

Reporting of Emission to Surface Water for the period from ...1st January 2018...to...30th June 2018.

Operator : RWE Generation UK plc

Form: Water1

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>
SW12	Aluminium, Dissolved		<10 µg/l		28/02/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		379 µg/l				
	Cadmium, Dissolved		0.211 µg/l				
	Calcium, Dissolved		187 mg/l				
	Chromium, Dissolved		2.55 µg/l				
	Copper, Dissolved		1.11 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		32.5 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		947 µg/l				
	Nickel, Dissolved		3.34 µg/l				
	Selenium Dissolved		2.16 µg/l				
	Vanadium, Dissolved		2.61 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		161 mg/l				
	Electrical Conductivity at 20C		2000 mS/cm				
	Potassium, Dissolved		23.3 mg/l				
	Sodium, Dissolved		214 mg/l				
	Sulphate, Dissolved		362 mg/l				
	Total Oxidised Nitrogen		7.33 mg/l				
	Chloride		367 mg/l				
	Fluoride		0.228 mg/l				
	Ammoniacal Nitrogen		0.043 mg/l				
	Total Organic Carbon		1.7 mg/l				
	Nitrate		0.0554 mg/l				
	pH		8.19 pH Units				

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>
SW12	Aluminium, Dissolved		10.8 µg/l		16/05/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		1.03 µg/l				
	Boron, Dissolved		406 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		171 mg/l				
	Chromium, Dissolved		2.8 µg/l				
	Copper, Dissolved		1.63 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		31.8 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		959 µg/l				
	Nickel, Dissolved		5.49 µg/l				
	Selenium Dissolved		2.57 µg/l				
	Vanadium, Dissolved		2.28 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		141 mg/l				
	Electrical Conductivity at 20C		1860 mS/cm				
	Potassium, Dissolved		22.7 mg/l				
	Sodium, Dissolved		195 mg/l				
	Sulphate, Dissolved		351 mg/l				
	Total Oxidised Nitrogen		6.65 mg/l				
	Chloride		333 mg/l				
	Fluoride		0.28 mg/l				
	Ammoniacal Nitrogen		0.106 mg/l				
	Total Organic Carbon		2.3 mg/l				
	Nitrate		8.13 mg/l				
	pH		8.13 pH Units				

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>
Settlement Ponds	Aluminium, Dissolved		11.90 µg/l		03/01/2018	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	1.51 µg/l				
	Boron, Dissolved	2000	477.00 µg/l				
	Cadmium, Dissolved	5	0.27 µg/l				
	Calcium, Dissolved		215.00 mg/l				
	Chromium, Dissolved	50	5.96 µg/l				
	Copper, Dissolved		1.09 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		33.70 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1220.00 µg/l				
	Nickel, Dissolved		9.02 µg/l				
	Selenium Dissolved		1.47 µg/l				
	Vanadium, Dissolved	60	3.45 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		226.00 mg/l				
	Electrical Conductivity at 20C		2370.00 mS/cm				
	Potassium, Dissolved		28.90 mg/l				
	Sodium, Dissolved		276.00 mg/l				
	Sulphate, Dissolved	400	379.00 mg/l				
	Total Oxidised Nitrogen		13.50 mg/l				
	Chloride		473.00 mg/l				
	Fluoride		0.19 mg/l				
	Ammoniacal Nitrogen	0.6	0.70 mg/l				
	Total Organic Carbon		1.20 mg/l				
	Nitrate		0.70 mg/l				
	pH	<9	8.18 pH Units				

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>
Settlement Ponds	Aluminium, Dissolved		11.80 µg/l		01/02/2018	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	2.07 µg/l				
	Boron, Dissolved	2000	437.00 µg/l				
	Cadmium, Dissolved	5	0.28 µg/l				
	Calcium, Dissolved		198.00 mg/l				
	Chromium, Dissolved	50	6.29 µg/l				
	Copper, Dissolved		1.65 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		32.10 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1060.00 µg/l				
	Nickel, Dissolved		8.05 µg/l				
	Selenium Dissolved		1.18 µg/l				
	Vanadium, Dissolved	60	3.34 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		248.00 mg/l				
	Electrical Conductivity at 20C		2130.00 mS/cm				
	Potassium, Dissolved		25.60 mg/l				
	Sodium, Dissolved		226.00 mg/l				
	Sulphate, Dissolved	400	330.00 mg/l				
	Total Oxidised Nitrogen		13.60 mg/l				
	Chloride		383.00 mg/l				
	Fluoride		0.16 mg/l				
	Ammoniacal Nitrogen	0.6	1.07 mg/l				
	Total Organic Carbon		0.70 mg/l				
	Nitrate		13.10 mg/l				
	pH	<9	8.15 pH Units				

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>
Settlement Ponds	Aluminium, Dissolved		14.70 µg/l		12/03/2018	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	5.52 µg/l				
	Boron, Dissolved	2000	571.00 µg/l				
	Cadmium, Dissolved	5	<0.1 µg/l				
	Calcium, Dissolved		243.00 mg/l				
	Chromium, Dissolved	50	10.50 µg/l				
	Copper, Dissolved		1.13 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		37.00 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1550.00 µg/l				
	Nickel, Dissolved		10.80 µg/l				
	Selenium Dissolved		1.98 µg/l				
	Vanadium, Dissolved	60	7.03 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		213.00 mg/l				
	Electrical Conductivity at 20C		2640.00 mS/cm				
	Potassium, Dissolved		29.60 mg/l				
	Sodium, Dissolved		293.00 mg/l				
	Sulphate, Dissolved	400	385.00 mg/l				
	Total Oxidised Nitrogen		16.90 mg/l				
	Chloride		547.00 mg/l				
	Fluoride		0.16 mg/l				
	Ammoniacal Nitrogen	0.6	1.00 mg/l				
	Total Organic Carbon		0.90 mg/l				
	Nitrate		16.20 mg/l				
	pH	<9	8.03 pH Units				

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>
Settlement Ponds	Aluminium, Dissolved		<10 µg/l		03/04/2018	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	2.64 µg/l				
	Boron, Dissolved	2000	514.00 µg/l				
	Cadmium, Dissolved	5	0.25 µg/l				
	Calcium, Dissolved		193.00 mg/l				
	Chromium, Dissolved	50	6.55 µg/l				
	Copper, Dissolved		1.58 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		33.70 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1230.00 µg/l				
	Nickel, Dissolved		8.01 µg/l				
	Selenium Dissolved		1.76 µg/l				
	Vanadium, Dissolved	60	4.73 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		179.00 mg/l				
	Electrical Conductivity at 20C		2130.00 mS/cm				
	Potassium, Dissolved		25.70 mg/l				
	Sodium, Dissolved		242.00 mg/l				
	Sulphate, Dissolved	400	340.00 mg/l				
	Total Oxidised Nitrogen		14.50 mg/l				
	Chloride		419.00 mg/l				
	Fluoride		0.17 mg/l				
	Ammoniacal Nitrogen	0.6	<0.500 mg/l				
	Total Organic Carbon		1.80 mg/l				
	Nitrate		14.20 mg/l				
	pH	<9	7.94 pH Units				

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>
Settlement Ponds	Aluminium, Dissolved		18 µg/l		04/05/2018	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	2 µg/l				
	Boron, Dissolved	2000	593 µg/l				
	Cadmium, Dissolved	5	<0.1 µg/l				
	Calcium, Dissolved		215 mg/l				
	Chromium, Dissolved	50	8 µg/l				
	Copper, Dissolved		2 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		37 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1520 µg/l				
	Nickel, Dissolved		10 µg/l				
	Selenium Dissolved		3 µg/l				
	Vanadium, Dissolved	60	6 µg/l				
	Mercury, Dissolved		0 µg/l				
	Total Alkalinity as CaCO3		188 mg/l				
	Electrical Conductivity at 20C		2470 mS/cm				
	Potassium, Dissolved		29 mg/l				
	Sodium, Dissolved		274 mg/l				
	Sulphate, Dissolved	400	397 mg/l				
	Total Oxidised Nitrogen		16 mg/l				
	Chloride		494 mg/l				
	Fluoride		0 mg/l				
	Ammoniacal Nitrogen	0.6	1 mg/l				
	Total Organic Carbon		3 mg/l				
	Nitrate		15 mg/l				
	pH	<9	8 pH Units				

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>
Settlement Ponds	Aluminium, Dissolved		34.2 µg/l		04/06/2018	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	1.64 µg/l				
	Boron, Dissolved	2000	1070 µg/l				
	Cadmium, Dissolved	5	<0.1 µg/l				
	Calcium, Dissolved		348 mg/l				
	Chromium, Dissolved	50	13.6 µg/l				
	Copper, Dissolved		4.33 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		61.8 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		3160 µg/l				
	Nickel, Dissolved		14.7 µg/l				
	Selenium Dissolved		2.86 µg/l				
	Vanadium, Dissolved	60	8.01 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		73 mg/l				
	Electrical Conductivity at 20C		4280 mS/cm				
	Potassium, Dissolved		50.5 mg/l				
	Sodium, Dissolved		547 mg/l				
	Sulphate, Dissolved	400	670 mg/l				
	Total Oxidised Nitrogen		32.9 mg/l				
	Chloride		981 mg/l				
	Fluoride		0.132 mg/l				
	Ammoniacal Nitrogen	0.6	<0.500 mg/l				
	Total Organic Carbon		5.7 mg/l				
	Nitrate		31.9 mg/l				
	pH	<9	8.32 pH Units				



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>
DP2	Aluminium, Dissolved		<10 µg/l		03/01/2018	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		315 µg/l				
	Cadmium, Dissolved		0.221 µg/l				
	Calcium, Dissolved		194 mg/l				
	Chromium, Dissolved		1.73 µg/l				
	Copper, Dissolved		1.03 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		30 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		745 µg/l				
	Nickel, Dissolved		9.07 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		264 mg/l				
	Electrical Conductivity at 20C		1830 mS/cm				
	Potassium, Dissolved		19.1 mg/l				
	Sodium, Dissolved		176 mg/l				
	Sulphate, Dissolved		276 mg/l				
	Total Oxidised Nitrogen		11.6 mg/l				
	Chloride		307 mg/l				
	Fluoride		0.213 mg/l				
	Ammoniacal Nitrogen		0.72 mg/l				
	Total Organic Carbon		1 mg/l				
	Nitrate		11.2 mg/l				
	pH		7.39 pH Units				

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>
DP2	Aluminium, Dissolved		<10 µg/l		01/02/2018	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		1.1 µg/l				
	Boron, Dissolved		339 µg/l				
	Cadmium, Dissolved		0.258 µg/l				
	Calcium, Dissolved		193 mg/l				
	Chromium, Dissolved		2.53 µg/l				
	Copper, Dissolved		1.6 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		31.2 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		902 µg/l				
	Nickel, Dissolved		8.54 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		268 mg/l				
	Electrical Conductivity at 20C		1870 mS/cm				
	Potassium, Dissolved		18.8 mg/l				
	Sodium, Dissolved		171 mg/l				
	Sulphate, Dissolved		259 mg/l				
	Total Oxidised Nitrogen		13.8 mg/l				
	Chloride		315 mg/l				
	Fluoride		0.162 mg/l				
	Ammoniacal Nitrogen		1.06 mg/l				
	Total Organic Carbon		1.1 mg/l				
	Nitrate		13.2 mg/l				
	pH		7.44 pH Units				

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>
DP2	Aluminium, Dissolved		<10 µg/l		12/03/2018	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		5.97 µg/l				
	Boron, Dissolved		465 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		204 mg/l				
	Chromium, Dissolved		5.17 µg/l				
	Copper, Dissolved		1.41 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		34 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1050 µg/l				
	Nickel, Dissolved		11 µg/l				
	Selenium Dissolved		2 µg/l				
	Vanadium, Dissolved		5.38 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		260 mg/l				
	Electrical Conductivity at 20C		2030 mS/cm				
	Potassium, Dissolved		18.8 mg/l				
	Sodium, Dissolved		197 mg/l				
	Sulphate, Dissolved		636 mg/l				
	Total Oxidised Nitrogen		13 mg/l				
	Chloride		359 mg/l				
	Fluoride		0.171 mg/l				
	Ammoniacal Nitrogen		0.85 mg/l				
	Total Organic Carbon		0.9 mg/l				
	Nitrate		12.5 mg/l				
	pH		8.32 pH Units				

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>
DP2	Aluminium, Dissolved		<10 µg/l		04/04/2018	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		1.82 µg/l				
	Boron, Dissolved		367 µg/l				
	Cadmium, Dissolved		0.191 µg/l				
	Calcium, Dissolved		193 mg/l				
	Chromium, Dissolved		2.27 µg/l				
	Copper, Dissolved		4.04 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		31.9 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		882 µg/l				
	Nickel, Dissolved		9.68 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		2.32 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		274 mg/l				
	Electrical Conductivity at 20C		1800 mS/cm				
	Potassium, Dissolved		17.2 mg/l				
	Sodium, Dissolved		175 mg/l				
	Sulphate, Dissolved		279 mg/l				
	Total Oxidised Nitrogen		11.5 mg/l				
	Chloride		287 mg/l				
	Fluoride		0.191 mg/l				
	Ammoniacal Nitrogen		0.72 mg/l				
	Total Organic Carbon		1.3 mg/l				
	Nitrate		11.1 mg/l				
	pH		7.35 pH Units				

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>
DP2	Aluminium, Dissolved		17.5 µg/l		03/05/2018	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		3.13 µg/l				
	Boron, Dissolved		827 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		323 mg/l				
	Chromium, Dissolved		9.02 µg/l				
	Copper, Dissolved		2.24 µg/l				
	Iron, Dissolved		0 µg/l				
	Magnesium, Dissolved		0 mg/l				
	Manganese, Dissolved		53.3 µg/l				
	Molybdenum, Dissolved		10.8 µg/l				
	Nickel, Dissolved		2580 µg/l				
	Selenium Dissolved		19.6 µg/l				
	Vanadium, Dissolved		1.76 µg/l				
	Mercury, Dissolved		0 µg/l				
	Total Alkalinity as CaCO3		<0.01 mg/l				
	Electrical Conductivity at 20C		251 mS/cm				
	Potassium, Dissolved		3500 mg/l				
	Sodium, Dissolved		33.3 mg/l				
	Sulphate, Dissolved		388 mg/l				
	Total Oxidised Nitrogen		539 mg/l				
	Chloride		30.3 mg/l				
	Fluoride		729 mg/l				
	Ammoniacal Nitrogen		0 mg/l				
	Total Organic Carbon		3.04 mg/l				
	Nitrate		28.6 mg/l				
	pH		7.41 pH Units				

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>
DP2	Aluminium, Dissolved		18.90 µg/l		04/06/2018	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		3.01 µg/l				
	Boron, Dissolved		1120.00 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		456.00 mg/l				
	Chromium, Dissolved		12.20 µg/l				
	Copper, Dissolved		2.91 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		67.00 mg/l				
	Manganese, Dissolved		54.40 µg/l				
	Molybdenum, Dissolved		3700.00 µg/l				
	Nickel, Dissolved		23.80 µg/l				
	Selenium Dissolved		2.12 µg/l				
	Vanadium, Dissolved		6.85 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		257.00 mg/l				
	Electrical Conductivity at 20C		4960.00 mS/cm				
	Potassium, Dissolved		50.70 mg/l				
	Sodium, Dissolved		612.00 mg/l				
	Sulphate, Dissolved		731.00 mg/l				
	Total Oxidised Nitrogen		36.70 mg/l				
	Chloride		1110.00 mg/l				
	Fluoride		0.16 mg/l				
	Ammoniacal Nitrogen		4.34 mg/l				
	Total Organic Carbon		1.50 mg/l				
	Nitrate		34.80 mg/l				
	pH		7.06 pH Units				

[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


[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

[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

[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 25/072018  
(authorised to sign as representative of the Operator)

**Reporting of Emission to Groundwater for the period from ...1st January 2018...to...30th June 2018.**

**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		<10 ug/l		20/03/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		<100 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		138 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		5.78 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		<3 ug/l				
	Nickel, Dissolved		<1 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		304 mg/l				
	Electrical Conductivity at 20C		761 uS/cm				
	Potassium, Dissolved		1.26 mg/l				
	Sodium, Dissolved		18.8 mg/l				
	Sulphate, Dissolved		34.3 mg/l				
	Total Oxidised Nitrogen		4.24 mg/l				
	Chloride		64.5 mg/l				
	Fluoride		0.088 mg/l				
	Ammoniacal Nitrogen		<0.03 mg/l				
	Total Organic Carbon		2 mg/l				
	pH		7.17 pH Units				
	Nitrate		<0.004 mg/l				
	Ionic Balance		-4.11 %				
	Electrical Conductivity		905 µS/cm	Field Measurements			
Temperature		11.20 deg C					
Dissolved Oxygen		6.25 mg/l					
pH		7.17 pH Units					
Groundwater Level		26.39 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_01A	Aluminium, Dissolved		<10 ug/l		17/05/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		<100 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		125 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		5.41 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		<3 ug/l				
	Nickel, Dissolved		1.74 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		301 mg/l				
	Electrical Conductivity at 25C		676 uS/cm				
	Potassium, Dissolved		1.36 mg/l				
	Sodium, Dissolved		16.7 mg/l				
	Sulphate, Dissolved		27.2 mg/l				
	Total Oxidised Nitrogen		4.1 mg/l				
	Chloride		38.1 mg/l				
	Fluoride		0.066 mg/l				
	Ammoniacal Nitrogen		<0.03 mg/l				
	Total Organic Carbon		2.2 mg/l				
	pH		7.16 pH Units				
	Nitrate		<0.004 mg/l				
	Ionic Balance		-3.31 %				
	Electrical Conductivity		696 µS/cm	Field Measurements			
	Temperature		11.60 deg C				
	Dissolved Oxygen		4.00 mg/l				
	pH		6.98 pH Units				
	Groundwater Level		26.39 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_01B	Aluminium, Dissolved		37.7 ug/l		20/03/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		<100 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		135 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		1.15 ug/l				
	Iron, Dissolved		266 ug/l				
	Magnesium, Dissolved		6.77 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		<3 ug/l				
	Nickel, Dissolved		<1 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		304 mg/l				
	Electrical Conductivity at 25C		743 uS/cm				
	Potassium, Dissolved		1.28 mg/l				
	Sodium, Dissolved		17.9 mg/l				
	Sulphate, Dissolved		34.9 mg/l				
	Total Oxidised Nitrogen		3.99 mg/l				
	Chloride		59.2 mg/l				
	Fluoride		0.08 mg/l				
	Ammoniacal Nitrogen		<0.03 mg/l				
	Total Organic Carbon		1.2 mg/l				
	pH		7.2 pH Units				
	Nitrate		<3.99 mg/l				
	Ionic Balance		-3.88 %				
	Electrical Conductivity		889 µS/cm	Field Measurements			
	Temperature		11.20 deg C				
	Dissolved Oxygen		5.31 mg/l				
	pH		7.20 pH Units				
	Groundwater Level		26.33 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		13.1	ug/l		17/05/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1	ug/l				
	Arsenic Dissolved		<1	ug/l				
	Boron, Dissolved		<100	ug/l				
	Cadmium, Dissolved		<0.1	ug/l				
	Calcium, Dissolved		129	mg/l				
	Chromium, Dissolved		<0.5	ug/l				
	Copper, Dissolved		<1	ug/l				
	Iron, Dissolved		36.2	ug/l				
	Magnesium, Dissolved		5.97	mg/l				
	Manganese, Dissolved		<10	ug/l				
	Molybdenum, Dissolved		<3	ug/l				
	Nickel, Dissolved		1.68	ug/l				
	Selenium Dissolved		<1	ug/l				
	Vanadium, Dissolved		<2	ug/l				
	Mercury, Dissolved		<0.01	ug/l				
	Total Alkalinity as CaCO3		294	mg/l				
	Electrical Conductivity at 25C		684	uS/cm				
	Potassium, Dissolved		1.31	mg/l				
	Sodium, Dissolved		16.9	mg/l				
	Sulphate, Dissolved		29.8	mg/l				
	Total Oxidised Nitrogen		3.92	mg/l				
	Chloride		39.4	mg/l				
	Fluoride		0.071	mg/l				
	Ammoniacal Nitrogen		<0.03	mg/l				
	Total Organic Carbon		1.7	mg/l				
	pH		7.18	pH Units				
	Nitrate		<0.004	mg/l				
	Ionic Balance		-1.24	%				
	Electrical Conductivity		706	µS/cm	Field Measurements			
	Temperature		11.70	deg C				
	Dissolved Oxygen		4.03	mg/l				
	pH		6.94	pH Units				
	Groundwater Level		25.03	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		<10 ug/l		01/03/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		<100 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		237 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		1.63 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		13.4 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		<3 ug/l				
	Nickel, Dissolved		1.14 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		357 mg/l				
	Electrical Conductivity at 25C		1220 uS/cm				
	Potassium, Dissolved		0.963 mg/l				
	Sodium, Dissolved		25.5 mg/l				
	Sulphate, Dissolved		100 mg/l				
	Total Oxidised Nitrogen		44 mg/l				
	Chloride		56.7 mg/l				
	Fluoride		0.092 mg/l				
	Ammoniacal Nitrogen		0.181 mg/l				
	Total Organic Carbon		5 mg/l				
	pH		7.08 pH Units				
	Nitrate		0.141 mg/l				
	Ionic Balance		0.366 %				
	Electrical Conductivity		1467 µS/cm	Field Measurements			
	Temperature		11.30 deg C				
	Dissolved Oxygen		1.18 mg/l				
	pH		7.88 pH Units				
	Groundwater Level		27.48 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		<10 ug/l		17/05/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		<100 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		251 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		9.89 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		15.7 mg/l				
	Manganese, Dissolved		38.2 ug/l				
	Molybdenum, Dissolved		<3 ug/l				
	Nickel, Dissolved		5.59 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		441 mg/l				
	Electrical Conductivity at 25C		1270 uS/cm				
	Potassium, Dissolved		0.94 mg/l				
	Sodium, Dissolved		25.2 mg/l				
	Sulphate, Dissolved		81.1 mg/l				
	Total Oxidised Nitrogen		41.3 mg/l				
	Chloride		50.6 mg/l				
	Fluoride		<0.05 mg/l				
	Ammoniacal Nitrogen		0.041 mg/l				
	Total Organic Carbon		6.2 mg/l				
	pH		6.75 pH Units				
	Nitrate		0.607 mg/l				
	Ionic Balance		0.183 %				
	Electrical Conductivity		1327 µS/cm	Field Measurements			
	Temperature		11.90 deg C				
	Dissolved Oxygen		0.48 mg/l				
	pH		5.97 pH Units				
	Groundwater Level		27.54 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		450 ug/l		20/03/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		3.09 ug/l				
	Arsenic Dissolved		3.55 ug/l				
	Boron, Dissolved		<100 ug/l				
	Cadmium, Dissolved		0.172 ug/l				
	Calcium, Dissolved		250 mg/l				
	Chromium, Dissolved		1.58 ug/l				
	Copper, Dissolved		62.4 ug/l				
	Iron, Dissolved		1700 ug/l				
	Magnesium, Dissolved		14.7 mg/l				
	Manganese, Dissolved		200 ug/l				
	Molybdenum, Dissolved		<3 ug/l				
	Nickel, Dissolved		5.94 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		2.64 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		386 mg/l				
	Electrical Conductivity at 25C		1290 uS/cm				
	Potassium, Dissolved		1.3 mg/l				
	Sodium, Dissolved		27.2 mg/l				
	Sulphate, Dissolved		91.5 mg/l				
	Total Oxidised Nitrogen		52.1 mg/l				
	Chloride		53.5 mg/l				
	Fluoride		0.071 mg/l				
	Ammoniacal Nitrogen		<0.03 mg/l				
	Total Organic Carbon		5.4 mg/l				
	pH		6.97 pH Units				
	Nitrate		52.1 mg/l				
	Ionic Balance		0.166 %				
	Electrical Conductivity		1521 µS/cm	Field Measurements			
	Temperature		10.80 deg C				
	Dissolved Oxygen		7.38 mg/l				
	pH		0.00 pH Units				
	Groundwater Level		28.80 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		<10 ug/l		17/05/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		<100 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		169 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		1.73 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		30.4 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		<3 ug/l				
	Nickel, Dissolved		7.69 ug/l				
	Selenium Dissolved		1.31 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		413 mg/l				
	Electrical Conductivity at 25C		1110 uS/cm				
	Potassium, Dissolved		2.72 mg/l				
	Sodium, Dissolved		46.8 mg/l				
	Sulphate, Dissolved		93.5 mg/l				
	Total Oxidised Nitrogen		23.5 mg/l				
	Chloride		47.2 mg/l				
	Fluoride		0.141 mg/l				
	Ammoniacal Nitrogen		<0.03 mg/l				
	Total Organic Carbon		3.5 mg/l				
	pH		7.23 pH Units				
	Nitrate		<0.004 mg/l				
	Ionic Balance		-0.66 %				
	Electrical Conductivity		1232 µS/cm	Field Measurements			
	Temperature		13.90 deg C				
	Dissolved Oxygen		8.64 mg/l				
	pH		7.75 pH Units				
	Groundwater Level		27.59 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>
E05_03	Aluminium, Dissolved	50	<10 ug/l		28/02/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved	10	<1 ug/l				
	Boron, Dissolved	2800	1580 ug/l				
	Cadmium, Dissolved	0.4	0.341 ug/l				
	Calcium, Dissolved		420 mg/l				
	Chromium, Dissolved	50	<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		279 mg/l				
	Manganese, Dissolved		42.2 ug/l				
	Molybdenum, Dissolved	50	1610 ug/l				
	Nickel, Dissolved		<1 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved	20	<2 ug/l				
	Mercury, Dissolved	0.03	<0.01 ug/l				
	Total Alkalinity as CaCO3		183 mg/l				
	Electrical Conductivity at 25C		6340 uS/cm				
	Potassium, Dissolved		13.5 mg/l				
	Sodium, Dissolved		623 mg/l				
	Sulphate, Dissolved	400	567 mg/l				
	Total Oxidised Nitrogen		1.46 mg/l				
	Chloride		1930 mg/l				
	Fluoride		0.778 mg/l				
	Ammoniacal Nitrogen	1.6	0.624 mg/l				
	Total Organic Carbon		<0.7 mg/l				
	pH		7.21 pH Units				
	Nitrate		1.43 mg/l				
	Ionic Balance		0.978 %				
	Electrical Conductivity		7105 µS/cm	Field Measurements			
	Temperature		10.20 deg C				
	Dissolved Oxygen		2.45 mg/l				
	pH		7.39 pH Units				
	Groundwater Level		18.82 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>
E05_03	Aluminium, Dissolved	50	<10	ug/l		16/05/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1	ug/l				
	Arsenic Dissolved	10	<1	ug/l				
	Boron, Dissolved	2800	1630	ug/l				
	Cadmium, Dissolved	0.4	<0.1	ug/l				
	Calcium, Dissolved		381	mg/l				
	Chromium, Dissolved	50	0.71	ug/l				
	Copper, Dissolved		1.29	ug/l				
	Iron, Dissolved		<30	ug/l				
	Magnesium, Dissolved		248	mg/l				
	Manganese, Dissolved		41.6	ug/l				
	Molybdenum, Dissolved	50	1530	ug/l				
	Nickel, Dissolved		3.67	ug/l				
	Selenium Dissolved		<1	ug/l				
	Vanadium, Dissolved	20	<2	ug/l				
	Mercury, Dissolved	0.03	<0.01	ug/l				
	Total Alkalinity as CaCO3		182	mg/l				
	Electrical Conductivity at 25C		6190	uS/cm				
	Potassium, Dissolved		13.4	mg/l				
	Sodium, Dissolved		671	mg/l				
	Sulphate, Dissolved	400	547	mg/l				
	Total Oxidised Nitrogen		1.19	mg/l				
	Chloride		1930	mg/l				
	Fluoride		0.793	mg/l				
	Ammoniacal Nitrogen	1.6	0.66	mg/l				
	Total Organic Carbon		<0.7	mg/l				
	pH		7.26	pH Units				
	Nitrate		0.0121	mg/l				
	Ionic Balance		-0.415	%				
	Electrical Conductivity		6707	µS/cm	Field Measurements			
	Temperature		13.20	deg C				
	Dissolved Oxygen		4.97	mg/l				
	pH		6.53	pH Units				
	Groundwater Level		18.82	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>
E05_04	Aluminium, Dissolved	50	<10 ug/l		28/02/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved	10	1.18 ug/l				
	Boron, Dissolved	2800	2060 ug/l				
	Cadmium, Dissolved	0.4	<0.1 ug/l				
	Calcium, Dissolved		11.10 mg/l				
	Chromium, Dissolved	50	<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		8.66 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved	50	44.40 ug/l				
	Nickel, Dissolved		<1 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved	20	<2 ug/l				
	Mercury, Dissolved	0.03	<0.01 ug/l				
	Total Alkalinity as CaCO3		359 mg/l				
	Electrical Conductivity at 25C		1180 uS/cm				
	Potassium, Dissolved		3.46 mg/l				
	Sodium, Dissolved		273 mg/l				
	Sulphate, Dissolved	400	106.00 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		135.00 mg/l				
	Fluoride		6.99 mg/l				
	Ammoniacal Nitrogen	1.6	0.55 mg/l				
	Total Organic Carbon		<0.7 mg/l				
	pH		8.45 pH Units				
	Nitrate		<0.004 mg/l				
	Ionic Balance		0.15 %				
	Electrical Conductivity		1373 µS/cm	Field Measurements			
	Temperature		10.20 deg C				
	Dissolved Oxygen		0.30 mg/l				
	pH		8.51 pH Units				
	Groundwater Level		18.37 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>
E05_04	Aluminium, Dissolved	50	<10	ug/l		16/05/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1	ug/l				
	Arsenic Dissolved	10	1.06	ug/l				
	Boron, Dissolved	2800	2040	ug/l				
	Cadmium, Dissolved	0.4	<0.1	ug/l				
	Calcium, Dissolved		9.07	mg/l				
	Chromium, Dissolved	50	<0.5	ug/l				
	Copper, Dissolved		<1	ug/l				
	Iron, Dissolved		<30	ug/l				
	Magnesium, Dissolved		7.21	mg/l				
	Manganese, Dissolved		<10	ug/l				
	Molybdenum, Dissolved	50	38.80	ug/l				
	Nickel, Dissolved		<1	ug/l				
	Selenium Dissolved		<1	ug/l				
	Vanadium, Dissolved	20	<2	ug/l				
	Mercury, Dissolved	0.03	<0.01	ug/l				
	Total Alkalinity as CaCO3		364	mg/l				
	Electrical Conductivity at 25C		1130	uS/cm				
	Potassium, Dissolved		3.20	mg/l				
	Sodium, Dissolved		259	mg/l				
	Sulphate, Dissolved	400	95.30	mg/l				
	Total Oxidised Nitrogen		<0.2	mg/l				
	Chloride		117.00	mg/l				
	Fluoride		5.83	mg/l				
	Ammoniacal Nitrogen	1.6	0.59	mg/l				
	Total Organic Carbon		<0.7	mg/l				
	pH		8.47	pH Units				
	Nitrate		<0.004	mg/l				
	Ionic Balance		-0.67	%				
	Electrical Conductivity		1168	µS/cm	Field Measurements			
	Temperature		11.60	deg C				
	Dissolved Oxygen		0.68	mg/l				
	pH		8.42	pH Units				
	Groundwater Level		18.22	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_01	Aluminium, Dissolved	50	11.50	ug/l		28/02/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		1.05	ug/l				
	Arsenic Dissolved	10	1.48	ug/l				
	Boron, Dissolved	2800	1740	ug/l				
	Cadmium, Dissolved	0.4	<0.1	ug/l				
	Calcium, Dissolved		6.82	mg/l				
	Chromium, Dissolved	50	<0.5	ug/l				
	Copper, Dissolved		<1	ug/l				
	Iron, Dissolved		<30	ug/l				
	Magnesium, Dissolved		5.10	mg/l				
	Manganese, Dissolved		<10	ug/l				
	Molybdenum, Dissolved	50	4.86	ug/l				
	Nickel, Dissolved		<1	ug/l				
	Selenium Dissolved		<1	ug/l				
	Vanadium, Dissolved	20	4.87	ug/l				
	Mercury, Dissolved	0.03	<0.01	ug/l				
	Total Alkalinity as CaCO3		362	mg/l				
	Electrical Conductivity at 25C		886	uS/cm				
	Potassium, Dissolved		2.67	mg/l				
	Sodium, Dissolved		224	mg/l				
	Sulphate, Dissolved	400	92.50	mg/l				
	Total Oxidised Nitrogen		<0.2	mg/l				
	Chloride		37.20	mg/l				
	Fluoride		3.60	mg/l				
	Ammoniacal Nitrogen	1.6	0.49	mg/l				
	Total Organic Carbon		1.00	mg/l				
	pH		8.74	pH Units				
	Nitrate		<0.2	mg/l				
	Ionic Balance		0.00	%				
	Electrical Conductivity		1005	µS/cm	Field Measurements			
	Temperature		9.50	deg C				
	Dissolved Oxygen		6.11	mg/l				
	pH		7.68	pH Units				
	Groundwater Level		18.72	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_01	Aluminium, Dissolved	50	10.70	ug/l		16/05/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1	ug/l				
	Arsenic Dissolved	10	<1	ug/l				
	Boron, Dissolved	2800	1760	ug/l				
	Cadmium, Dissolved	0.4	<0.1	ug/l				
	Calcium, Dissolved		6.06	mg/l				
	Chromium, Dissolved	50	<0.5	ug/l				
	Copper, Dissolved		<1	ug/l				
	Iron, Dissolved		<30	ug/l				
	Magnesium, Dissolved		4.46	mg/l				
	Manganese, Dissolved		10.30	ug/l				
	Molybdenum, Dissolved	50	<3	ug/l				
	Nickel, Dissolved		<1	ug/l				
	Selenium Dissolved		<1	ug/l				
	Vanadium, Dissolved	20	<2	ug/l				
	Mercury, Dissolved	0.03	<0.01	ug/l				
	Total Alkalinity as CaCO3		333	mg/l				
	Electrical Conductivity at 25C		870	uS/cm				
	Potassium, Dissolved		2.35	mg/l				
	Sodium, Dissolved		212	mg/l				
	Sulphate, Dissolved	400	78.90	mg/l				
	Total Oxidised Nitrogen		7.23	mg/l				
	Chloride		52.30	mg/l				
	Fluoride		4.18	mg/l				
	Ammoniacal Nitrogen	1.6	<0.03	mg/l				
	Total Organic Carbon		0.90	mg/l				
	pH		8.69	pH Units				
	Nitrate		0.07	mg/l				
	Ionic Balance		-1.68	%				
	Electrical Conductivity		933	µS/cm	Field Measurements			
	Temperature		12.50	deg C				
	Dissolved Oxygen		3.84	mg/l				
	pH		7.16	pH Units				
	Groundwater Level		18.80	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_02	Aluminium, Dissolved		<10	ug/l		28/02/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1	ug/l				
	Arsenic Dissolved		<1	ug/l				
	Boron, Dissolved		1050	ug/l				
	Cadmium, Dissolved		<0.1	ug/l				
	Calcium, Dissolved		64.70	mg/l				
	Chromium, Dissolved		<0.5	ug/l				
	Copper, Dissolved		<1	ug/l				
	Iron, Dissolved		<30	ug/l				
	Magnesium, Dissolved		41.70	mg/l				
	Manganese, Dissolved		<10	ug/l				
	Molybdenum, Dissolved		17.20	ug/l				
	Nickel, Dissolved		<1	ug/l				
	Selenium Dissolved		<1	ug/l				
	Vanadium, Dissolved		<2	ug/l				
	Mercury, Dissolved		<0.01	ug/l				
	Total Alkalinity as CaCO3		260	mg/l				
	Electrical Conductivity at 25C		982	uS/cm				
	Potassium, Dissolved		6.25	mg/l				
	Sodium, Dissolved		117	mg/l				
	Sulphate, Dissolved		278.00	mg/l				
	Total Oxidised Nitrogen		<0.2	mg/l				
	Chloride		32.80	mg/l				
	Fluoride		0.56	mg/l				
	Ammoniacal Nitrogen		0.47	mg/l				
	Total Organic Carbon		<0.7	mg/l				
	pH		7.77	pH Units				
	Nitrate		<0.2	mg/l				
	Ionic Balance		0.01	%				
	Electrical Conductivity		1087	µS/cm	Field Measurements			
	Temperature		8.00	deg C				
	Dissolved Oxygen		0.49	mg/l				
	pH		7.73	pH Units				
	Groundwater Level		20.67	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_02	Aluminium, Dissolved		<10 ug/l		16/05/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		1050 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		51.00 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		37.20 mg/l				
	Manganese, Dissolved		14.00 ug/l				
	Molybdenum, Dissolved		11.90 ug/l				
	Nickel, Dissolved		<1 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		269 mg/l				
	Electrical Conductivity at 25C		1010 uS/cm				
	Potassium, Dissolved		5.99 mg/l				
	Sodium, Dissolved		128 mg/l				
	Sulphate, Dissolved		259.00 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		38.60 mg/l				
	Fluoride		0.62 mg/l				
	Ammoniacal Nitrogen		0.81 mg/l				
	Total Organic Carbon		1.20 mg/l				
	pH		7.79 pH Units				
	Nitrate		<0.004 mg/l				
	Ionic Balance		-2.28 %				
	Electrical Conductivity		1025 µS/cm	Field Measurements			
	Temperature		10.70 deg C				
	Dissolved Oxygen		0.68 mg/l				
	pH		7.51 pH Units				
	Groundwater Level		20.68 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		<10 ug/l		28/02/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		295 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		124 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		61.90 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		10.30 ug/l				
	Nickel, Dissolved		<1 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		150 mg/l				
	Electrical Conductivity at 25C		1010 uS/cm				
	Potassium, Dissolved		7.16 mg/l				
	Sodium, Dissolved		28 mg/l				
	Sulphate, Dissolved		434 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		26.50 mg/l				
	Fluoride		0.41 mg/l				
	Ammoniacal Nitrogen		<0.03 mg/l				
	Total Organic Carbon		<0.7 mg/l				
	pH		7.80 pH Units				
	Nitrate		-0.34 mg/l				
	Ionic Balance		0.00 %				
	Electrical Conductivity		1058 µS/cm	Field Measurements			
	Temperature		6.10 deg C				
	Dissolved Oxygen		9.65 mg/l				
	pH		7.67 pH Units				
	Groundwater Level		21.28 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		<10 ug/l		16/05/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		314 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		119 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		62.60 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		10.20 ug/l				
	Nickel, Dissolved		2.42 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		161 mg/l				
	Electrical Conductivity at 25C		1020 uS/cm				
	Potassium, Dissolved		6.69 mg/l				
	Sodium, Dissolved		30 mg/l				
	Sulphate, Dissolved		434 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		21.90 mg/l				
	Fluoride		0.42 mg/l				
	Ammoniacal Nitrogen		0.04 mg/l				
	Total Organic Carbon		1.00 mg/l				
	pH		7.81 pH Units				
	Nitrate		<0.004 mg/l				
	Ionic Balance		-1.26 %				
	Electrical Conductivity		1062 µS/cm	Field Measurements			
	Temperature		11.60 deg C				
	Dissolved Oxygen		8.63 mg/l				
	pH		6.65 pH Units				
	Groundwater Level		21.26 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		<10 ug/l		28/02/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		162 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		298 mg/l				
	Chromium, Dissolved		0.98 ug/l				
	Copper, Dissolved		2.63 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		70.90 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		10.10 ug/l				
	Nickel, Dissolved		2.34 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		152 mg/l				
	Electrical Conductivity at 25C		2000 uS/cm				
	Potassium, Dissolved		62.30 mg/l				
	Sodium, Dissolved		64 mg/l				
	Sulphate, Dissolved		815 mg/l				
	Total Oxidised Nitrogen		6.31 mg/l				
	Chloride		163.00 mg/l				
	Fluoride		0.45 mg/l				
	Ammoniacal Nitrogen		<0.03 mg/l				
	Total Organic Carbon		2.30 mg/l				
	pH		7.60 pH Units				
	Nitrate		<0.004 mg/l				
	Ionic Balance		0.10 %				
	Electrical Conductivity		1778 µS/cm	Field Measurements			
	Temperature		0.40 deg C				
	Dissolved Oxygen		13.15 mg/l				
	pH		7.56 pH Units				
	Groundwater Level		22.01 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		<10 ug/l		16/05/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		152 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		268 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		2.82 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		72.20 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		8.45 ug/l				
	Nickel, Dissolved		5.86 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		153 mg/l				
	Electrical Conductivity at 25C		1810 uS/cm				
	Potassium, Dissolved		49.10 mg/l				
	Sodium, Dissolved		57 mg/l				
	Sulphate, Dissolved		736 mg/l				
	Total Oxidised Nitrogen		5.13 mg/l				
	Chloride		146.00 mg/l				
	Fluoride		0.68 mg/l				
	Ammoniacal Nitrogen		0.04 mg/l				
	Total Organic Carbon		2.20 mg/l				
	pH		7.69 pH Units				
	Nitrate		0.01 mg/l				
	Ionic Balance		0.42 %				
	Electrical Conductivity		1875 µS/cm	Field Measurements			
	Temperature		11.40 deg C				
	Dissolved Oxygen		8.78 mg/l				
	pH		6.67 pH Units				
	Groundwater Level		22.01 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		<10 ug/l		28/02/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		226 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		169 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		69.10 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		4.83 ug/l				
	Nickel, Dissolved		<1 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		163 mg/l				
	Electrical Conductivity at 25C		1170 uS/cm				
	Potassium, Dissolved		3.98 mg/l				
	Sodium, Dissolved		21 mg/l				
	Sulphate, Dissolved		551 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		26.20 mg/l				
	Fluoride		0.42 mg/l				
	Ammoniacal Nitrogen		0.08 mg/l				
	Total Organic Carbon		<0.7 mg/l				
	pH		7.53 pH Units				
	Nitrate		-1.02 mg/l				
	Ionic Balance		0.00 %				
	Electrical Conductivity		1282 µS/cm	Field Measurements			
	Temperature		8.00 deg C				
	Dissolved Oxygen		5.65 mg/l				
	pH		7.39 pH Units				
	Groundwater Level		24.87 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		<10 ug/l		16/05/2018	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		237 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		179 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		1.11 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		72.30 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		5.40 ug/l				
	Nickel, Dissolved		2.46 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		164 mg/l				
	Electrical Conductivity at 25C		1230 uS/cm				
	Potassium, Dissolved		4.03 mg/l				
	Sodium, Dissolved		22 mg/l				
	Sulphate, Dissolved		575 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		26.10 mg/l				
	Fluoride		0.41 mg/l				
	Ammoniacal Nitrogen		0.10 mg/l				
	Total Organic Carbon		<0.7 mg/l				
	pH		7.56 pH Units				
	Nitrate		-0.13 mg/l				
	Ionic Balance		-0.13 %				
	Electrical Conductivity		1251 µS/cm	Field Measurements			
	Temperature		10.50 deg C				
	Dissolved Oxygen		4.30 mg/l				
	pH		6.82 pH Units				
	Groundwater Level		24.76 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 ....  
(authorised to sign as representative of the Operator)

  
Date 25/07/2018