

# RELEASES TO AIR

## MONTHLY FUEL USE AND TOTAL RELEASE DATA<sup>(a)</sup>

Operator: RWE Generation UK plc

Form: ESI/01

Location: Aberthaw Power Station

Version/date: V.6 Nov 2006

Permit/Variation Number: RP3133LD

Operating Details		LCP1 <sup>(b)</sup>	Standby gas turbines <sup>(c)</sup>	Site month total
Year : 2015	Month: March			
Coal (tonnes)		318617.6		318617.6
Coal Sulphur content (%)		0.78		
Solid Biomass (tonnes)		3896.04		3896.04
Solid Biomass Sulphur content (%)		0.01		
Heavy Fuel Oil (tonnes)		1827.22		1827.22
Heavy Fuel Oil Sulphur content (%)		0.72		
Gas Oil (tonnes)				
Gas Oil Sulphur content (%)				
Process Fuel Oil (Tonnes)				
Process Fuel Oil Sulphur content (%)				
High Carbon Ash (tonnes)		1698.16		1698.16
High Carbon Ash Sulphur content (%)		0.37		
Liquid Biomass (tonnes)				
Liquid Biomass Sulphur content (%)				

Sulphur dioxide (tonnes)	866.22		866.22
Nitrogen oxides (tonnes)	2784.68		2784.68
Dust (tonnes)	42.60		42.60

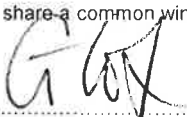
### NOTES:

(a) Including start-up & shut-down

(b) LCP = Large Combustion Plant

(c) Auxiliary combustion emissions should be included in the LCP if the auxiliaries share a common windshield with the LCP

Signed on behalf of the Operator by:



Date of return:

01 April 2015

# RELEASES TO AIR

## MONTHLY SO<sub>2</sub>, NO<sub>x</sub> and Particulate Release Data for LCP1<sup>(a)</sup>

Operator: RWE Generation UK plc

Form: ESI/02

Location: Aberthaw Power Station



Permit: RP3133LD

Year

2015

Month March

Reporting Period	SO <sub>2</sub> Emissions		NO <sub>x</sub> Emissions		Particulate Emissions		Cumulative SO <sub>2</sub> Release Rates Year to date	Cumulative NO <sub>x</sub> Release Rates Year to date
	Actual	Cumulative Year to date	Actual	Cumulative Year to date	Actual	Cumulative Year to date		
	(tonnes)	(tonnes)	(tonnes)	(tonnes)	(tonnes)	(tonnes)	(tonnes/ GWh)	(tonnes/ GWh)
01 (Jan)	1,045.6	1,045.6	3,616.0	3,616.0	53.0	53.0	1.0	3.3
02 (Feb)	935.1	1,980.7	2,953.0	6,569.0	47.6	100.6	1.0	3.2
03 (Mar)	840.1	2,820.8	2,766.1	9,335.0	41.5	142.1	0.9	3.1
04 (Apr)								
05 (May)								
06 (Jun)								
07 (Jul)								
08 (Aug)								
09 (Sep)								
10 (Oct)								
11 (Nov)								
12 (Dec)								
Current Allocation <sup>(b)</sup>		14,769		33,000		#N/A	#N/A	#N/A

### NOTES:

- (a) Excluding start-up and shut-down
- (b) Current Allocation refers to the yearly Process B limit/NERP allocation OR the target t/GWh (generated), where applicable as set in Table 4.4 of the permit

Signed on behalf of the Operator by:

*G. G. G.*

Date of return:

01 April 2015

# RELEASES TO AIR

## MONTHLY MEAN CONCENTRATIONS AND ANNUAL PERCENTILES<sup>(a)</sup>

Operator: RWE Generation UK plc

Form: ESI/03

Location: Aberthaw Power Station

Version: V 6.Nov 2006

Permit: RP3133LD

Year: 2015

Month: March



Reporting Period	LCP 1			
	Monthly Mean (mg/m <sup>3</sup> ) <sup>(b)</sup>			Desulphurisation <sup>(c)</sup>
	SO <sub>2</sub> <sup>(c)</sup>	NO <sub>x</sub> <sup>(c)</sup>	Dust	Efficiency %
01 (Jan)	232.19	799.75	10.11	>94%
02 (Feb)	241.54	777.65	10.68	>94%
03 (Mar)	220.66	715.31	9.26	>94%
04 (Apr)				>94%
05 (May)				>94%
06 (Jun)				>94%
07 (Jul)				>94%
08 (Aug)				>94%
09 (Sep)				>94%
10 (Oct)				>94%
11 (Nov)				>94%
12 (Dec)				>94%
Monthly Mean ELV	400.0	1100.0	25.0	
48 hour means	97 <sup>th</sup>	95 <sup>th</sup>	97 <sup>th</sup>	
Annual Percentile <sup>(c)</sup>	303.92	850.04	13.71	
Annual Emission Limit Value <sup>(c)</sup>	440.0	1210.0	55.0	
Annual Desulphurisation Efficiency (%) <sup>(c)</sup>				
Operational Hours <sup>(d)</sup>				

### NOTES:

(a) Annual percentiles are submitted with the final return

(b) Reference conditions for mg/m<sup>3</sup> are 6% O<sub>2</sub> solid fuels, 3% O<sub>2</sub> for oil and gas, dry, 0°C, 101.325 kPa

(c) Required for Opted-in (ELV) plant only

(d) Required for Opted-out plant only

Signed on behalf of the Operator by:

Date of return:

01 April 2015

Permit Number:

RP3133LD

Operator:

RWE Generation UK plc

Installation:

Aberthaw Power Station

Form Number:

Process1 / 30/11/07

## Reporting of process monitoring for the period from ...

01/03/2015

...to... 31/03/2015

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
A13 (unit 7 absorber inlet)	Particulate Matter (mg/m3) (maximum hourly average value)	-	Continuous	268		01 - 31/03/15	MCERT monitor
A13 (unit 7 absorber inlet)	Particulate Matter (mg/m3) (monthly average value)	-	Continuous	74.7		01 - 31/03/15	MCERT monitor
A14 (unit 8 absorber inlet)	Particulate Matter (mg/m3) (maximum hourly average value)	-	Continuous	281		01 - 31/03/15	MCERT monitor
A14 (unit 8 absorber inlet)	Particulate Matter (mg/m3) (monthly average value)	-	Continuous	61.9		01 - 31/03/15	MCERT monitor
A15 (unit 9 absorber inlet)	Particulate Matter (mg/m3) (maximum hourly average value)	-	Continuous	136		01 - 31/03/15	MCERT monitor
A15 (unit 9 absorber inlet)	Particulate Matter (mg/m3) (monthly average value)	-	Continuous	60.2		01 - 31/03/15	MCERT monitor

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
Windshield A1 (unit 7 flue)	Temperature (degC) (minimum hourly average value)	-	Continuous	53.7		01 - 31/03/15	< +/-1°C
Windshield A1 (unit 7 flue)	Temperature (degC) (monthly average value)	-	Continuous	66.0		01 - 31/03/15	< +/-1°C
Windshield A1 (unit 8 flue)	Temperature (degC) (minimum hourly average value)	-	Continuous	49.0		01 - 31/03/15	< +/-1°C
Windshield A1 (unit 8 flue)	Temperature (degC) (monthly average value)	-	Continuous	64.3		01 - 31/03/15	< +/-1°C
Windshield A1 (unit 9 flue)	Temperature (degC) (minimum hourly average value)	-	Continuous	52.7		01 - 31/03/15	< +/-1°C
Windshield A1 (unit 9 flue)	Temperature (degC) (monthly average value)	-	Continuous	68.7		01 - 31/03/15	< +/-1°C

[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. gas chromatography. To be confirmed upon completion of permit improvement condition reference IC20.

[3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed  .....

Date 24-04-15 .....

(Authorised to sign as representative of Operator)

# Reporting of deposited particulate matter for the period from 04/03/15 to 09/04/15

Operator: RWE Generation UK plc      Form: Deposition1 /30/11/07

Location: Aberthaw Power Station      Version: V.6 Nov 2006

Permit/Variation Number: RP3133LD

Monitoring Point	Substance / Parameter	Guidance Value (mg/m <sup>2</sup> /day)	Result <sup>[1]</sup> (mg/m <sup>2</sup> /day)	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Accreditation/ Certification <sup>[4]</sup>	Uncertainty <sup>[5]</sup>
Font-y-gary	Total deposited particulate matter	80-100	14.6	BS 1747-1:1969 and best practice guidelines	Continuous	-	-
East Aberthaw Sidings	Total deposited particulate matter	80-100	19.4	BS 1747-1:1969 and best practice guidelines	Continuous	-	-
Rail Bend	Total deposited particulate matter	80-100	34.6	BS 1747-1:1969 and best practice guidelines	Continuous	-	-
Quarry North	Total deposited particulate matter	80-100	18.5	BS 1747-1:1969 and best practice guidelines	Continuous	-	-
Quarry South	Total deposited particulate matter	80-100	30.3	BS 1747-1:1969 and best practice guidelines	Continuous	-	-

[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.

Signed  (authorised to sign as representative of the Operator)      Date: 24-04-15

**Reporting of Emissions to Water (other than to Sewer) for the period from ...1st March 2015...to...31st March 2015.**

**Operator:** RWE Generation UK plc      **Form:**      **Water1 /25/01/2013**

**Location:** Aberthaw      **Version:**      **V.8 Jan 2013**

**Permit/Variation Number:** EPR/RP3133LD/V006

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>
W1	Total suspended solids	100 mg/l	No release	BS EN 872:2005			
W1	Ammoniacal nitrogen	2 mg/l	No release	BS EN 872:2005			
W1	Cadmium and its compounds, expressed as cadmium (Total Cd)	0.01 mg/l	No release	BS EN 872:2005			
W1	Total hydrocarbon oil	3 mg/l	No release	EN ISO 9377-2			
W1	pH (minimum daily value)	6	No release	BS EN 872:2005			
W1	pH (maximum daily value)	9	No release	BS EN 872:2005			
W1	pH (average daily value)	-	No release	BS EN 872:2005			
W2	Differential total suspended solids	50 mg/l	21.65 mg/l	BS EN 872:2005			
W2	Ammoniacal nitrogen	0.1 mg/l (above background)	0.000 mg/l (above background)	BS EN 872:2005			
W2	Differential temperature (rolling 98th percentile)	13.5°C	9.0 °C	ISO, BS EN or SCA Blue Book Method			
W2	Differential temperature (average daily value)	-	7.6 °C	ISO, BS EN or SCA Blue Book Method			
W2	Differential temperature (maximum daily value)	-	11.1 °C	ISO, BS EN or SCA Blue Book Method			
W2	Total hydrocarbon oil	3 mg/l	0.200 mg/l	EN ISO 9377-2			
W2	pH (minimum value)	5.8	6.2	BS EN 872:2005			
W2	pH (maximum 95%ile value)	8.5	7.5	BS EN 872:2005			
W2	pH (minimum 95%ile value)	6	6.2	BS EN 872:2005			
W2	pH (average value)	-	6.4	BS EN 872:2005			

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>
SWTP1	Mercury and its compounds, expressed as mercury (Total Hg) (monthly average of daily samples)	0.0005 mg/l (above background)	0.0002 mg/l (above background)	BS EN 17852			
SWTP1	Cadmium and its compounds, expressed as cadmium (Total Cd) (monthly average of daily samples)	0.0002 mg/l (above background)	0.00000 mg/l (above background)	BS 6068-2.89			
SWTP2	Mercury and its compounds, expressed as mercury (Total Hg) (monthly average of daily samples)	0.0005 mg/l (above background)	0.0002 mg/l (above background)	BS EN 17852			
SWTP2	Cadmium and its compounds, expressed as cadmium (Total Cd) (monthly average of daily samples)	0.0002 mg/l (above background)	0.00000 mg/l (above background)	BS 6068-2.89			
SWTP3	Mercury and its compounds, expressed as mercury (Total Hg) (monthly average of daily samples)	0.0005 mg/l (above background)	0.0002 mg/l (above background)	BS EN 17852			
SWTP3	Cadmium and its compounds, expressed as cadmium (Total Cd) (monthly average of daily samples)	0.0002 mg/l (above background)	0.00000 mg/l (above background)	BS 6068-2.89			



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>
W2	Dissolved oxygen (minimum value)	-	8.1 mg/l	EN 25814			
W2	Dissolved oxygen (maximum value)	-	12.7 mg/l	EN 25814			
W2	Dissolved oxygen (average value)	-	10.3 mg/l	EN 25814			
SWTP1	pH (average value)	-	3.2	BS 6068-2:50:1995			
SWTP1	Flow (average daily value)	-	18694 m3/h	BS3680			
SWTP1	Flow (Total Monthly Volume)	-	13340289 m3	BS3680			
SWTP1	Arsenic and its compounds, expressed as arsenic (Total As)	-	0.0040 mg/l	BS 6068			
SWTP1	Lead and its compounds, expressed as lead (Total Pb) (monthly average of daily samples)	0.004 mg/l (above background)	0.0001 mg/l (above background)	BS 6068			
SWTP1	Chromium and its compounds, expressed as chromium (Total Cr VI)	-	0.0300 mg/l	BS 6068			
SWTP1	Zinc and its compounds, expressed as zinc (Total Zn) (monthly average of daily samples)	0.01 mg/l (above background)	0.003 mg/l (above background)	BS 6068			
SWTP1	Selenium and its compounds, expressed as selenium (Total Se)	-	0.0007 mg/l	BS 6068			

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>
SWTP2	pH (average value)	-	3.4	BS 6368-2.50:1995			
SWTP2	Flow (average daily value)	-	17014 m3/h	BS3680			
SWTP2	Flow (Total Monthly Volume)	-	10374023 m3	BS3680			
SWTP2	Arsenic and its compounds, expressed as arsenic (Total As)	-	0.0050 mg/l	BS 6068			
SWTP2	Lead and its compounds, expressed as lead (Total Pb) (monthly average of daily samples)	0.004 mg/l (above background)	0.0003 mg/l (above background)	BS 6068			
SWTP2	Chromium and its compounds, expressed as chromium (Total Cr-VI)	-	0.0300 mg/l	BS 6068			
SWTP2	Zinc and its compounds, expressed as zinc (Total Zn) (monthly average of daily samples)	0.01 mg/l (above background)	0.001 mg/l (above background)	BS 6068			
SWTP2	Selenium and its compounds, expressed as selenium (Total Se)	-	0.0009 mg/l	BS 6068			

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>
SWTP3	pH (average value)	-	5.3	BS EN 68-2.50:1995			
SWTP3	Flow (average daily value)	-	16986 m <sup>3</sup> /h	BS 3680			
SWTP3	Flow (Total Monthly Volume)	-	11747586 m <sup>3</sup>	BS 3680			
SWTP3	Arsenic and its compounds, expressed as arsenic (Total As)	-	0.0036 mg/l	BS EN 68			
SWTP3	Lead and its compounds, expressed as lead (Total Pb) (monthly average of daily samples)	0.004 mg/l (above background)	0.0007 mg/l (above background)	BS EN 68			
SWTP3	Chromium and its compounds, expressed as chromium (Total Cr VI)	-	0.0300 mg/l	BS EN 68			
SWTP3	Zinc and its compounds, expressed as zinc (Total Zn) (monthly average of daily samples)	0.01 mg/l (above background)	0.000 mg/l (above background)	BS EN 68			
SWTP3	Selenium and its compounds, expressed as selenium (Total Se)	-	0.0001 mg/l	BS EN 68			

[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.

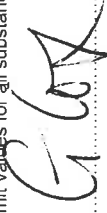
[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.

[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 .....

Date: 24-06-15

(authorised to sign as representative of the Operator)

# Reporting of Surface Water Monitoring for the period from ...1st March 2015...to...31st March 2015.....

Operator: RWE Generation UK plc Form: Water2 /25/01/2013

Location: Aberthaw Version: V.7 Jan 2013

Permit/Variation Number: EPR/RP3133LD/V006

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>
Seawater intake from Bristol Channel	Total suspended solids	-	89.20 mg/l	BS EN 872:2005			
Seawater intake from Bristol Channel	pH (average value)	-	7.9	BS 6068-2.50:1995			
Seawater intake from Bristol Channel	Mercury and its compounds, expressed as mercury (Total Hg)	-	0.00002 mg/l	BS EN 17852			
Seawater intake from Bristol Channel	Mercury (on filtered sample)	-	<0.00001 mg/l	BS EN 17852			
W2	Mercury and its compounds, expressed as mercury (Total Hg) (monthly cumulative mass)	60kg/yr	16.2 kg	BS EN 17852			

[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  Date 26-04-15

(authorised to sign as representative of the Operator)