

Reporting of Emission to Groundwater for the period from ...1st January 2016...to...30th June 2016...

Operator : RWE Generation UK plc

Form: Groundwater1

Location: Aberthaw Quarry Ash Disposal Site

Permit/Variation Number: BP3339BH

	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		18/02/2016	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		145 mg/l					
	Chromium, Dissolved		<0.5 ug/l					
	Copper, Dissolved		<1 ug/l					
	Iron, Dissolved		<30 ug/l					
	Magnesium, Dissolved		5.52 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		287 mg/l					
	Electrical Conductivity at 20C		698 uS/cm					
	Potassium, Dissolved		1.24 mg/l					
	Sodium, Dissolved		17.2 mg/l					
	Sulphate, Dissolved		26.9 mg/l					
	Total Oxidised Nitrogen		9.7 mg/l					
	Chloride		39.1 mg/l					
	Fluoride		0.073 mg/l					
	Ammoniacal Nitrogen		0.03 mg/l					
	Total Organic Carbon		2 mg/l					
	pH		7.4 pH Units					
	Nitrate		<9.7 mg/l					
	Ionic Balance		2.26 %					
	Electrical Conductivity		900 uS/cm	Field Measurements				
	Temperature		11.80 deg C					
	Dissolved Oxygen		5.07 mg/l					
	pH		7.05 pH Units					
	Groundwater Level		27.30 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		05/05/2016	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		126 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		5.22 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		288 mg/l				
	Electrical Conductivity at 25C		633 uS/cm				
	Potassium, Dissolved		1.22 mg/l				
	Sodium, Dissolved		15.6 mg/l				
	Sulphate, Dissolved		25.5 mg/l				
	Total Oxidised Nitrogen		4.37 mg/l				
	Chloride		32.5 mg/l				
	Fluoride		0.089 mg/l				
	Ammoniacal Nitrogen		0.03 mg/l				
	Total Organic Carbon		1.3 mg/l				
	pH		7.24 pH Units				
	Nitrate		<9.84 mg/l				
Ionic Balance		0 %					
Electrical Conductivity		720 μS/cm		Field Measurements			
Temperature		12.80 deg C					
Dissolved Oxygen		3.61 mg/l					
pH		6.91 pH Units					
Groundwater Level		26.28 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>
E09_01B	Aluminium, Dissolved		<10 ug/l		18/02/2016	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		142 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		6.1 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		287 mg/l				
	Electrical Conductivity at 25C		698 uS/cm				
	Potassium, Dissolved		1.25 mg/l				
	Sodium, Dissolved		16.8 mg/l				
	Sulphate, Dissolved		30.2 mg/l				
	Total Oxidised Nitrogen		8.91 mg/l				
	Chloride		40.6 mg/l				
	Fluoride		0.083 mg/l				
	Ammoniacal Nitrogen		0.03 mg/l				
	Total Organic Carbon		1.7 mg/l				
	pH		7.5 pH Units				
	Nitrate		<8.91 mg/l				
Ionic Balance		1.22 %					
Electrical Conductivity		900 μS/cm		Field Measurements			
Temperature		11.20 deg C					
Dissolved Oxygen		4.59 mg/l					
pH		7.06 pH Units					
Groundwater Level		26.13 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		<10 ug/l		05/05/2016	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		<30 ug/l				
	Magnesium, Dissolved		5.8 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		291 mg/l				
	Electrical Conductivity at 25C		643 uS/cm				
	Potassium, Dissolved		1.15 mg/l				
	Sodium, Dissolved		15.9 mg/l				
	Sulphate, Dissolved		28.7 mg/l				
	Total Oxidised Nitrogen		4.23 mg/l				
	Chloride		33.5 mg/l				
	Fluoride		0.087 mg/l				
	Ammoniacal Nitrogen		0.03 mg/l				
	Total Organic Carbon		1.1 mg/l				
	pH		7.22 pH Units				
Nitrate		<4.23 mg/l					
Ionic Balance		-0.184 %					
Electrical Conductivity		730 uS/cm	Field Measurements				
Temperature		12.80 deg C					
Dissolved Oxygen		3.29 mg/l					
pH		6.90 pH Units					
Groundwater Level		24.95 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		18/02/2016	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		248 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		1.7 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		12.2 mg/l				
	Manganese, Dissolved		15.5 ug/l				
	Molybdenum, Dissolved		<3 ug/l				
	Nickel, Dissolved		2.61 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		392 mg/l				
	Electrical Conductivity at 25C		1170 uS/cm				
	Potassium, Dissolved		0.9 mg/l				
	Sodium, Dissolved		25.7 mg/l				
	Sulphate, Dissolved		86.7 mg/l				
	Total Oxidised Nitrogen		38.2 mg/l				
	Chloride		49.7 mg/l				
	Fluoride		0.066 mg/l				
	Ammoniacal Nitrogen		0.03 mg/l				
	Total Organic Carbon		6.8 mg/l				
	pH		7.1 pH Units				
Nitrate		38 mg/l					
Ionic Balance		2.64 %					
Electrical Conductivity		1470 uS/cm					
Temperature		11.70 deg C					
Dissolved Oxygen		3.26 mg/l	Field Measurements				
pH		6.74 pH Units					
Groundwater Level		28.27 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		05/05/2016	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		240 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		1.38 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		14.1 mg/l				
	Manganese, Dissolved		37.5 ug/l				
	Molybdenum, Dissolved		<3 ug/l				
	Nickel, Dissolved		2.24 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		399 mg/l				
	Electrical Conductivity at 25C		1160 uS/cm				
	Potassium, Dissolved		1.01 mg/l				
	Sodium, Dissolved		24.4 mg/l				
	Sulphate, Dissolved		94 mg/l				
	Total Oxidised Nitrogen		35.4 mg/l				
	Chloride		49.7 mg/l				
	Fluoride		0.083 mg/l				
	Ammoniacal Nitrogen		0.04 mg/l				
	Total Organic Carbon		4.9 mg/l				
	pH		6.92 pH Units				
	Nitrate		33.5 mg/l				
Ionic Balance		1.28 %					
Electrical Conductivity		1330 μS/cm					
Temperature		13.30 deg C					
Dissolved Oxygen		1.47 mg/l	Field Measurements				
pH		6.59 pH Units					
Groundwater Level		27.23 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		18/02/2016	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		226 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		2.05 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		13.2 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		<3 ug/l				
	Nickel, Dissolved		1.59 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		359 mg/l				
	Electrical Conductivity at 25C		1160 uS/cm				
	Potassium, Dissolved		0.989 mg/l				
	Sodium, Dissolved		26.1 mg/l				
	Sulphate, Dissolved		87.5 mg/l				
	Total Oxidised Nitrogen		42.7 mg/l				
	Chloride		50.9 mg/l				
	Fluoride		0.071 mg/l				
	Ammoniacal Nitrogen		0.03 mg/l				
	Total Organic Carbon		6 mg/l				
	pH		7.18 pH Units				
Nitrate		42.7 mg/l					
Ionic Balance		0.149 %					
Electrical Conductivity		1460 μS/cm					
Temperature		11.70 deg C					
Dissolved Oxygen		5.03 mg/l	Field Measurements				
pH		6.82 pH Units					
Groundwater Level		29.56 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_02B	Aluminium, Dissolved		<10 ug/l		05/05/2016	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		230 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		1.49 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		18.5 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		<3 ug/l				
	Nickel, Dissolved		1.72 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		368 mg/l				
	Electrical Conductivity at 25C		1170 uS/cm				
	Potassium, Dissolved		1.38 mg/l				
	Sodium, Dissolved		25.5 mg/l				
	Sulphate, Dissolved		99.4 mg/l				
	Total Oxidised Nitrogen		43 mg/l				
	Chloride		49.5 mg/l				
	Fluoride		0.096 mg/l				
	Ammoniacal Nitrogen		0.03 mg/l				
	Total Organic Carbon		4.6 mg/l				
	pH		6.95 pH Units				
Nitrate		43 mg/l					
Ionic Balance		0.893 %					
Electrical Conductivity		1350 μS/cm		Field Measurements			
Temperature		12.00 deg C					
Dissolved Oxygen		0.90 mg/l					
pH		6.60 pH Units					
Groundwater Level		27.23 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		18/02/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved	10	<1 ug/l				
	Boron, Dissolved	2800	1500 ug/l				
	Cadmium, Dissolved	0.4	<0.1 ug/l				
	Calcium, Dissolved		209 mg/l				
	Chromium, Dissolved	50	<0.5 ug/l				
	Copper, Dissolved		1.07 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		145 mg/l				
	Manganese, Dissolved		155 ug/l				
	Molybdenum, Dissolved	50	538* 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		182 mg/l				
	Electrical Conductivity at 25C		3960 uS/cm				
	Potassium, Dissolved		7.66 mg/l				
	Sodium, Dissolved		455 mg/l				
	Sulphate, Dissolved	400	239 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		1070 mg/l				
	Fluoride		1.38 mg/l				
	Ammoniacal Nitrogen	1.6	1.11 mg/l				
	Total Organic Carbon		0.8 mg/l				
	pH		7.64 pH Units				
Nitrate		<0.2 mg/l					
Ionic Balance		4.4 %					
Electrical Conductivity		3150 μS/cm		Field Measurements			
Temperature		11.00 deg C					
Dissolved Oxygen		2.97 mg/l					
pH		7.17 pH Units					
Groundwater Level		18.65 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		05/05/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		1.09 ug/l				
	Arsenic Dissolved	10	<1 ug/l				
	Boron, Dissolved	2800	1390 ug/l				
	Cadmium, Dissolved	0.4	<0.1 ug/l				
	Calcium, Dissolved		252 mg/l				
	Chromium, Dissolved	50	<0.5 ug/l				
	Copper, Dissolved		1.05 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		171 mg/l				
	Manganese, Dissolved		96.8 ug/l				
	Molybdenum, Dissolved	50	715* ug/l				
	Nickel, Dissolved		2.74 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		180 mg/l				
	Electrical Conductivity at 25C		4410 uS/cm				
	Potassium, Dissolved		8.88 mg/l				
	Sodium, Dissolved		475 mg/l				
	Sulphate, Dissolved	400	319 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		1370 mg/l				
	Fluoride		1.1 mg/l				
	Ammoniacal Nitrogen	1.6	1.18 mg/l				
	Total Organic Carbon		1.18 mg/l				
	pH		7.39 pH Units				
	Nitrate		<0.196 mg/l				
Ionic Balance		-1.38 %					
Electrical Conductivity		5190 μS/cm		Field Measurements			
Temperature		12.90 deg C					
Dissolved Oxygen		2.71 mg/l					
pH		7.09 pH Units					
Groundwater Level		18.58 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		17/02/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved	10	1.11 ug/l				
	Boron, Dissolved	2800	2130 ug/l				
	Cadmium, Dissolved	0.4	<0.1 ug/l				
	Calcium, Dissolved		6.64 mg/l				
	Chromium, Dissolved	50	<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		5.07 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved	50	23.00 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		373 mg/l				
	Electrical Conductivity at 25C		975 uS/cm				
	Potassium, Dissolved		2.43 mg/l				
	Sodium, Dissolved		238 mg/l				
	Sulphate, Dissolved	400	83.30 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		65.10 mg/l				
	Fluoride		5.40 mg/l				
	Ammoniacal Nitrogen	1.6	0.48 mg/l				
	Total Organic Carbon		0.80 mg/l				
	pH		8.57 pH Units				
Nitrate		<0.2 mg/l					
Ionic Balance		0.61 %					
Electrical Conductivity		900 μS/cm		Field Measurements			
Temperature		10.60 deg C					
Dissolved Oxygen		3.29 mg/l					
pH		8.41 pH Units					
Groundwater Level		19.12 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		06/05/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved	10	1.18 ug/l				
	Boron, Dissolved	2800	2020 ug/l				
	Cadmium, Dissolved	0.4	<0.1 ug/l				
	Calcium, Dissolved		9.21 mg/l				
	Chromium, Dissolved	50	<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		6.96 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved	50	42.00 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		358 mg/l				
	Electrical Conductivity at 25C		1120 uS/cm				
	Potassium, Dissolved		2.86 mg/l				
	Sodium, Dissolved		255 mg/l				
	Sulphate, Dissolved	400	115.00 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		101.00 mg/l				
	Fluoride		4.75 mg/l				
	Ammoniacal Nitrogen	1.6	0.44 mg/l				
	Total Organic Carbon		<0.7 mg/l				
	pH		8.36 pH Units				
	Nitrate		<0.192 mg/l				
Ionic Balance		0.87 %					
Electrical Conductivity		1256 μS/cm		Field Measurements			
Temperature		14.40 deg C					
Dissolved Oxygen		2.45 mg/l					
pH		8.20 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	17.90	ug/l		17/02/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1	ug/l				
	Arsenic Dissolved	10	1.61	ug/l				
	Boron, Dissolved	2800	1710	ug/l				
	Cadmium, Dissolved	0.4	<0.1	ug/l				
	Calcium, Dissolved		11.20	mg/l				
	Chromium, Dissolved	50	<0.5	ug/l				
	Copper, Dissolved		<1	ug/l				
	Iron, Dissolved		<30	ug/l				
	Magnesium, Dissolved		7.82	mg/l				
	Manganese, Dissolved		14.30	ug/l				
	Molybdenum, Dissolved	50	12.10	ug/l				
	Nickel, Dissolved		<1	ug/l				
	Selenium Dissolved		<1	ug/l				
	Vanadium, Dissolved	20	3.41	ug/l				
	Mercury, Dissolved	0.03	<0.01	ug/l				
	Total Alkalinity as CaCO3		364	mg/l				
	Electrical Conductivity at 25C		909	uS/cm				
	Potassium, Dissolved		2.90	mg/l				
	Sodium, Dissolved		206	mg/l				
	Sulphate, Dissolved	400	116.00	mg/l				
	Total Oxidised Nitrogen		<0.2	mg/l				
	Chloride		42.10	mg/l				
	Fluoride		2.60	mg/l				
	Ammoniacal Nitrogen	1.6	0.48	mg/l				
	Total Organic Carbon		1.60	mg/l				
	pH		8.58	pH Units				
Nitrate		<0.2	mg/l					
Ionic Balance		-3.04	%					
Electrical Conductivity		830	µS/cm	Field Measurements				
Temperature		10.70	deg C					
Dissolved Oxygen		2.39	mg/l					
pH		8.43	pH Units					
Groundwater Level		18.83	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	16.10	ug/l		05/05/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1	ug/l				
	Arsenic Dissolved	10	1.54	ug/l				
	Boron, Dissolved	2800	1770	ug/l				
	Cadmium, Dissolved	0.4	<0.1	ug/l				
	Calcium, Dissolved		4.50	mg/l				
	Chromium, Dissolved	50	<0.5	ug/l				
	Copper, Dissolved		<1	ug/l				
	Iron, Dissolved		<30	ug/l				
	Magnesium, Dissolved		3.21	mg/l				
	Manganese, Dissolved		<10	ug/l				
	Molybdenum, Dissolved	50	7.32	ug/l				
	Nickel, Dissolved		<1	ug/l				
	Selenium Dissolved		<1	ug/l				
	Vanadium, Dissolved	20	<2	ug/l				
	Mercury, Dissolved	0.03	0.02	ug/l				
	Total Alkalinity as CaCO3		373	mg/l				
	Electrical Conductivity at 25C		863	uS/cm				
	Potassium, Dissolved		2.06	mg/l				
	Sodium, Dissolved		218	mg/l				
	Sulphate, Dissolved	400	76.20	mg/l				
	Total Oxidised Nitrogen		<0.2	mg/l				
	Chloride		38.40	mg/l				
	Fluoride		2.80	mg/l				
	Ammoniacal Nitrogen	1.6	0.31	mg/l				
	Total Organic Carbon		0.80	mg/l				
	pH		8.64	pH Units				
	Nitrate		<0.185	mg/l				
	Ionic Balance		-0.51	%				
	Electrical Conductivity		1085	µS/cm				
	Temperature		15.00	deg C	Field Measurements			
	Dissolved Oxygen		2.69	mg/l				
	pH		8.55	pH Units				
	Groundwater Level		19.16	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		17/02/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		1.83 ug/l				
	Boron, Dissolved		541 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		73.00 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		29.20 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		21.40 ug/l				
	Nickel, Dissolved		<1 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		3.98 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		169 mg/l				
	Electrical Conductivity at 25C		790 uS/cm				
	Potassium, Dissolved		5.65 mg/l				
	Sodium, Dissolved		68 mg/l				
	Sulphate, Dissolved		225.00 mg/l				
	Total Oxidised Nitrogen		0.73 mg/l				
	Chloride		41.60 mg/l				
	Fluoride		0.43 mg/l				
	Ammoniacal Nitrogen		0.22 mg/l				
	Total Organic Carbon		1.10 mg/l				
	pH		7.92 pH Units				
Nitrate		0.73 mg/l					
Ionic Balance		-0.86 %					
Electrical Conductivity		750 uS/cm	Field Measurements				
Temperature		9.10 deg C					
Dissolved Oxygen		6.15 mg/l					
pH		7.73 pH Units					
Groundwater Level		20.76 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		06/05/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		1.53	ug/l				
	Arsenic Dissolved		1.87	ug/l				
	Boron, Dissolved		1070	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		37.40	mg/l				
	Manganese, Dissolved		<10	ug/l				
	Molybdenum, Dissolved		15.60	ug/l				
	Nickel, Dissolved		<1	ug/l				
	Selenium Dissolved		<1	ug/l				
	Vanadium, Dissolved		6.23	ug/l				
	Mercury, Dissolved		<0.01	ug/l				
	Total Alkalinity as CaCO3		240	mg/l				
	Electrical Conductivity at 25C		950	uS/cm				
	Potassium, Dissolved		6.03	mg/l				
	Sodium, Dissolved		119	mg/l				
	Sulphate, Dissolved		281.00	mg/l				
	Total Oxidised Nitrogen		0.39	mg/l				
	Chloride		36.30	mg/l				
	Fluoride		0.55	mg/l				
	Ammoniacal Nitrogen		0.45	mg/l				
	Total Organic Carbon		0.70	mg/l				
	pH		7.80	pH Units				
Nitrate		0.33	mg/l					
Ionic Balance		-3.28	%					
Electrical Conductivity		1088	µS/cm					
Temperature		13.60	deg C	Field Measurements				
Dissolved Oxygen		4.48	mg/l					
pH		7.59	pH Units					
Groundwater Level		20.57	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		19/02/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		282 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		85 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		49.70 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		11.50 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		118 mg/l				
	Electrical Conductivity at 25C		772 uS/cm				
	Potassium, Dissolved		7.08 mg/l				
	Sodium, Dissolved		22 mg/l				
	Sulphate, Dissolved		241 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		64.50 mg/l				
	Fluoride		0.48 mg/l				
	Ammoniacal Nitrogen		0.03 mg/l				
	Total Organic Carbon		0.70 mg/l				
	pH		7.99 pH Units				
Nitrate		<0.2 mg/l					
Ionic Balance		1.53 %					
Electrical Conductivity		960 μS/cm					
Temperature		11.00 deg C					
Dissolved Oxygen		8.11 mg/l	Field Measurements				
pH		8.00 pH Units					
Groundwater Level		21.43 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		05/05/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		271 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		67.70 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		9.60 ug/l				
	Nickel, Dissolved		1.16 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		139 mg/l				
	Electrical Conductivity at 25C		1060 uS/cm				
	Potassium, Dissolved		7.30 mg/l				
	Sodium, Dissolved		25 mg/l				
	Sulphate, Dissolved		432 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		43.00 mg/l				
	Fluoride		0.41 mg/l				
	Ammoniacal Nitrogen		0.04 mg/l				
	Total Organic Carbon		<0.7 mg/l				
	pH		7.81 pH Units				
Nitrate		<0.2 mg/l					
Ionic Balance		0.35 %					
Electrical Conductivity		1201 μS/cm					
Temperature		11.20 deg C					
Dissolved Oxygen		4.37 mg/l	Field Measurements				
pH		7.50 pH Units					
Groundwater Level		21.35 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		18/02/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		196 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		249 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		3.27 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		73.80 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		9.23 ug/l				
	Nickel, Dissolved		3.54 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		159 mg/l				
	Electrical Conductivity at 25C		1830 uS/cm				
	Potassium, Dissolved		44.80 mg/l				
	Sodium, Dissolved		69 mg/l				
	Sulphate, Dissolved		621 mg/l				
	Total Oxidised Nitrogen		2.69 mg/l				
	Chloride		216.00 mg/l				
	Fluoride		0.46 mg/l				
	Ammoniacal Nitrogen		0.04 mg/l				
	Total Organic Carbon		2.70 mg/l				
	pH		7.58 pH Units				
Nitrate		2.59 mg/l					
Ionic Balance		0.59 %					
Electrical Conductivity		2140 μS/cm					
Temperature		10.70 deg C					
Dissolved Oxygen		5.19 mg/l	Field Measurements				
pH		7.54 pH Units					
Groundwater Level		22.23 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		12.80	ug/l		06/05/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1	ug/l				
	Arsenic Dissolved		<1	ug/l				
	Boron, Dissolved		160	ug/l				
	Cadmium, Dissolved		<0.1	ug/l				
	Calcium, Dissolved		207	mg/l				
	Chromium, Dissolved		<0.5	ug/l				
	Copper, Dissolved		2.24	ug/l				
	Iron, Dissolved		<30	ug/l				
	Magnesium, Dissolved		58.70	mg/l				
	Manganese, Dissolved		<10	ug/l				
	Molybdenum, Dissolved		8.87	ug/l				
	Nickel, Dissolved		3.56	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		1570	uS/cm				
	Potassium, Dissolved		39.00	mg/l				
	Sodium, Dissolved		58	mg/l				
	Sulphate, Dissolved		514	mg/l				
	Total Oxidised Nitrogen		2.49	mg/l				
	Chloride		162.00	mg/l				
	Fluoride		0.45	mg/l				
	Ammoniacal Nitrogen		0.15	mg/l				
	Total Organic Carbon		1.70	mg/l				
	pH		7.58	pH Units				
Nitrate		<2.49	mg/l					
Ionic Balance		0.68	%					
Electrical Conductivity		1784	µS/cm					
Temperature		13.10	deg C	Field Measurements				
Dissolved Oxygen		4.50	mg/l					
pH		7.25	pH Units					
Groundwater Level		22.04	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		18/02/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		170 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		186 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		1.36 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		66.30 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		5.67 ug/l				
	Nickel, Dissolved		1.12 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		148 mg/l				
	Electrical Conductivity at 25C		1140 uS/cm				
	Potassium, Dissolved		4.34 mg/l				
	Sodium, Dissolved		20 mg/l				
	Sulphate, Dissolved		552 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		28.50 mg/l				
	Fluoride		0.39 mg/l				
	Ammoniacal Nitrogen		0.03 mg/l				
	Total Organic Carbon		<0.7 mg/l				
	pH		7.70 pH Units				
Nitrate		<0.2 mg/l					
Ionic Balance		1.47 %					
Electrical Conductivity		1400 μS/cm		Field Measurements			
Temperature		10.40 deg C					
Dissolved Oxygen		4.21 mg/l					
pH		7.68 pH Units					
Groundwater Level		25.46 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		06/05/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		232 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		185 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		73.80 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		4.27 ug/l				
	Nickel, Dissolved		1.23 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		165 mg/l				
	Electrical Conductivity at 25C		1230 uS/cm				
	Potassium, Dissolved		3.92 mg/l				
	Sodium, Dissolved		22 mg/l				
	Sulphate, Dissolved		565 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		27.60 mg/l				
	Fluoride		0.39 mg/l				
	Ammoniacal Nitrogen		0.09 mg/l				
	Total Organic Carbon		<0.7 mg/l				
	pH		7.51 pH Units				
	Nitrate		<0.2 mg/l				
	Ionic Balance		1.64 %				
	Electrical Conductivity		1414 uS/cm	Field Measurements			
	Temperature		11.60 deg C				
	Dissolved Oxygen		1.74 mg/l				
	pH		7.21 pH Units				
	Groundwater Level		24.83 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.

\*Compliance limit exceeded for 3 consecutive sampling events after March 2014 results (12 elevated sampling events in total).

Discussed with NRW and under investigation.

Signed A. J. J. J. J. Date 26/07/16  
(authorised to sign as representative of the Operator)

Reporting of Emission to Surface Water for the period from ...1st January 2016...to.30th June 2016...

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		17/02/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		1.99 µg/l				
	Boron, Dissolved		291 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		156 mg/l				
	Chromium, Dissolved		5.81 µg/l				
	Copper, Dissolved		1.41 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		29 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		585 µg/l				
	Nickel, Dissolved		3.35 µg/l				
	Selenium Dissolved		1.76 µg/l				
	Vanadium, Dissolved		2.37 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		155 mg/l				
	Electrical Conductivity at 20C		1580 mS/cm				
	Potassium, Dissolved		18.9 mg/l				
	Sodium, Dissolved		156 mg/l				
	Sulphate, Dissolved		306 mg/l				
	Total Oxidised Nitrogen		5.9 mg/l				
	Chloride		248 mg/l				
	Fluoride		0.225 mg/l				
	Ammoniacal Nitrogen		<0.03 mg/l				
	Total Organic Carbon		1.5 mg/l				
	Nitrate		5.86 mg/l				
	pH		8.35 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>
SW12	Aluminium, Dissolved		<10 µg/l		05/05/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		1.83 µg/l				
	Boron, Dissolved		331 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		168 mg/l				
	Chromium, Dissolved		5.55 µg/l				
	Copper, Dissolved		1.01 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		31.4 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		814 µg/l				
	Nickel, Dissolved		3.39 µg/l				
	Selenium Dissolved		2.04 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		136 mg/l				
	Electrical Conductivity at 20C		1890 mS/cm				
	Potassium, Dissolved		22.3 mg/l				
	Sodium, Dissolved		199 mg/l				
	Sulphate, Dissolved		346 mg/l				
	Total Oxidised Nitrogen		6.69 mg/l				
	Chloride		354 mg/l				
	Fluoride		0.214 mg/l				
	Ammoniacal Nitrogen		0.053 mg/l				
	Total Organic Carbon		1.6 mg/l				
	Nitrate		6.64 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		15 µg/l		04/01/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	3.46 µg/l				
	Boron, Dissolved	2000	336 µg/l				
	Cadmium, Dissolved	5	<0.1 µg/l				
	Calcium, Dissolved		186 mg/l				
	Chromium, Dissolved	50	20.6 µg/l				
	Copper, Dissolved		1.67 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		30.4 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		880 µg/l				
	Nickel, Dissolved		9.91 µg/l				
	Selenium Dissolved		1.11 µg/l				
	Vanadium, Dissolved	60	4.41 µg/l				
	Mercury, Dissolved		0.0148 µg/l				
	Total Alkalinity as CaCO3		217 mg/l				
	Electrical Conductivity at 20C		1990 mS/cm				
	Potassium, Dissolved		25 mg/l				
	Sodium, Dissolved		222 mg/l				
	Sulphate, Dissolved	400	303 mg/l				
	Total Oxidised Nitrogen		11.3 mg/l				
	Chloride		377 mg/l				
	Fluoride		0.17 mg/l				
	Ammoniacal Nitrogen	0.6	0.61 mg/l				
	Total Organic Carbon		1 mg/l				
	Nitrate		10.7 mg/l				
	pH	<9	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		12 µg/l		01/02/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	3.88 µg/l				
	Boron, Dissolved	2000	377 µg/l				
	Cadmium, Dissolved	5	<0.1 µg/l				
	Calcium, Dissolved		193 mg/l				
	Chromium, Dissolved	50	18.8 µg/l				
	Copper, Dissolved		1.47 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		33.9 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		971 µg/l				
	Nickel, Dissolved		10.2 µg/l				
	Selenium Dissolved		1.38 µg/l				
	Vanadium, Dissolved	60	5.01 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		207 mg/l				
	Electrical Conductivity at 20C		2100 mS/cm				
	Potassium, Dissolved		25.7 mg/l				
	Sodium, Dissolved		237 mg/l				
	Sulphate, Dissolved	400	316 mg/l				
	Total Oxidised Nitrogen		13.8 mg/l				
	Chloride		417 mg/l				
	Fluoride		0.186 mg/l				
	Ammoniacal Nitrogen	0.6	<0.500 mg/l				
	Total Organic Carbon		2.1 mg/l				
	Nitrate		13.1 mg/l				
	pH	<9	7.98 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		01/03/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	2.4 µg/l				
	Boron, Dissolved	2000	420 µg/l				
	Cadmium, Dissolved	5	<0.1 µg/l				
	Calcium, Dissolved		201 mg/l				
	Chromium, Dissolved	50	19.5 µg/l				
	Copper, Dissolved		2 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		32 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1150 µg/l				
	Nickel, Dissolved		9.39 µg/l				
	Selenium Dissolved		1.33 µg/l				
	Vanadium, Dissolved	60	4.29 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		205 mg/l				
	Electrical Conductivity at 20C		2310 mS/cm				
	Potassium, Dissolved		28.6 mg/l				
	Sodium, Dissolved		256 mg/l				
	Sulphate, Dissolved	400	330 mg/l				
	Total Oxidised Nitrogen		15 mg/l				
	Chloride		481 mg/l				
	Fluoride		0.162 mg/l				
	Ammoniacal Nitrogen	0.6	0.53 mg/l				
	Total Organic Carbon		2.1 mg/l				
	Nitrate		14.2 mg/l				
	pH	<9	7.93 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		12 µg/l		01/04/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	3.6 µg/l				
	Boron, Dissolved	2000	462 µg/l				
	Cadmium, Dissolved	5	0.578 µg/l				
	Calcium, Dissolved		247 mg/l				
	Chromium, Dissolved	50	27.3 µg/l				
	Copper, Dissolved		2.7 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		37 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1500 µg/l				
	Nickel, Dissolved		9.88 µg/l				
	Selenium Dissolved		2.46 µg/l				
	Vanadium, Dissolved	60	5.89 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		172 mg/l				
	Electrical Conductivity at 20C		2990 mS/cm				
	Potassium, Dissolved		34.1 mg/l				
	Sodium, Dissolved		357 mg/l				
	Sulphate, Dissolved	400	412 mg/l				
	Total Oxidised Nitrogen		18.5 mg/l				
	Chloride		687 mg/l				
	Fluoride		0.164 mg/l				
	Ammoniacal Nitrogen	0.6	1.01 mg/l				
	Total Organic Carbon		1.6 mg/l				
	Nitrate		17.4 mg/l				
	pH	<9	7.86 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		41 µg/l		03/05/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		1 µg/l				
	Arsenic Dissolved	50	9 µg/l				
	Boron, Dissolved	2000	669 µg/l				
	Cadmium, Dissolved	5	1 µg/l				
	Calcium, Dissolved		344 mg/l				
	Chromium, Dissolved	50	34 µg/l				
	Copper, Dissolved		3 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		45 mg/l				
	Manganese, Dissolved		12 µg/l				
	Molybdenum, Dissolved		2170 µg/l				
	Nickel, Dissolved		11 µg/l				
	Selenium Dissolved		3 µg/l				
	Vanadium, Dissolved	60	12 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		182 mg/l				
	Electrical Conductivity at 20C		4290 mS/cm				
	Potassium, Dissolved		48 mg/l				
	Sodium, Dissolved		558 mg/l				
	Sulphate, Dissolved	400	563 mg/l				
	Total Oxidised Nitrogen		26 mg/l				
	Chloride		1050 mg/l				
	Fluoride		0.175 mg/l				
	Ammoniacal Nitrogen	0.6	2 mg/l				
	Total Organic Carbon		1 mg/l				
	Nitrate		24 mg/l				
	pH	<9	8.22 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		90.9 µg/l		01/06/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		1.49 µg/l				
	Arsenic Dissolved	50	6.53 µg/l				
	Boron, Dissolved	2000	752 µg/l				
	Cadmium, Dissolved	5	<0.1 µg/l				
	Calcium, Dissolved		318 mg/l				
	Chromium, Dissolved	50	23.8 µg/l				
	Copper, Dissolved		6.33 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		50.3 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		2510 µg/l				
	Nickel, Dissolved		6.86 µg/l				
	Selenium Dissolved		3.08 µg/l				
	Vanadium, Dissolved	60	10.5 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		40 mg/l				
	Electrical Conductivity at 20C		4540 mS/cm				
	Potassium, Dissolved		54.7 mg/l				
	Sodium, Dissolved		615 mg/l				
	Sulphate, Dissolved	400	772 mg/l				
	Total Oxidised Nitrogen		22.4 mg/l				
	Chloride		1190 mg/l				
	Fluoride		0.154 mg/l				
	Ammoniacal Nitrogen	0.6	<0.500 mg/l				
	Total Organic Carbon		8 mg/l				
	Nitrate		21.9 mg/l				
	pH	<9	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		04/01/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		126 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		173 mg/l				
	Chromium, Dissolved		1.56 µg/l				
	Copper, Dissolved		2.02 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		20.5 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		296 µg/l				
	Nickel, Dissolved		7.23 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		1400 mS/cm				
	Potassium, Dissolved		12.6 mg/l				
	Sodium, Dissolved		123 mg/l				
	Sulphate, Dissolved		171 mg/l				
	Total Oxidised Nitrogen		9.5 mg/l				
	Chloride		215 mg/l				
	Fluoride		0.131 mg/l				
	Ammoniacal Nitrogen		<0.500 mg/l				
	Total Organic Carbon		1.3 mg/l				
	Nitrate		9.37 mg/l				
	pH		7.34 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		01/02/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		2.35 µg/l				
	Boron, Dissolved		319 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		218 mg/l				
	Chromium, Dissolved		16.5 µg/l				
	Copper, Dissolved		1.42 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		32.3 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1070 µg/l				
	Nickel, Dissolved		10.8 µg/l				
	Selenium Dissolved		1.22 µg/l				
	Vanadium, Dissolved		4.21 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		264 mg/l				
	Electrical Conductivity at 20C		2280 mS/cm				
	Potassium, Dissolved		23 mg/l				
	Sodium, Dissolved		246 mg/l				
	Sulphate, Dissolved		285 mg/l				
	Total Oxidised Nitrogen		15.1 mg/l				
	Chloride		456 mg/l				
	Fluoride		0.179 mg/l				
	Ammoniacal Nitrogen		1.97 mg/l				
	Total Organic Carbon		1.5 mg/l				
	Nitrate		13.4 mg/l				
	pH		7.49 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		01/03/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		212 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		215 mg/l				
	Chromium, Dissolved		1.51 µg/l				
	Copper, Dissolved		3.16 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		25.1 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		809 µg/l				
	Nickel, Dissolved		9.41 µg/l				
	Selenium Dissolved		1.03 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		258 mg/l				
	Electrical Conductivity at 20C		2090 mS/cm				
	Potassium, Dissolved		18.9 mg/l				
	Sodium, Dissolved		221 mg/l				
	Sulphate, Dissolved		214 mg/l				
	Total Oxidised Nitrogen		16 mg/l				
	Chloride		419 mg/l				
	Fluoride		0.156 mg/l				
	Ammoniacal Nitrogen		<0.500 mg/l				
	Total Organic Carbon		1.4 mg/l				
	Nitrate		15.8 mg/l				
	pH		7.38 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		01/04/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		233 µg/l				
	Cadmium, Dissolved		0.424 µg/l				
	Calcium, Dissolved		260 mg/l				
	Chromium, Dissolved		3.22 µg/l				
	Copper, Dissolved		2.62 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		27.8 mg/l				
	Manganese, Dissolved		38 µg/l				
	Molybdenum, Dissolved		1020 µg/l				
	Nickel, Dissolved		9.7 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		255 mg/l				
	Electrical Conductivity at 20C		2900 mS/cm				
	Potassium, Dissolved		25.1 mg/l				
	Sodium, Dissolved		334 mg/l				
	Sulphate, Dissolved		277 mg/l				
	Total Oxidised Nitrogen		18.2 mg/l				
	Chloride		680 mg/l				
	Fluoride		0.14 mg/l				
	Ammoniacal Nitrogen		0.84 mg/l				
	Total Organic Carbon		1.5 mg/l				
	Nitrate		17.4 mg/l				
	pH		7.34 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		03/05/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		371 µg/l				
	Cadmium, Dissolved		0.563 µg/l				
	Calcium, Dissolved		306 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		1.93 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		34.3 mg/l				
	Manganese, Dissolved		43 µg/l				
	Molybdenum, Dissolved		1570 µg/l				
	Nickel, Dissolved		12 µg/l				
	Selenium Dissolved		1.21 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		249 mg/l				
	Electrical Conductivity at 20C		3350 mS/cm				
	Potassium, Dissolved		29.5 mg/l				
	Sodium, Dissolved		410 mg/l				
	Sulphate, Dissolved		382 mg/l				
	Total Oxidised Nitrogen		24.4 mg/l				
	Chloride		803 mg/l				
	Fluoride		0.155 mg/l				
	Ammoniacal Nitrogen		<0.500 mg/l				
	Total Organic Carbon		<1 mg/l				
	Nitrate		24.3 mg/l				
	pH		7.71 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	Iron, Dissolved		<30 µg/l		01/06/2016	Sampling Station/Testing EA NLS	
	Magnesium, Dissolved		38.1 mg/l				
	Manganese, Dissolved		74.5 µg/l				
	Molybdenum, Dissolved		2190 µg/l				
	Nickel, Dissolved		14.9 µg/l				
	Selenium Dissolved		1.05 µg/l				
	Vanadium, Dissolved		2.72 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO <sub>3</sub>		261 mg/l				
	Electrical Conductivity at 20C		5010 mS/cm				
	Potassium, Dissolved		51 mg/l				
	Sodium, Dissolved		679 mg/l				
	Sulphate, Dissolved		423 mg/l				
	Total Oxidised Nitrogen		27.1 mg/l				
	Chloride		1300 mg/l				
	Fluoride		0.126 mg/l				
	Ammoniacal Nitrogen		6.52 mg/l				
	Total Organic Carbon		1.5 mg/l				
	Nitrate		25.1 mg/l				
	pH		7.14 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 terms

[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 ..... *A. Sawyer* ..... Date *21/07/16* .....  
(authorised to sign as representative of the Operator)