

Reporting of Emission to Groundwater for the period from 1st July 2020 to 31st December 2020.

Operator : RWE Generation UK plc

Form: Groundwater1

Location: Aberthaw Ash Disposal Site

Permit/Variation Number: DP3432SW

	Substance/ Emission point Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH3	Aluminium, Dissolved		7.1 µg/l		28/07/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		5.1 µg/l				
	Arsenic Dissolved	310	52.0 µg/l				
	Boron, Dissolved	60000	29000 µg/l				
	Cadmium, Dissolved	15	<0.20 µg/l				
	Calcium, Dissolved		865 mg/l				
	Chromium, Dissolved		0.3 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		232 mg/l				
	Manganese, Dissolved		1490 µg/l				
	Molybdenum, Dissolved	9000	5320 µg/l				
	Nickel, Dissolved		2.0 µg/l				
	Selenium Dissolved	350	Not tested µg/l				
	Vanadium, Dissolved		19 µg/l				
	Mercury, Dissolved	20	<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		139 mg/l				
	Conductivity at 20C		16200 uS/cm				
	Potassium, Dissolved		310 mg/l				
	Sodium, Dissolved		3000 mg/l				
	Sulphate, Dissolved as SO4		2020 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		5100 mg/l				
	Fluoride		0.40 mg/l				
	Ammoniacal Nitrogen as N	6.6	2.27 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.3 mg/l				
	pH		7.5 pH Units				
Ionic Balance		3.05 %	Field Measurements				
Electrical Conductivity		16302 µS/cm					
Temperature		13.9 deg C					
Dissolved Oxygen		3.4 mg/l					
pH		7.2 pH Units					
Groundwater Level		5.63 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH3	Aluminium, Dissolved		8.8 µg/l		13/10/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		14.0 µg/l				
	Arsenic Dissolved	310	151.0 µg/l				
	Boron, Dissolved	60000	29600 µg/l				
	Cadmium, Dissolved	15	<0.20 µg/l				
	Calcium, Dissolved		542 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		247 mg/l				
	Manganese, Dissolved		437 µg/l				
	Molybdenum, Dissolved	9000	2990 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved	350	Not tested µg/l				
	Vanadium, Dissolved		48 µg/l				
	Mercury, Dissolved	20	<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		191 mg/l				
	Conductivity at 20C		7050 uS/cm				
	Potassium, Dissolved		140 mg/l				
	Sodium, Dissolved		1100 mg/l				
	Sulphate, Dissolved as SO4		1660 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		1670 mg/l				
	Fluoride		0.20 mg/l				
	Ammoniacal Nitrogen as N	6.6	<0.06 mg/l				
	Carbon, Organic : Total as C :- (TOC)		1.0 mg/l				
	pH		7.8 pH Units				
Ionic Balance		7.19 %					
Electrical Conductivity		8437 µS/cm	Field Measurements				
Temperature		13.1 deg C					
Dissolved Oxygen		2.1 mg/l					
pH		14.9 pH Units					
Groundwater Level		6.15 mAOD					

Emission point	Substance/ 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		28/07/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		<0.2 µg/l				
	Boron, Dissolved		919 µg/l				
	Cadmium, Dissolved		0.03 µg/l				
	Calcium, Dissolved		294 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		21 mg/l				
	Manganese, Dissolved		14 µg/l				
	Molybdenum, Dissolved		5 µg/l				
	Nickel, Dissolved		1.4 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		<0.15 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		237 mg/l				
	Conductivity at 20C		1400 uS/cm				
	Potassium, Dissolved		2 mg/l				
	Sodium, Dissolved		54 mg/l				
	Sulphate, Dissolved as SO4		531 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		53 mg/l				
	Fluoride		0.10 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- (TOC)		1.5 mg/l				
pH		7.9 pH Units					
Ionic Balance		4.11 %					
Electrical Conductivity		1404 µS/cm	Field Measurements				
Temperature		12.5 deg C					
Dissolved Oxygen		2.9 mg/l					
pH		6.8 pH Units					
Groundwater Level		8.71 mAOD					

Emission point	Substance/ 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		13/10/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.3 µg/l				
	Boron, Dissolved		877 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		287 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		20 mg/l				
	Manganese, Dissolved		27 µg/l				
	Molybdenum, Dissolved		9 µg/l				
	Nickel, Dissolved		1.5 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		<0.15 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		332 mg/l				
	Conductivity at 20C		1250 uS/cm				
	Potassium, Dissolved		3 mg/l				
	Sodium, Dissolved		52 mg/l				
	Sulphate, Dissolved as SO4		350 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		60 mg/l				
	Fluoride		0.10 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- (TOC)		2.3 mg/l				
pH		7.5 pH Units					
Ionic Balance		7.87 %					
Electrical Conductivity		1509 µS/cm	Field Measurements				
Temperature		12.2 deg C					
Dissolved Oxygen		3.1 mg/l					
pH		13.9 pH Units					
Groundwater Level		9.75 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH6	Aluminium, Dissolved		5.3 µg/l		28/07/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		12.0 µg/l				
	Arsenic Dissolved		68.0 µg/l				
	Boron, Dissolved		24800 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		630 mg/l				
	Chromium, Dissolved		0.2 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		242 mg/l				
	Manganese, Dissolved		1470 µg/l				
	Molybdenum, Dissolved		3540 µg/l				
	Nickel, Dissolved		5.1 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		74 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		384 mg/l				
	Conductivity at 20C		5920 uS/cm				
	Potassium, Dissolved		81 mg/l				
	Sodium, Dissolved		690 mg/l				
	Sulphate, Dissolved as SO4		2030 mg/l				
	Nitrogen : Total Oxidised as N		3.60 mg/l				
	Chloride		1050 mg/l				
	Fluoride		0.20 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- (TOC)		1.5 mg/l				
pH		7.9 pH Units					
Ionic Balance		2.34 %					
Electrical Conductivity		6349 µS/cm	Field Measurements				
Temperature		14.5 deg C					
Dissolved Oxygen		1.2 mg/l					
pH		7.2 pH Units					
Groundwater Level		8.37 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH6	Aluminium, Dissolved		<35 µg/l		13/10/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<13 µg/l				
	Arsenic Dissolved		22.0 µg/l				
	Boron, Dissolved		23000 µg/l				
	Cadmium, Dissolved		<0.20 µg/l				
	Calcium, Dissolved		1090 mg/l				
	Chromium, Dissolved		<2.0 µg/l				
	Copper, Dissolved		<40 µg/l				
	Magnesium, Dissolved		281 mg/l				
	Manganese, Dissolved		1200 µg/l				
	Molybdenum, Dissolved		4650 µg/l				
	Nickel, Dissolved		<10.0 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		29 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		314 mg/l				
	Conductivity at 20C		12100 uS/cm				
	Potassium, Dissolved		140 mg/l				
	Sodium, Dissolved		2000 mg/l				
	Sulphate, Dissolved as SO4		1880 mg/l				
	Nitrogen : Total Oxidised as N		5.10 mg/l				
	Chloride		3440 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		7.7 pH Units				
Ionic Balance		8.23 %					
Electrical Conductivity		14017 µS/cm	Field Measurements				
Temperature		13.1 deg C					
Dissolved Oxygen		2.4 mg/l					
pH		13.5 pH Units					
Groundwater Level		9.09 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH7	Aluminium, Dissolved		<3.5 ug/l		28/07/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved	310	3.0 µg/l				
	Boron, Dissolved	60000	25400 µg/l				
	Cadmium, Dissolved	15	<0.02 µg/l				
	Calcium, Dissolved		900 mg/l				
	Chromium, Dissolved		0.3 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		111 mg/l				
	Manganese, Dissolved		1240 µg/l				
	Molybdenum, Dissolved	9000	3980 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved	350	Not tested µg/l				
	Vanadium, Dissolved		0.6 µg/l				
	Mercury, Dissolved	20	<0.10 µg/l				
	Alkalinity to pH 4.5 as CaCO3		252 mg/l				
	Conductivity at 20C		14000 uS/cm				
	Potassium, Dissolved		290 mg/l				
	Sodium, Dissolved		2400 mg/l				
	Sulphate, Dissolved as SO4		1750 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		4070 mg/l				
	Fluoride		0.40 mg/l				
	Ammoniacal Nitrogen as N	6.6	3.03 mg/l				
	Carbon, Organic : Total as C :- (TOC)		1.1 mg/l				
	pH		7.9 pH Units				
Ionic Balance		2.95 %					
Electrical Conductivity		13856 µS/cm	Field Measurements				
Temperature		14.1 deg C					
Dissolved Oxygen		1.3 mg/l					
pH		6.9 pH Units					
Groundwater Level		3.52 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH7	Aluminium, Dissolved		<35 µg/l		13/10/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<13 µg/l				
	Arsenic Dissolved	310	7.8 µg/l				
	Boron, Dissolved	60000	26600 µg/l				
	Cadmium, Dissolved	15	<0.20 µg/l				
	Calcium, Dissolved		956 mg/l				
	Chromium, Dissolved		<2.0 µg/l				
	Copper, Dissolved		<40 µg/l				
	Magnesium, Dissolved		128 mg/l				
	Manganese, Dissolved		1220 µg/l				
	Molybdenum, Dissolved	9000	4090 µg/l				
	Nickel, Dissolved		<10.0 µg/l				
	Selenium Dissolved	350	Not tested µg/l				
	Vanadium, Dissolved		<1.5 µg/l				
	Mercury, Dissolved	20	<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		245 mg/l				
	Conductivity at 20C		13800 uS/cm				
	Potassium, Dissolved		320 mg/l				
	Sodium, Dissolved		2700 mg/l				
	Sulphate, Dissolved as SO4		1790 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		4130 mg/l				
	Fluoride		0.40 mg/l				
	Ammoniacal Nitrogen as N	6.6	2.97 mg/l				
	Carbon, Organic : Total as C :- (TOC)		1.4 mg/l				
	pH		7.7 pH Units				
Ionic Balance		7.33 %					
Electrical Conductivity		15783 µS/cm	Field Measurements				
Temperature		13.1 deg C					
Dissolved Oxygen		2.9 mg/l					
pH		8.9 pH Units					
Groundwater Level		2.39 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		µg/l		Borehole unable to be sampled due to damage	Sampling Amec / Testing ALS	
	Antimony, Dissolved		µg/l				
	Arsenic Dissolved		µg/l				
	Boron, Dissolved		µg/l				
	Cadmium, Dissolved		µg/l				
	Calcium, Dissolved		mg/l				
	Chromium, Dissolved		µg/l				
	Copper, Dissolved		µg/l				
	Magnesium, Dissolved		mg/l				
	Manganese, Dissolved		µg/l				
	Molybdenum, Dissolved		µg/l				
	Nickel, Dissolved		µg/l				
	Selenium Dissolved		µg/l				
	Vanadium, Dissolved		µg/l				
	Mercury, Dissolved		µg/l				
	Alkalinity to pH 4.5 as CaCO3		mg/l				
	Conductivity at 20C		uS/cm				
	Potassium, Dissolved		mg/l				
	Sodium, Dissolved		mg/l				
	Sulphate, Dissolved as SO4		mg/l				
	Nitrogen : Total Oxidised as N		mg/l				
	Chloride		mg/l				
	Fluoride		mg/l				
	Ammoniacal Nitrogen as N		mg/l				
	Carbon, Organic : Total as C :- {TOC}		mg/l				
pH		pH Units					
Ionic Balance		%					
Electrical Conductivity		µS/cm	Field Measurements				
Temperature		deg C					
Dissolved Oxygen		mg/l					
pH		pH Units					
Groundwater Level		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		µg/l		Borehole unable to be sampled due to damage	Sampling Amec / Testing ALS	
	Antimony, Dissolved		µg/l				
	Arsenic Dissolved		µg/l				
	Boron, Dissolved		µg/l				
	Cadmium, Dissolved		µg/l				
	Calcium, Dissolved		mg/l				
	Chromium, Dissolved		µg/l				
	Copper, Dissolved		µg/l				
	Magnesium, Dissolved		mg/l				
	Manganese, Dissolved		µg/l				
	Molybdenum, Dissolved		µg/l				
	Nickel, Dissolved		µg/l				
	Selenium Dissolved		µg/l				
	Vanadium, Dissolved		µg/l				
	Mercury, Dissolved		µg/l				
	Alkalinity to pH 4.5 as CaCO3		mg/l				
	Conductivity at 20C		uS/cm				
	Potassium, Dissolved		mg/l				
	Sodium, Dissolved		mg/l				
	Sulphate, Dissolved as SO4		mg/l				
	Nitrogen : Total Oxidised as N		mg/l				
	Chloride		mg/l				
	Fluoride		mg/l				
	Ammoniacal Nitrogen as N		mg/l				
	Carbon, Organic : Total as C :- {TOC}		mg/l				
pH		pH Units					
Ionic Balance		%					
Electrical Conductivity		µS/cm	Field Measurements				
Temperature		deg C					
Dissolved Oxygen		mg/l					
pH		pH Units					
Groundwater Level		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		28/07/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		<0.20 µg/l				
	Boron, Dissolved		124 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		94 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		22 mg/l				
	Manganese, Dissolved		75 µg/l				
	Molybdenum, Dissolved		<2.50 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		<0.15 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		281 mg/l				
	Conductivity at 20C		436 uS/cm				
	Potassium, Dissolved		2 mg/l				
	Sodium, Dissolved		22 mg/l				
	Sulphate, Dissolved as SO4		29 mg/l				
	Nitrogen : Total Oxidised as N		2.80 mg/l				
	Chloride		29 mg/l				
	Fluoride		0.20 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- (TOC)		0.8 mg/l				
pH		8.2 pH Units					
Ionic Balance		3.25 %					
Electrical Conductivity		626 µS/cm	Field Measurements				
Temperature		13.2 deg C					
Dissolved Oxygen		3.1 mg/l					
pH		7.1 pH Units					
Groundwater Level		5.35 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		13/10/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.2 µg/l				
	Boron, Dissolved		262 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		110 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		27 mg/l				
	Manganese, Dissolved		81 µg/l				
	Molybdenum, Dissolved		<2.50 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		0.2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		309 mg/l				
	Conductivity at 20C		643 uS/cm				
	Potassium, Dissolved		3 mg/l				
	Sodium, Dissolved		28 mg/l				
	Sulphate, Dissolved as SO4		28 mg/l				
	Nitrogen : Total Oxidised as N		1.80 mg/l				
	Chloride		36 mg/l				
	Fluoride		0.20 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- (TOC)		1.8 mg/l				
	pH		7.9 pH Units				
Ionic Balance		7.38 %					
Electrical Conductivity		745 µS/cm	Field Measurements				
Temperature		11.6 deg C					
Dissolved Oxygen		4.5 mg/l					
pH		9.0 pH Units					
Groundwater Level		4.77 mAOD					

Emission point	Substance/ 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		28/07/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		22.0 µg/l				
	Boron, Dissolved		14000 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		413 mg/l				
	Chromium, Dissolved		0.4 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		395 mg/l				
	Manganese, Dissolved		607 µg/l				
	Molybdenum, Dissolved		876 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		1.9 µg/l				
	Mercury, Dissolved		<0.1 µg/l				
	Alkalinity to pH 4.5 as CaCO3		778 mg/l				
	Conductivity at 20C		15100 uS/cm				
	Potassium, Dissolved		150 mg/l				
	Sodium, Dissolved		2900 mg/l				
	Sulphate, Dissolved as SO4		1040 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		4850 mg/l				
	Fluoride		0.20 mg/l				
	Ammoniacal Nitrogen as N		23.10 mg/l				
	Carbon, Organic : Total as C :- {TOC}		4.0 mg/l				
pH		7.9 pH Units					
Ionic Balance		2.51 %					
Electrical Conductivity		15079 µS/cm	Field Measurements				
Temperature		14.3 deg C					
Dissolved Oxygen		1.5 mg/l					
pH		7.0 pH Units					
Groundwater Level		2.55 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH10	Aluminium, Dissolved		<35 µg/l		13/10/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<13 µg/l				
	Arsenic Dissolved		19.0 µg/l				
	Boron, Dissolved		9830 µg/l				
	Cadmium, Dissolved		<0.20 µg/l				
	Calcium, Dissolved		418 mg/l				
	Chromium, Dissolved		<2.0 µg/l				
	Copper, Dissolved		<40 µg/l				
	Magnesium, Dissolved		671 mg/l				
	Manganese, Dissolved		553 µg/l				
	Molybdenum, Dissolved		384 µg/l				
	Nickel, Dissolved		<10.0 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		2.5 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		1070 mg/l				
	Conductivity at 20C		22400 uS/cm				
	Potassium, Dissolved		200 mg/l				
	Sodium, Dissolved		5300 mg/l				
	Sulphate, Dissolved as SO4		854 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		7500 mg/l				
	Fluoride		0.20 mg/l				
	Ammoniacal Nitrogen as N		57.30 mg/l				
	Carbon, Organic : Total as C :- (TOC)		9.5 mg/l				
pH		7.7 pH Units					
Ionic Balance		10.82 %					
Electrical Conductivity		25755 µS/cm	Field Measurements				
Temperature		12.9 deg C					
Dissolved Oxygen		1.0 mg/l					
pH		10.1 pH Units					
Groundwater Level		1.32 mAOD					

Emission point	Substance/ 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		28/07/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		9.1 µg/l				
	Boron, Dissolved		12900 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		418 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		172 mg/l				
	Manganese, Dissolved		1170 µg/l				
	Molybdenum, Dissolved		803 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		0.7 µg/l				
	Mercury, Dissolved		<0.1 µg/l				
	Alkalinity to pH 4.5 as CaCO3		579 mg/l				
	Conductivity at 20C		8100 uS/cm				
	Potassium, Dissolved		130 mg/l				
	Sodium, Dissolved		1300 mg/l				
	Sulphate, Dissolved as SO4		1030 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		2050 mg/l				
	Fluoride		0.60 mg/l				
	Ammoniacal Nitrogen as N		6.81 mg/l				
	Carbon, Organic : Total as C :- (TOC)		4.8 mg/l				
	pH		7.9 pH Units				
Ionic Balance		2.14 %					
Electrical Conductivity		8437 µS/cm	Field Measurements				
Temperature		15.4 deg C					
Dissolved Oxygen		1.4 mg/l					
pH		7.1 pH Units					
Groundwater Level		4.12 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH11	Aluminium, Dissolved		<35 µg/l		13/10/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		14.0 µg/l				
	Boron, Dissolved		8090 µg/l				
	Cadmium, Dissolved		<0.20 µg/l				
	Calcium, Dissolved		326 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		116 mg/l				
	Manganese, Dissolved		1020 µg/l				
	Molybdenum, Dissolved		555 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		0.4 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		664 mg/l				
	Conductivity at 20C		4540 uS/cm				
	Potassium, Dissolved		85 mg/l				
	Sodium, Dissolved		720 mg/l				
	Sulphate, Dissolved as SO4		505 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		1060 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		2.84 mg/l				
	Carbon, Organic : Total as C :- {TOC}		2.3 mg/l				
	pH		7.7 pH Units				
	Ionic Balance		4.94 %				
Electrical Conductivity		5476 µS/cm	Field Measurements				
Temperature		13.9 deg C					
Dissolved Oxygen		4.0 mg/l					
pH		11.2 pH Units					
Groundwater Level		3.99 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 05/03/2021
(authorised to sign as representative of the Operator)

Please note - the Selenium Parameter appears to have been missed off the analysis parameter list in error by our external contractor. This has been highlighted and should be included