



Mr A Leakey
PPC Compliance Team
Natural Resources Wales
Rivers House
St Mellons
Cardiff
CF3 0EY

Your ref:
Our ref: NRW Reporting Forms
Phone: 01446 752270
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27th July 2017

Dear Mr Leakey

**RWE Generation UK plc, Aberthaw Power Station, Permit Ref. RP3133LD,
DP3432SW, BP3339BH: NRW Reporting Forms**

Please find enclosed the Water1 and Groundwater1 reports for Aberthaw Power Station, Aberthaw Ash Disposal Site and Aberthaw Quarry Ash Disposal Site covering the period 1st January 2017 to 30th June 2017.

Please contact Amy Lavisher on the above telephone number if you have any questions or if clarification is required.

Yours sincerely

RL

Richard Little
Station Manager

RWE Generation

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Registered in England
and Wales no. 3892782

Reporting of Emission to Groundwater for the period from ...1st January 2017 ...to...30th June 2017...

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 ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
E09_01A	Aluminium, Dissolved		<10 ug/l		16/02/2017	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		141 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		1.15 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		5.54 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		295 mg/l				
	Electrical Conductivity at 20C		694 uS/cm				
	Potassium, Dissolved		1.46 mg/l				
	Sodium, Dissolved		16.7 mg/l				
	Sulphate, Dissolved		27.2 mg/l				
	Total Oxidised Nitrogen		6.56 mg/l				
	Chloride		38.8 mg/l				
	Fluoride		0.099 mg/l				
	Ammoniacal Nitrogen		0.03 mg/l				
	Total Organic Carbon		1.4 mg/l				
	pH		7.19 pH Units				
	Nitrate		<6.56 mg/l				
	Ionic Balance		1.4 %				
	Electrical Conductivity		860 uS/cm				
	Temperature		12.10 deg C				
	Dissolved Oxygen		6.08 mg/l				
	pH		6.89 pH Units				
	Groundwater Level		26.74 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
E09_01A	Aluminium, Dissolved		<10 ug/l		11/05/2017	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		5.68 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		278 mg/l						
	Electrical Conductivity at 25C		664 uS/cm						
	Potassium, Dissolved		1.38 mg/l						
	Sodium, Dissolved		16.2 mg/l						
	Sulphate, Dissolved		27.5 mg/l						
	Total Oxidised Nitrogen		4.09 mg/l						
	Chloride		36.3 mg/l						
	Fluoride		0.114 mg/l						
	Ammoniacal Nitrogen		<0.03 mg/l						
	Total Organic Carbon		1.5 mg/l						
	pH		7.24 pH Units						
	Nitrate		<4.09 mg/l						
	Ionic Balance		1.3 %						
	Electrical Conductivity		7 uS/cm	Field Measurements					
	Temperature		11.00 deg C						
	Dissolved Oxygen		5.21 mg/l						
	pH		6.92 pH Units						
	Groundwater Level		24.78 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾	
E09_01B	Aluminium, Dissolved		<10 ug/l		16/02/2017	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		132 mg/l					
	Chromium, Dissolved		<0.5 ug/l					
	Copper, Dissolved		<1 ug/l					
	Iron, Dissolved		<30 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			299 mg/l				
	Electrical Conductivity at 25C			687 uS/cm				
	Potassium, Dissolved			1.29 mg/l				
	Sodium, Dissolved			15.9 mg/l				
	Sulphate, Dissolved			30.3 mg/l				
	Total Oxidised Nitrogen			5.44 mg/l				
	Chloride			37.2 mg/l				
	Fluoride			0.445 mg/l				
	Ammoniacal Nitrogen			0.03 mg/l				
	Total Organic Carbon			1.4 mg/l				
	pH			7.2 pH Units				
	Nitrate			<5.44 mg/l				
	Ionic Balance			-1.12 %				
	Electrical Conductivity			850 uS/cm			Field Measurements	
	Temperature			12.10 deg C				
	Dissolved Oxygen			4.24 mg/l				
	pH			6.81 pH Units				
	Groundwater Level			25.53 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
E09_01B	Aluminium, Dissolved		<10 ug/l		10/05/2017	Sampling Anec/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		127 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		5.96 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		278 mg/l				
	Electrical Conductivity at 25C		666 uS/cm				
	Potassium, Dissolved		1.3 mg/l				
	Sodium, Dissolved		15.7 mg/l				
	Sulphate, Dissolved		29.4 mg/l				
	Total Oxidised Nitrogen		4.03 mg/l				
	Chloride		36.5 mg/l				
	Fluoride		0.09 mg/l				
	Ammoniacal Nitrogen		<0.03 mg/l				
	Total Organic Carbon		1.2 mg/l				
	pH		7.21 pH Units				
	Nitrate		<4.03 mg/l				
	Ionic Balance		0.369 %				
	Electrical Conductivity		697 µS/cm				
	Temperature		11.80 deg C				
	Dissolved Oxygen		5.71 mg/l				
	pH		6.92 pH Units				
	Groundwater Level		24.54 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]	
E09_02A	Aluminium, Dissolved		<10 ug/l		16/02/2017	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		232 mg/l					
	Chromium, Dissolved		0.61 ug/l					
	Copper, Dissolved		1.91 ug/l					
	Iron, Dissolved		<30 ug/l					
	Magnesium, Dissolved		19.5 mg/l					
	Manganese, Dissolved		24 ug/l					
	Molybdenum, Dissolved		<3 ug/l					
	Nickel, Dissolved		2.85 ug/l					
	Selenium Dissolved		<1 ug/l					
	Vanadium, Dissolved		<2 ug/l					
	Mercury, Dissolved		<0.01 ug/l					
	Total Alkalinity as CaCO3			472 mg/l				
	Electrical Conductivity at 25C			1190 uS/cm				
	Potassium, Dissolved			1.19 mg/l				
	Sodium, Dissolved			26.5 mg/l				
	Sulphate, Dissolved			78 mg/l				
	Total Oxidised Nitrogen			25.7 mg/l				
	Chloride			45.4 mg/l				
	Fluoride			0.102 mg/l				
	Ammoniacal Nitrogen			0.03 mg/l				
	Total Organic Carbon			4.8 mg/l				
	pH			7.03 pH Units				
	Nitrate			25.6 mg/l				
	Ionic Balance			0.656 %				
	Electrical Conductivity			1477 µS/cm				
	Temperature			11.90 deg C				
	Dissolved Oxygen			3.12 mg/l				
	pH			6.64 pH Units				
	Groundwater Level			27.80 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
E09_02A	Aluminium, Dissolved		<10 ug/l		11/05/2017	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		122 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		198 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		1.82 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		19.4 mg/l				
	Manganese, Dissolved		42.7 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		399 mg/l				
	Electrical Conductivity at 25C		1060 uS/cm				
	Potassium, Dissolved		1.19 mg/l				
	Sodium, Dissolved		25.1 mg/l				
	Sulphate, Dissolved		84.2 mg/l				
	Total Oxidised Nitrogen		17.8 mg/l				
	Chloride		48 mg/l				
	Fluoride		0.14 mg/l				
	Ammoniacal Nitrogen		<0.03 mg/l				
	Total Organic Carbon		4.2 mg/l				
	pH		7.01 pH Units				
	Nitrate		16.2 mg/l				
	Ionic Balance		0.975 %				
	Electrical Conductivity		1354 uS/cm				
	Temperature		12.00 deg C				
	Dissolved Oxygen		4.01 mg/l	Field Measurements			
	pH		6.63 pH Units				
	Groundwater Level		27.43 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
E09_02B	Aluminium, Dissolved		<10 ug/l		16/02/2017	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		242 mg/l						
	Chromium, Dissolved		<0.5 ug/l						
	Copper, Dissolved		2.87 ug/l						
	Iron, Dissolved		<30 ug/l						
	Magnesium, Dissolved		14.3 mg/l						
	Manganese, Dissolved		<10 ug/l						
	Molybdenum, Dissolved		<3 ug/l						
	Nickel, Dissolved		3.29 ug/l						
	Selenium Dissolved		<1 ug/l						
	Vanadium, Dissolved		<2 ug/l						
	Mercury, Dissolved		<0.01 ug/l						
	Total Alkalinity as CaCO3		418 mg/l						
	Electrical Conductivity at 25C		1240 uS/cm						
	Potassium, Dissolved		1.03 mg/l						
	Sodium, Dissolved		27.1 mg/l						
	Sulphate, Dissolved		88.4 mg/l						
	Total Oxidised Nitrogen		43.2 mg/l						
	Chloride		48.6 mg/l						
	Fluoride		0.106 mg/l						
	Ammoniacal Nitrogen		0.03 mg/l						
	Total Organic Carbon		4.5 mg/l						
	pH		6.87 pH Units						
	Nitrate		43.2 mg/l						
	Ionic Balance		-0.673 %						
	Electrical Conductivity		1552 µS/cm	Field Measurements					
	Temperature		12.00 deg C						
	Dissolved Oxygen		6.47 mg/l						
	pH		6.57 pH Units						
	Groundwater Level		27.97 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
E09_02B	Aluminium, Dissolved		<10 ug/l		11/05/2017	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		138 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		213 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		5.06 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		34.2 mg/l				
	Manganese, Dissolved		27.7 ug/l				
	Molybdenum, Dissolved		<3 ug/l				
	Nickel, Dissolved		3.48 ug/l				
	Selenium Dissolved		<1 ug/l				
	Vanadium, Dissolved		<2 ug/l				
	Mercury, Dissolved		<0.01 ug/l				
	Total Alkalinity as CaCO3		438 mg/l				
	Electrical Conductivity at 25C		1280 uS/cm				
	Potassium, Dissolved		2.87 mg/l				
	Sodium, Dissolved		34.4 mg/l				
	Sulphate, Dissolved		90.8 mg/l				
	Total Oxidised Nitrogen		36.9 mg/l				
	Chloride		49.6 mg/l				
	Fluoride		0.13 mg/l				
	Ammoniacal Nitrogen		0.0129 mg/l				
	Total Organic Carbon		4.7 mg/l				
	pH		6.98 pH Units				
	Nitrate		36.9 mg/l				
	Ionic Balance		1.12 %				
	Electrical Conductivity		1354 µS/cm				
	Temperature		12.00 deg C				
	Dissolved Oxygen		4.01 mg/l				
	pH		6.63 pH Units				
	Groundwater Level		27.45 mAOD				

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾
E05_03	Aluminium, Dissolved	50	<10 ug/l		15/02/2017	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved	10	<1 ug/l				
	Boron, Dissolved	2800	1610 ug/l				
	Cadmium, Dissolved	0.4	<0.1 ug/l				
	Calcium, Dissolved		389 mg/l				
	Chromium, Dissolved	50	<0.5 ug/l				
	Copper, Dissolved		1.96 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		246 mg/l				
	Manganese, Dissolved		34.7 ug/l				
	Molybdenum, Dissolved	50	*1510 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		180 mg/l				
	Electrical Conductivity at 25C		6270 uS/cm				
	Potassium, Dissolved		9.97 mg/l				
	Sodium, Dissolved		635 mg/l				
	Sulphate, Dissolved	400	**547 mg/l				
	Total Oxidised Nitrogen		2 mg/l				
	Chloride		1960 mg/l				
	Fluoride		0.932 mg/l				
	Ammoniacal Nitrogen	1.6	0.841 mg/l				
	Total Organic Carbon		<0.7 mg/l				
	pH		7.3 pH Units				
Nitrate		1.98 mg/l					
Ionic Balance		-2.07 %					
Electrical Conductivity		7760 µS/cm	Field Measurements				
Temperature		12.00 deg C					
Dissolved Oxygen		4.64 mg/l					
pH		6.97 pH Units					
Groundwater Level		18.82 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
E05_03	Aluminium, Dissolved	50	<10 ug/l		10/05/2017	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		394 mg/l						
	Chromium, Dissolved	50	<0.5 ug/l						
	Copper, Dissolved		1.27 ug/l						
	Iron, Dissolved		<30 ug/l						
	Magnesium, Dissolved		256 mg/l						
	Manganese, Dissolved		42.7 ug/l						
	Molybdenum, Dissolved	50	*1400 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		170 mg/l						
	Electrical Conductivity at 25C		5990 uS/cm						
	Potassium, Dissolved		9.84 mg/l						
	Sodium, Dissolved		578 mg/l						
	Sulphate, Dissolved	400	**527 mg/l						
	Total Oxidised Nitrogen		2.04 mg/l						
	Chloride		1820 mg/l						
	Fluoride		0.866 mg/l						
	Ammoniacal Nitrogen	1.6	0.728 mg/l						
	Total Organic Carbon		<0.7 mg/l						
	pH		7.23 pH Units						
	Nitrate		1.98 mg/l						
	Ionic Balance		0.222 %						
	Electrical Conductivity		7080 µS/cm	Field Measurements					
	Temperature		15.00 deg C						
	Dissolved Oxygen		2.27 mg/l						
	pH		7.00 pH Units						
	Groundwater Level		18.82 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]		
E05_04	Aluminium, Dissolved	50	<10 ug/l		15/02/2017	Sampling Amec/Testing EA NLS			
	Antimony, Dissolved		<1 ug/l						
	Arsenic Dissolved	10	1.44 ug/l						
	Boron, Dissolved	2800	2000 ug/l						
	Cadmium, Dissolved	0.4	<0.1 ug/l						
	Calcium, Dissolved		11.90 mg/l						
	Chromium, Dissolved	50	<0.5 ug/l						
	Copper, Dissolved		<1 ug/l						
	Iron, Dissolved		<30 ug/l						
	Magnesium, Dissolved		9.14 mg/l						
	Manganese, Dissolved		<10 ug/l						
	Molybdenum, Dissolved	50	***59.2 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		353 mg/l						
	Electrical Conductivity at 25C		1220 uS/cm						
	Potassium, Dissolved		3.34 mg/l						
	Sodium, Dissolved		271 mg/l						
	Sulphate, Dissolved	400	118.00 mg/l						
	Total Oxidised Nitrogen		<0.2 mg/l						
	Chloride		139.00 mg/l						
	Fluoride		5.16 mg/l						
	Ammoniacal Nitrogen	1.6	0.55 mg/l						
	Total Organic Carbon		0.70 mg/l						
	pH		8.42 pH Units						
	Nitrate		<0.2 mg/l						
	Ionic Balance		-0.80 %						
	Electrical Conductivity		1512 µS/cm	Field Measurements					
	Temperature		11.80 deg C						
	Dissolved Oxygen		2.61 mg/l						
	pH		8.24 pH Units						
	Groundwater Level		18.70 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
E05_04	Aluminium, Dissolved	50	<10 ug/l		10/05/2017	Sampling Amec/Testing EA NLS			
	Antimony, Dissolved		<1 ug/l						
	Arsenic Dissolved	10	1.06 ug/l						
	Boron, Dissolved	2800	2070 ug/l						
	Cadmium, Dissolved	0.4	<0.1 ug/l						
	Calcium, Dissolved		8.53 mg/l						
	Chromium, Dissolved	50	<0.5 ug/l						
	Copper, Dissolved		<1 ug/l						
	Iron, Dissolved		<30 ug/l						
	Magnesium, Dissolved		6.61 mg/l						
	Manganese, Dissolved		<10 ug/l						
	Molybdenum, Dissolved	50	35.50 ug/l						
	Nickel, Dissolved		<1 ug/l						
	Selenium Dissolved		0.00 ug/l						
	Vanadium, Dissolved	20	<2 ug/l						
	Mercury, Dissolved	0.03	<0.01 ug/l						
	Total Alkalinity as CaCO3		0 mg/l						
	Electrical Conductivity at 25C		0 uS/cm						
	Potassium, Dissolved		2.68 mg/l						
	Sodium, Dissolved		242 mg/l						
	Sulphate, Dissolved	400	96.10 mg/l						
	Total Oxidised Nitrogen		0.00 mg/l						
	Chloride		0.00 mg/l						
	Fluoride		0.00 mg/l						
	Ammoniacal Nitrogen	1.6	0.00 mg/l						
	Total Organic Carbon		0.00 mg/l						
	pH		0.00 pH Units						
	Nitrate		<0.2 mg/l						
	Ionic Balance		0.00 %						
	Electrical Conductivity		1170 uS/cm	Field Measurements					
	Temperature		12.90 deg C						
	Dissolved Oxygen		3.52 mg/l						
	pH		8.09 pH Units						
	Groundwater Level		18.46 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
E06_01	Aluminium, Dissolved	50	12.10 ug/l		15/02/2017	Sampling Amec/Testing EA NLS			
	Antimony, Dissolved		<1 ug/l						
	Arsenic, Dissolved	10	1.50 ug/l						
	Boron, Dissolved	2800	1720 ug/l						
	Cadmium, Dissolved	0.4	<0.1 ug/l						
	Calcium, Dissolved		8.80 mg/l						
	Chromium, Dissolved	50	<0.5 ug/l						
	Copper, Dissolved		<1 ug/l						
	Iron, Dissolved		<30 ug/l						
	Magnesium, Dissolved		6.66 mg/l						
	Manganese, Dissolved		20.80 ug/l						
	Molybdenum, Dissolved	50	4.23 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		366 mg/l						
	Electrical Conductivity at 25C		905 uS/cm						
	Potassium, Dissolved		2.52 mg/l						
	Sodium, Dissolved		211 mg/l						
	Sulphate, Dissolved	400	97.00 mg/l						
	Total Oxidised Nitrogen		<0.2 mg/l						
	Chloride		38.40 mg/l						
	Fluoride		3.05 mg/l						
	Ammoniacal Nitrogen	1.6	0.46 mg/l						
	Total Organic Carbon		1.30 mg/l						
	pH		8.59 pH Units						
	Nitrate		<0.2 mg/l						
	Ionic Balance		-0.92 %						
	Electrical Conductivity		1175 µS/cm	Field Measurements					
	Temperature		12.30 deg C						
	Dissolved Oxygen		2.84 mg/l						
	pH		8.23 pH Units						
	Groundwater Level		18.71 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
E06_01	Aluminium, Dissolved	50	0.00 ug/l		10/05/2017	Sampling Amec/Testing EA NLS			
	Antimony, Dissolved		<1 ug/l						
	Arsenic Dissolved	10	1.64 ug/l						
	Boron, Dissolved	2800	1730 ug/l						
	Cadmium, Dissolved	0.4	<0.1 ug/l						
	Calcium, Dissolved		7.58 mg/l						
	Chromium, Dissolved	50	0.98 ug/l						
	Copper, Dissolved		2.10 ug/l						
	Iron, Dissolved		0.00 ug/l						
	Magnesium, Dissolved		3.89 mg/l						
	Manganese, Dissolved		19.30 ug/l						
	Molybdenum, Dissolved	50	<3 ug/l						
	Nickel, Dissolved		1.24 ug/l						
	Selenium Dissolved		<1 ug/l						
	Vanadium, Dissolved	20	3.45 ug/l						
	Mercury, Dissolved	0.03	<0.01 ug/l						
	Total Alkalinity as CaCO3		361 mg/l						
	Electrical Conductivity at 25C		850 uS/cm						
	Potassium, Dissolved		2.33 mg/l						
	Sodium, Dissolved		208 mg/l						
	Sulphate, Dissolved	400	74.90 mg/l						
	Total Oxidised Nitrogen		<0.2 mg/l						
	Chloride		35.30 mg/l						
	Fluoride		3.48 mg/l						
	Ammoniacal Nitrogen	1.6	0.30 mg/l						
	Total Organic Carbon		0.90 mg/l						
	pH		8.64 pH Units						
	Nitrate		<0.184 mg/l						
	Ionic Balance		0.17 %						
	Electrical Conductivity		1009 uS/cm	Field Measurements					
	Temperature		13.40 deg C						
	Dissolved Oxygen		2.79 mg/l						
	pH		8.24 pH Units						
	Groundwater Level		18.60 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
E06_02	Aluminium, Dissolved		<10 ug/l		15/02/2017	Sampling Amec/Testing EA NLS			
	Antimony, Dissolved		<1 ug/l						
	Arsenic Dissolved		<1 ug/l						
	Boron, Dissolved		601 ug/l						
	Cadmium, Dissolved		<0.1 ug/l						
	Calcium, Dissolved		92.10 mg/l						
	Chromium, Dissolved		<0.5 ug/l						
	Copper, Dissolved		<1 ug/l						
	Iron, Dissolved		<30 ug/l						
	Magnesium, Dissolved		37.10 mg/l						
	Manganese, Dissolved		<10 ug/l						
	Molybdenum, Dissolved		32.00 ug/l						
	Nickel, Dissolved		1.13 ug/l						
	Selenium Dissolved		<1 ug/l						
	Vanadium, Dissolved		4.12 ug/l						
	Mercury, Dissolved		<0.01 ug/l						
	Total Alkalinity as CaCO3		184 mg/l						
	Electrical Conductivity at 25C		930 uS/cm						
	Potassium, Dissolved		5.87 mg/l						
	Sodium, Dissolved		74 mg/l						
	Sulphate, Dissolved		312.00 mg/l						
	Total Oxidised Nitrogen		1.70 mg/l						
	Chloride		27.70 mg/l						
	Fluoride		0.46 mg/l						
	Ammoniacal Nitrogen		0.22 mg/l						
	Total Organic Carbon		1.00 mg/l						
	pH		7.81 pH Units						
	Nitrate		1.68 mg/l						
	Ionic Balance		-0.32 %						
	Electrical Conductivity		1128 µS/cm	Field Measurements					
	Temperature		10.70 deg C						
	Dissolved Oxygen		7.90 mg/l						
	pH		7.56 pH Units						
	Groundwater Level		20.70 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
E06_02	Aluminium, Dissolved		<10 ug/l		11/05/2017	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		979 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		49.50 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		<1 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		35.80 mg/l				
	Manganese, Dissolved		<10 ug/l				
	Molybdenum, Dissolved		11.20 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		223 mg/l				
	Electrical Conductivity at 25C		973 uS/cm				
	Potassium, Dissolved		5.77 mg/l				
	Sodium, Dissolved		123 mg/l				
	Sulphate, Dissolved		282.00 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		30.30 mg/l				
	Fluoride		0.59 mg/l				
	Ammoniacal Nitrogen		0.56 mg/l				
	Total Organic Carbon		0.80 mg/l				
	pH		7.77 pH Units				
Nitrate		<0.186 mg/l					
Ionic Balance		-1.20 %					
Electrical Conductivity		1010 uS/cm	Field Measurements				
Temperature		11.20 deg C					
Dissolved Oxygen		3.25 mg/l					
pH		7.60 pH Units					
Groundwater Level		20.52 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
E06_03	Aluminium, Dissolved		<10 ug/l		15/02/2017	Sampling Amec/Testing EA NLS			
	Antimony, Dissolved		<1 ug/l						
	Arsenic Dissolved		<1 ug/l						
	Boron, Dissolved		265 ug/l						
	Cadmium, Dissolved		<0.1 ug/l						
	Calcium, Dissolved		134 mg/l						
	Chromium, Dissolved		<0.5 ug/l						
	Copper, Dissolved		1.16 ug/l						
	Iron, Dissolved		<30 ug/l						
	Magnesium, Dissolved		65.90 mg/l						
	Manganese, Dissolved		<10 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		140 mg/l						
	Electrical Conductivity at 25C		1070 uS/cm						
	Potassium, Dissolved		7.46 mg/l						
	Sodium, Dissolved		27 mg/l						
	Sulphate, Dissolved		457 mg/l						
	Total Oxidised Nitrogen		0.22 mg/l						
	Chloride		24.40 mg/l						
	Fluoride		0.49 mg/l						
	Ammoniacal Nitrogen		0.03 mg/l						
	Total Organic Carbon		1.10 mg/l						
	pH		7.75 pH Units						
	Nitrate		<0.22 mg/l						
	Ionic Balance		1.74 %						
	Electrical Conductivity		1300 µS/cm	Field Measurements					
	Temperature		11.00 deg C						
	Dissolved Oxygen		9.54 mg/l						
	pH		7.47 pH Units						
	Groundwater Level		21.35 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
E06_03	Aluminium, Dissolved		<10 ug/l		11/05/2017	Sampling Amec/Testing EA NLS			
	Antimony, Dissolved		<1 ug/l						
	Arsenic Dissolved		<1 ug/l						
	Boron, Dissolved		296 ug/l						
	Cadmium, Dissolved		<0.1 ug/l						
	Calcium, Dissolved		134 mg/l						
	Chromium, Dissolved		<0.5 ug/l						
	Copper, Dissolved		1.21 ug/l						
	Iron, Dissolved		<30 ug/l						
	Magnesium, Dissolved		72.40 mg/l						
	Manganese, Dissolved		<10 ug/l						
	Molybdenum, Dissolved		9.77 ug/l						
	Nickel, Dissolved		1.54 ug/l						
	Selenium Dissolved		<1 ug/l						
	Vanadium, Dissolved		<2 ug/l						
	Mercury, Dissolved		<0.01 ug/l						
	Total Alkalinity as CaCO3		142 mg/l						
	Electrical Conductivity at 25C		1140 uS/cm						
	Potassium, Dissolved		7.37 mg/l						
	Sodium, Dissolved		27 mg/l						
	Sulphate, Dissolved		493 mg/l						
	Total Oxidised Nitrogen		<0.2 mg/l						
	Chloride		26.90 mg/l						
	Fluoride		0.41 mg/l						
	Ammoniacal Nitrogen		<0.03 mg/l						
	Total Organic Carbon		0.80 mg/l						
	pH		7.62 pH Units						
	Nitrate		0.50 mg/l						
	Ionic Balance		0.50 %						
	Electrical Conductivity		1178 µS/cm	Field Measurements					
	Temperature		11.40 deg C						
	Dissolved Oxygen		6.25 mg/l						
	pH		7.09 pH Units						
	Groundwater Level		21.30 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
E06_04	Aluminium, Dissolved		<10 ug/l		15/02/2017	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		192 mg/l						
	Chromium, Dissolved		<0.5 ug/l						
	Copper, Dissolved		2.02 ug/l						
	Iron, Dissolved		<30 ug/l						
	Magnesium, Dissolved		53.20 mg/l						
	Manganese, Dissolved		27.70 ug/l						
	Molybdenum, Dissolved		8.74 ug/l						
	Nickel, Dissolved		3.34 ug/l						
	Selenium Dissolved		<1 ug/l						
	Vanadium, Dissolved		<2 ug/l						
	Mercury, Dissolved		<0.01 ug/l						
	Total Alkalinity as CaCO3		160 mg/l						
	Electrical Conductivity at 25C		1440 uS/cm						
	Potassium, Dissolved		47.10 mg/l						
	Sodium, Dissolved		47 mg/l						
	Sulphate, Dissolved		514 mg/l						
	Total Oxidised Nitrogen		1.33 mg/l						
	Chloride		113.00 mg/l						
	Fluoride		0.57 mg/l						
	Ammoniacal Nitrogen		<0.03 mg/l						
	Total Organic Carbon		<0.7 mg/l						
	pH		7.48 pH Units						
	Nitrate		0.15 mg/l						
	Ionic Balance		0.15 %						
	Electrical Conductivity		1562 µS/cm	Field Measurements					
	Temperature		12.80 deg C						
	Dissolved Oxygen		4.45 mg/l						
	pH		7.69 pH Units						
	Groundwater Level		22.04 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
E06_04	Aluminium, Dissolved		<10 ug/l		10/05/2017	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		187 mg/l						
	Chromium, Dissolved		0.90 ug/l						
	Copper, Dissolved		1.90 ug/l						
	Iron, Dissolved		<30 ug/l						
	Magnesium, Dissolved		53.10 mg/l						
	Manganese, Dissolved		22.50 ug/l						
	Molybdenum, Dissolved		8.81 ug/l						
	Nickel, Dissolved		2.96 ug/l						
	Selenium Dissolved		<1 ug/l						
	Vanadium, Dissolved		<2 ug/l						
	Mercury, Dissolved		<0.01 ug/l						
	Total Alkalinity as CaCO3		158 mg/l						
	Electrical Conductivity at 25C		1440 uS/cm						
	Potassium, Dissolved		46.80 mg/l						
	Sodium, Dissolved		46 mg/l						
	Sulphate, Dissolved		495 mg/l						
	Total Oxidised Nitrogen		1.34 mg/l						
	Chloride		113.00 mg/l						
	Fluoride		0.56 mg/l						
	Ammoniacal Nitrogen		<0.03 mg/l						
	Total Organic Carbon		1.60 mg/l						
	pH		7.48 pH Units						
	Nitrate		0.51 mg/l						
	Ionic Balance		0.51 %						
	Electrical Conductivity		1562 µS/cm	Field Measurements					
	Temperature		12.80 deg C						
	Dissolved Oxygen		4.45 mg/l						
	pH		7.69 pH Units						
	Groundwater Level			21.82 mAOD					

Emission point	Substance/ Parameter	Emission Limit Value	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Times ⁽³⁾	Accreditation/ Certification ⁽⁴⁾	Uncertainty ⁽⁵⁾		
E06_05	Aluminium, Dissolved		<10 ug/l		15/02/2017	Sampling Amec/Testing EA NLS			
	Antimony, Dissolved		<1 ug/l						
	Arsenic, Dissolved		<1 ug/l						
	Boron, Dissolved		194 ug/l						
	Cadmium, Dissolved		<0.1 ug/l						
	Calcium, Dissolved		173 mg/l						
	Chromium, Dissolved		<0.5 ug/l						
	Copper, Dissolved		1.90 ug/l						
	Iron, Dissolved		<30 ug/l						
	Magnesium, Dissolved		68.30 mg/l						
	Manganese, Dissolved		<10 ug/l						
	Molybdenum, Dissolved		4.97 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		154 mg/l						
	Electrical Conductivity at 25C		1190 uS/cm						
	Potassium, Dissolved		4.06 mg/l						
	Sodium, Dissolved		19 mg/l						
	Sulphate, Dissolved		552 mg/l						
	Total Oxidised Nitrogen		<0.2 mg/l						
	Chloride		23.30 mg/l						
	Fluoride		0.40 mg/l						
	Ammoniacal Nitrogen		0.05 mg/l						
	Total Organic Carbon		<0.7 mg/l						
	pH		7.53 pH Units						
	Nitrate		<0.2 mg/l						
	Ionic Balance		-0.06 %						
	Electrical Conductivity		1412 uS/cm	Field Measurements					
	Temperature		10.30 deg C						
	Dissolved Oxygen		4.58 mg/l						
	pH		7.12 pH Units						
	Groundwater Level		25.16 mAOD						

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
E06_05	Aluminium, Dissolved		<10 ug/l		10/05/2017	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 ug/l				
	Arsenic Dissolved		<1 ug/l				
	Boron, Dissolved		255 ug/l				
	Cadmium, Dissolved		<0.1 ug/l				
	Calcium, Dissolved		187 mg/l				
	Chromium, Dissolved		<0.5 ug/l				
	Copper, Dissolved		1.16 ug/l				
	Iron, Dissolved		<30 ug/l				
	Magnesium, Dissolved		75.70 mg/l				
	Manganese, Dissolved		12 ug/l				
	Molybdenum, Dissolved		4.99 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		160 mg/l				
	Electrical Conductivity at 25C		1280 uS/cm				
	Potassium, Dissolved		4.01 mg/l				
	Sodium, Dissolved		21 mg/l				
	Sulphate, Dissolved		604 mg/l				
	Total Oxidised Nitrogen		<0.2 mg/l				
	Chloride		26.50 mg/l				
	Fluoride		0.45 mg/l				
	Ammoniacal Nitrogen		0.09 mg/l				
	Total Organic Carbon		<0.7 mg/l				
	pH		7.45 pH Units				
	Nitrate		<0.2 mg/l				
	Ionic Balance		0.20 %				
	Electrical Conductivity		1384 uS/cm				
	Temperature		13.10 deg C				
	Dissolved Oxygen		2.86 mg/l				
	pH		7.24 pH Units				
	Groundwater Level		24.78 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.

***E05_03 Mo exceeded Compliance limit since June 2014 (16 elevated sampling events in total). Discussed with NRW and under investigation.

***E05_03 SO4 exceeded Compliance limit since February 2017 (4 elevated sampling events in total). Discussed with NRW and under investigation.

***E05_04 Mo result 15/02/2017 not exceedance of Compliance limit as criteria is 3 consecutive sampling events against 1 elevated sampling event.

Signed  Date 27/07/17

Reporting of Emission to Surface Water for the period from ...1st January 2017 ...to...30th June 2017...

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 ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
SW12	Aluminium, Dissolved		<10 µg/l		15/02/2017	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		1.02 µg/l				
	Boron, Dissolved		429 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		216 mg/l				
	Chromium, Dissolved		4.58 µg/l				
	Copper, Dissolved		1.44 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		37.1 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1030 µg/l				
	Nickel, Dissolved		5.24 µg/l				
	Selenium Dissolved		1.68 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		167 mg/l				
	Electrical Conductivity at 20C		2490 mS/cm				
	Potassium, Dissolved		29.2 mg/l				
	Sodium, Dissolved		285 mg/l				
	Sulphate, Dissolved		427 mg/l				
	Total Oxidised Nitrogen		8.46 mg/l				
	Chloride		508 mg/l				
	Fluoride		0.19 mg/l				
	Ammoniacal Nitrogen		0.03 mg/l				
	Total Organic Carbon		1.9 mg/l				
	Nitrate		8.37 mg/l				
	pH		8.22 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
SW12	Aluminium, Dissolved		13.8 µg/l		10/06/2017	Sampling Amec/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		431 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		188 mg/l				
	Chromium, Dissolved		3.37 µg/l				
	Copper, Dissolved		7.94 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		37 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		980 µg/l				
	Nickel, Dissolved		4.82 µg/l				
	Selenium Dissolved		2.19 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		117 mg/l				
	Electrical Conductivity at 20C		2360 mS/cm				
	Potassium, Dissolved		28.8 mg/l				
	Sodium, Dissolved		276 mg/l				
	Sulphate, Dissolved		400 mg/l				
	Total Oxidised Nitrogen		6.78 mg/l				
	Chloride		482 mg/l				
	Fluoride		0.242 mg/l				
	Ammoniacal Nitrogen		0.033 mg/l				
	Total Organic Carbon		5.8 mg/l				
	Nitrate		6.71 mg/l				
	pH		8.13 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
Settlement Ponds	Aluminium, Dissolved		13 µg/l		03/01/2017	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	2.39 µg/l				
	Boron, Dissolved	2000	567 µg/l				
	Cadmium, Dissolved	5	0.44 µg/l				
	Calcium, Dissolved		278 mg/l				
	Chromium, Dissolved	50	15.5 µg/l				
	Copper, Dissolved		1.7 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		39.5 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1560 µg/l				
	Nickel, Dissolved		12.4 µg/l				
	Selenium Dissolved		1.34 µg/l				
	Vanadium, Dissolved	60	5.53 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		221 mg/l				
	Electrical Conductivity at 20C		3280 mS/cm				
	Potassium, Dissolved		39.1 mg/l				
	Sodium, Dissolved		383 mg/l				
	Sulphate, Dissolved	400	*434 mg/l				
	Total Oxidised Nitrogen		19.4 mg/l				
	Chloride		737 mg/l				
	Fluoride		0.188 mg/l				
	Ammoniacal Nitrogen	0.6	**1.19 mg/l				
	Total Organic Carbon		1.8 mg/l				
	Nitrate		18.3 mg/l				
	pH	<9	7.93 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
Settlement Ponds	Aluminium, Dissolved		13 µg/l		01/02/2017	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	2.6 µg/l				
	Boron, Dissolved	2000	582 µg/l				
	Cadmium, Dissolved	5	<0.1 µg/l				
	Calcium, Dissolved		273 mg/l				
	Chromium, Dissolved	50	15.9 µg/l				
	Copper, Dissolved		1.53 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		39.4 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1700 µg/l				
	Nickel, Dissolved		11.4 µg/l				
	Selenium Dissolved		1.38 µg/l				
	Vanadium, Dissolved	60	5.02 µg/l				
	Mercury, Dissolved		0.0165 µg/l				
	Total Alkalinity as CaCO3		206 mg/l				
	Electrical Conductivity at 20C		3250 mS/cm				
	Potassium, Dissolved		39.1 mg/l				
	Sodium, Dissolved		391 mg/l				
	Sulphate, Dissolved	400	*413 mg/l				
	Total Oxidised Nitrogen		19.3 mg/l				
	Chloride		756 mg/l				
	Fluoride		<0.100 mg/l				
	Ammoniacal Nitrogen	0.6	**0.9 mg/l				
	Total Organic Carbon		2.3 mg/l				
	Nitrate		18.4 mg/l				
	pH	<9	8.04 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
Settlement Ponds	Aluminium, Dissolved		107 µg/l		28/02/2017	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		2.37 µg/l				
	Arsenic Dissolved	50	17.5 µg/l				
	Boron, Dissolved	2000	562 µg/l				
	Cadmium, Dissolved	5	<0.1 µg/l				
	Calcium, Dissolved		174 mg/l				
	Chromium, Dissolved	50	4.95 µg/l				
	Copper, Dissolved		2.76 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		35.7 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1600 µg/l				
	Nickel, Dissolved		4 µg/l				
	Selenium Dissolved		3.09 µg/l				
	Vanadium, Dissolved	60	21.9 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		34 mg/l				
	Electrical Conductivity at 20C		2890 mS/cm				
	Potassium, Dissolved		36.4 mg/l				
	Sodium, Dissolved		388 mg/l				
	Sulphate, Dissolved	400	*408 mg/l				
	Total Oxidised Nitrogen		6.6 mg/l				
	Chloride		726 mg/l				
	Fluoride		0.218 mg/l				
	Ammoniacal Nitrogen	0.6	<0.500 mg/l				
	Total Organic Carbon		7.3 mg/l				
	Nitrate		<6.60 mg/l				
	pH	<9	8.91 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
Settlement Ponds	Aluminium, Dissolved		71 µg/l		30/03/2017	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		2.59 µg/l				
	Arsenic Dissolved	50	24.6 µg/l				
	Boron, Dissolved	2000	523 µg/l				
	Cadmium, Dissolved	5	0.214 µg/l				
	Calcium, Dissolved		178 mg/l				
	Chromium, Dissolved	50	2.85 µg/l				
	Copper, Dissolved		2.96 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		33.7 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1420 µg/l				
	Nickel, Dissolved		3.26 µg/l				
	Selenium Dissolved		3.9 µg/l				
	Vanadium, Dissolved	60	24.3 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		83 mg/l				
	Electrical Conductivity at 20C		2630 mS/cm				
	Potassium, Dissolved		32.2 mg/l				
	Sodium, Dissolved		334 mg/l				
	Sulphate, Dissolved	400	334 mg/l				
	Total Oxidised Nitrogen		5.5 mg/l				
	Chloride		633 mg/l				
	Fluoride		0.256 mg/l				
	Ammoniacal Nitrogen	0.6	<0.500 mg/l				
	Total Organic Carbon		3.1 mg/l				
	Nitrate		<5.50 mg/l				
	pH	<9	8.68 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
Settlement Ponds	Aluminium, Dissolved		14 µg/l		02/05/2017	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved	50	3.01 µg/l				
	Boron, Dissolved	2000	574 µg/l				
	Cadmium, Dissolved	5	0.465 µg/l				
	Calcium, Dissolved		269 mg/l				
	Chromium, Dissolved	50	11.7 µg/l				
	Copper, Dissolved		2.14 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		42.5 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1970 µg/l				
	Nickel, Dissolved		9.24 µg/l				
	Selenium Dissolved		1.01 µg/l				
	Vanadium, Dissolved	60	3.42 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		169 mg/l				
	Electrical Conductivity at 20C		3380 mS/cm				
	Potassium, Dissolved		38.6 mg/l				
	Sodium, Dissolved		399 mg/l				
	Sulphate, Dissolved	400	*465 mg/l				
	Total Oxidised Nitrogen		21 mg/l				
	Chloride		806 mg/l				
	Fluoride		0.134 mg/l				
	Ammoniacal Nitrogen	0.6	0.57 mg/l				
	Total Organic Carbon		283 mg/l				
	Nitrate		20.2 mg/l				
	pH	<9	8.07 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
Settlement Ponds	Aluminium, Dissolved		24 µg/l		01/06/2017	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		1.01 µg/l				
	Arsenic Dissolved	50	<1 µg/l				
	Boron, Dissolved	2000	747 µg/l				
	Cadmium, Dissolved	5	0.333 µg/l				
	Calcium, Dissolved		319 mg/l				
	Chromium, Dissolved	50	8.55 µg/l				
	Copper, Dissolved		2.26 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		52.8 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		2360 µg/l				
	Nickel, Dissolved		11 µg/l				
	Selenium Dissolved		2.78 µg/l				
	Vanadium, Dissolved	60	6.09 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		94 mg/l				
	Electrical Conductivity at 20C		4290 mS/cm				
	Potassium, Dissolved		48.3 mg/l				
	Sodium, Dissolved		529 mg/l				
	Sulphate, Dissolved	400	*639 mg/l				
	Total Oxidised Nitrogen		21.8 mg/l				
	Chloride		1060 mg/l				
	Fluoride		0.144 mg/l				
	Ammoniacal Nitrogen	0.6	<0.500 mg/l				
	Total Organic Carbon		4.4 mg/l				
	Nitrate		21.3 mg/l				
	pH	<9	7.97 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
DP2	Aluminium, Dissolved		16.8 µg/l		03/01/2017	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		1.38 µg/l				
	Boron, Dissolved		436 µg/l				
	Cadmium, Dissolved		0.423 µg/l				
	Calcium, Dissolved		277 mg/l				
	Chromium, Dissolved		6.63 µg/l				
	Copper, Dissolved		2.15 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		35.8 mg/l				
	Manganese, Dissolved		11.6 µg/l				
	Molybdenum, Dissolved		1410 µg/l				
	Nickel, Dissolved		12.4 µg/l				
	Selenium Dissolved		1.08 µg/l				
	Vanadium, Dissolved		3.23 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		268 mg/l				
	Electrical Conductivity at 20C		3200 mS/cm				
	Potassium, Dissolved		32.5 mg/l				
	Sodium, Dissolved		368 mg/l				
	Sulphate, Dissolved		367 mg/l				
	Total Oxidised Nitrogen		20 mg/l				
	Chloride		718 mg/l				
	Fluoride		0.191 mg/l				
	Ammoniacal Nitrogen		2.98 mg/l				
	Total Organic Carbon		1.10 mg/l				
	Nitrate		18.7 mg/l				
	pH		7.41 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
DP2	Aluminium, Dissolved		24.3 µg/l		01/02/2017	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		343 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		288 mg/l				
	Chromium, Dissolved		1.27 µg/l				
	Copper, Dissolved		3.54 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		30.6 mg/l				
	Manganese, Dissolved		21.1 µg/l				
	Molybdenum, Dissolved		1250 µg/l				
	Nickel, Dissolved		11.4 µg/l				
	Selenium Dissolved		1.44 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		282 mg/l				
	Electrical Conductivity at 20C		3010 mS/cm				
	Potassium, Dissolved		30 mg/l				
	Sodium, Dissolved		352 mg/l				
	Sulphate, Dissolved		330 mg/l				
	Total Oxidised Nitrogen		20.3 mg/l				
	Chloride		674 mg/l				
	Fluoride		0.163 mg/l				
	Ammoniacal Nitrogen		<0.500 mg/l				
	Total Organic Carbon		0.90 mg/l				
	Nitrate		20.1 mg/l				
	pH		7.34 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
DP2	Aluminium, Dissolved		<10 µg/l		28/02/2017	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		1.04 µg/l				
	Boron, Dissolved		333 µg/l				
	Cadmium, Dissolved		<0.1 µg/l				
	Calcium, Dissolved		243 mg/l				
	Chromium, Dissolved		2.62 µg/l				
	Copper, Dissolved		2.47 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		29.8 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		1030 µg/l				
	Nickel, Dissolved		11.4 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		275 mg/l				
	Electrical Conductivity at 20C		536 mS/cm				
	Potassium, Dissolved		24.4 mg/l				
	Sodium, Dissolved		285 mg/l				
	Sulphate, Dissolved		303 mg/l				
	Total Oxidised Nitrogen		16.4 mg/l				
	Chloride		533 mg/l				
	Fluoride		0.159 mg/l				
	Ammoniacal Nitrogen		0.87 mg/l				
	Total Organic Carbon		1.00 mg/l				
	Nitrate		16 mg/l				
	pH		7.54 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
DP2	Aluminium, Dissolved		<10 µg/l		30/03/2017	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		341 µg/l				
	Cadmium, Dissolved		0.2 µg/l				
	Calcium, Dissolved		229 mg/l				
	Chromium, Dissolved		2.53 µg/l				
	Copper, Dissolved		3.87 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		31.5 mg/l				
	Manganese, Dissolved		<10 µg/l				
	Molybdenum, Dissolved		979 µg/l				
	Nickel, Dissolved		10.5 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		271 mg/l				
	Electrical Conductivity at 20C		2290 mS/cm				
	Potassium, Dissolved		21.8 mg/l				
	Sodium, Dissolved		241 mg/l				
	Sulphate, Dissolved		292 mg/l				
	Total Oxidised Nitrogen		15.8 mg/l				
	Chloride		444 mg/l				
	Fluoride		0.17 mg/l				
	Ammoniacal Nitrogen		0.96 mg/l				
	Total Organic Carbon		4.30 mg/l				
	Nitrate		15.3 mg/l				
	pH		7.42 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
DP2	Aluminium, Dissolved		<10 µg/l		02/05/2017	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		1.24 µg/l				
	Boron, Dissolved		565 µg/l				
	Cadmium, Dissolved		0.53 µg/l				
	Calcium, Dissolved		343 mg/l				
	Chromium, Dissolved		3.41 µg/l				
	Copper, Dissolved		2.22 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		51.1 mg/l				
	Manganese, Dissolved		17.8 µg/l				
	Molybdenum, Dissolved		1940 µg/l				
	Nickel, Dissolved		17.9 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		2.07 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		250 mg/l				
	Electrical Conductivity at 20C		3850 mS/cm				
	Potassium, Dissolved		33.9 mg/l				
	Sodium, Dissolved		439 mg/l				
	Sulphate, Dissolved		544 mg/l				
	Total Oxidised Nitrogen		28.2 mg/l				
	Chloride		907 mg/l				
	Fluoride		0.161 mg/l				
	Ammoniacal Nitrogen		1.82 mg/l				
	Total Organic Carbon		0.90 mg/l				
	Nitrate		27 mg/l				
	pH		7.42 pH Units				

Emission point	Substance/Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
DP2	Aluminium, Dissolved		10.2 µg/l		01/06/2017	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<1 µg/l				
	Arsenic Dissolved		1.39 µg/l				
	Boron, Dissolved		741 µg/l				
	Cadmium, Dissolved		0.382 µg/l				
	Calcium, Dissolved		417 mg/l				
	Chromium, Dissolved		3.17 µg/l				
	Copper, Dissolved		1.5 µg/l				
	Iron, Dissolved		<30 µg/l				
	Magnesium, Dissolved		57.9 mg/l				
	Manganese, Dissolved		35.4 µg/l				
	Molybdenum, Dissolved		2460 µg/l				
	Nickel, Dissolved		20.6 µg/l				
	Selenium Dissolved		1.58 µg/l				
	Vanadium, Dissolved		3.4 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Total Alkalinity as CaCO3		267 mg/l				
	Electrical Conductivity at 20C		4660 mS/cm				
	Potassium, Dissolved		41.7 mg/l				
	Sodium, Dissolved		579 mg/l				
	Sulphate, Dissolved		662 mg/l				
	Total Oxidised Nitrogen		33.9 mg/l				
	Chloride		1100 mg/l				
	Fluoride		0.166 mg/l				
	Ammoniacal Nitrogen		2.98 mg/l				
	Total Organic Carbon		1.00 mg/l				
	Nitrate		32.2 mg/l				
	pH		7.18 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 the

[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

[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.

***Settlement Pond Sulphate exceeding Compliance Limit. Reported to NRW and under investigation as part of HRA review.**

****Settlement Pond Ammoniacal-Nitrogen exceeding Compliance Limit after Dec 2016 result (5 consecutive sampling events). Under investigation as part of HRA review.**

Signed A. Jambor Date 22/07/17
(authorised to sign as representative of the Operator)