

Reporting of Emission to Groundwater for the period from 1st July 2021 to 31st December 2021.

Operator : RWE Generation UK plc

Form: Groundwater1

Location: Aberthaw Ash Disposal Site

Permit/Variation Number: DP3432SW

	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH3	Aluminium, Dissolved		4.2 µg/l		02/09/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		4.9 µg/l				
	Arsenic Dissolved	310	36.0 µg/l				
	Boron, Dissolved	60000	26500 µg/l				
	Cadmium, Dissolved	15	<0.02 µg/l				
	Calcium, Dissolved		908 mg/l				
	Chromium, Dissolved		0.3 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		230 mg/l				
	Manganese, Dissolved		1670 µg/l				
	Molybdenum, Dissolved	9000	4950 µg/l				
	Nickel, Dissolved		1.8 µg/l				
	Selenium Dissolved	350	n/t µg/l				
	Vanadium, Dissolved		15 µg/l				
	Mercury, Dissolved	20	0.02 µg/l				
	Alkalinity to pH 4.5 as CaCO3		171 mg/l				
	Conductivity at 20C		17600 uS/cm				
	Potassium, Dissolved		280 mg/l				
	Sodium, Dissolved		3300 mg/l				
	Sulphate, Dissolved as SO4		2060 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		5530 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N	6.6	3.15 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.8 mg/l				
	pH		7.6 pH Units				
Ionic Balance		3.00 %					
Electrical Conductivity		14909 µS/cm	Field Measurements				
Temperature		13.3 deg C					
Dissolved Oxygen		0.6 mg/l					
pH		7.7 pH Units					
Groundwater Level		3.04 mAOD					

	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH3	Aluminium, Dissolved		3.9 µg/l		20/10/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<13 µg/l				
	Arsenic Dissolved	310	70.0 µg/l				
	Boron, Dissolved	60000	26600 µg/l				
	Cadmium, Dissolved	15	<0.20 µg/l				
	Calcium, Dissolved		647 mg/l				
	Chromium, Dissolved		0.3 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		269 mg/l				
	Manganese, Dissolved		1250 µg/l				
	Molybdenum, Dissolved	9000	3380 µg/l				
	Nickel, Dissolved		2.4 µg/l				
	Selenium Dissolved	350	n/t µg/l				
	Vanadium, Dissolved		25 µg/l				
	Mercury, Dissolved	20	<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		209 mg/l				
	Conductivity at 20C		13700 uS/cm				
	Potassium, Dissolved		220 mg/l				
	Sodium, Dissolved		2400 mg/l				
	Sulphate, Dissolved as SO4		1920 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		4080 mg/l				
	Fluoride		0.20 mg/l				
	Ammoniacal Nitrogen as N	6.6	1.94 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.9 mg/l				
	pH		7.7 pH Units				
Ionic Balance		1.58 %	Field Measurements				
Electrical Conductivity		11692 µS/cm					
Temperature		13.1 deg C					
Dissolved Oxygen		0.4 mg/l					
pH		7.6 pH Units					
Groundwater Level		5.94 mAOD					

Substance/ Emission point	Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH5	Aluminium, Dissolved		<3.5 µg/l		03/09/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.2 µg/l				
	Boron, Dissolved		1460 µg/l				
	Cadmium, Dissolved		0.03 µg/l				
	Calcium, Dissolved		335 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		23 mg/l				
	Manganese, Dissolved		18 µg/l				
	Molybdenum, Dissolved		37 µg/l				
	Nickel, Dissolved		1.1 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		0.2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		254 mg/l				
	Conductivity at 20C		1560 uS/cm				
	Potassium, Dissolved		2 mg/l				
	Sodium, Dissolved		62 mg/l				
	Sulphate, Dissolved as SO4		658 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		76 mg/l				
	Fluoride		<0.1 mg/l				
	Ammoniacal Nitrogen as N		0.07 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.8 mg/l				
	pH		7.4 pH Units				
Ionic Balance		1.02 %	Field Measurements				
Electrical Conductivity		797 µS/cm					
Temperature		10.7 deg C					
Dissolved Oxygen		12.5 mg/l					
pH		7.8 pH Units					
Groundwater Level		9.78 mAOD					

	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH5	Aluminium, Dissolved		<35 µg/l		20/10/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<13 µg/l				
	Arsenic Dissolved		<2.0 µg/l				
	Boron, Dissolved		1180 µg/l				
	Cadmium, Dissolved		<0.20 µg/l				
	Calcium, Dissolved		341 mg/l				
	Chromium, Dissolved		<2.0 µg/l				
	Copper, Dissolved		<40 µg/l				
	Magnesium, Dissolved		22 mg/l				
	Manganese, Dissolved		7 µg/l				
	Molybdenum, Dissolved		<25.0 µg/l				
	Nickel, Dissolved		<10.0 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		<1.5 µg/l				
	Mercury, Dissolved		0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		283 mg/l				
	Conductivity at 20C		1640 uS/cm				
	Potassium, Dissolved		<2.8 mg/l				
	Sodium, Dissolved		65 mg/l				
	Sulphate, Dissolved as SO4		612 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		117 mg/l				
	Fluoride		0.10 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.8 mg/l				
	pH		7.4 pH Units				
Ionic Balance		0.03 %	Field Measurements				
Electrical Conductivity		869 µS/cm					
Temperature		12.3 deg C					
Dissolved Oxygen		5.8 mg/l					
pH		7.7 pH Units					
Groundwater Level		9.64 mAOD					

Substance/ Emission point	Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH6	Aluminium, Dissolved		7.3 µg/l		03/09/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		11.0 µg/l				
	Arsenic Dissolved		74.0 µg/l				
	Boron, Dissolved		25800 µg/l				
	Cadmium, Dissolved		0.02 µg/l				
	Calcium, Dissolved		572 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		238 mg/l				
	Manganese, Dissolved		882 µg/l				
	Molybdenum, Dissolved		3470 µg/l				
	Nickel, Dissolved		4.2 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		75 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		392 mg/l				
	Conductivity at 20C		4880 uS/cm				
	Potassium, Dissolved		70 mg/l				
	Sodium, Dissolved		450 mg/l				
	Sulphate, Dissolved as SO4		1950 mg/l				
	Nitrogen : Total Oxidised as N		2.80 mg/l				
	Chloride		638 mg/l				
	Fluoride		0.10 mg/l				
	Ammoniacal Nitrogen as N		0.40 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.5 mg/l				
	pH		7.6 pH Units				
Ionic Balance		2.21 %	Field Measurements				
Electrical Conductivity		4852 µS/cm					
Temperature		13.7 deg C					
Dissolved Oxygen		2.2 mg/l					
pH		7.7 pH Units					
Groundwater Level		8.18 mAOD					

Substance/ Emission point	Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH6	Aluminium, Dissolved		<3.5 µg/l		20/10/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		7.8 µg/l				
	Arsenic Dissolved		39.0 µg/l				
	Boron, Dissolved		25300 µg/l				
	Cadmium, Dissolved		0.15 µg/l				
	Calcium, Dissolved		702 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		238 mg/l				
	Manganese, Dissolved		1500 µg/l				
	Molybdenum, Dissolved		3920 µg/l				
	Nickel, Dissolved		6.7 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		43 µg/l				
	Mercury, Dissolved		0.02 µg/l				
	Alkalinity to pH 4.5 as CaCO3		413 mg/l				
	Conductivity at 20C		8410 uS/cm				
	Potassium, Dissolved		110 mg/l				
	Sodium, Dissolved		1200 mg/l				
	Sulphate, Dissolved as SO4		2040 mg/l				
	Nitrogen : Total Oxidised as N		10.10 mg/l				
	Chloride		1970 mg/l				
	Fluoride		<0.1 mg/l				
	Ammoniacal Nitrogen as N		0.62 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.7 mg/l				
	pH		7.8 pH Units				
Ionic Balance		1.51 %	Field Measurements				
Electrical Conductivity		7390 µS/cm					
Temperature		12.9 deg C					
Dissolved Oxygen		1.5 mg/l					
pH		7.4 pH Units					
Groundwater Level		8.89 mAOD					

	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH7	Aluminium, Dissolved		<35 ug/l		02/09/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<13 µg/l				
	Arsenic Dissolved	310	2.8 µg/l				
	Boron, Dissolved	60000	22900 µg/l				
	Cadmium, Dissolved	15	<0.20 µg/l				
	Calcium, Dissolved		841 mg/l				
	Chromium, Dissolved		<2.0 µg/l				
	Copper, Dissolved		<40 µg/l				
	Magnesium, Dissolved		121 mg/l				
	Manganese, Dissolved		1130 µg/l				
	Molybdenum, Dissolved	9000	3400 µg/l				
	Nickel, Dissolved		<10.0 µg/l				
	Selenium Dissolved	350	n/t µg/l				
	Vanadium, Dissolved		<1.5 µg/l				
	Mercury, Dissolved	20	<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		254 mg/l				
	Conductivity at 20C		13000 uS/cm				
	Potassium, Dissolved		270 mg/l				
	Sodium, Dissolved		2300 mg/l				
	Sulphate, Dissolved as SO4		1840 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		3850 mg/l				
	Fluoride		0.40 mg/l				
	Ammoniacal Nitrogen as N	6.6	3.07 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.7 mg/l				
	pH		7.1 pH Units				
Ionic Balance		2.19 %	Field Measurements				
Electrical Conductivity		11544 µS/cm					
Temperature		14.1 deg C					
Dissolved Oxygen		0.3 mg/l					
pH		7.7 pH Units					
Groundwater Level		2.48 mAOD					

	Substance/ Emission point Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH7	Aluminium, Dissolved		<3.5 µg/l		20/10/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved	310	8.4 µg/l				
	Boron, Dissolved	60000	20400 µg/l				
	Cadmium, Dissolved	15	<0.02 µg/l				
	Calcium, Dissolved		853 mg/l				
	Chromium, Dissolved		0.3 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		107 mg/l				
	Manganese, Dissolved		1110 µg/l				
	Molybdenum, Dissolved	9000	3530 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved	350	n/t µg/l				
	Vanadium, Dissolved		0.3 µg/l				
	Mercury, Dissolved	20	<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		239 mg/l				
	Conductivity at 20C		13700 uS/cm				
	Potassium, Dissolved		280 mg/l				
	Sodium, Dissolved		2400 mg/l				
	Sulphate, Dissolved as SO4		1860 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		4110 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N	6.6	3.26 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.4 mg/l				
	pH		7.8 pH Units				
Ionic Balance		1.06 %	Field Measurements				
Electrical Conductivity		11952 µS/cm					
Temperature		12.8 deg C					
Dissolved Oxygen		0.1 mg/l					
pH		7.5 pH Units					
Groundwater Level		2.73 mAOD					

Substance/ Emission point	Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH8	Aluminium, Dissolved		<3.5 µg/l		03/09/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.5 µg/l				
	Boron, Dissolved		1920 µg/l				
	Cadmium, Dissolved		0.06 µg/l				
	Calcium, Dissolved		227 mg/l				
	Chromium, Dissolved		0.4 µg/l				
	Copper, Dissolved		852 µg/l				
	Magnesium, Dissolved		407 mg/l				
	Manganese, Dissolved		273 µg/l				
	Molybdenum, Dissolved		34 µg/l				
	Nickel, Dissolved		4.1 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		1.0 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		669 mg/l				
	Conductivity at 20C		19800 uS/cm				
	Potassium, Dissolved		110 mg/l				
	Sodium, Dissolved		4100 mg/l				
	Sulphate, Dissolved as SO4		443 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		6940 mg/l				
	Fluoride		0.60 mg/l				
	Ammoniacal Nitrogen as N		6.54 mg/l				
	Carbon, Organic : Total as C :- {TOC}		4.4 mg/l				
	pH		7.5 pH Units				
Ionic Balance		1.69 %					
Electrical Conductivity		16971 µS/cm	Field Measurements				
Temperature		12.5 deg C					
Dissolved Oxygen		0.2 mg/l					
pH		7.4 pH Units					
Groundwater Level		4.68 mAOD					

Substance/ Emission point	Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH8	Aluminium, Dissolved		<3.5 µg/l		20/10/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<13 µg/l				
	Arsenic Dissolved		0.6 µg/l				
	Boron, Dissolved		1420 µg/l				
	Cadmium, Dissolved		<0.20 µg/l				
	Calcium, Dissolved		320 mg/l				
	Chromium, Dissolved		0.5 µg/l				
	Copper, Dissolved		309 µg/l				
	Magnesium, Dissolved		443 mg/l				
	Manganese, Dissolved		166 µg/l				
	Molybdenum, Dissolved		5.2 µg/l				
	Nickel, Dissolved		2.0 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		0.4 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		593 mg/l				
	Conductivity at 20C		18300 uS/cm				
	Potassium, Dissolved		120 mg/l				
	Sodium, Dissolved		3600 mg/l				
	Sulphate, Dissolved as SO4		590 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		6510 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		6.65 mg/l				
	Carbon, Organic : Total as C :- {TOC}		3.1 mg/l				
	pH		7.8 pH Units				
Ionic Balance		1.0 %					
Electrical Conductivity		15780 µS/cm	Field Measurements				
Temperature		12.1 deg C					
Dissolved Oxygen		0.1 mg/l					
pH		7.4 pH Units					
Groundwater Level		7.25 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH9	Aluminium, Dissolved		<3.5 µg/l		02/09/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.8 µg/l				
	Boron, Dissolved		1000 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		163 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		34 mg/l				
	Manganese, Dissolved		14 µg/l				
	Molybdenum, Dissolved		6.6 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		<0.15 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		306 mg/l				
	Conductivity at 20C		1050 uS/cm				
	Potassium, Dissolved		3 mg/l				
	Sodium, Dissolved		50 mg/l				
	Sulphate, Dissolved as SO4		116 mg/l				
	Nitrogen : Total Oxidised as N		0.90 mg/l				
	Chloride		133 mg/l				
	Fluoride		0.20 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.3 mg/l				
	pH		7.7 pH Units				
Ionic Balance		3.46 %	Field Measurements				
Electrical Conductivity		654 µS/cm					
Temperature		11.0 deg C					
Dissolved Oxygen		5.6 mg/l					
pH		7.9 pH Units					
Groundwater Level		4.49 mAOD					

	Substance/ Emission point Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH9	Aluminium, Dissolved		<35 µg/l		20/10/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<13 µg/l				
	Arsenic Dissolved		<2.0 µg/l				
	Boron, Dissolved		<560 µg/l				
	Cadmium, Dissolved		<0.20 µg/l				
	Calcium, Dissolved		143 mg/l				
	Chromium, Dissolved		<2.0 µg/l				
	Copper, Dissolved		<40 µg/l				
	Magnesium, Dissolved		27 mg/l				
	Manganese, Dissolved		2.9 µg/l				
	Molybdenum, Dissolved		<25.0 µg/l				
	Nickel, Dissolved		<10.0 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		<1.5 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		334 mg/l				
	Conductivity at 20C		942 uS/cm				
	Potassium, Dissolved		5 mg/l				
	Sodium, Dissolved		45 mg/l				
	Sulphate, Dissolved as SO4		87 mg/l				
	Nitrogen : Total Oxidised as N		1.20 mg/l				
	Chloride		102 mg/l				
	Fluoride		0.20 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		3.1 mg/l				
	pH		7.7 pH Units				
Ionic Balance		0.30 %	Field Measurements				
Electrical Conductivity		1371 µS/cm					
Temperature		11.6 deg C					
Dissolved Oxygen		3.3 mg/l					
pH		7.7 pH Units					
Groundwater Level		4.29 mAOD					

Substance/ Emission point	Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH10	Aluminium, Dissolved		<3.5 µg/l		03/09/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		3.8 µg/l				
	Boron, Dissolved		15900 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		454 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		241 mg/l				
	Manganese, Dissolved		1140 µg/l				
	Molybdenum, Dissolved		1900 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		0.5 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		622 mg/l				
	Conductivity at 20C		7470 uS/cm				
	Potassium, Dissolved		100 mg/l				
	Sodium, Dissolved		1200 mg/l				
	Sulphate, Dissolved as SO4		1250 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		1880 mg/l				
	Fluoride		0.20 mg/l				
	Ammoniacal Nitrogen as N		3.35 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.9 mg/l				
	pH		7.6 pH Units				
	Ionic Balance		3.0 %	Field Measurements			
Electrical Conductivity		6955 µS/cm					
Temperature		15.9 deg C					
Dissolved Oxygen		0.5 mg/l					
pH		7.6 pH Units					
Groundwater Level		1.21 mAOD					

Substance/ Emission point	Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH10	Aluminium, Dissolved		<3.5 µg/l		20/10/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<13 µg/l				
	Arsenic Dissolved		8.0 µg/l				
	Boron, Dissolved		10300 µg/l				
	Cadmium, Dissolved		<0.20 µg/l				
	Calcium, Dissolved		325 mg/l				
	Chromium, Dissolved		0.7 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		490 mg/l				
	Manganese, Dissolved		437 µg/l				
	Molybdenum, Dissolved		303 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		1.6 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		956 mg/l				
	Conductivity at 20C		20000 uS/cm				
	Potassium, Dissolved		170 mg/l				
	Sodium, Dissolved		4100 mg/l				
	Sulphate, Dissolved as SO4		961 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		6860 mg/l				
	Fluoride		0.20 mg/l				
	Ammoniacal Nitrogen as N		32.70 mg/l				
	Carbon, Organic : Total as C :- {TOC}		6.2 mg/l				
pH		8.0 pH Units					
Ionic Balance		1.4 %					
Electrical Conductivity		17267 µS/cm	Field Measurements				
Temperature		13.1 deg C					
Dissolved Oxygen		0.1 mg/l					
pH		7.6 pH Units					
Groundwater Level		2.34 mAOD					

	Substance/ Emission point Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH11	Aluminium, Dissolved		<3.5 µg/l		03/09/2021	Sampling Amec / Testing ALS <i>Note: Contractor reported that they were unable to monitor the field parameters due to very slow borehole recharge.</i>	
	Antimony, Dissolved		3.2 µg/l				
	Arsenic Dissolved		131.0 µg/l				
	Boron, Dissolved		13500 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		488 mg/l				
	Chromium, Dissolved		0.2 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		149 mg/l				
	Manganese, Dissolved		1300 µg/l				
	Molybdenum, Dissolved		984 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		4.4 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		759 mg/l				
	Conductivity at 20C		8710 uS/cm				
	Potassium, Dissolved		160 mg/l				
	Sodium, Dissolved		1400 mg/l				
	Sulphate, Dissolved as SO4		968 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		2450 mg/l				
	Fluoride		0.4 mg/l				
	Ammoniacal Nitrogen as N		8.9 mg/l				
	Carbon, Organic : Total as C :- {TOC}		9.8 mg/l				
pH		7.4 pH Units					
Ionic Balance		1.40 %					
Electrical Conductivity		<i>Note</i> µS/cm	Field Measurements				
Temperature		<i>Note</i> deg C					
Dissolved Oxygen		<i>Note</i> mg/l					
pH		<i>Note</i> pH Units					
Groundwater Level		3.95 mAOD					

	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH11	Aluminium, Dissolved		4.2 µg/l		20/10/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		5.5 µg/l				
	Arsenic Dissolved		144.0 µg/l				
	Boron, Dissolved		14800 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		563 mg/l				
	Chromium, Dissolved		2.6 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		145 mg/l				
	Manganese, Dissolved		1490 µg/l				
	Molybdenum, Dissolved		1540 µg/l				
	Nickel, Dissolved		3.2 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		9.5 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		1400 mg/l				
	Conductivity at 20C		9510 uS/cm				
	Potassium, Dissolved		180 mg/l				
	Sodium, Dissolved		1500 mg/l				
	Sulphate, Dissolved as SO4		1120 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		2700 mg/l				
	Fluoride		0.4 mg/l				
	Ammoniacal Nitrogen as N		6.0 mg/l				
	Carbon, Organic : Total as C :- {TOC}		4.4 mg/l				
	pH		7.4 pH Units				
Ionic Balance		7.44 %	Field Measurements				
Electrical Conductivity		8519 µS/cm					
Temperature		15.3 deg C					
Dissolved Oxygen		4.1 mg/l					
pH		7.6 pH Units					
Groundwater Level		3.86 mAOD					

[1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.

[3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements, or flow/time proportional samples, the percentage of the process operating time covered by the monitoring is given.

[4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.

[5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

[6] The emission limit values for all substances is expressed as a maximum individual value, unless otherwise stated.

Signed  Date 26/01/2022
(authorised to sign as representative of the Operator)