

Reporting of Emission to Groundwater for the period from 1st January 2022 to 30June 2022.

Operator : RWE Generation UK plc

Form: Groundwater1

Location: Aberthaw Quarry Ash Disposal Site

Permit/Variation Number: BP3339BH

Emission point	Substance/ Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E09_01A	Aluminium, Dissolved		<3.5 ug/l		25/02/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		<0.20 ug/l				
	Boron, Dissolved		<56 ug/l				
	Cadmium, Dissolved		<0.02 ug/l				
	Calcium, Dissolved		130 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		5.1 mg/l				
	Manganese, Dissolved		<0.20 ug/l				
	Molybdenum, Dissolved		<2.50 ug/l				
	Nickel, Dissolved		<1.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		<0.15 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		297 mg/l				
	Electrical Conductivity at 20C		637 uS/cm				
	Potassium, Dissolved		1.2 mg/l				
	Sodium, Dissolved		16 mg/l				
	Sulphate, Dissolved		21.9 mg/l				
	Total Oxidised Nitrogen		3.8 mg/l				
	Chloride		28.5 mg/l				
	Fluoride		0.1 mg/l				
	Ammoniacal Nitrogen		<0.06 mg/l				
	Total Organic Carbon		1.8 mg/l				
	pH		7.6 pH Units				
	Nitrate		3.8 mg/l				
	Ionic Balance		2.9 %				
	Electrical Conductivity		680 µS/cm	Field Measurements			
	Temperature		12.1 deg C				
	Dissolved Oxygen		5.7 mg/l				
	pH		7.2 pH Units				
	Groundwater Level		27.56 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E09_01A	Aluminium, Dissolved		<3.5 ug/l		26/04/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		<0.20 ug/l				
	Boron, Dissolved		116 ug/l				
	Cadmium, Dissolved		<0.02 ug/l				
	Calcium, Dissolved		120 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		6.3 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		5.5 mg/l				
	Manganese, Dissolved		<0.20 ug/l				
	Molybdenum, Dissolved		<2.50 ug/l				
	Nickel, Dissolved		<1.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		<0.15 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		285 mg/l				
	Electrical Conductivity at 25C		604 uS/cm				
	Potassium, Dissolved		1.4 mg/l				
	Sodium, Dissolved		16 mg/l				
	Sulphate, Dissolved		25.5 mg/l				
	Total Oxidised Nitrogen		3.3 mg/l				
	Chloride		27.5 mg/l				
	Fluoride		0.2 mg/l				
	Ammoniacal Nitrogen		<0.06 mg/l				
	Total Organic Carbon		1.3 mg/l				
	pH		7.5 pH Units				
	Nitrate		3.3 mg/l				
	Ionic Balance		1.2 %				
	Electrical Conductivity		666 µS/cm	Field Measurements			
	Temperature		13.1 deg C				
	Dissolved Oxygen		3.3 mg/l				
	pH		6.6 pH Units				
	Groundwater Level		25.97 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E09_01B	Aluminium, Dissolved		<3.5 ug/l		25/02/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		<0.20 ug/l				
	Boron, Dissolved		<56 ug/l				
	Cadmium, Dissolved		<0.02 ug/l				
	Calcium, Dissolved		130 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		5.9 mg/l				
	Manganese, Dissolved		0.2 ug/l				
	Molybdenum, Dissolved		<2.50 ug/l				
	Nickel, Dissolved		<1.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		<0.15 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		282 mg/l				
	Electrical Conductivity at 25C		632 uS/cm				
	Potassium, Dissolved		1.1 mg/l				
	Sodium, Dissolved		16 mg/l				
	Sulphate, Dissolved		23.4 mg/l				
	Total Oxidised Nitrogen		3.3 mg/l				
	Chloride		27.8 mg/l				
	Fluoride		0.1 mg/l				
	Ammoniacal Nitrogen		<0.06 mg/l				
	Total Organic Carbon		1.6 mg/l				
	pH		7.6 pH Units				
	Nitrate		3.3 mg/l				
	Ionic Balance		5.4 %				
	Electrical Conductivity		681 µS/cm	Field Measurements			
Temperature		12.1 deg C					
Dissolved Oxygen		4.4 mg/l					
pH		7.1 pH Units					
Groundwater Level		26.42 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E09_01B	Aluminium, Dissolved		<3.5 ug/l		26/04/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		<0.20 ug/l				
	Boron, Dissolved		111 ug/l				
	Cadmium, Dissolved		<0.02 ug/l				
	Calcium, Dissolved		130 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		6.2 mg/l				
	Manganese, Dissolved		<0.20 ug/l				
	Molybdenum, Dissolved		<2.50 ug/l				
	Nickel, Dissolved		<1.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		<0.15 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		287 mg/l				
	Electrical Conductivity at 25C		602 uS/cm				
	Potassium, Dissolved		1.4 mg/l				
	Sodium, Dissolved		16 mg/l				
	Sulphate, Dissolved		27.7 mg/l				
	Total Oxidised Nitrogen		2.9 mg/l				
	Chloride		27.4 mg/l				
	Fluoride		0.2 mg/l				
	Ammoniacal Nitrogen		<0.06 mg/l				
	Total Organic Carbon		1.3 mg/l				
	pH		7.5 pH Units				
	Nitrate		2.9 mg/l				
	Ionic Balance		4.3 %				
	Electrical Conductivity		670 µS/cm	Field Measurements			
Temperature		12.6 deg C					
Dissolved Oxygen		2.6 mg/l					
pH		6.5 pH Units					
Groundwater Level		24.67 mAOD					

	Substance/ Emission point Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E09_02A	Aluminium, Dissolved		<3.5 ug/l		25/02/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		0.36 ug/l				
	Boron, Dissolved		<56 ug/l				
	Cadmium, Dissolved		0.03 ug/l				
	Calcium, Dissolved		220 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		10 mg/l				
	Manganese, Dissolved		0.65 ug/l				
	Molybdenum, Dissolved		<2.50 ug/l				
	Nickel, Dissolved		1.5 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		0.2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		416 mg/l				
	Electrical Conductivity at 25C		1080 uS/cm				
	Potassium, Dissolved		0.58 mg/l				
	Sodium, Dissolved		26 mg/l				
	Sulphate, Dissolved		88.9 mg/l				
	Total Oxidised Nitrogen		28.8 mg/l				
	Chloride		36 mg/l				
	Fluoride		0.1 mg/l				
	Ammoniacal Nitrogen		<0.06 mg/l				
	Total Organic Carbon		5.3 mg/l				
	pH		7.1 pH Units				
	Nitrate		28.8 mg/l				
	Ionic Balance		7.3 %				
	Electrical Conductivity		1176 µS/cm	Field Measurements			
	Temperature		12.1 deg C				
	Dissolved Oxygen		5.8 mg/l				
	pH		6.8 pH Units				
	Groundwater Level		28.24 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E09_02A	Aluminium, Dissolved		<3.5 ug/l		26/04/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		0.38 ug/l				
	Boron, Dissolved		121 ug/l				
	Cadmium, Dissolved		0.04 ug/l				
	Calcium, Dissolved		190 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		17 mg/l				
	Manganese, Dissolved		6.4 ug/l				
	Molybdenum, Dissolved		<2.50 ug/l				
	Nickel, Dissolved		2.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		0.36 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		409 mg/l				
	Electrical Conductivity at 25C		928 uS/cm				
	Potassium, Dissolved		0.91 mg/l				
	Sodium, Dissolved		23 mg/l				
	Sulphate, Dissolved		71.3 mg/l				
	Total Oxidised Nitrogen		14.6 mg/l				
	Chloride		31.5 mg/l				
	Fluoride		0.2 mg/l				
	Ammoniacal Nitrogen		<0.06 mg/l				
	Total Organic Carbon		4 mg/l				
	pH		7.6 pH Units				
	Nitrate		14.5 mg/l				
	Ionic Balance		6.0 %				
	Electrical Conductivity		963 µS/cm	Field Measurements			
Temperature		14.4 deg C					
Dissolved Oxygen		1.0 mg/l					
pH		6.6 pH Units					
Groundwater Level		27.39 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E09_02B	Aluminium, Dissolved		<3.5 ug/l		25/02/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		0.42 ug/l				
	Boron, Dissolved		<56 ug/l				
	Cadmium, Dissolved		0.03 ug/l				
	Calcium, Dissolved		210 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		9.9 mg/l				
	Manganese, Dissolved		3.6 ug/l				
	Molybdenum, Dissolved		<2.50 ug/l				
	Nickel, Dissolved		4.6 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		0.38 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		358 mg/l				
	Electrical Conductivity at 25C		1050 uS/cm				
	Potassium, Dissolved		0.64 mg/l				
	Sodium, Dissolved		26 mg/l				
	Sulphate, Dissolved		113 mg/l				
	Total Oxidised Nitrogen		28.7 mg/l				
	Chloride		34.9 mg/l				
	Fluoride		0.1 mg/l				
	Ammoniacal Nitrogen		<0.06 mg/l				
	Total Organic Carbon		4.8 mg/l				
	pH		7.1 pH Units				
	Nitrate		28.7 mg/l				
	Ionic Balance		8.5 %				
	Electrical Conductivity		1136 µS/cm	Field Measurements			
	Temperature		12.0 deg C				
	Dissolved Oxygen		6.6 mg/l				
	pH		6.8 pH Units				
	Groundwater Level		29.49 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E09_02B	Aluminium, Dissolved		NO SAMPLE DUE TO TUBING STUCK IN BOREHOLE		26/04/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved						
	Arsenic Dissolved						
	Boron, Dissolved						
	Cadmium, Dissolved						
	Calcium, Dissolved						
	Chromium, Dissolved						
	Copper, Dissolved						
	Iron, Dissolved						
	Magnesium, Dissolved						
	Manganese, Dissolved						
	Molybdenum, Dissolved						
	Nickel, Dissolved						
	Selenium Dissolved						
	Vanadium, Dissolved						
	Mercury, Dissolved						
	Total Alkalinity as CaCO3						
	Electrical Conductivity at 25C						
	Potassium, Dissolved						
	Sodium, Dissolved						
	Sulphate, Dissolved						
	Total Oxidised Nitrogen						
	Chloride						
	Fluoride						
	Ammoniacal Nitrogen						
	Total Organic Carbon						
	pH						
	Nitrate						
	Ionic Balance						
	Electrical Conductivity						Field Measurements
Temperature							
Dissolved Oxygen							
pH							
Groundwater Level							



	Substance/ Emission point	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E05_03	Aluminium, Dissolved	50	<35 ug/l		25/02/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<13 ug/l				
	Arsenic Dissolved	10	<2.0 ug/l				
	Boron, Dissolved	2800	2240 ug/l				
	Cadmium, Dissolved	0.4	<0.20 ug/l				
	Calcium, Dissolved		410 mg/l				
	Chromium, Dissolved	50	<2.0 ug/l				
	Copper, Dissolved		<40 ug/l				
	Iron, Dissolved		<200 ug/l				
	Magnesium, Dissolved		261 mg/l				
	Manganese, Dissolved		32 ug/l				
	Molybdenum, Dissolved	50	1090 ug/l				
	Nickel, Dissolved		<10.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved	20	<1.5 ug/l				
	Mercury, Dissolved	0.03	<0.01 ug/l				
	Total Alkalinity as CaCO3		192 mg/l				
	Electrical Conductivity at 25C		6010 uS/cm				
	Potassium, Dissolved		10 mg/l				
	Sodium, Dissolved		710 mg/l				
	Sulphate, Dissolved	400	529 mg/l				
	Total Oxidised Nitrogen		<0.7 mg/l				
	Chloride		1910 mg/l				
	Fluoride		0.9 mg/l				
	Ammoniacal Nitrogen	1.6	0.65 mg/l				
	Total Organic Carbon		1.8 mg/l				
	pH		7.4 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		3.0 %				
	Electrical Conductivity		6724 µS/cm	Field Measurements			
	Temperature		11.6 deg C				
	Dissolved Oxygen		5.0 mg/l				
	pH		7.3 pH Units				
	Groundwater Level		19.42 mAOD				

	Substance/ Emission point	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E05_03	Aluminium, Dissolved	50	<3.5 ug/l		26/04/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		1.5 ug/l				
	Arsenic Dissolved	10	<0.20 ug/l				
	Boron, Dissolved	2800	1640 ug/l				
	Cadmium, Dissolved	0.4	<0.20 ug/l				
	Calcium, Dissolved		390 mg/l				
	Chromium, Dissolved	50	<2.0 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		247 mg/l				
	Manganese, Dissolved		30 ug/l				
	Molybdenum, Dissolved	50	1080 ug/l				
	Nickel, Dissolved		<10.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved	20	<1.5 ug/l				
	Mercury, Dissolved	0.03	<0.01 ug/l				
	Total Alkalinity as CaCO3		174 mg/l				
	Electrical Conductivity at 25C		5840 uS/cm				
	Potassium, Dissolved		10 mg/l				
	Sodium, Dissolved		610 mg/l				
	Sulphate, Dissolved	400	526 mg/l				
	Total Oxidised Nitrogen		1.1 mg/l				
	Chloride		1850 mg/l				
	Fluoride		0.8 mg/l				
	Ammoniacal Nitrogen	1.6	0.49 mg/l				
	Total Organic Carbon		0.9 mg/l				
	pH		7.4 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		0.1 %				
	Electrical Conductivity		6404 µS/cm	Field Measurements			
	Temperature		14.2 deg C				
	Dissolved Oxygen		4.4 mg/l				
	pH		6.8 pH Units				
	Groundwater Level		18.67 mAOD				

	Substance/ Emission point	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E05_04	Aluminium, Dissolved	50	<3.5 ug/l		25/02/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved	10	1.1 ug/l				
	Boron, Dissolved	2800	2250 ug/l				
	Cadmium, Dissolved	0.4	0.05 ug/l				
	Calcium, Dissolved		18 mg/l				
	Chromium, Dissolved	50	<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		14 mg/l				
	Manganese, Dissolved		5.9 ug/l				
	Molybdenum, Dissolved	50	65.9 ug/l				
	Nickel, Dissolved		<1.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved	20	0.7 ug/l				
	Mercury, Dissolved	0.03	<0.01 ug/l				
	Total Alkalinity as CaCO3		337 mg/l				
	Electrical Conductivity at 25C		1530 uS/cm				
	Potassium, Dissolved		3.6 mg/l				
	Sodium, Dissolved		330 mg/l				
	Sulphate, Dissolved	400	135 mg/l				
	Total Oxidised Nitrogen		<0.7 mg/l				
	Chloride		258 mg/l				
	Fluoride		5.1 mg/l				
	Ammoniacal Nitrogen	1.6	0.37 mg/l				
	Total Organic Carbon		0.7 mg/l				
	pH		8.5 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		1.0 %				
	Electrical Conductivity		1684 µS/cm	Field Measurements			
	Temperature		10.1 deg C				
	Dissolved Oxygen		4.8 mg/l				
	pH		8.4 pH Units				
	Groundwater Level		18.88 mAOD				

	Substance/ Emission point	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E05_04	Aluminium, Dissolved	50	<3.5 ug/l		26/04/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved	10	1.3 ug/l				
	Boron, Dissolved	2800	2210 ug/l				
	Cadmium, Dissolved	0.4	<0.02 ug/l				
	Calcium, Dissolved		16 mg/l				
	Chromium, Dissolved	50	<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		11 mg/l				
	Manganese, Dissolved		4.1 ug/l				
	Molybdenum, Dissolved	50	59.7 ug/l				
	Nickel, Dissolved		<1.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved	20	1.4 ug/l				
	Mercury, Dissolved	0.03	<0.01 ug/l				
	Total Alkalinity as CaCO3		553 mg/l				
	Electrical Conductivity at 25C		1270 uS/cm				
	Potassium, Dissolved		3.4 mg/l				
	Sodium, Dissolved		300 mg/l				
	Sulphate, Dissolved	400	114 mg/l				
	Total Oxidised Nitrogen		<0.7 mg/l				
	Chloride		179 mg/l				
	Fluoride		5.3 mg/l				
	Ammoniacal Nitrogen	1.6	0.19 mg/l				
	Total Organic Carbon		1.1 mg/l				
	pH		8.3 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		11.0 %				
	Electrical Conductivity		1403 µS/cm	Field Measurements			
	Temperature		12.3 deg C				
	Dissolved Oxygen		0.3 mg/l				
	pH		7.1 pH Units				
	Groundwater Level		18.30 mAOD				

	Substance/ Emission point Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E06_01	Aluminium, Dissolved	50	8 ug/l		25/02/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		2 ug/l				
	Arsenic Dissolved	10	1.9 ug/l				
	Boron, Dissolved	2800	1970 ug/l				
	Cadmium, Dissolved	0.4	<0.02 ug/l				
	Calcium, Dissolved		3 mg/l				
	Chromium, Dissolved	50	<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		2 mg/l				
	Manganese, Dissolved		8.8 ug/l				
	Molybdenum, Dissolved	50	<2.50 ug/l				
	Nickel, Dissolved		<1.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved	20	2.1 ug/l				
	Mercury, Dissolved	0.03	<0.01 ug/l				
	Total Alkalinity as CaCO3		583 mg/l				
	Electrical Conductivity at 25C		878 uS/cm				
	Potassium, Dissolved		2 mg/l				
	Sodium, Dissolved		230 mg/l				
	Sulphate, Dissolved	400	75 mg/l				
	Total Oxidised Nitrogen		<0.7 mg/l				
	Chloride		32 mg/l				
	Fluoride		3.3 mg/l				
	Ammoniacal Nitrogen	1.6	0.41 mg/l				
	Total Organic Carbon		5.3 mg/l				
	pH		8.70 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		15.6 %				
	Electrical Conductivity		950 µS/cm	Field Measurements			
Temperature		11.1 deg C					
Dissolved Oxygen		1.6 mg/l					
pH		8.9 pH Units					
Groundwater Level		19.18 mAOD					

	Substance/ Emission point	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E06_01	Aluminium, Dissolved	50	6.6 ug/l		26/04/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved	10	0.8 ug/l				
	Boron, Dissolved	2800	1910 ug/l				
	Cadmium, Dissolved	0.4	<0.02 ug/l				
	Calcium, Dissolved		4.5 mg/l				
	Chromium, Dissolved	50	<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		2.9 mg/l				
	Manganese, Dissolved		2.6 ug/l				
	Molybdenum, Dissolved	50	<2.50 ug/l				
	Nickel, Dissolved		<1.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved	20	1.6 ug/l				
	Mercury, Dissolved	0.03	<0.01 ug/l				
	Total Alkalinity as CaCO3		409 mg/l				
	Electrical Conductivity at 25C		864 uS/cm				
	Potassium, Dissolved		2.1 mg/l				
	Sodium, Dissolved		220 mg/l				
	Sulphate, Dissolved	400	85 mg/l				
	Total Oxidised Nitrogen		<0.7 mg/l				
	Chloride		33 mg/l				
	Fluoride		3.2 mg/l				
	Ammoniacal Nitrogen	1.6	0.17 mg/l				
	Total Organic Carbon		1.7 mg/l				
	pH		8.60 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		3.8 %				
	Electrical Conductivity		940 µS/cm	Field Measurements			
	Temperature		12.5 deg C				
	Dissolved Oxygen		0.1 mg/l				
	pH		7.2 pH Units				
	Groundwater Level		18.97 mAOD				

	Substance/ Emission point	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E06_02	Aluminium, Dissolved		<3.5 ug/l		25/02/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		0.37 ug/l				
	Boron, Dissolved		742 ug/l				
	Cadmium, Dissolved		<0.02 ug/l				
	Calcium, Dissolved		69 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		31 mg/l				
	Manganese, Dissolved		3.7 ug/l				
	Molybdenum, Dissolved		9.4 ug/l				
	Nickel, Dissolved		<1.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		0.4 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		177 mg/l				
	Electrical Conductivity at 25C		821 uS/cm				
	Potassium, Dissolved		5.2 mg/l				
	Sodium, Dissolved		73 mg/l				
	Sulphate, Dissolved		232 mg/l				
	Total Oxidised Nitrogen		<0.7 mg/l				
	Chloride		38 mg/l				
	Fluoride		0.4 mg/l				
	Ammoniacal Nitrogen		0.06 mg/l				
	Total Organic Carbon		1.1 mg/l				
	pH		8.10 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		0.8 %				
	Electrical Conductivity		1061 µS/cm	Field Measurements			
	Temperature		9.7 deg C				
	Dissolved Oxygen		0.6 mg/l				
	pH		7.6 pH Units				
	Groundwater Level		21.11 mAOD				

	Substance/ Emission point	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E06_02	Aluminium, Dissolved		<3.5 ug/l		26/04/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		0.38 ug/l				
	Boron, Dissolved		995 ug/l				
	Cadmium, Dissolved		<0.02 ug/l				
	Calcium, Dissolved		67 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		39 mg/l				
	Manganese, Dissolved		13 ug/l				
	Molybdenum, Dissolved		11.5 ug/l				
	Nickel, Dissolved		<1.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		0.59 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		235 mg/l				
	Electrical Conductivity at 25C		932 uS/cm				
	Potassium, Dissolved		6.3 mg/l				
	Sodium, Dissolved		110 mg/l				
	Sulphate, Dissolved		270 mg/l				
	Total Oxidised Nitrogen		0.8 mg/l				
	Chloride		36.6 mg/l				
	Fluoride		0.6 mg/l				
	Ammoniacal Nitrogen		0.2 mg/l				
	Total Organic Carbon		1.3 mg/l				
	pH		7.80 pH Units				
	Nitrate		0.8 mg/l				
	Ionic Balance		0.6 %				
	Electrical Conductivity		1032 µS/cm	Field Measurements			
	Temperature		11.3 deg C				
	Dissolved Oxygen		1.8 mg/l				
	pH		6.9 pH Units				
	Groundwater Level		20.54 mAOD				



	Substance/ Emission point	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E06_03	Aluminium, Dissolved		<3.5 ug/l		25/02/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		0.5 ug/l				
	Boron, Dissolved		402 ug/l				
	Cadmium, Dissolved		<0.02 ug/l				
	Calcium, Dissolved		91 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		53 mg/l				
	Manganese, Dissolved		5 ug/l				
	Molybdenum, Dissolved		8 ug/l				
	Nickel, Dissolved		<1.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		0.6 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		144 mg/l				
	Electrical Conductivity at 25C		870 uS/cm				
	Potassium, Dissolved		7 mg/l				
	Sodium, Dissolved		33 mg/l				
	Sulphate, Dissolved		308 mg/l				
	Total Oxidised Nitrogen		<0.7 mg/l				
	Chloride		39 mg/l				
	Fluoride		0.5 mg/l				
	Ammoniacal Nitrogen		<0.06 mg/l				
	Total Organic Carbon		1.4 mg/l				
	pH		8.1 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		0.5 %				
	Electrical Conductivity		1047 µS/cm	Field Measurements			
	Temperature		11.1 deg C				
	Dissolved Oxygen		2.6 mg/l				
	pH		7.6 pH Units				
	Groundwater Level		21.78 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E06_03	Aluminium, Dissolved		<3.5 ug/l		26/04/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		0.8 ug/l				
	Boron, Dissolved		463 ug/l				
	Cadmium, Dissolved		<0.02 ug/l				
	Calcium, Dissolved		99 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		57 mg/l				
	Manganese, Dissolved		4 ug/l				
	Molybdenum, Dissolved		9 ug/l				
	Nickel, Dissolved		<1.0 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		0.3 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		155 mg/l				
	Electrical Conductivity at 25C		887 uS/cm				
	Potassium, Dissolved		6.6 mg/l				
	Sodium, Dissolved		32 mg/l				
	Sulphate, Dissolved		326 mg/l				
	Total Oxidised Nitrogen		<0.7 mg/l				
	Chloride		41 mg/l				
	Fluoride		0.5 mg/l				
	Ammoniacal Nitrogen		<0.06 mg/l				
	Total Organic Carbon		1.0 mg/l				
	pH		7.7 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		0.7 %				
	Electrical Conductivity		974 µS/cm	Field Measurements			
	Temperature		11.3 deg C				
	Dissolved Oxygen		0.2 mg/l				
	pH		7.0 pH Units				
	Groundwater Level		21.47 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E06_04	Aluminium, Dissolved		<3.5 ug/l		25/02/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		0.3 ug/l				
	Boron, Dissolved		211 ug/l				
	Cadmium, Dissolved		<0.02 ug/l				
	Calcium, Dissolved		280 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		71 mg/l				
	Manganese, Dissolved		38 ug/l				
	Molybdenum, Dissolved		17 ug/l				
	Nickel, Dissolved		2.9 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		<0.15 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		134 mg/l				
	Electrical Conductivity at 25C		1840 uS/cm				
	Potassium, Dissolved		45 mg/l				
	Sodium, Dissolved		44 mg/l				
	Sulphate, Dissolved		908 mg/l				
	Total Oxidised Nitrogen		<0.7 mg/l				
	Chloride		94 mg/l				
	Fluoride		0.5 mg/l				
	Ammoniacal Nitrogen		<0.06 mg/l				
	Total Organic Carbon		2.6 mg/l				
	pH		8.00 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		2.9 %				
	Electrical Conductivity		2019 µS/cm	Field Measurements			
	Temperature		11.7 deg C				
	Dissolved Oxygen		3.1 mg/l				
	pH		7.4 pH Units				
	Groundwater Level		22.70 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E06_04	Aluminium, Dissolved		<3.5 ug/l		26/04/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		0.4 ug/l				
	Boron, Dissolved		227 ug/l				
	Cadmium, Dissolved		<0.02 ug/l				
	Calcium, Dissolved		280 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		73.0 mg/l				
	Manganese, Dissolved		72.0 ug/l				
	Molybdenum, Dissolved		19 ug/l				
	Nickel, Dissolved		4.4 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		<0.15 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		189 mg/l				
	Electrical Conductivity at 25C		1700 uS/cm				
	Potassium, Dissolved		45.0 mg/l				
	Sodium, Dissolved		45.0 mg/l				
	Sulphate, Dissolved		838 mg/l				
	Total Oxidised Nitrogen		<0.7 mg/l				
	Chloride		87 mg/l				
	Fluoride		0.5 mg/l				
	Ammoniacal Nitrogen		0.1 mg/l				
	Total Organic Carbon		2.3 mg/l				
	pH		7.60 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		1.3 %				
	Electrical Conductivity		1713 µS/cm	Field Measurements			
	Temperature		11.7 deg C				
	Dissolved Oxygen		0.3 mg/l				
	pH		6.7 pH Units				
	Groundwater Level		22.11 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E06_05	Aluminium, Dissolved		<3.5 ug/l		25/02/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		<0.20 ug/l				
	Boron, Dissolved		139 ug/l				
	Cadmium, Dissolved		<0.02 ug/l				
	Calcium, Dissolved		150 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		54 mg/l				
	Manganese, Dissolved		6 ug/l				
	Molybdenum, Dissolved		4.3 ug/l				
	Nickel, Dissolved		1.6 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		<0.15 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		153 mg/l				
	Electrical Conductivity at 25C		1050 uS/cm				
	Potassium, Dissolved		4 mg/l				
	Sodium, Dissolved		14 mg/l				
	Sulphate, Dissolved		444 mg/l				
	Total Oxidised Nitrogen		<0.7 mg/l				
	Chloride		34 mg/l				
	Fluoride		0.4 mg/l				
	Ammoniacal Nitrogen		<0.06 mg/l				
	Total Organic Carbon		0.8 mg/l				
	pH		8.10 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		2.4 %				
	Electrical Conductivity		1153 µS/cm	Field Measurements			
	Temperature		10.8 deg C				
	Dissolved Oxygen		0.5 mg/l				
	pH		7.5 pH Units				
	Groundwater Level		26.19 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
E06_05	Aluminium, Dissolved		<3.5 ug/l		26/04/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 ug/l				
	Arsenic Dissolved		<0.20 ug/l				
	Boron, Dissolved		281 ug/l				
	Cadmium, Dissolved		<0.02 ug/l				
	Calcium, Dissolved		190 mg/l				
	Chromium, Dissolved		<0.20 ug/l				
	Copper, Dissolved		<4.0 ug/l				
	Iron, Dissolved		<20 ug/l				
	Magnesium, Dissolved		76 mg/l				
	Manganese, Dissolved		34 ug/l				
	Molybdenum, Dissolved		4.3 ug/l				
	Nickel, Dissolved		1.8 ug/l				
	Selenium Dissolved		n/s ug/l				
	Vanadium, Dissolved		<0.15 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		187 mg/l				
	Electrical Conductivity at 25C		1210 uS/cm				
	Potassium, Dissolved		4.2 mg/l				
	Sodium, Dissolved		22 mg/l				
	Sulphate, Dissolved		568 mg/l				
	Total Oxidised Nitrogen		<0.7 mg/l				
	Chloride		31 mg/l				
	Fluoride		0.5 mg/l				
	Ammoniacal Nitrogen		0.1 mg/l				
	Total Organic Carbon		0.9 mg/l				
	pH		7.70 pH Units				
	Nitrate		<0.7 mg/l				
	Ionic Balance		1.1 %				
	Electrical Conductivity		1326 µS/cm	Field Measurements			
	Temperature		11.0 deg C				
	Dissolved Oxygen		0.1 mg/l				
	pH		6.8 pH Units				
	Groundwater Level		24.89 mAOD				

Substance/ Emission point	Parameter	Emission Limit Value	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
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[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 .....  .....  
(authorised to sign as representative of the Operator)

Date 07/09/2022