample.									
tot.unfilt	Total / unfiltered sample.									
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)										
Component	LOD/Units	Method								
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099		0.296	0.313	<0.2	11.9	580	8.4	
Arsenic (diss.filt)	<0.5 µg/l	TM152		8.97	17.5	<0.5	29.6	16.1	27.4	
Barium (diss.filt)	<0.2 µg/l	TM152		108	169	81.7	230	71.6	129	
Beryllium (diss.filt)	<0.1 µg/l	TM152		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Boron (diss.filt)	<10 µg/l	TM152		301	267	135	1760	38.8	621	
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	
Chromium (diss.filt)	<1 µg/l	TM152		<1	<1	<1	<1	<1	<1	
Copper (diss.filt)	<0.3 µg/l	TM152		0.37	<0.3	0.323	0.421	6.68	0.337	
Lead (diss.filt)	<0.2 µg/l	TM152		0.319	<0.2	<0.2	<0.2	<0.2	<0.2	
Nickel (diss.filt)	<0.4 µg/l	TM152		1.39	1	4.56	8.81	14.3	9.41	
Selenium (diss.filt)	<1 µg/l	TM152		3.64	<1	<1	<1	9.42	<1	
Vanadium (diss.filt)	<1 µg/l	TM152		<1	<1	<1	1.88	27.3	1.17	
Zinc (diss.filt)	<1 µg/l	TM152		3.13	2.48	7.06	7.19	5.47	2.18	
Sodium (Dis.Filt)	<0.076 mg/l	TM152		379	188	364	2010	213	583	
Magnesium (Dis.Filt)	<0.036 mg/l	TM152		22.9	23.4	22.2	324	0.331	38.6	
Potassium (Dis.Filt)	<0.2 mg/l	TM152		7.63	18.5	4.51	90.5	154	31.2	
Calcium (Dis.Filt)	<0.2 mg/l	TM152		144	186	163	341	297	107	
Hardness, Total as CaCO3 unfiltered	<0.35 mg/l	TM152		460	554	505	2350	1060	466	
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01	<0.01	<0.01	<0.01	0.0165	<0.01	
Chloride	<2 mg/l	TM184		657	301	680	3520	414	1110	
Nitrate as NO3	<0.3 mg/l	TM184		<0.3	<0.3	8.99	<0.3	977	<0.3	
PCB congener 28	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 52	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 101	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 118	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 138	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 153	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 180	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
Sum of detected EC7 PCB's	<0.105 µg/l	TM197		<0.105	<0.105	<0.105	<0.105	<0.105	<0.105	
PCB congener 77	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 81	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 105	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 114	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.	E-BH02	E-BH07	E-BH11	E-BH14	E-BH15	E-BH20
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4* @ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023
Component	LOD/Units	Method							
PCB congener 123	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 126	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 156	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 157	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 167	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 169	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 189	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Cyanide, Total	<0.05 mg/l	TM227	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide, Free	<0.05 mg/l	TM227	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium, Hexavalent	<0.03 mg/l	TM241	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Conductivity @ 20 deg.C	<0.02 mS/cm	TM256	2.53	1.82	2.59	11.1	3.31	3.62	
Phenol	<0.002 mg/l	TM259	<0.002	<0.002	<0.002	<0.002	0.02	<0.002	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.		E-BH22	E-BH25	E-BH03A	P-BH04	W-BH01	W-BH10
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023
M	mCERTS accredited.				20/12/2023 231220-66 29138626	20/12/2023 231220-66 29138632	20/12/2023 231220-66 29138625	20/12/2023 231220-66 29138623	20/12/2023 231220-66 29138618	20/12/2023 231220-66 29138617
aq	Aqueous / settled sample.									
diss.filt	Dissolved / filtered sample.									
tot.unfilt	Total / unfiltered sample.									
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)										
Component	LOD/Units	Method								
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099		<0.2	0.208	16.4	0.6	<0.2	<0.2	
Arsenic (diss.filt)	<0.5 µg/l	TM152		0.874	1.91	13.3	1.05	<0.5	<0.5	
Barium (diss.filt)	<0.2 µg/l	TM152		201	33.6	354	47.4	79	83.5	
Beryllium (diss.filt)	<0.1 µg/l	TM152		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Boron (diss.filt)	<10 µg/l	TM152		68.1	118	888	1150	20.5	14.2	
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	
Chromium (diss.filt)	<1 µg/l	TM152		<1	<1	1.33	<1	10.1	<1	
Copper (diss.filt)	<0.3 µg/l	TM152		<0.3	2.42	<0.3	0.372	0.46	<0.3	
Lead (diss.filt)	<0.2 µg/l	TM152		<0.2	<0.2	<0.2	0.305	<0.2	<0.2	
Nickel (diss.filt)	<0.4 µg/l	TM152		0.834	4.04	10.3	6.33	0.483	0.623	
Selenium (diss.filt)	<1 µg/l	TM152		<1	1.01	<1	<1	<1	<1	
Vanadium (diss.filt)	<1 µg/l	TM152		<1	21.3	7.25	<1	<1	<1	
Zinc (diss.filt)	<1 µg/l	TM152		5.6	13.8	36.2	6.87	5.22	21.3	
Sodium (Dis.Filt)	<0.076 mg/l	TM152		104	19.7	171	375	12.6	13.1	
Magnesium (Dis.Filt)	<0.036 mg/l	TM152		14.1	1.5	121	86.5	6.25	6.44	
Potassium (Dis.Filt)	<0.2 mg/l	TM152		3.53	22.4	69.1	54.4	1.8	1.69	
Calcium (Dis.Filt)	<0.2 mg/l	TM152		138	87	388	113	108	104	
Hardness, Total as CaCO3 unfiltered	<0.35 mg/l	TM152		423	297	1490	657	310	372	
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Chloride	<2 mg/l	TM184		255	29.9	297	483	38	34.4	
Nitrate as NO3	<0.3 mg/l	TM184		<0.3	<0.3	<0.3	<0.3	39.4	36.1	
PCB congener 28	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 52	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 101	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 118	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 138	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 153	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 180	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
Sum of detected EC7 PCB's	<0.105 µg/l	TM197		<0.105	<0.105	<0.105	<0.105	<0.105	<0.105	
PCB congener 77	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 81	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 105	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
PCB congener 114	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.	E-BH22	E-BH25	E-BH03A	P-BH04	W-BH01	W-BH10
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4* @ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023
Component	LOD/Units	Method							
PCB congener 123	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 126	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 156	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 157	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 167	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 169	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 189	<0.015 µg/l	TM197	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Cyanide, Total	<0.05 mg/l	TM227	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide, Free	<0.05 mg/l	TM227	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium, Hexavalent	<0.03 mg/l	TM241	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Conductivity @ 20 deg.C	<0.02 mS/cm	TM256	1.22	0.553	3.03	2.75	0.603	0.575	
Phenol	<0.002 mg/l	TM259	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

Results Legend			Customer Sample Ref.	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26	W-BH34
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
M	mCERTS accredited.			18/12/2023	18/12/2023	18/12/2023	18/12/2023	18/12/2023	18/12/2023
aq	Aqueous / settled sample.			20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023
diss.filt	Dissolved / filtered sample.			231220-66	231220-66	231220-66	231220-66	231220-66	231220-66
tot.unfilt	Total / unfiltered sample.			29138615	29138613	29138614	29138609	29138611	29138607
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)									
Component	LOD/Units	Method							
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099		<0.2 #	<0.2 #	<0.2 #	0.76 #	<0.2 #	<0.2 #
Arsenic (diss.filt)	<0.5 µg/l	TM152		<0.5 #	<0.5 2 #	<0.5 #		4.89 #	<0.5 #
Barium (diss.filt)	<0.2 µg/l	TM152		94.4 #	137 2 #	75.6 #		28.2 #	78.8 #
Beryllium (diss.filt)	<0.1 µg/l	TM152		<0.1 #	<0.1 2 #	<0.1 #		<0.1 #	<0.1 #
Boron (diss.filt)	<10 µg/l	TM152		20.4 #	16 2 #	25.4 #		480 #	12.2 #
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 #	<0.08 2 #	<0.08 #		<0.08 #	<0.08 #
Chromium (diss.filt)	<1 µg/l	TM152		<1 #	<1 2 #	<1 #		<1 #	<1 #
Copper (diss.filt)	<0.3 µg/l	TM152		<0.3 #	<0.3 2 #	<0.3 #		0.839 #	<0.3 #
Lead (diss.filt)	<0.2 µg/l	TM152		<0.2 #	<0.2 2 #	<0.2 #		<0.2 #	<0.2 #
Nickel (diss.filt)	<0.4 µg/l	TM152		<0.4 #	<0.4 2 #	0.529 #		6.04 #	0.923 #
Selenium (diss.filt)	<1 µg/l	TM152		<1 #	<1 2 #	<1 #		<1 #	<1 #
Vanadium (diss.filt)	<1 µg/l	TM152		<1 #	<1 2 #	<1 #		<1 #	<1 #
Zinc (diss.filt)	<1 µg/l	TM152		4.43 #	14.6 2 #	2.7 #		4.62 #	3.82 #
Sodium (Dis.Filt)	<0.076 mg/l	TM152		12 #	14.1 2 #	11.2 #		94 #	10.4 #
Magnesium (Dis.Filt)	<0.036 mg/l	TM152		6.65 #	7.28 2 #	5.7 #		64.1 #	5.61 #
Potassium (Dis.Filt)	<0.2 mg/l	TM152		1.57 #	1.85 2 #	1.59 #		16.5 #	1.42 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152		91.6 #	95.8 2 #	102 #		207 #	96.4 #
Hardness, Total as CaCO3 unfiltered	<0.35 mg/l	TM152		280 2	268 2	499 2	284 2	980 2	276 2
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 #	<0.01 2 #	<0.01 #		<0.01 #	<0.01 #
Chloride	<2 mg/l	TM184		21.7 #	25.1 #	32.3 #	18.3 #	44.6 #	27.1 #
Nitrate as NO3	<0.3 mg/l	TM184		<0.3 #	1.73 #	30.2 #	<0.3 #	<0.3 #	26.6 #
PCB congener 28	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 52	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 101	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 118	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 138	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 153	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 180	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Sum of detected EC7 PCB's	<0.105 µg/l	TM197		<0.105	<0.105	<0.105	<0.105	<0.105	<0.105
PCB congener 77	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 81	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 105	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
PCB congener 114	<0.015 µg/l	TM197		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

Results Legend		Customer Sample Ref.	W-BH35			
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138608			
M	mCERTS accredited.					
aq	Aqueous / settled sample.					
diss.filt	Dissolved / filtered sample.					
tot.unfilt	Total / unfiltered sample.					
*	Subcontracted - refer to subcontractor report for accreditation status.					
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery					
(F)	Trigger breach confirmed					
1-4*\$	Sample deviation (see appendix)					
Component	LOD/Units	Method				
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	<0.2	#		
Arsenic (diss.filt)	<0.5 µg/l	TM152	<0.5	#		
Barium (diss.filt)	<0.2 µg/l	TM152	78.1	#		
Beryllium (diss.filt)	<0.1 µg/l	TM152	<0.1	#		
Boron (diss.filt)	<10 µg/l	TM152	<10	#		
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08	#		
Chromium (diss.filt)	<1 µg/l	TM152	<1	#		
Copper (diss.filt)	<0.3 µg/l	TM152	0.852	#		
Lead (diss.filt)	<0.2 µg/l	TM152	<0.2	#		
Nickel (diss.filt)	<0.4 µg/l	TM152	2.35	#		
Selenium (diss.filt)	<1 µg/l	TM152	<1	#		
Vanadium (diss.filt)	<1 µg/l	TM152	<1	#		
Zinc (diss.filt)	<1 µg/l	TM152	4.17	#		
Sodium (Dis.Filt)	<0.076 mg/l	TM152	10.1	#		
Magnesium (Dis.Filt)	<0.036 mg/l	TM152	5.52	#		
Potassium (Dis.Filt)	<0.2 mg/l	TM152	1.44	#		
Calcium (Dis.Filt)	<0.2 mg/l	TM152	97	#		
Hardness, Total as CaCO3 unfiltered	<0.35 mg/l	TM152	272	#		
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01	#		
Chloride	<2 mg/l	TM184	25.6	#		
Nitrate as NO3	<0.3 mg/l	TM184	24.1	#		
PCB congener 28	<0.015 µg/l	TM197	<0.015			
PCB congener 52	<0.015 µg/l	TM197	<0.015			
PCB congener 101	<0.015 µg/l	TM197	<0.015			
PCB congener 118	<0.015 µg/l	TM197	<0.015			
PCB congener 138	<0.015 µg/l	TM197	<0.015			
PCB congener 153	<0.015 µg/l	TM197	<0.015			
PCB congener 180	<0.015 µg/l	TM197	<0.015			
Sum of detected EC7 PCB's	<0.105 µg/l	TM197	<0.105			
PCB congener 77	<0.015 µg/l	TM197	<0.015			
PCB congener 81	<0.015 µg/l	TM197	<0.015			
PCB congener 105	<0.015 µg/l	TM197	<0.015			
PCB congener 114	<0.015 µg/l	TM197	<0.015			



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

PAH Spec MS - Aqueous (W)

Results Legend			Customer Sample Ref.	E-BH02	E-BH07	E-BH11	E-BH14	E-BH15	E-BH20
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023
Component	LOD/Units	Method							
Naphthalene (aq)	<0.01 µg/l	TM178	0.0101	<0.01	<0.01	0.0304	7.12	0.0518	
Acenaphthene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.0184	1.4	0.33	
Acenaphthylene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.0146	<0.05	<0.005	
Fluoranthene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.131	0.653	0.0767	
Anthracene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.0179	0.199	0.0236	
Phenanthrene (aq)	<0.005 µg/l	TM178	0.00851	<0.005	<0.005	0.099	1.23	0.00671	
Fluorene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.0146	0.456	0.0293	
Chrysene (aq)	<0.005 µg/l	TM178	0.021	<0.005	<0.005	0.421	1.16	0.02	
Pyrene (aq)	<0.005 µg/l	TM178	0.00758	<0.005	<0.005	0.21	0.74	0.0615	
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.137	0.366	<0.005	
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.17	0.568	<0.005	
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.0708	0.227	<0.005	
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178	<0.002	<0.002	<0.002	0.138	0.44	<0.002	
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.0226	0.132	<0.005	
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.123	0.23	<0.005	
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.0621	0.212	<0.005	
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178	<0.082	<0.082	<0.082	1.68	15.1	0.6	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

PAH Spec MS - Aqueous (W)

Results Legend			Customer Sample Ref.	E-BH22	E-BH25	E-BH03A	P-BH04	W-BH01	W-BH10
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
M	mCERTS accredited.			19/12/2023	19/12/2023	19/12/2023	18/12/2023	18/12/2023	18/12/2023
aq	Aqueous / settled sample.			20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023
diss.filt	Dissolved / filtered sample.			231220-66	231220-66	231220-66	231220-66	231220-66	231220-66
tot.unfilt	Total / unfiltered sample.			29138626	29138632	29138625	29138623	29138618	29138617
	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-4*\$	@Sample deviation (see appendix)								
Component	LOD/Units	Method							
Naphthalene (aq)	<0.01 µg/l	TM178		0.0132 #	0.0319 #	0.0645 #	0.0106 #	<0.01 #	<0.01 #
Acenaphthene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0124 #	0.0438 #	<0.005 #	<0.005 #	<0.005 #
Acenaphthylene (aq)	<0.005 µg/l	TM178		<0.005 #	0.00702 #	0.015 #	<0.005 #	<0.005 #	<0.005 #
Fluoranthene (aq)	<0.005 µg/l	TM178		<0.005 #	0.147 #	0.457 #	0.0117 #	<0.005 #	<0.005 #
Anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0224 #	0.0688 #	<0.005 #	<0.005 #	<0.005 #
Phenanthrene (aq)	<0.005 µg/l	TM178		0.0142 #	0.117 #	0.194 #	<0.005 #	<0.005 #	<0.005 #
Fluorene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0179 #	0.0361 #	<0.005 #	<0.005 #	<0.005 #
Chrysene (aq)	<0.005 µg/l	TM178		<0.005 #	0.453 #	0.315 #	0.0754 #	<0.005 #	<0.005 #
Pyrene (aq)	<0.005 µg/l	TM178		<0.005 #	0.233 #	0.451 #	0.0248 #	<0.005 #	<0.005 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	0.149 #	0.223 #	0.00851 #	<0.005 #	<0.005 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		<0.005 #	0.195 #	0.287 #	<0.005 #	<0.005 #	<0.005 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0724 #	0.212 #	<0.005 #	<0.005 #	<0.005 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		<0.002 #	0.173 #	0.328 #	<0.002 #	<0.002 #	<0.002 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	0.046 #	0.0376 #	<0.005 #	<0.005 #	<0.005 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		<0.005 #	0.145 #	0.224 #	<0.005 #	<0.005 #	<0.005 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0942 #	0.181 #	<0.005 #	<0.005 #	<0.005 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		<0.082 #	1.92 #	3.14 #	0.131 #	<0.082 #	<0.082 #



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

PAH Spec MS - Aqueous (W)

Results Legend			Customer Sample Ref.	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26	W-BH34
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138615	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138613	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138614	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138609	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138611	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138607
Component	LOD/Units	Method							
Naphthalene (aq)	<0.01 µg/l	TM178	<0.01 #	<0.01 #	<0.01 #	0.0306 #	<0.01 #	<0.01 #	
Acenaphthene (aq)	<0.005 µg/l	TM178	0.00556 #	<0.005 #	<0.005 #	0.0135 #	<0.005 #	0.00719 #	
Acenaphthylene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	
Fluoranthene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	
Anthracene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	
Phenanthrene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	0.00868 #	<0.005 #	<0.005 #	
Fluorene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	
Chrysene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	
Pyrene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178	<0.002 #	<0.002 #	<0.002 #	<0.002 #	<0.002 #	<0.002 #	
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178	<0.082 #	<0.082 #	<0.082 #	<0.082 #	<0.082 #	<0.082 #	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	E-BH02	E-BH07	E-BH11	E-BH14	E-BH15	E-BH20
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138620	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138622	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138621	Ground Water (GW) 19/12/2023 20/12/2023 231220-66 29138631	Ground Water (GW) 19/12/2023 20/12/2023 231220-66 29138630	Ground Water (GW) 19/12/2023 20/12/2023 231220-66 29138628
Component	LOD/Units	Method							
1,2-Trichlorobenzene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
2-Chlorophenol (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
2-Methylphenol (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
2-Nitroaniline (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
2-Nitrophenol (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
3-Nitroaniline (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
4-Chloroaniline (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
4-Methylphenol (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
4-Nitroaniline (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
4-Nitrophenol (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
Azobenzene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
Acenaphthylene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
Acenaphthene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
Anthracene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<2	<4	<2	<40	<40	<40	<20
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<20	<10



CERTIFICATE OF ANALYSIS

Validated

 SDG: 231220-66
 Client Ref.:

 Report Number: 715981
 Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	E-BH02	E-BH07	E-BH11	E-BH14	E-BH15	E-BH20
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4* Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138620	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138622	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138621	Ground Water (GW) 19/12/2023 20/12/2023 231220-66 29138631	Ground Water (GW) 19/12/2023 20/12/2023 231220-66 29138630	Ground Water (GW) 19/12/2023 20/12/2023 231220-66 29138628
Component	LOD/Units	Method							
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Benzo(a)pyrene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Carbazole (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Chrysene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Dibenzofuran (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Diethyl phthalate (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Dimethyl phthalate (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<5	<10	<5	<100	<100	<50	#
Fluoranthene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Fluorene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Hexachlorobenzene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Pentachlorophenol (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Phenol (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Hexachloroethane (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Nitrobenzene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Naphthalene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Isophorone (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Phenanthrene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#
Pyrene (aq)	<1 µg/l	TM176	<1	<2	<1	<20	<20	<10	#



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	E-BH22	E-BH25	E-BH03A	P-BH04	W-BH01	W-BH10
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
M	mCERTS accredited.			19/12/2023	19/12/2023	19/12/2023	18/12/2023	18/12/2023	18/12/2023
aq	Aqueous / settled sample.			20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023
diss.filt	Dissolved / filtered sample.			231220-66	231220-66	231220-66	231220-66	231220-66	231220-66
tot.unfilt	Total / unfiltered sample.			29138626	29138632	29138625	29138623	29138618	29138617
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*@\$@Sample deviation (see appendix)									
Component	LOD/Units	Method							
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
2-Chlorophenol (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
2-Methylphenol (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
2-Nitroaniline (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
2-Nitrophenol (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
3-Nitroaniline (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
4-Chloroaniline (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
4-Methylphenol (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
4-Nitroaniline (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
4-Nitrophenol (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
Azobenzene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
Acenaphthylene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
Acenaphthene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
Anthracene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<8 #	<16 #	<40 #	<2 #	<2 #	<8 #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #
Benzo(a)anthracene (aq)	<1 µg/l	TM176		<4 #	<8 #	<20 #	<1 #	<1 #	<4 #



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	E-BH22	E-BH25	E-BH03A	P-BH04	W-BH01	W-BH10
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfiltTotal / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4* @ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 19/12/2023 20/12/2023 231220-66 29138626	Ground Water (GW) 19/12/2023 20/12/2023 231220-66 29138632	Ground Water (GW) 19/12/2023 20/12/2023 231220-66 29138625	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138623	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138618	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138617
Component	LOD/Units	Method							
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Benzo(a)pyrene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Carbazole (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Chrysene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Dibenzofuran (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Diethyl phthalate (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Dimethyl phthalate (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<20 #	<40 #	<100 #	<5 #	<5 #	<20 #	
Fluoranthene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Fluorene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Hexachlorobenzene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Pentachlorophenol (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Phenol (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Hexachloroethane (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Nitrobenzene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Naphthalene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Isophorone (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Phenanthrene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	
Pyrene (aq)	<1 µg/l	TM176	<4 #	<8 #	<20 #	<1 #	<1 #	<4 #	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26	W-BH34	
# ISO17025 accredited.	M mCERTS accredited.	aq Aqueous / settled sample.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	
diss.filt Dissolved / filtered sample.	tot.unfilt Total / unfiltered sample.	* Subcontracted - refer to subcontractor report for accreditation status.		18/12/2023	18/12/2023	18/12/2023	18/12/2023	18/12/2023	18/12/2023	18/12/2023
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	(F) Trigger breach confirmed	1-4* @ Sample deviation (see appendix)		20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023
				231220-66	231220-66	231220-66	231220-66	231220-66	231220-66	231220-66
				29138615	29138613	29138614	29138609	29138611	29138607	29138607
Component	LOD/Units	Method								
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
2-Chlorophenol (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
2-Methylphenol (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
2-Nitroaniline (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
2-Nitrophenol (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
3-Nitroaniline (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
4-Chloroaniline (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
4-Methylphenol (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
4-Nitroaniline (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
4-Nitrophenol (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
Azobenzene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
Acenaphthylene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
Acenaphthene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
Anthracene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<4	<2	<20	<8	<4	<2	#	
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<2	<1	<10	<4	<2	<1	#	



CERTIFICATE OF ANALYSIS

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend			Customer Sample Ref.	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26	W-BH34
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery.								
(F)	Trigger breach confirmed								
1-4*#	@ Sample deviation (see appendix)								
Component	LOD/Units	Method	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138615	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138613	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138614	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138609	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138611	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138607
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Benzo(a)pyrene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Carbazole (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Chrysene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Dibenzofuran (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Diethyl phthalate (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Dimethyl phthalate (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<10 #	<5 #	<50 #	<20 #	<10 #	<5 #
Fluoranthene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Fluorene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Hexachlorobenzene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Pentachlorophenol (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Phenol (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Hexachloroethane (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Nitrobenzene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Naphthalene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Isophorone (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Phenanthrene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #
Pyrene (aq)	<1 µg/l	TM176		<2 #	<1 #	<10 #	<4 #	<2 #	<1 #



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

Results Legend		Customer Sample Ref.	W-BH35			
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138608			
Component	LOD/Units	Method				
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<1	#		
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	#		
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	#		
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	#		
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<1	#		
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<1	#		
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<1	#		
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<1	#		
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	#		
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	#		
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<1	#		
2-Chlorophenol (aq)	<1 µg/l	TM176	<1	#		
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<1	#		
2-Methylphenol (aq)	<1 µg/l	TM176	<1	#		
2-Nitroaniline (aq)	<1 µg/l	TM176	<1	#		
2-Nitrophenol (aq)	<1 µg/l	TM176	<1	#		
3-Nitroaniline (aq)	<1 µg/l	TM176	<1	#		
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<1	#		
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<1	#		
4-Chloroaniline (aq)	<1 µg/l	TM176	<1	#		
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<1	#		
4-Methylphenol (aq)	<1 µg/l	TM176	<1	#		
4-Nitroaniline (aq)	<1 µg/l	TM176	<1	#		
4-Nitrophenol (aq)	<1 µg/l	TM176	<1	#		
Azobenzene (aq)	<1 µg/l	TM176	<1	#		
Acenaphthylene (aq)	<1 µg/l	TM176	<1	#		
Acenaphthene (aq)	<1 µg/l	TM176	<1	#		
Anthracene (aq)	<1 µg/l	TM176	<1	#		
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<1	#		
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<1	#		
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<2	#		
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<1	#		
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<1	#		



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
 Client Ref.:

Report Number: 715981
 Location: Immingham

Superseded Report:

SVOC MS (W) - Aqueous

#	Results Legend	Customer Sample Ref.	W-BH35	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
	# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfiltTotal / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4* Sample deviation (see appendix)				Ground Water (GW)	18/12/2023		20/12/2023	231220-66	29138608	
Component	LOD/Units	Method									
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	<1								#
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	<1								#
Benzo(a)pyrene (aq)	<1 µg/l	TM176	<1								#
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	<1								#
Carbazole (aq)	<1 µg/l	TM176	<1								#
Chrysene (aq)	<1 µg/l	TM176	<1								#
Dibenzofuran (aq)	<1 µg/l	TM176	<1								#
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<1								#
Diethyl phthalate (aq)	<1 µg/l	TM176	<1								#
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	<1								#
Dimethyl phthalate (aq)	<1 µg/l	TM176	<1								#
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<5								#
Fluoranthene (aq)	<1 µg/l	TM176	<1								#
Fluorene (aq)	<1 µg/l	TM176	<1								#
Hexachlorobenzene (aq)	<1 µg/l	TM176	<1								#
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<1								#
Pentachlorophenol (aq)	<1 µg/l	TM176	<1								#
Phenol (aq)	<1 µg/l	TM176	<1								#
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<1								#
Hexachloroethane (aq)	<1 µg/l	TM176	<1								#
Nitrobenzene (aq)	<1 µg/l	TM176	<1								#
Naphthalene (aq)	<1 µg/l	TM176	<1								#
Isophorone (aq)	<1 µg/l	TM176	<1								#
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<1								#
Phenanthrene (aq)	<1 µg/l	TM176	<1								#
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<1								#
Pyrene (aq)	<1 µg/l	TM176	<1								#



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

TPH CWG (W)

Results Legend			Customer Sample Ref.	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26	W-BH34
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*§@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM245	92	94	101	98	98	104	
GRO >C5-C12 (HS_1D_TOTAL)	<50 µg/l	TM245	<50 #	<50 #	<50 #	<50 #	<50 #	<50 #	<50 #
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12 (HS_1D_AL)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aliphatics >C12-C16 (aq) (SPEC_D_AL1_W)	<10 µg/l	TM439	<10	<10	<10	<50	<10	<10	<10
Aliphatics >C16-C21 (aq) (SPEC_D_AL2_W)	<10 µg/l	TM439	<10	<10	<10	<50	<10	<10	<10
Aliphatics >C21-C35 (aq) (SPEC_D_AL3_W)	<10 µg/l	TM439	<10	<10	<10	<50	<10	<10	<10
Total Aliphatics >C12-C35 (aq) (EPHAR12_35T_GC_W)	<10 µg/l	TM439	<10	<10	<10	<50	<10	<10	<10
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq) (SPEC_D_AROM1_W)	<10 µg/l	TM439	<10	<10	<10	<50	<10	<10	<10
Aromatics >EC16-EC21 (aq) (SPEC_D_AROM2_W)	<10 µg/l	TM439	<10	<10	<10	<50	<10	<10	<10
Aromatics >EC21-EC35 (aq) (SPEC_D_AROM3_W)	<10 µg/l	TM439	<10	<10	<10	<50	<10	<10	<10
Total Aromatics >EC12-EC35 (aq) (EPHAR12_35T_GC_W)	<10 µg/l	TM439	<10	<10	<10	<50	<10	<10	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM439	<10	<10	<10	<10	<10	<10	<10



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	E-BH02	E-BH07	E-BH11	E-BH14	E-BH15	E-BH20
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*§@Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023	Ground Water (GW) 19/12/2023
Component	LOD/Units	Method							
Dibromofluoromethane**	%	TM208	104	105	104	103	0.76	104	
Toluene-d8**	%	TM208	100	99.6	100	100	102	100	
4-Bromofluorobenzene**	%	TM208	102	100	100	101	104	101	
Dichlorodifluoromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Chloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Vinyl chloride	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Bromomethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Chloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Trichlorofluoromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,1-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Carbon disulphide	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Dichloromethane	<3 µg/l	TM208	<3	<3	<3	<3	<3	<3	
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,1-Dichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
2,2-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Bromochloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Chloroform	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,1,1-Trichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,1-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Carbontetrachloride	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,2-Dichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Benzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Trichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,2-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Dibromomethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Bromodichloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
Toluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,1,2-Trichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	
1,3-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	E-BH02	E-BH07	E-BH11	E-BH14	E-BH15	E-BH20
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
M	mCERTS accredited.			18/12/2023	18/12/2023	18/12/2023	19/12/2023	19/12/2023	19/12/2023
aq	Aqueous / settled sample.			20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023
diss.filt	Dissolved / filtered sample.			231220-66	231220-66	231220-66	231220-66	231220-66	231220-66
tot.unfilt	Total / unfiltered sample.		29138620	29138622	29138621	29138631	29138630	29138628	
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-4	Sample deviation (see appendix)								
Component	LOD/Units	Method							
Tetrachloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
m,p-Xylene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
o-Xylene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Styrene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1 µg/l	TM208	<2	<1	<1	<1	<1	<1	<1
Isopropylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Bromobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Propylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
4-Chlorotoluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	2.25	<1
sec-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
4-iso-Propyltoluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Naphthalene	<1 µg/l	TM208	<1	<1	<1	<1	<1	14.7	<1
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	E-BH22	E-BH25	E-BH03A	P-BH04	W-BH01	W-BH10
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
M	mCERTS accredited.			19/12/2023	19/12/2023	19/12/2023	18/12/2023	18/12/2023	18/12/2023
aq	Aqueous / settled sample.			20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023
diss.filt	Dissolved / filtered sample.			231220-66	231220-66	231220-66	231220-66	231220-66	231220-66
tot.unfilt	Total / unfiltered sample.			29138626	29138632	29138625	29138623	29138618	29138617
* Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*§@Sample deviation (see appendix)									
Component	LOD/Units	Method							
Dibromofluoromethane**	%	TM208		106	105	105	104	105	105
Toluene-d8**	%	TM208		101	99.8	100	100	99.2	99.9
4-Bromofluorobenzene**	%	TM208		102	99.9	101	101	103	101
Dichlorodifluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Vinyl chloride	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromomethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Carbon disulphide	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Dichloromethane	<3 µg/l	TM208		<3	<3	<3	<3	<3	<3
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chloroform	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Carbontetrachloride	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Benzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Trichloroethene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Dibromomethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Toluene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	E-BH22	E-BH25	E-BH03A	P-BH04	W-BH01	W-BH10
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
M	mCERTS accredited.			19/12/2023	19/12/2023	19/12/2023	18/12/2023	18/12/2023	18/12/2023
aq	Aqueous / settled sample.			20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023
diss.filt	Dissolved / filtered sample.			231220-66	231220-66	231220-66	231220-66	231220-66	231220-66
tot.unfilt	Total / unfiltered sample.		29138626	29138632	29138625	29138623	29138618	29138617	
* Subcontracted - refer to subcontractor report for accreditation status.									
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
(F) Trigger breach confirmed									
1-4* @ Sample deviation (see appendix)									
Component	LOD/Units	Method							
Tetrachloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
m,p-Xylene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
o-Xylene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Styrene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1 µg/l	TM208	<1	<2	<1	<2	<1	<1	<1
Isopropylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Bromobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Propylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
4-Chlorotoluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
4-iso-Propyltoluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Naphthalene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26	W-BH34
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*§@Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023	Ground Water (GW) 18/12/2023
Component	LOD/Units	Method							
Dibromofluoromethane**	%	TM208	104	108	105	105	105	105	106
Toluene-d8**	%	TM208	99.5	99.2	100	100	100	100	99.3
4-Bromofluorobenzene**	%	TM208	99.6	100	101	102	103	103	101
Dichlorodifluoromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Carbon disulphide	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Dichloromethane	<3 µg/l	TM208	<3	<3	<3	<3	<3	<3	<3
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
2,2-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Carbontetrachloride	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Benzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Toluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend			Customer Sample Ref.	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26	W-BH34
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
M	mCERTS accredited.			18/12/2023	18/12/2023	18/12/2023	18/12/2023	18/12/2023	18/12/2023
aq	Aqueous / settled sample.			20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023
diss.filt	Dissolved / filtered sample.			231220-66	231220-66	231220-66	231220-66	231220-66	231220-66
tot.unfilt	Total / unfiltered sample.			29138615	29138613	29138614	29138609	29138611	29138607
* Subcontracted - refer to subcontractor report for accreditation status.									
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
(F) Trigger breach confirmed									
1-4* @ Sample deviation (see appendix)									
Component	LOD/Units	Method							
Tetrachloroethene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
m,p-Xylene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
o-Xylene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Styrene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Bromobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Propylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
2-Chlorotoluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
4-Chlorotoluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
tert-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
4-iso-Propyltoluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
Naphthalene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend		Customer Sample Ref.	W-BH35			
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138608			
Component	LOD/Units	Method				
Dibromofluoromethane**	%	TM208	105			
Toluene-d8**	%	TM208	100			
4-Bromofluorobenzene**	%	TM208	102			
Dichlorodifluoromethane	<1 µg/l	TM208	<1			
Chloromethane	<1 µg/l	TM208	<1	#		
Vinyl chloride	<1 µg/l	TM208	<1	#		
Bromomethane	<1 µg/l	TM208	<1	#		
Chloroethane	<1 µg/l	TM208	<1	#		
Trichlorofluoromethane	<1 µg/l	TM208	<1	#		
1,1-Dichloroethene	<1 µg/l	TM208	<1	#		
Carbon disulphide	<1 µg/l	TM208	<1	#		
Dichloromethane	<3 µg/l	TM208	<3	#		
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1	#		
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1	#		
1,1-Dichloroethane	<1 µg/l	TM208	<1	#		
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1	#		
2,2-Dichloropropane	<1 µg/l	TM208	<1	#		
Bromochloromethane	<1 µg/l	TM208	<1	#		
Chloroform	<1 µg/l	TM208	<1	#		
1,1,1-Trichloroethane	<1 µg/l	TM208	<1	#		
1,1-Dichloropropene	<1 µg/l	TM208	<1	#		
Carbontetrachloride	<1 µg/l	TM208	<1	#		
1,2-Dichloroethane	<1 µg/l	TM208	<1	#		
Benzene	<1 µg/l	TM208	<1	#		
Trichloroethene	<1 µg/l	TM208	<1	#		
1,2-Dichloropropane	<1 µg/l	TM208	<1	#		
Dibromomethane	<1 µg/l	TM208	<1	#		
Bromodichloromethane	<1 µg/l	TM208	<1	#		
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1	#		
Toluene	<1 µg/l	TM208	<1	#		
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1	#		
1,1,2-Trichloroethane	<1 µg/l	TM208	<1	#		
1,3-Dichloropropane	<1 µg/l	TM208	<1	#		



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

VOC MS (W)

Results Legend		Customer Sample Ref.	W-BH35			
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4# Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 18/12/2023 20/12/2023 231220-66 29138608			
Component	LOD/Units	Method				
Tetrachloroethene	<1 µg/l	TM208	<1	#		
Dibromochloromethane	<1 µg/l	TM208	<1	#		
1,2-Dibromoethane	<1 µg/l	TM208	<1	#		
Chlorobenzene	<1 µg/l	TM208	<1	#		
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1	#		
Ethylbenzene	<1 µg/l	TM208	<1	#		
m,p-Xylene	<1 µg/l	TM208	<1	#		
o-Xylene	<1 µg/l	TM208	<1	#		
Styrene	<1 µg/l	TM208	<1	#		
Bromoform	<1 µg/l	TM208	<1	#		
Isopropylbenzene	<1 µg/l	TM208	<1	#		
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1	#		
1,2,3-Trichloropropane	<1 µg/l	TM208	<1	#		
Bromobenzene	<1 µg/l	TM208	<1	#		
Propylbenzene	<1 µg/l	TM208	<1	#		
2-Chlorotoluene	<1 µg/l	TM208	<1	#		
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1	#		
4-Chlorotoluene	<1 µg/l	TM208	<1	#		
tert-Butylbenzene	<1 µg/l	TM208	<1	#		
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1	#		
sec-Butylbenzene	<1 µg/l	TM208	<1	#		
4-iso-Propyltoluene	<1 µg/l	TM208	<1	#		
1,3-Dichlorobenzene	<1 µg/l	TM208	<1	#		
1,4-Dichlorobenzene	<1 µg/l	TM208	<1	#		
n-Butylbenzene	<1 µg/l	TM208	<1	#		
1,2-Dichlorobenzene	<1 µg/l	TM208	<1	#		
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1	#		
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1	#		
Hexachlorobutadiene	<1 µg/l	TM208	<1	#		
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1	#		
Naphthalene	<1 µg/l	TM208	<1	#		
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1	#		
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1	#		



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

Notification of NDPs (No determination possible)

Date Received : 20/12/2023 08:49:32

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
29138609	W-BH24		Mercury Dissolved	Insufficient sample supplied
29138609	W-BH24		Dissolved Metals by ICP-MS	Insufficient sample supplied



SDG: 231220-66
Client Ref.:

Report Number: 715981
Location: Immingham

Superseded Report:

Table of Results - Appendix

Method No	Description
TM099	Determination of Ammonium in Water Samples using the Kone Analyser
TM152	Analysis of Aqueous Samples by ICP-MS
TM176	Determination of SVOCs in Water by GCMS
TM178	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM197	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Waters
TM208	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM241	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM245	Determination of GRO by Headspace in waters
TM256	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM259	Determination of Phenols in Waters and Leachates by HPLC
TM439	Determination of Extractable Petroleum Hydrocarbons (EPH) CWG banding by GC-FID on liquids

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



CERTIFICATE OF ANALYSIS

Validated

SDG: 231220-66
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Location: Immingham

Superseded Report:

Test Completion Dates

Lab Sample No(s) Customer Sample Ref.	29138620	29138622	29138621	29138631	29138630	29138628	29138626	29138632	29138625	29138623
	E-BH02	E-BH07	E-BH11	E-BH14	E-BH15	E-BH20	E-BH22	E-BH25	E-BH03A	P-BH04
AGS Ref.										
Depth										
Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Ammoniacal Nitrogen	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023
Anions by Kone (w)	28-Dec-2023	28-Dec-2023	27-Dec-2023	28-Dec-2023	27-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023
Cyanide Comp/Free/Total/Thiocyanate	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023
Dissolved Metals by ICP-MS	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	29-Dec-2023	28-Dec-2023	29-Dec-2023	29-Dec-2023	27-Dec-2023	28-Dec-2023
EPH and CWG by FID	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023
GRO by GC-FID (W)	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023
Hexavalent Chromium (w)	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023
Mercury Dissolved	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	28-Dec-2023	22-Dec-2023	28-Dec-2023	28-Dec-2023	22-Dec-2023	22-Dec-2023
Nitrite by Kone (w)	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023
PAH Spec MS - Aqueous (W)	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023
PCB Congeners - Aqueous (W)	29-Dec-2023	29-Dec-2023	28-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	28-Dec-2023	29-Dec-2023	29-Dec-2023
pH Value	30-Dec-2023	30-Dec-2023	30-Dec-2023	29-Dec-2023	30-Dec-2023	29-Dec-2023	30-Dec-2023	29-Dec-2023	30-Dec-2023	29-Dec-2023
Phenols by HPLC (W)	28-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	28-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023
SVOC MS (W) - Aqueous	28-Dec-2023	28-Dec-2023	27-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023
Total Metals by ICP-MS	22-Dec-2023	27-Dec-2023	22-Dec-2023	29-Dec-2023	27-Dec-2023	28-Dec-2023	28-Dec-2023	27-Dec-2023	27-Dec-2023	22-Dec-2023
TPH CWG (W)	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023
VOC MS (W)	21-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	21-Dec-2023	21-Dec-2023	21-Dec-2023

Lab Sample No(s) Customer Sample Ref.	29138618	29138617	29138615	29138613	29138614	29138609	29138611	29138607	29138608
	W-BH01	W-BH10	W-BH14	W-BH18	W-BH21	W-BH24	W-BH26	W-BH34	W-BH35
AGS Ref.									
Depth									
Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Ammoniacal Nitrogen	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023
Anions by Kone (w)	27-Dec-2023	28-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	28-Dec-2023	27-Dec-2023	27-Dec-2023	28-Dec-2023
Cyanide Comp/Free/Total/Thiocyanate	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023
Dissolved Metals by ICP-MS	28-Dec-2023	27-Dec-2023	28-Dec-2023	27-Dec-2023	28-Dec-2023		28-Dec-2023	28-Dec-2023	28-Dec-2023
EPH and CWG by FID	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023
GRO by GC-FID (W)	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023
Hexavalent Chromium (w)	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023
Mercury Dissolved	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023		22-Dec-2023	22-Dec-2023	22-Dec-2023
Nitrite by Kone (w)	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023	23-Dec-2023
PAH Spec MS - Aqueous (W)	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023
PCB Congeners - Aqueous (W)	29-Dec-2023	29-Dec-2023	29-Dec-2023	02-Jan-2024	29-Dec-2023	29-Dec-2023	02-Jan-2024	29-Dec-2023	02-Jan-2024
pH Value	30-Dec-2023	30-Dec-2023	30-Dec-2023	30-Dec-2023	30-Dec-2023	30-Dec-2023	30-Dec-2023	30-Dec-2023	30-Dec-2023
Phenols by HPLC (W)	27-Dec-2023	28-Dec-2023	27-Dec-2023	27-Dec-2023	28-Dec-2023	28-Dec-2023	27-Dec-2023	27-Dec-2023	28-Dec-2023
SVOC MS (W) - Aqueous	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023	27-Dec-2023	28-Dec-2023	28-Dec-2023	28-Dec-2023
Total Metals by ICP-MS	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	27-Dec-2023	22-Dec-2023	22-Dec-2023
TPH CWG (W)	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023	29-Dec-2023
VOC MS (W)	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023	22-Dec-2023



CERTIFICATE OF ANALYSIS

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Appendix

General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of 15 days after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Annex C: CQRA Screening Tables

Chem_Group	ChemName	output unit	EQL	GAC_WTV_EN/WA_DWS	GAC_WTV_EN/WA_EOS-Coast	Location Code	W-BH26	W-BH26	W-BH26	W-BH26	E-BH14	E-BH14	E-BH14	E-BH14A
						Strata	TFD	TFD	TFD	TFD	TFD	TFD	TFD	
						Sampled_Date_Time	28/02/2023	12/12/2023	18/12/2023	05/12/2023	04/12/2023	13/12/2023	19/12/2023	28/02/2023
	Freon 113	µg/L	3	10,000		-	-	-	-	-	-	-	-	-
BS 3882 test methods for topso	Potassium (available) (Filtered)	mg/l	0.2			-	-	-	19.4	141	-	-	-	-
Field	Turbidity	NTU	0.1			-	-	-	-	-	-	-	-	-
TPH	GRO >C5-C12	µg/L	50			-	<50	<50	<50	50	<50	<50	<50	-
	EPH >C10-C40	µg/L	100			-	-	-	-	-	-	-	-	-
	>C5-C6 Aliphatics	µg/L	1	15,000		<1	<10	<10	<10	<10	<10	<10	<10	<1
	>C6-C8 Aliphatics	µg/L	1	15,000		<1	<10	<10	<10	<10	<10	<10	<10	<1
	>C8-C10 Aliphatics	µg/L	1	300		<1	<10	<10	<10	<10	<10	<10	<10	<1
	>C10-C12 Aliphatics	µg/L	10	300		<10	<10	<10	<10	<10	<10	<10	<10	16
	>C12-C16 Aliphatics	µg/L	10	300		<10	<10	<10	<10	50	<10	<50	<50	85
	>C16-C21 Aliphatics	µg/L	10	300		<10	<10	<10	<10	50	<10	<50	<50	60
	>C16-C35 Aliphatics	µg/L	10			-	-	-	-	-	-	-	-	-
	>C21-C35 Aliphatics	µg/L	10	300		<10	<10	<10	<10	50	<10	<50	<50	27
	>C5-C35 Aliphatics	µg/L	10			<10	-	-	-	-	-	-	-	190
	>C12-C35 Aliphatics	µg/L	10			-	<10	<10	<10	50	<10	<50	<50	-
	>EC5-EC7 Aromatics	µg/L	1	1	8		<1	<10	<10	<10	<10	<10	<10	<1
	>EC7-EC8 Aromatics	µg/L	1	700	74		<1	<10	<10	<10	<10	<10	<10	<1
	>EC8-EC10 Aromatics	µg/L	1	300		<1	<10	<10	<10	<10	<10	<10	<10	<1
	>EC10-EC12 Aromatics	µg/L	10	90		<10	<10	<10	<10	<10	<10	<10	<10	60
	>EC12-EC16 Aromatics	µg/L	10	90		<10	<10	<10	<10	50	<10	<50	<50	100
	>EC16-EC21 Aromatics	µg/L	10	90		<10	<10	<10	<10	50	<10	<50	<50	32
	>EC21-EC35 Aromatics	µg/L	10	90		<10	<10	<10	<10	50	11	<50	<50	<10
	>EC5-EC35 Aromatics	µg/L	10			<10	-	-	-	-	-	-	-	190
>EC12-EC35 Aromatics	µg/L	10			-	<10	<10	<10	50	111	52	52	-	
>C5-C35 Aliphatics & Aromatics	µg/L	10			-	<10	<10	<10	50	111	52	52	-	
BTX	Benzene	µg/L	1	1	8	<3	<1	<1	<1	<1	<1	<1	<1	<3
	Toluene	µg/L	1	700	74	<3	<1	<1	<1	<1	<1	<1	<1	<3
	Ethylbenzene	µg/L	1	300	20	<3	<1	<1	<1	<1	<1	<1	<1	<3
	Xylene (m & p)	µg/L	1			<3	<1	<1	<1	<1	<1	<1	<1	<3
	Xylene Total	µg/L	2	500	30	-	<2	<2	<2	<2	<2	<2	<2	-
	Xylene (o)	µg/L	1	190		<3	<1	<1	<1	<1	<1	<1	<1	<3
	Total BTX	µg/L	5			-	<5	<5	<5	<5	<5	<5	<5	-
Oxygenates	MTBE	µg/L	1	1,800	260	<3	<1	<1	<1	<1	<1	<1	<1	<3
	Tert Amyl Methyl Ether	µg/L	1		34	-	<1	<1	<1	<1	<1	<1	<1	-
Chlorinated Hydrocarbons	Chloromethane	µg/L	1			-	<1	<1	<1	<1	<1	<1	<1	<3
	Vinyl chloride	µg/L	1	190	8	-	<1	<1	<1	<1	<1	<1	<1	<3
	Chloroethane	µg/L	1	0.5		-	<1	<1	<1	<1	<1	<1	<1	<3
	1,1-dichloroethene	µg/L	1	21000	1	-	<1	<1	<1	<1	<1	<1	<1	<3
	Dichloromethane	µg/L	3	140	20	-	<3	<3	<3	<3	<3	<3	<3	-
	trans-1,2-dichloroethene	µg/L	1	50		-	<1	<1	<1	<1	<1	<1	<1	<3
	1,1-dichloroethane	µg/L	1	2.8		-	<1	<1	<1	<1	<1	<1	<1	<3
	cis-1,2-dichloroethene	µg/L	1	50		-	<1	<1	<1	<1	<1	<1	<1	<3
	Chloroform	µg/L	1	100	2.5		<1	<1	<1	<1	<1	<1	<1	<3
	1,1,1-trichloroethane	µg/L	1	2000	100		<1	<1	<1	<1	<1	<1	<1	<3
	Carbon tetrachloride	µg/L	1	3	12		<1	<1	<1	<1	<1	<1	<1	<3
	Trichloroethene	µg/L	1	10	10		<1	<1	<1	<1	<1	<1	<1	<3
	1,1,1,2-trichloroethane	µg/L	1	0.28	300		<1	<1	<1	<1	<1	<1	<1	<3
	Tetrachloroethene	µg/L	1	10	10		<1	<1	<1	<1	<1	<1	<1	<3
VOC	2,2-dichloropropane	µg/L	1			-	<1	<1	<1	<1	<1	<1	<1	<3
	Bromochloromethane	µg/L	1	83		-	<1	<1	<1	<1	<1	<1	<1	<3
	1,1-dichloropropene	µg/L	1			-	<1	<1	<1	<1	<1	<1	<1	<3
	1,2-dichloroethane	µg/L	1	3	10		<1	<1	<1	<1	<1	<1	<1	<3
	1,2-dichloropropane	µg/L	1	40		-	<1	<1	<1	<1	<1	<1	<1	<3
	Dibromomethane	µg/L	1	8.3		-	<1	<1	<1	<1	<1	<1	<1	<3
	Bromodichloromethane	µg/L	1	100		-	<1	<1	<1	<1	<1	<1	<1	<3
	cis-1,3-dichloropropene	µg/L	1			-	<1	<1	<1	<1	<1	<1	<1	<3
	trans-1,3-dichloropropene	µg/L	1			-	<1	<1	<1	<1	<1	<1	<1	<3
	1,3-dichloropropane	µg/L	1	370		-	<1	<1	<1	<1	<1	<1	<1	<3
	Chlorodibromomethane	µg/L	1	100		-	<1	<1	<1	<1	<1	<1	<1	<3
	1,1,1,2-tetrachloroethane	µg/L	1	0.57		-	<1	<1	<1	<1	<1	<1	<1	<3
	Styrene	µg/L	1	20	50		<1	<1	<1	<1	<1	<1	<1	<3
	Bromoform	µg/L	1	100		-	<1	<1	<1	<1	<1	<1	<1	<3
	Isopropylbenzene	µg/L	1	450		-	<1	<1	<1	<1	<1	<1	<1	<3
	1,1,1,2-tetrachloroethane	µg/L	1	0.076		-	<1	<1	<1	<1	<1	<1	<1	<3
	1,1,2,3-trichloropropane	µg/L	1	0.00075		-	<1	<1	<1	<1	<1	<1	<1	<3
	n-propylbenzene	µg/L	1	660		-	<1	<1	<1	<1	<1	<1	<1	<3
	1,3,5-trimethylbenzene	µg/L	1	60		-	<1	<1	<1	<1	<1	<1	<1	<3
	tert-butylbenzene	µg/L	1	690		-	<1	<1	<1	<1	<1	<1	<1	<3
	1,2,4-trimethylbenzene	µg/L	1	56		-	<1	<1	<1	<1	<1	<1	<1	<3
	sec-butylbenzene	µg/L	1	2,000		-	<1	<1	<1	<1	<1	<1	<1	<3
	p-isopropyltoluene	µg/L	1			-	<1	<1	<1	<1	<1	<1	<1	<3
	n-butylbenzene	µg/L	1	1,000		-	<1	<1	<1	<1	<1	<1	<1	<3
	1,2-dibromo-3-chloropropane	µg/L	1	1		-	<1	<1	<1	<1	<1	<1	<1	<3
	Hexachlorobutadiene	µg/L	1	0.1	0.6		-	<1	<1	<1	<1	<1	<1	<3
	PAH	Naphthalene	µg/L	0.01	6	2	-	<0.01	<0.01	<0.02	<0.05	<0.1	0.0304	0.0304
Acenaphthylene		µg/L	0.005	18		-	<0.005	<0.005	<0.01	<0.025	<0.05	0.0146	0.0146	-
Acenaphthene		µg/L	0.005	18		-	<0.005	<0.005	<0.01	<0.025	<0.05	0.0184	0.0184	-
Fluorene		µg/L	0.005	12		-	<0.005	<0.005	<0.01	<0.025	<0.05	0.0146	0.0146	-
Phenanthrene		µg/L	0.005	4		-	<0.005	<0.005	<0.01	<0.025	<0.05	0.0099	0.0099	-
Anthracene		µg/L	0.005	90	0.1		<0.005	<0.005	<0.01	<0.025	<0.05	0.0179	0.0179	-
Fluoranthene		µg/L	0.005	4	0.0063		<0.005	<0.005	<0.01	<0.025	<0.05	0.131	0.131	-
Pyrene		µg/L	0.005	9		-	<0.005	<0.005	<0.01	<0.025	<0.05	0.21	0.21	-
Benz(a)anthracene		µg/L	0.005	3.5		-	<0.005	<0.005	<0.01	<0.025	<0.05	0.137	0.137	-
Chrysene		µg/L	0.005	7		-	<0.005	<0.005	<0.01	<0.025	<0.05	0.421	0.421	-
Benzo(a)pyrene		µg/L	0.002	0.01	0.00017		<0.002	<0.002	<0.004	<0.01	<0.02	0.138	0.138	-
Indeno(1,2,3-c,d)pyrene		µg/L	0.005	0.1		-	<0.005	<0.005	<0.01	<0.025	<0.05	0.0621	0.0621	-
Dibenz(a,h)anthracene		µg/L	0.005	0.07		-	<0.005	<0.005	<0.01	<0.025	<0.05	0.0226	0.0226	-
Benzo(g,h,i)perylene		µg/L	0.005	0.1	0.00082		<0.005	<0.005	<0.01	<0.025	<0.05	0.123	0.123	-
Benzo(b)fluoranthene		µg/L	0.005	0.1	0.017		<0.005	<0.005	<0.01	<0.025	<0.05	0.17	0.17	-

Groundwater Screen in Tidal flat Deposits

					Location Code									
					Strata		W-BH26	W-BH26	W-BH26	W-BH26	E-BH14	E-BH14	E-BH14	E-BH14A
					Sampled_Date_Time	TFD	TFD	TFD	TFD	TFD	TFD	TFD	TFD	
	2-methylnaphthalene	µg/L	1	36	-	<1	<2	<1	<40	<2	<20	-		
	4-bromophenyl phenyl ether	µg/L	1		-	<1	<2	<1	<40	<2	<20	-		
	4-chlorophenyl phenyl ether	µg/L	1		-	<1	<2	<1	<40	<2	<20	-		
	Azobenzene	µg/L	1	0.12	-	<1	<2	<1	<40	<2	<20	-		
	Bis(2-chloroethoxy) methane	µg/L	1	59	-	<1	<2	<1	<40	<2	<20	-		
	Bis(2-chloroethyl)ether	µg/L	1	0.014	-	<1	<2	<1	<40	<2	<20	-		
	Carbazole	µg/L	1		-	<1	<2	<1	<40	<2	<20	-		
	Dibenzofuran	µg/L	1	7.9	-	<1	<2	<1	<40	<2	<20	-		
	Hexachlorocyclopentadiene	µg/L	1	0.41	-	<1	<2	<1	<40	<2	<20	-		
	Hexachloroethane	µg/L	1	0.33	-	<1	<2	<1	<40	<2	<20	-		
	Bis(2-chloroisopropyl) ether (Filtered)	µg/l	0.05	710	-	-	-	-	-	-	-	<0.05		
	9,10-Anthracenedione (Filtered)	µg/L	0.05	1.4	-	-	-	-	-	-	-	<0.05		
Phenolics	2-methylphenol	µg/L	1	930	-	<1	<2	<1	<40	<2	<20	-		
	2-nitrophenol	µg/L	1		-	<1	<2	<1	<40	<2	<20	-		
	2,4-dimethylphenol	µg/L	1	360	-	<1	<2	<1	<40	<2	<20	-		
	4-chloro-3-methylphenol	µg/L	1	1,400	40	-	<1	<2	<1	<40	<2	<20	-	
	4-methylphenol	µg/L	1	1,900		-	<1	<2	<1	<40	<2	<20	-	
	4-nitrophenol	µg/L	1			-	<1	<2	<1	<40	<2	<20	-	
	Phenol	µg/L	1	5,800	7.7	-	<1	<2	<1	<40	<2	<20	-	
	2-chloronaphthalene	µg/L	1	750		-	<1	<2	<1	<40	<2	<20	-	
	3-&4-methylphenol (Filtered)	µg/L	0.1			-	-	-	-	-	-	-	<0.1	
	Cresol Total (Filtered)	µg/L	6	1,500		-	-	-	-	-	-	-	-	
Total Monohydric Phenols (S) Corrected (Filtered)	µg/L	10			<10	-	-	-	-	-	-	<10		
Xylenols (Filtered)	µg/L	8			-	-	-	-	-	-	-	-		
PCBs	Tetrachlorobiphenyl, 3,3,4,4- (PCB 77)	µg/L	0.015	0.006	-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	Tetrachlorobiphenyl, 3,4,4,5- (PCB 81)	µg/L	0.015	0.0004	-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	Pentachlorobiphenyl, 2,3,3,4,4- (PCB 105)	µg/L	0.015	0.004	-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	Pentachlorobiphenyl, 2,3,4,4,5- (PCB 114)	µg/L	0.015	0.004	-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	PCB 118	µg/L	0.015	0.004	-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	Pentachlorobiphenyl, 2,3,4,4,5- (PCB 123)	µg/L	0.015	0.004	-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	Pentachlorobiphenyl, 3,3,4,4,5- (PCB 126)	µg/L	0.015	0.000012	-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	Hexachlorobiphenyl, 2,3,3,4,4,5- (PCB 156)	µg/L	0.015	0.004	-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	Hexachlorobiphenyl, 2,3,3,4,4,5- (PCB 157)	µg/L	0.015	0.004	-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	Hexachlorobiphenyl, 2,3,4,4,5,5- (PCB 167)	µg/L	0.015	0.004	-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	Hexachlorobiphenyl, 3,3,4,4,5,5- (PCB 169)	µg/L	0.015	0.000004	-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	Heptachlorobiphenyl, 2,3,3,4,4,5,5- (PCB 189)	µg/L	0.015	0.004	-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	PCB 28	µg/L	0.015		-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	PCB 52	µg/L	0.015		-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	PCB 101	µg/L	0.015		-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	PCB 138	µg/L	0.015		-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	PCB 153	µg/L	0.015		-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	PCB 180	µg/L	0.015		-	<0.015	<0.015	<0.075	<0.075	<0.15	<0.015	<0.02		
	PCBs (Sum of total)	µg/L	0.14	0.044	-	-	-	-	-	-	-	-	<0.14	
	Total PCB 7 Congeners	µg/L	0.105		-	<0.105	<0.105	0.525	0.525	<1.05	<0.105	-	-	
Amino Aliphatics	N-nitrosodi-n-propylamine	µg/L	1	0.011	-	<1	<2	<1	<40	<2	<20	-		
	Aniline (Filtered)	µg/L	0.05	13	-	-	-	-	-	-	-	<0.05		
Anilines	2-nitroaniline	µg/L	1	190	-	<1	<2	<1	<40	<2	<20	-		
	3-nitroaniline	µg/L	1		-	<1	<2	<1	<40	<2	<20	-		
	4-chloroaniline	µg/L	1	0.37	-	<1	<2	<1	<40	<2	<20	-		
	4-nitroaniline	µg/L	1	3.8	-	<1	<2	<1	<40	<2	<20	-		
Explosives	2,4-Dinitrotoluene	µg/L	1	0.24	-	<1	<2	<1	<40	<2	<20	-		
	2,6-dinitrotoluene	µg/L	1	0.049	-	<1	<2	<1	<40	<2	<20	-		
	Nitrobenzene	µg/L	1	8 to 63	-	<1	<2	<1	<40	<2	<20	-		
Halogenated Benzenes	1,3,5-Trichlorobenzene	µg/L	1	0.1	0.4	-	<1	<1	<1	<1	<1	-		
	Chlorobenzene	µg/L	1	300	-	<1	<1	<1	<1	<1	<1	<3		
	Bromobenzene	µg/L	1	62	-	<1	<1	<1	<1	<1	<1	-		
	2-chlorotoluene	µg/L	1	240	-	<1	<1	<1	<1	<1	<1	<3		
	4-chlorotoluene	µg/L	1	250	-	<1	<1	<1	<1	<1	<1	<3		
	1,3-dichlorobenzene	µg/L	1		-	<1	<1	<1	<1	<1	<1	<3		
	1,4-dichlorobenzene	µg/L	1	300	-	<1	<1	<1	<1	<1	<1	<3		
	1,2-dichlorobenzene	µg/L	1	1,000	-	<1	<1	<1	<1	<1	<1	<3		
	1,2,4-trichlorobenzene	µg/L	1	0.1	0.1	-	<1	<1	<1	<1	<1	<3		
	1,2,3-trichlorobenzene	µg/L	1	0.1	0.1	-	<1	<1	<1	<1	<1	<3		
Hexachlorobenzene	µg/L	1	0.1	0.05	-	<1	<2	<1	<40	<2	<20	-		
Hexabromobenzene	µg/L	3	40		-	-	-	-	-	-	<3			
Halogenated Hydrocarbons	Dichlorodifluoromethane	µg/L	1	200	-	<1	<1	<1	<1	<1	<1	-		
	Bromomethane	µg/L	1	7.5	-	<1	<1	<1	<1	<1	<1	<3		
	Trichlorofluoromethane	µg/L	1	5,200	-	<1	<1	<1	<1	<1	<1	<3		
1,2-dibromoethane	µg/L	1	0.4		-	<1	<1	<1	<1	<1	<3			
Halogenated Phenols	2-chlorophenol	µg/L	1	91	50	-	<1	<2	<1	<40	<2	<20	-	
	2,4-dichlorophenol	µg/L	1	46	0.42	-	<1	<2	<1	<40	<2	<20	-	
	2,4,5-trichlorophenol	µg/L	1	1,200		-	<1	<2	<1	<40	<2	<20	-	
	2,4,6-trichlorophenol	µg/L	1	200		-	<1	<2	<1	<40	<2	<20	-	
	Pentachlorophenol	µg/L	1	9	0.4	-	<1	<2	<1	<40	<2	<20	-	
Phthalates	Bis(2-ethylhexyl) phthalate	µg/L	2	8	1.3	-	<2	<4	<8	<80	<4	<40	-	
	Butyl benzyl phthalate	µg/L	1	16	0.75	-	<2	<2	<1	<40	<2	<20	-	
	Di-n-butyl phthalate	µg/L	1	900	8	-	<1	<2	<1	<40	<2	<20	-	
	Di-n-octyl phthalate	µg/L	5	200	20	-	<5	<10	<5	<200	<10	<100	-	
	Diethylphthalate	µg/L	1	15,000	200	-	<1	<2	<1	<40	<2	<20	-	
	Dimethyl phthalate	µg/L	1		800	-	<1	<2	<1	<40	<2	<20	-	
Solvents	Carbon disulfide	µg/L	1	810		-	<1	<1	<1	<1	<1	-		
	Isophorone	µg/L	1	78		-	<1	<2	<1	<40	<2	<20	-	
Metals	Arsenic (Filtered)	µg/L	0.15	10	25	3.23	4.95	4.89	2.21	39.2	3.91	29.6	2.86	
	Barium (Filtered)	µg/L	0.06	1,300		99	36.1	28.2	63.4	344	104	230	190	
	Beryllium (Filtered)	µg/L	0.1	12		<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1	
	Boron (Filtered)	µg/L	10	1,000	7,000	350	576	480	697	2600	1280	1760	820	
	Cadmium (Filtered)	µg/L	0.02	5	0.2	<0.02	<0.08	<0.08	0.08	0.08	<0.08	<0.08	0.04	
	Calcium (Filtered)	mg/L	0.012			290	276	207	306	253	319	341	400	
	Chromium (III+VI) (Filtered)	µg/L	0.2	50		<0.2	<1	<1	<1	1.95	<1	<1	0.2	
	Copper (Filtered)	µg/L	0.3	2,000	3.76	<0.5	0.871	0.839	1.42	0.3	<0.3	0.421	4.4	
	Iron (Filtered)	µg/L	19	200	1,000	-	-	-	-	-	-	-	-	
	Lead (Filtered)	µg/L	0.2	10	1.3	<0.2	<0.2	<0.2	0.2	0.2	<0.2	<0.2	<0.2	
	Magnesium (Filtered)	mg/L	0.005			54	84.9	64.1	104	434	257	324	360	

					Location Code								
					Strata								
					W-BH26	W-BH26	W-BH26	W-BH26	E-BH14	E-BH14	E-BH14	E-BH14A	
Sampled_Date_Time	TFD	TFD	TFD	TFD	TFD	TFD	TFD	TFD					
	Mercury (Filtered)	µg/L	0.01	1	0.07	<0.05	<0.01	<0.01	<0.1	-	<0.01	<0.01	<0.05
	Nickel (Filtered)	µg/L	0.4	20	8.6	19	8.17	6.04	11.9	3.37	13.8	8.81	38
	Phosphorus	µg/L	20	0.4	-	-	-	-	-	-	-	-	-
	Selenium (Filtered)	µg/L	0.6	10	-	1.1	<1	<1	<1	<1	<1	<1	<4
	Vanadium (Filtered)	µg/L	0.2	86	100	<0.2	<1	<1	<1	3.18	<1	1.88	2.4
	Zinc (Filtered)	µg/L	0.5	6.000	6.8	5.6	6.98	4.62	18.2	11.3	13.6	7.19	41
	Potassium (Filtered)	mg/L	0.025	-	-	14	20.7	16.5	19.4	141	65.8	90.5	70
	Chromium (hexavalent) (Filtered)	µg/L	5	50	0.6	<5	<30	<30	<30	<30	<30	<30	<5
Organics	Dissolved Organic Carbon (Filtered)	mg/L	3	-	-	-	-	-	-	-	-	-	-
	TOC	mg/L	3	-	-	-	-	-	-	-	-	-	-
Inorganics	BOD	mg/L	1	-	-	-	-	-	-	-	-	-	-
	Sodium (Filtered)	mg/L	0.01	200	-	180	124	94	126	2970	1210	2010	16.000
	Cyanide (Free) (Filtered)	mg/L	0.05	0.05	0.001	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
	Cyanide Total (Filtered)	mg/L	0.005	0.05	0.001	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
	Electrical conductivity *(lab)	µS/cm	20	-	-	-	2160	1590	2090	16.700	8790	11.100	-
	Chloride (Filtered)	mg/L	0.15	250	-	72	62.2	44.6	63.3	6530	2500	3520	3700
	Nitrate (as NO3-) (Filtered)	mg/L	0.05	50	-	-	<0.3	<0.3	0.3	0.3	<0.3	<0.3	2.19
	Nitrite (as NO2-) (Filtered)	mg/L	0.05	0.5	-	-	-	-	-	-	-	-	-
	Ortho Phosphate as P (Filtered)	mg/L	0.02	-	-	-	-	-	-	-	-	-	-
	Sulphide	mg/L	0.005	-	-	-	-	-	-	-	-	-	<0.005
	Alkalinity (total) as CaCO3	mg/L	3	-	-	-	-	-	-	-	-	-	-
	Nitrate (as N) (Filtered)	mg/L	0.01	-	-	0.24	-	-	-	-	-	-	0.49
	Sulphur as S	mg/L	0.015	-	-	-	-	-	-	-	-	-	180
	Hardness as CaCO3	mg/L	0.35	-	-	-	971	980	1160	2680	2020	2350	-
	Ammoniacal Nitrogen as N	mg/L	0.015	-	-	0.12	<0.2	<0.2	0.2	16.8	8.71	11.9	9.4
	Ammonium as NH4 BRE	mg/L	0.015	0.5	300	-	-	-	-	-	-	-	12
	Sulphate (soluble) (Filtered)	mg/L	2	-	-	-	-	-	-	-	-	-	-
	COD	mg/L	7	-	-	-	-	-	-	-	-	-	-
	pH (Lab)	pH_Units	0	-	-	7	-	-	-	-	-	-	7.2
	TSS	mg/L	2	-	-	-	-	-	-	-	-	-	-
PFAS	Perfluorooctanoic acid	ng/L	0.65	10	-	-	-	-	-	-	-	-	-
	Perfluorooctanesulfonic acid	ng/L	0.65	10	-	-	-	-	-	-	-	-	-
	Perfluorooctane sulfonic acid	ng/L	0.65	-	-	-	-	-	-	-	-	-	-
	Branched Perfluorooctanesulfonic acid	ng/L	0.65	-	-	-	-	-	-	-	-	-	-

Comments
 GAC: Generic
 Assessment Criteria (blank): No assessment criteria available
 -: Not analysed
 EQS: Environmental Quality Standard

Key
 Exceedance of CW/WE Water, DWS - England /Wales
 Exceedance of CW/WE Water, Aquatic Toxicity - England / Wales - Transitional/Coastal
 Exceedance of DWS and EQS (Transitional/Coastal)

E-BH02 E-BH04

Location Code	E-BH02	E-BH02	E-BH02	E-BH02	E-BH04	E-BH04	E-BH04	E-BH04	E-BH18	E-BH10	E-BH10	W-BH09	W-BH20	W-BH34	W-BH34	W-BH34	W-BH34
Strata	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Sampled Date	01/03/2023	05/12/2023	12/12/2023	18/12/2023	01/03/2023	04/12/2023	13/12/2023	18/12/2023	01/03/2023	27/02/2023	05/12/2023	02/03/2023	01/03/2023	28/02/2023	05/12/2023	12/12/2023	18/12/2023

Chem_Group	ChemName	output unit	EQL	GAC_WTV_EN/ WA_DWS	GAC_WTV_EN/ A_EOS-Coast	E-BH02	E-BH02	E-BH02	E-BH02	E-BH04	E-BH04	E-BH04	E-BH04	E-BH18	E-BH10	E-BH10	W-BH09	W-BH20	W-BH34	W-BH34	W-BH34	W-BH34		
BS 3882 test methods for topso	Freon 113	µg/L	3	10000		<3	-	-	-	-	-	-	-	<3	-	-	<3	-	-	-	-	-	-	
	Potassium (available) (Filtered)	mg/l	0.2			-	8.88	-	-	-	57.4	-	-	-	-	17.1	-	-	-	-	1.52	-	-	
Field	Turbidity	NTU	0.1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TPH	GRO >C5-C12	µg/L	50			-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
	EPH >C10-C40	µg/L	100			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	>C5-C6 Aliphatics	µg/L	1	15000		<1	<10	<10	<10	<1	<10	<10	<10	<1	-	<10	<1	<1	<1	<1	<10	<10	<10	
	>C6-C8 Aliphatics	µg/L	1	15000		<1	<10	<10	<10	<1	<10	<10	<10	<1	-	<10	<1	<1	<1	<1	<10	<10	<10	
	>C8-C10 Aliphatics	µg/L	1	300		<1	<10	<10	<10	<1	<10	<10	<10	<1	-	<10	<1	<1	<1	<1	<10	<10	<10	
	>C10-C12 Aliphatics	µg/L	10	300		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10	
	>C12-C16 Aliphatics	µg/L	10	300		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10	
	>C16-C21 Aliphatics	µg/L	10	300		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10	
	>C16-C35 Aliphatics	µg/L	10	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	>C21-C35 Aliphatics	µg/L	10	300		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10	
	>C5-C35 Aliphatics	µg/L	10	-		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10	
	>C12-C35 Aliphatics	µg/L	10	-		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10	
	>EC5-EC7 Aromatics	µg/L	1	1	8	<1	<10	<10	<10	<1	<10	<10	<10	<1	-	<10	<1	<1	<1	<1	<10	<10	<10	
	>EC7-EC8 Aromatics	µg/L	1	700	74	<1	<10	<10	<10	<1	<10	<10	<10	<1	-	<10	<1	<1	<1	<1	<10	<10	<10	
	>EC8-EC10 Aromatics	µg/L	1	300		<1	<10	<10	<10	<1	<10	<10	<10	<1	-	<10	<1	<1	<1	<1	<10	<10	<10	
	>EC10-EC12 Aromatics	µg/L	10	90		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10	
	>EC12-EC16 Aromatics	µg/L	10	90		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10	
>EC16-EC21 Aromatics	µg/L	10	90		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10		
>EC21-EC35 Aromatics	µg/L	10	90		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10		
>EC5-EC35 Aromatics	µg/L	10	-		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10		
>EC12-EC35 Aromatics	µg/L	10	-		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10		
>C5-C35 Aliphatics & Aromatics	µg/L	10	-		<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10	<10		
BTEX	Benzene	µg/L	1	1	8	<3	<1	<1	<1	<3	<1	<1	<1	<3	<1	<3	<3	<3	<3	<3	<1	<1	<1	
	Toluene	µg/L	1	700	74	<3	<1	<1	<1	<3	<1	<1	<1	<3	<1	<3	<3	<3	<3	<3	<1	<1	<1	
	Ethylbenzene	µg/L	1	300	20	<3	<1	<1	<1	<3	<1	<1	<1	<3	<1	<3	<3	<3	<3	<3	<1	<1	<1	
	Xylene (m & p)	µg/L	1	-	-	<3	<1	<1	<1	<3	<1	<1	<1	<3	<1	<3	<3	<3	<3	<3	<1	<1	<1	
	Xylene Total	µg/L	2	500	30	<3	<2	<2	<2	<3	<2	<2	<2	<3	<2	<3	<3	<3	<3	<3	<2	<2	<2	
	Xylene (o)	µg/L	1	190		<3	<1	<1	<1	<3	<1	<1	<1	<3	<1	<3	<3	<3	<3	<3	<1	<1	<1	
Oxygenates	Total BTEX	µg/L	5	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	
	MTBE	µg/L	1	1800	260	<3	<1	<1	<1	<3	<1	<1	<1	<3	<1	<3	<3	<3	<3	<3	<1	<1	<1	
Chlorinated Hydrocarbons	Tert Amyl Methyl Ether	µg/L	1		34	<3	<1	<1	<1	<3	<1	<1	<1	<3	<1	<3	<3	<3	<3	<3	<1	<1	<1	
	Chloromethane	µg/L	1	-	-	<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	Vinyl chloride	µg/L	1	190	8	<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	Chloroethane	µg/L	1	0.5		<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	1,1-dichloroethene	µg/L	1	21000	1	<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	Dichloromethane	µg/L	3	140	20	-	<3	<3	<3	-	<3	<3	<3	-	<3	-	-	-	-	-	<3	<3	<3	
	trans-1,2-dichloroethene	µg/L	1	50		<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	1,1-dichloroethane	µg/L	1	2.8		<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	cis-1,2-dichloroethene	µg/L	1	50		<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	Chloroform	µg/L	1	100	2.5	33.8	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	1,1,1-trichloroethane	µg/L	1	2000	100	<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	Carbon tetrachloride	µg/L	1	3	12	<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	Trichloroethene	µg/L	1	10	10	<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
1,1,2-trichloroethane	µg/L	1	0.28	300	<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1		
Tetrachloroethene	µg/L	1	10	10	<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1		
VOC	2,2-dichloropropane	µg/L	1	-	-	<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	Bromochloromethane	µg/L	1	83		-	<1	<1	<1	-	<1	<1	<1	-	<1	-	-	-	-	-	<1	<1	<1	
	1,1-dichloropropene	µg/L	1	-	-	<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	1,2-dichloroethane	µg/L	1	3	10	<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	1,2-dichloropropane	µg/L	1	40		<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	Dibromomethane	µg/L	1	8.3		<3	<1	<1	<1	-	<1	<1	<1	<3	<1	<3	-	-	-	-	<1	<1	<1	
	Bromodichloromethane	µg/L	1																					

E-BH02 E-BH04

Location Code	Strata	Sampled Date	Time	E-BH02				E-BH04				E-BH18	E-BH10	E-BH10	W-BH09	W-BH20	W-BH34	W-BH34	W-BH34	W-BH34	
				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock										
				01/03/2023	05/12/2023	12/12/2023	18/12/2023	01/03/2023	04/12/2023	13/12/2023	18/12/2023										
Phenolics	Azobenzene	µg/L	1	0.12	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	Bis(2-chloroethoxy) methane	µg/L	1	59	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	Bis(2-chloroethyl) ether	µg/L	1	0.014	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	Carbazole	µg/L	1	-	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	Dibenzofuran	µg/L	1	7.9	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	Hexachlorocyclopentadiene	µg/L	1	0.41	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	Hexachloroethane	µg/L	1	0.33	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	Bis(2-chloroisopropyl) ether (Filtered)	µg/L	0.05	710	<0.05	-	-	-	-	-	-	-	-	<0.05	-	<0.05	-	-	-	-	-
	9,10-Anthracenedione (Filtered)	µg/L	0.05	1.4	<0.05	-	-	-	-	-	-	-	-	<0.05	-	<0.05	-	-	-	-	-
	2-methylphenol	µg/L	1	930	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	2-nitrophenol	µg/L	1	-	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	2,4-dimethylphenol	µg/L	1	360	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	4-chloro-3-methylphenol	µg/L	1	1400	40	-	<2	<1	<1	-	<1	<1	-	<1	-	-	-	<1	<1	<1	
	4-methylphenol	µg/L	1	1900	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	4-nitrophenol	µg/L	1	-	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
Phenol	µg/L	1	5800	7.7	-	<2	<1	<1	-	<1	<1	-	<1	-	-	-	<1	<1	<1		
2-chloronaphthalene	µg/L	1	750	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1		
3,4-dimethylphenol (Filtered)	µg/L	0.1	-	-	<0.1	-	-	-	-	-	-	-	2.1	-	<0.1	-	-	-	-		
Cresol Total (Filtered)	µg/L	6	1500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total Monohydric Phenols (S) Corrected	µg/L	10	-	-	<10	-	-	<10	-	-	-	-	<10	-	<10	<10	<10	-	-		
Xylenols (Filtered)	µg/L	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
PCBs	Tetrachlorobiphenyl, 3,3,4,4- (PCB 77)	µg/L	0.015	0.006	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	<0.015	
	Tetrachlorobiphenyl, 3,4,4,5- (PCB 81)	µg/L	0.015	0.0004	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	<0.015	
	Pentachlorobiphenyl, 2,3,3,4,4- (PCB 101)	µg/L	0.015	0.004	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	<0.015	
	Pentachlorobiphenyl, 2,3,4,4,5- (PCB 118)	µg/L	0.015	0.004	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	<0.015	
	Pentachlorobiphenyl, 2,3,4,4,5- (PCB 119)	µg/L	0.015	0.004	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	<0.015	
	Pentachlorobiphenyl, 3,3,4,4,5- (PCB 120)	µg/L	0.015	0.0000012	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	<0.015	
	Hexachlorobiphenyl, 2,3,3,4,4,5- (PCB 123)	µg/L	0.015	0.004	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	<0.015	
	Hexachlorobiphenyl, 2,3,3,4,4,5- (PCB 124)	µg/L	0.015	0.004	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	<0.015	
	Hexachlorobiphenyl, 2,3,4,4,5,5- (PCB 125)	µg/L	0.015	0.004	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	<0.015	
	Hexachlorobiphenyl, 3,3,4,4,5,5- (PCB 126)	µg/L	0.015	0.0000004	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	<0.015	
	Heptachlorobiphenyl, 2,3,3,4,4,5,5- (PCB 127)	µg/L	0.015	0.004	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	<0.015	
	PCB 28	µg/L	0.015	-	-	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	
	PCB 52	µg/L	0.015	-	-	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	
	PCB 101	µg/L	0.015	-	-	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	
	PCB 138	µg/L	0.015	-	-	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015	
PCB 153	µg/L	0.015	-	-	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015		
PCB 180	µg/L	0.015	-	-	<0.02	<0.015	<0.015	<0.015	-	<0.015	<0.015	<0.015	-	<0.015	-	-	-	<0.015	<0.015		
PCBs (Sum of total)	µg/L	0.14	0.044	<0.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total PCB 7 Congeners	µg/L	0.105	-	-	<0.105	<0.105	<0.105	-	<0.105	<0.105	<0.105	-	<0.105	-	-	-	-	<0.105	<0.105	<0.105	
Amino Aliphatics	N-nitrosodi-n-propylamine	µg/L	1	0.011	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	Aniline (Filtered)	µg/L	0.05	13	<0.05	-	-	-	-	-	-	-	-	<0.05	-	<0.05	-	-	-	-	
Anilines	2-nitroaniline	µg/L	1	190	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	3-nitroaniline	µg/L	1	-	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	4-chloroaniline	µg/L	1	0.37	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	4-nitroaniline	µg/L	1	3.8	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
Explosives	2,4-Dinitrotoluene	µg/L	1	0.24	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	2,6-dinitrotoluene	µg/L	1	0.049	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	Nitrobenzene	µg/L	1	8 to 63	-	<2	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
Halogenated Benzenes	1,3,5-Trichlorobenzene	µg/L	1	0.1	0.4	-	<1	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	Chlorobenzene	µg/L	1	300	-	<3	<1	<1	-	<1	<1	<1	<3	-	<1	<3	-	<1	<1	<1	
	Bromobenzene	µg/L	1	62	-	<3	<1	<1	-	<1	<1	<1	<3	-	<1	<3	-	<1	<1	<1	
	2-chlorotoluene	µg/L	1	240	-	<3	<1	<1	-	<1	<1	<1	<3	-	<1	<3	-	<1	<1	<1	
	4-chlorotoluene	µg/L	1	250	-	<3	<1	<1	-	<1	<1	<1	<3	-	<1	<3	-	<1	<1	<1	
	1,3-dichlorobenzene	µg/L	1	-	-	<3	<1	<1	-	<1	<1	<1	<3	-	<1	<3	-	<1	<1	<1	
	1,4-dichlorobenzene	µg/L	1	300	-	<3	<1	<1	-	<1	<1	<1	<3	-	<1	<3	-	<1	<1	<1	
	1,2-dichlorobenzene	µg/L	1	1000	-	<3	<1	<1	-	<1	<1	<1	<3	-	<1	<3	-	<1	<1	<1	
	1,2,4-trichlorobenzene	µg/L	1	0.1	0.1	<3	<1	<1	-	<1	<1	<1	<3	-	<1	<3	-	<1	<1	<1	
	1,2,3-trichlorobenzene	µg/L	1	0.1	0.1	<3	<1	<1	-	<1	<1	<1	<3	-	<1	<3	-	<1	<1	<1	
Halogenated Hydrocarbons	Hexachlorobenzene	µg/L	1	0.1	0.05	-	<2	<1	-	<1	<1	<1	-	<1	-	-	-	<1	<1	<1	
	Hexabromobenzene	µg/L	3	40	-	<3	<1	<1	-	<1	<1	<1	<3	-	<1	<3	-	<1	<1	<1	
Halogenated Phenols	Dichlorodifluoromethane	µg/L	1	200	-	<3	<1	<1	-	<1	<1	<1	<3	-	<1	<3	-	<1	<1	<1	
	Bromomethane	µg/L	1	7.5	-	<3	<1	<1	-	<1	<1	<1									

E-BH02 E-BH04

Location_Code	E-BH02				E-BH04				E-BH18		E-BH10		W-BH09		W-BH20		W-BH34		W-BH34	
	Strata	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Sampled	Date	Time	01/03/2023	05/12/2023	12/12/2023	18/12/2023	01/03/2023	04/12/2023	13/12/2023	18/12/2023	01/03/2023	27/02/2023	05/12/2023	02/03/2023	01/03/2023	28/02/2023	05/12/2023	12/12/2023	18/12/2023	
Electrical conductivity *(lab)	µS/cm	20	-	2150	2420	2530	-	2710	2680	2750	390	-	7480	-	-	-	530	526	535	
Chloride (Filtered)	mg/L	0.15	230	515	718	657	590	482	480	483	66	2620	35	34	27	26.6	26.8	27.1		
Nitrate (as NO3-) (Filtered)	mg/L	0.05	1.98	0.3	<0.3	<0.3	-	0.3	<0.3	<0.3	-	50	0.3	-	-	26.9	25.4	26.6		
Nitrite (as NO2-) (Filtered)	mg/L	0.05	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Ortho Phosphate as P (Filtered)	mg/L	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Sulphide	mg/L	0.005	<0.005	-	-	-	<0.005	-	-	-	<0.005	-	-	<0.005	<0.005	<0.005	-	-		
Alkalinity (total) as CaCO3	mg/L	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Nitrate (as N) (Filtered)	mg/L	0.01	0.45	-	-	-	0.24	-	-	-	0.09	11.3	-	6.77	8.08	5.5	-	-		
Sulphur as S	mg/L	0.015	42	-	-	-	-	-	-	-	-	39	-	-	-	-	-	-		
Hardness as CaCO3	mg/L	0.35	-	443	471	460	-	677	674	657	-	931	-	-	-	284	268	276		
Ammoniacal Nitrogen as N	mg/L	0.015	300	<0.015	0.416	0.36	0.296	0.48	0.594	0.6	0.055	-	3.62	0.03	0.028	0.041	0.2	<0.2		
Ammonium as NH4 BRE	mg/L	0.015	300	0.016	-	-	-	-	-	-	-	1.2	-	-	-	-	-	-		
Sulphate (soluble) (Filtered)	mg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
COD	mg/L	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
pH (Lab)	pH Units	0	7.2	-	-	-	7.3	-	-	-	6.7	8	-	7.3	7.4	7.5	-	-		
TSS	mg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
PFAS	Perfluorooctanoic acid	ng/L	0.65	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Perfluorooctanesulfonic acid	ng/L	0.65	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Perfluorooctane sulfonic acid	ng/L	0.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Branched Perfluorooctanesulfonic acid	ng/L	0.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Comments
 GAC: Generic
 Assessment Criteria
 (blank): No
 assessment criteria
 available
 -: Not analysed
 EQS: Environmental
 Quality Standard

Key
Exceedance of CW/WE Water, DWS -
England /Wales
Exceedance of CW/WE Water, Aquatic
Toxicity - England / Wales -
Transitional/Coastal
Exceedance of DWS and EQS
(Transitional/Coastal)