

Reporting of Emission to Surface Water for the period from1st July 2016.....to.....31st December 2016.....

Operator : RWE Generation UK plc

Form: Water1

Location: Aberthaw Ash Disposal Site

Permit/Variation Number: DP3432SW

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
S1 (Group Five Spring)	Aluminium, Dissolved		<40 µg/l		11/08/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		11.50 µg/l				
	Boron, Dissolved		13100 µg/l				
	Cadmium, Dissolved		0.103 µg/l				
	Calcium, Dissolved		1050 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		3.800 µg/l				
	Magnesium, Dissolved		77.0 mg/l				
	Manganese, Dissolved		587.0 µg/l				
	Molybdenum, Dissolved		4230 µg/l				
	Nickel, Dissolved		0.45 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Conductivity at 20C		17500 µS/cm				
	Potassium, Dissolved		239 mg/l				
	Sodium, Dissolved		3210 mg/l				
	Sulphate, Dissolved as SO4		1690 mg/l				
	Nitrogen : Total Oxidised as N		5.55 mg/l				
	Chloride		5760 mg/l				
	Fluoride		0.102 mg/l				
	Ammoniacal Nitrogen as N		1.430 mg/l				
	Carbon, Organic : Total as C :- {TOC}		5.80 mg/l				
	pH		6.87 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
S1 (Group Five Spring)	Aluminium, Dissolved		60 µg/l		16/11/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		29.90 µg/l				
	Boron, Dissolved		8470 µg/l				
	Cadmium, Dissolved		0.14 µg/l				
	Calcium, Dissolved		656 mg/l				
	Chromium, Dissolved		0.551 µg/l				
	Copper, Dissolved		200.000 µg/l				
	Magnesium, Dissolved		55 mg/l				
	Manganese, Dissolved		574.0 µg/l				
	Molybdenum, Dissolved		2320 µg/l				
	Nickel, Dissolved		3.77 µg/l				
	Selenium Dissolved		6 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Conductivity at 20C		10900 uS/cm				
	Potassium, Dissolved		161 mg/l				
	Sodium, Dissolved		1910 mg/l				
	Sulphate, Dissolved as SO4		1090 mg/l				
	Nitrogen : Total Oxidised as N		1.16 mg/l				
	Chloride		3360 mg/l				
	Fluoride		0.06 mg/l				
	Ammoniacal Nitrogen as N		0.256 mg/l				
	Carbon, Organic : Total as C :- {TOC}		12.00 mg/l				
	pH		7.05 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
Eastern Perimeter Drain	Aluminium, Dissolved		<40 µg/l		10/08/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		4.53 µg/l				
	Boron, Dissolved		<700 µg/l				
	Cadmium, Dissolved		<0.03 µg/l				
	Calcium, Dissolved		84 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		0.946 µg/l				
	Magnesium, Dissolved		22.7 mg/l				
	Manganese, Dissolved		<20 µg/l				
	Molybdenum, Dissolved		<30 µg/l				
	Nickel, Dissolved		<0.3 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Conductivity at 20C		528 uS/cm				
	Potassium, Dissolved		2 mg/l				
	Sodium, Dissolved		<20 mg/l				
	Sulphate, Dissolved as SO4		32 mg/l				
	Nitrogen : Total Oxidised as N		3.63 mg/l				
	Chloride		22 mg/l				
	Fluoride		0.108 mg/l				
	Ammoniacal Nitrogen as N		<0.0100 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.00 mg/l				
	pH		8.00 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
Eastern Perimeter Drain	Aluminium, Dissolved		<40 µg/l		16/11/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		2.85 µg/l				
	Boron, Dissolved		759 µg/l				
	Cadmium, Dissolved		<0.03 µg/l				
	Calcium, Dissolved		103 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		0.496 µg/l				
	Magnesium, Dissolved		18 mg/l				
	Manganese, Dissolved		64.3 µg/l				
	Molybdenum, Dissolved		136 µg/l				
	Nickel, Dissolved		0.52 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		0.0123 µg/l				
	Conductivity at 20C		799 uS/cm				
	Potassium, Dissolved		7 mg/l				
	Sodium, Dissolved		61 mg/l				
	Sulphate, Dissolved as SO4		113 mg/l				
	Nitrogen : Total Oxidised as N		2.66 mg/l				
	Chloride		79 mg/l				
	Fluoride		0.10 mg/l				
	Ammoniacal Nitrogen as N		<0.0100 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.50 mg/l				
	pH		8.12 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
S3 (River Thaw)	Aluminium, Dissolved		48 µg/l		11/08/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		<700 µg/l				
	Cadmium, Dissolved		<0.03 µg/l				
	Calcium, Dissolved		124 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		0.905 µg/l				
	Magnesium, Dissolved		15.2 mg/l				
	Manganese, Dissolved		<20 µg/l				
	Molybdenum, Dissolved		<30 µg/l				
	Nickel, Dissolved		0.48 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Conductivity at 20C		635 uS/cm				
	Potassium, Dissolved		3 mg/l				
	Sodium, Dissolved		29 mg/l				
	Sulphate, Dissolved as SO4		31 mg/l				
	Nitrogen : Total Oxidised as N		3.63 mg/l				
	Chloride		36 mg/l				
	Fluoride		0.075 mg/l				
	Ammoniacal Nitrogen as N		0.011 mg/l				
	Carbon, Organic : Total as C :- {TOC}		<1.00 mg/l				
	pH		8.21 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
S3 (River Thaw)	Aluminium, Dissolved		439 µg/l		16/11/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		<700 µg/l				
	Cadmium, Dissolved		0.07 µg/l				
	Calcium, Dissolved		120 mg/l				
	Chromium, Dissolved		1.22 µg/l				
	Copper, Dissolved		2.720 µg/l				
	Magnesium, Dissolved		77.3 mg/l				
	Manganese, Dissolved		33.4 µg/l				
	Molybdenum, Dissolved		<30 µg/l				
	Nickel, Dissolved		1.61 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		0.0122 µg/l				
	Conductivity at 20C		3580 uS/cm				
	Potassium, Dissolved		26.30 mg/l				
	Sodium, Dissolved		594.0 mg/l				
	Sulphate, Dissolved as SO4		172.0 mg/l				
	Nitrogen : Total Oxidised as N		3.21 mg/l				
	Chloride		981.0 mg/l				
	Fluoride		0.159 mg/l				
	Ammoniacal Nitrogen as N		0.050 mg/l				
	Carbon, Organic : Total as C :- {TOC}		7.40 mg/l				
	pH		7.94 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
Brackish Lagoon	Aluminium, Dissolved		<40 µg/l		10/08/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		4050 µg/l				
	Cadmium, Dissolved		0 µg/l				
	Calcium, Dissolved		270 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		0.723 µg/l				
	Magnesium, Dissolved		335.0 mg/l				
	Manganese, Dissolved		82.0 µg/l				
	Molybdenum, Dissolved		657 µg/l				
	Nickel, Dissolved		0.37 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Conductivity at 20C		14700 uS/cm				
	Potassium, Dissolved		149 mg/l				
	Sodium, Dissolved		3530 mg/l				
	Sulphate, Dissolved as SO4		979 mg/l				
	Nitrogen : Total Oxidised as N		0.62 mg/l				
	Chloride		4910 mg/l				
	Fluoride		0.340 mg/l				
	Ammoniacal Nitrogen as N		0.051 mg/l				
	Carbon, Organic : Total as C :- {TOC}		7.00 mg/l				
	pH		8.54 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
Brackish Lagoon	Aluminium, Dissolved		<40 µg/l		16/11/2016	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		1.45 µg/l				
	Boron, Dissolved		3530 µg/l				
	Cadmium, Dissolved		0.031 µg/l				
	Calcium, Dissolved		237 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		0.616 µg/l				
	Magnesium, Dissolved		262 mg/l				
	Manganese, Dissolved		58.6 µg/l				
	Molybdenum, Dissolved		550 µg/l				
	Nickel, Dissolved		0.46 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Conductivity at 20C		12300 uS/cm				
	Potassium, Dissolved		115 mg/l				
	Sodium, Dissolved		2350 mg/l				
	Sulphate, Dissolved as SO4		829 mg/l				
	Nitrogen : Total Oxidised as N		0.91 mg/l				
	Chloride		3980 mg/l				
	Fluoride		0.33 mg/l				
	Ammoniacal Nitrogen as N		0.04 mg/l				
	Carbon, Organic : Total as C :- {TOC}		2.80 mg/l				
	pH		8.19 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 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 A. Santos Date 27/01/2017 (authorised to sign as representative of the Operator)

Reporting of Emission to Groundwater for the period from ... 1st July 2016..to...31st December 2016...

Operator : RWE Generation UK plc

Form: Groundwater1

Location: Aberthaw Ash Disposal Site

Permit/Variation Number: DP3432SW

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH3	Aluminium, Dissolved		<40 µg/l		31/08/2016	Sampling Artec/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved	310	92 µg/l				
	Boron, Dissolved	60000	25500 µg/l				
	Cadmium, Dissolved	15	0.13 µg/l				
	Calcium, Dissolved		838 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		4.03 µg/l				
	Magnesium, Dissolved		253 mg/l				
	Manganese, Dissolved		945 µg/l				
	Molybdenum, Dissolved	9000	4460 µg/l				
	Nickel, Dissolved		1.8 µg/l				
	Selenium Dissolved	350	4.58 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved	20	<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		170 mg/l				
	Conductivity at 20C		17800 uS/cm				
	Potassium, Dissolved		312 mg/l				
	Sodium, Dissolved		3430 mg/l				
	Sulphate, Dissolved as SO4		2100 mg/l				
	Nitrogen : Total Oxidised as N		0.35 mg/l				
	Chloride		5770 mg/l				
	Fluoride		0.32 mg/l				
	Ammoniacal Nitrogen as N		2.74 mg/l				
	Carbon, Organic : Total as C :- (TOC)	6.6	1 mg/l				
	pH		7.38 pH Units				
	Ionic Balance		2.29 %				
	Electrical Conductivity		17435 µS/cm				
	Temperature		13.2 deg C				
	Dissolved Oxygen		1.29 mg/l				
	pH		7.26 pH Units				
	Groundwater Level		6.20 mAO				

Emission point	Substance/Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
BH3	Aluminium, Dissolved		<40 µg/l		22/11/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		17 µg/l				
	Arsenic Dissolved	310	173 µg/l				
	Boron, Dissolved	60000	25700 µg/l				
	Cadmium, Dissolved	15	0.08 µg/l				
	Calcium, Dissolved		405 mg/l				
	Chromium, Dissolved		1 µg/l				
	Copper, Dissolved		2.84 µg/l				
	Magnesium, Dissolved		213 mg/l				
	Manganese, Dissolved		146 µg/l				
	Molybdenum, Dissolved	9000	2710 µg/l				
	Nickel, Dissolved		0.6 µg/l				
	Selenium Dissolved	350	12.20 µg/l				
	Vanadium, Dissolved		56 µg/l				
	Mercury, Dissolved	20	<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		170 mg/l				
	Conductivity at 20C		5210 uS/cm				
	Potassium, Dissolved		108 mg/l				
	Sodium, Dissolved		621 mg/l				
	Sulphate, Dissolved as SO4		1910 mg/l				
	Nitrogen : Total Oxidised as N		0.85 mg/l				
	Chloride		914 mg/l				
	Fluoride		0.08 mg/l				
	Ammoniacal Nitrogen as N	6.6	0.40 mg/l				
	Carbon, Organic : Total as C :- {TOC}		<0.7 mg/l				
	pH		7.69 pH Units				
	Ionic Balance		1.09 %				
	Electrical Conductivity		4483 µS/cm				
	Temperature		13.1 deg C				
	Dissolved Oxygen		1.43 mg/l				
	pH		7.42 pH Units				
	Groundwater Level		7.14 mAOD	Field Measurements			

Substance/ Emission point Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
Aluminium, Dissolved		<10 µg/l		02/09/2016	Sampling Artec/Testing EA NLS	
Antimony, Dissolved		<1 µg/l				
Arsenic Dissolved		<1 µg/l				
Boron, Dissolved		1020 µg/l				
Cadmium, Dissolved		<0.1 µg/l				
Calcium, Dissolved		323 mg/l				
Chromium, Dissolved		<0.5 µg/l				
Copper, Dissolved		1.39 µg/l				
Magnesium, Dissolved		20 mg/l				
Manganese, Dissolved		<10 µg/l				
Molybdenum, Dissolved		3 µg/l				
Nickel, Dissolved		1.3 µg/l				
Selenium Dissolved		<1 µg/l				
Vanadium, Dissolved		<2 µg/l				
Mercury, Dissolved		<0.01 µg/l				
Alkalinity to pH 4.5 as CaCO3		275 mg/l				
Conductivity at 20C		1450 uS/cm				
Potassium, Dissolved		2 mg/l				
Sodium, Dissolved		58 mg/l				
Sulphate, Dissolved as SO4		550 mg/l				
Nitrogen : Total Oxidised as N		0.73 mg/l				
Chloride		85 mg/l				
Fluoride		0.07 mg/l				
Ammoniacal Nitrogen as N		0.03 mg/l				
Carbon, Organic : Total as C :- (TOC)		1 mg/l				
pH		7.09 pH Units				
Ionic Balance		2.37 %				
Electrical Conductivity		1467 µS/cm	Field Measurements			
Temperature		16.6 deg C				
Dissolved Oxygen		4.04 mg/l				
pH		6.95 pH Units				
Groundwater Level		8.54 mAOD				

BH5

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH5	Aluminium, Dissolved		<10 µg/l		22/11/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		271 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		175 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		2.84 µg/l				
	Magnesium, Dissolved		12 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		6 µg/l				
	Nickel, Dissolved		1.4 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		262 mg/l				
	Conductivity at 20C		1050 uS/cm				
	Potassium, Dissolved		6 mg/l				
	Sodium, Dissolved		46 mg/l				
	Sulphate, Dissolved as SO4		180 mg/l				
	Nitrogen : Total Oxidised as N		3.18 mg/l				
	Chloride		103 mg/l				
	Fluoride		0.13 mg/l				
	Ammoniacal Nitrogen as N		0.03 mg/l				
	Carbon, Organic : Total as C :- {TOC}		3 mg/l				
	pH		7.21 pH Units				
	Ionic Balance		-1.07 %				
	Electrical Conductivity		880 µS/cm				
	Temperature		11.1 deg C				
	Dissolved Oxygen		5.12 mg/l				
	pH		7.28 pH Units				
	Groundwater Level		11.51 mAOD	Field Measurements			

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
BH6	Aluminium, Dissolved		<40 µg/l		31/08/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		6 µg/l				
	Boron, Dissolved		18400 µg/l				
	Cadmium, Dissolved		0.49 µg/l				
	Calcium, Dissolved		1290 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		0.38 µg/l				
	Magnesium, Dissolved		202 mg/l				
	Manganese, Dissolved		1160 µg/l				
	Molybdenum, Dissolved		3950 µg/l				
	Nickel, Dissolved		8.3 µg/l				
	Selenium Dissolved		6.21 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		165 mg/l				
	Conductivity at 20C		16800 uS/cm				
	Potassium, Dissolved		164 mg/l				
	Sodium, Dissolved		2700 mg/l				
	Sulphate, Dissolved as SO4		1650 mg/l				
	Nitrogen : Total Oxidised as N		29.50 mg/l				
	Chloride		5450 mg/l				
	Fluoride		0.13 mg/l				
	Ammoniacal Nitrogen as N		1.23 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1 mg/l				
	pH		7.27 pH Units				
	Ionic Balance		2.82 %				
	Electrical Conductivity		6536 µS/cm				
	Temperature		13.3 deg C				
	Dissolved Oxygen		5.01 mg/l	Field Measurements			
	pH		7.64 pH Units				
	Groundwater Level		8.17 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
BH6	Aluminium, Dissolved		<40 µg/l		22/11/2016	Sampling Amec/Testing EA NLS			
	Antimony, Dissolved		<10 µg/l						
	Arsenic Dissolved		5 µg/l						
	Boron, Dissolved		18200 µg/l						
	Cadmium, Dissolved		0.48 µg/l						
	Calcium, Dissolved		1280 mg/l						
	Chromium, Dissolved		<0.5 µg/l						
	Copper, Dissolved		0.39 µg/l						
	Magnesium, Dissolved		200 mg/l						
	Manganese, Dissolved		1150 µg/l						
	Molybdenum, Dissolved		3930 µg/l						
	Nickel, Dissolved		9.2 µg/l						
	Selenium Dissolved		6.44 µg/l						
	Vanadium, Dissolved		<20 µg/l						
	Mercury, Dissolved		<0.01 µg/l						
	Alkalinity to pH 4.5 as CaCO3		175 mg/l						
	Conductivity at 20C		16800 uS/cm						
	Potassium, Dissolved		163 mg/l						
	Sodium, Dissolved		2740 mg/l						
	Sulphate, Dissolved as SO4		1640 mg/l						
	Nitrogen : Total Oxidised as N		31.40 mg/l						
	Chloride		5500 mg/l						
	Fluoride		0.13 mg/l						
	Ammoniacal Nitrogen as N		1.31 mg/l						
	Carbon, Organic : Total as C :- {TOC}		1 mg/l						
	pH		7.28 pH Units						
	Ionic Balance		2.83 %						
	Electrical Conductivity		14331 µS/cm	Field Measurements					
	Temperature		11.8 deg C						
	Dissolved Oxygen		3.51 mg/l						
	pH		7.00 pH Units						
	Groundwater Level		10.31 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]		
BH7	Aluminium, Dissolved		<40 µg/l		31/08/2016	Sampling Amec/Testing EA NLS			
	Antimony, Dissolved		<10 µg/l						
	Arsenic Dissolved	310	7 µg/l						
	Boron, Dissolved	60000	26000 µg/l						
	Cadmium, Dissolved	15	0.06 µg/l						
	Calcium, Dissolved		880 mg/l						
	Chromium, Dissolved		<0.5 µg/l						
	Copper, Dissolved		<0.2 µg/l						
	Magnesium, Dissolved		125 mg/l						
	Manganese, Dissolved		1350 µg/l						
	Molybdenum, Dissolved	9000	3940 µg/l						
	Nickel, Dissolved		<0.3 µg/l						
	Selenium Dissolved	350	<1 µg/l						
	Vanadium, Dissolved		<20 µg/l						
	Mercury, Dissolved	20	<0.01 µg/l						
	Alkalinity to pH 4.5 as CaCO3		245 mg/l						
	Conductivity at 20C		14300 uS/cm						
	Potassium, Dissolved		337 mg/l						
	Sodium, Dissolved		2910 mg/l						
	Sulphate, Dissolved as SO4		1950 mg/l						
	Nitrogen : Total Oxidised as N		<0.2 mg/l						
	Chloride		4370 mg/l						
	Fluoride		0.44 mg/l						
	Ammoniacal Nitrogen as N	6.6	3.28 mg/l						
	Carbon, Organic : Total as C :- {TOC}		1 mg/l						
	pH		7.15 pH Units						
	Ionic Balance		5.70 %						
	Electrical Conductivity		14164 µS/cm	Field Measurements					
	Temperature		13.3 deg C						
	Dissolved Oxygen		0.24 mg/l						
	pH		7.09 pH Units						
	Groundwater Level		2.80 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]		
BH7	Aluminium, Dissolved		<40 µg/l		22/11/2016	Sampling Amec/Testing EA NLS			
	Antimony, Dissolved		<10 µg/l						
	Arsenic Dissolved	310	7 µg/l						
	Boron, Dissolved	60000	21600 µg/l						
	Cadmium, Dissolved	15	0.17 µg/l						
	Calcium, Dissolved		914 mg/l						
	Chromium, Dissolved		<0.5 µg/l						
	Copper, Dissolved		<0.2 µg/l						
	Magnesium, Dissolved		121 mg/l						
	Manganese, Dissolved		1340 µg/l						
	Molybdenum, Dissolved	9000	4260 µg/l						
	Nickel, Dissolved		<0.3 µg/l						
	Selenium Dissolved	350	<1 µg/l						
	Vanadium, Dissolved		<20 µg/l						
	Mercury, Dissolved	20	<0.01 µg/l						
	Alkalinity to pH 4.5 as CaCO3		200 mg/l						
	Conductivity at 20C		15300 uS/cm						
	Potassium, Dissolved		303 mg/l						
	Sodium, Dissolved		2650 mg/l						
	Sulphate, Dissolved as SO4		2100 mg/l						
	Nitrogen : Total Oxidised as N		<0.2 mg/l						
	Chloride		4530 mg/l						
	Fluoride		0.43 mg/l						
	Ammoniacal Nitrogen as N		3.51 mg/l						
	Carbon, Organic : Total as C :- {TOC}	6.6	1 mg/l						
	pH		7.25 pH Units						
	Ionic Balance		0.84 %						
	Electrical Conductivity		13238 µS/cm	Field Measurements					
	Temperature		12.6 deg C						
	Dissolved Oxygen		0.86 mg/l						
	pH		6.74 pH Units						
	Groundwater Level		2.95 mAOD						

Substance/ Emission point Parameter		Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH8	Aluminium, Dissolved		<40 µg/l		31/08/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		1860 µg/l				
	Cadmium, Dissolved		<0.03 µg/l				
	Calcium, Dissolved		204 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		<0.2 µg/l				
	Magnesium, Dissolved		401 mg/l				
	Manganese, Dissolved		80 µg/l				
	Molybdenum, Dissolved		<30 µg/l				
	Nickel, Dissolved		<0.3 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		700 mg/l				
	Conductivity at 20C		18000 uS/cm				
	Potassium, Dissolved		121 mg/l				
	Sodium, Dissolved		3960 mg/l				
	Sulphate, Dissolved as SO4		435 mg/l				
	Nitrogen : Total Oxidised as N		<0.2 mg/l				
	Chloride		6340 mg/l				
	Fluoride		0.59 mg/l				
	Ammoniacal Nitrogen as N		6.23 mg/l				
	Carbon, Organic : Total as C :- {TOC}		3.8 mg/l				
	pH		7.11 pH Units				
Ionic Balance		3.93 %					
Electrical Conductivity		17638 µS/cm	Field Measurements				
Temperature		12.5 deg C					
Dissolved Oxygen		0.53 mg/l					
pH		6.96 pH Units					
Groundwater Level		5.24 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH8	Aluminium, Dissolved		<40 µg/l		22/11/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		1860 µg/l				
	Cadmium, Dissolved		0.03 µg/l				
	Calcium, Dissolved		201 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		1.08 µg/l				
	Magnesium, Dissolved		402 mg/l				
	Manganese, Dissolved		79 µg/l				
	Molybdenum, Dissolved		<30 µg/l				
	Nickel, Dissolved		0.6 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		890 mg/l				
	Conductivity at 20C		17800 uS/cm				
	Potassium, Dissolved		126 mg/l				
	Sodium, Dissolved		3730 mg/l				
	Sulphate, Dissolved as SO4		477 mg/l				
	Nitrogen : Total Oxidised as N		<0.2 mg/l				
	Chloride		6200 mg/l				
	Fluoride		0.88 mg/l				
	Ammoniacal Nitrogen as N		6.52 mg/l				
	Carbon, Organic : Total as C :- {TOC}		3.8 mg/l				
	pH		7.23 pH Units				
	Ionic Balance		1.42 %				
	Electrical Conductivity		14726 µS/cm				
	Temperature		10.9 deg C				
	Dissolved Oxygen		3.06 mg/l				
	pH		6.98 pH Units				
	Groundwater Level		6.35 mAOD	Field Measurements			

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]		
BH9	Aluminium, Dissolved		<10 µg/l		31/08/2016	Sampling Anec/Testing EA NLS			
	Antimony, Dissolved		<1 µg/l						
	Arsenic Dissolved		<1 µg/l						
	Boron, Dissolved		147 µg/l						
	Cadmium, Dissolved		<0.1 µg/l						
	Calcium, Dissolved		82.5 mg/l						
	Chromium, Dissolved		<0.5 µg/l						
	Copper, Dissolved		<1 µg/l						
	Magnesium, Dissolved		19.3 mg/l						
	Manganese, Dissolved		<10 µg/l						
	Molybdenum, Dissolved		<3 µg/l						
	Nickel, Dissolved		<1 µg/l						
	Selenium Dissolved		<1 µg/l						
	Vanadium, Dissolved		<2 µg/l						
	Mercury, Dissolved		<0.01 µg/l						
	Alkalinity to pH 4.5 as CaCO3		260 mg/l						
	Conductivity at 20C		560 uS/cm						
	Potassium, Dissolved		1.84 mg/l						
	Sodium, Dissolved		19.3 mg/l						
	Sulphate, Dissolved as SO4		29.0 mg/l						
	Nitrogen : Total Oxidised as N		2.67 mg/l						
	Chloride		28.4 mg/l						
	Fluoride		0.16 mg/l						
	Ammoniacal Nitrogen as N		0.03 mg/l						
	Carbon, Organic : Total as C :- (TOC)		<0.7 mg/l						
	pH		7.52 pH Units						
	Ionic Balance		-1.52 %						
	Electrical Conductivity		556 µS/cm	Field Measurements					
	Temperature		13.3 deg C						
	Dissolved Oxygen		6.60 mg/l						
	pH		6.43 pH Units						
	Groundwater Level		4.36 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
BH9	Aluminium, Dissolved		<10 µg/l		22/11/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		101 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		76 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		<1 µg/l				
	Magnesium, Dissolved		18 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		<3 µg/l				
	Nickel, Dissolved		<1 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		242 mg/l				
	Conductivity at 20C		535 uS/cm				
	Potassium, Dissolved		2.08 mg/l				
	Sodium, Dissolved		18.1 mg/l				
	Sulphate, Dissolved as SO4		26.7 mg/l				
	Nitrogen : Total Oxidised as N		2.14 mg/l				
	Chloride		27.1 mg/l				
	Fluoride		0.16 mg/l				
	Ammoniacal Nitrogen as N		0.03 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1 mg/l				
	pH		7.56 pH Units				
	Ionic Balance		-1.61 %				
	Electrical Conductivity		435 µS/cm				
	Temperature		10.7 deg C				
	Dissolved Oxygen		3.85 mg/l				
	pH		6.95 pH Units				
	Groundwater Level		5.48 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
BH10	Aluminium, Dissolved		<40 µg/l		02/09/2016	Sampling Anec/Testing EA NLS			
	Antimony, Dissolved		<10 µg/l						
	Arsenic Dissolved		38 µg/l						
	Boron, Dissolved		10800 µg/l						
	Cadmium, Dissolved		<0.03 µg/l						
	Calcium, Dissolved		409 mg/l						
	Chromium, Dissolved		<0.5 µg/l						
	Copper, Dissolved		<0.2 µg/l						
	Magnesium, Dissolved		465 mg/l						
	Manganese, Dissolved		610 µg/l						
	Molybdenum, Dissolved		801 µg/l						
	Nickel, Dissolved		<0.3 µg/l						
	Selenium Dissolved		<1 µg/l						
	Vanadium, Dissolved		<20 µg/l						
	Mercury, Dissolved		<0.01 µg/l						
	Alkalinity to pH 4.5 as CaCO3		875 mg/l						
	Conductivity at 20C		18500 uS/cm						
	Potassium, Dissolved		177 mg/l						
	Sodium, Dissolved		3820 mg/l						
	Sulphate, Dissolved as SO4		1090 mg/l						
	Nitrogen : Total Oxidised as N		<0.2 mg/l						
	Chloride		6220 mg/l						
	Fluoride		0.20 mg/l						
	Ammoniacal Nitrogen as N		31.20 mg/l						
	Carbon, Organic : Total as C :- {TOC}		6 mg/l						
	pH		7.30 pH Units						
	Ionic Balance		3.06 %						
	Electrical Conductivity		19120 µS/cm	Field Measurements					
	Temperature		15.3 deg C						
	Dissolved Oxygen		0.27 mg/l						
	pH		7.16 pH Units						
	Groundwater Level		1.81 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
BH10	Aluminium, Dissolved		<40 µg/l		22/11/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		22 µg/l				
	Boron, Dissolved		9830 µg/l				
	Cadmium, Dissolved		<0.03 µg/l				
	Calcium, Dissolved		412 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		<0.2 µg/l				
	Magnesium, Dissolved		505 mg/l				
	Manganese, Dissolved		557 µg/l				
	Molybdenum, Dissolved		586 µg/l				
	Nickel, Dissolved		<0.3 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		923 mg/l				
	Conductivity at 20C		21100 uS/cm				
	Potassium, Dissolved		192 mg/l				
	Sodium, Dissolved		4180 mg/l				
	Sulphate, Dissolved as SO4		1060 mg/l				
	Nitrogen : Total Oxidised as N		<0.2 mg/l				
	Chloride		7100 mg/l				
	Fluoride		0.19 mg/l				
	Ammoniacal Nitrogen as N		37.20 mg/l				
	Carbon, Organic : Total as C :- {TOC}		7 mg/l				
	pH		7.34 pH Units				
	Ionic Balance		1.62 %				
	Electrical Conductivity		18438 µS/cm				
	Temperature		12.6 deg C				
	Dissolved Oxygen		0.29 mg/l				
	pH		6.94 pH Units				
	Groundwater Level		1.78 mAOD	Field Measurements			

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
BH11	Aluminium, Dissolved		<40 µg/l		31/08/2016	Sampling Artec/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic, Dissolved		15.8 µg/l				
	Boron, Dissolved		12100 µg/l				
	Cadmium, Dissolved		<0.03 µg/l				
	Calcium, Dissolved		367 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		<0.2 µg/l				
	Magnesium, Dissolved		189 mg/l				
	Manganese, Dissolved		1060 µg/l				
	Molybdenum, Dissolved		708 µg/l				
	Nickel, Dissolved		<0.3 µg/l				
	Selenium, Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		670 mg/l				
	Conductivity at 20C		7650 uS/cm				
	Potassium, Dissolved		133 mg/l				
	Sodium, Dissolved		1290 mg/l				
	Suphate, Dissolved as SO4		1020 mg/l				
	Nitrogen : Total Oxidised as N		<0.2 mg/l				
	Chloride		1960 mg/l				
	Fluoride		0.52 mg/l				
	Ammoniacal Nitrogen as N		7.18 mg/l				
	Carbon, Organic : Total as C :- {TOC}		5.0 mg/l				
	pH		7.34 pH Units				
	Ionic Balance		1.86 %				
	Electrical Conductivity		7673 µS/cm				
	Temperature		13.4 deg C				
	Dissolved Oxygen		0.36 mg/l				
	pH		7.29 pH Units				
	Groundwater Level		4.04 mAOD	Field Measurements			

Emission point	Substance/Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
BH11	Aluminium, Dissolved		<40 µg/l		22/11/2016	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic, Dissolved		23 µg/l				
	Boron, Dissolved		7300 µg/l				
	Cadmium, Dissolved		<0.03 µg/l				
	Calcium, Dissolved		211 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		<0.2 µg/l				
	Magnesium, Dissolved		105 mg/l				
	Manganese, Dissolved		677 µg/l				
	Molybdenum, Dissolved		221 µg/l				
	Nickel, Dissolved		0.4 µg/l				
	Selenium, Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		688 mg/l				
	Conductivity at 20C		3150 uS/cm				
	Potassium, Dissolved		65.3 mg/l				
	Sodium, Dissolved		452 mg/l				
	Sulphate, Dissolved as SO4		375 mg/l				
	Nitrogen : Total Oxidised as N		<0.2 mg/l				
	Chloride		606 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		3.19 mg/l				
	Carbon, Organic : Total as C :- {TOC}		3.0 mg/l				
	pH		7.33 pH Units				
	Ionic Balance		3.08 %				
	Electrical Conductivity		2686 µS/cm				
	Temperature		12.6 deg C				
	Dissolved Oxygen		1.43 mg/l	Field Measurements			
	pH		7.06 pH Units				
	Groundwater Level		4.53 mAOB				

- [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 A. Zuber Date 27/01/2017
(authorised to sign as representative of the Operator)