

Notice of variation with introductory note

Environmental Permitting (England & Wales) Regulations 2010

RWE Npower plc

Aberthaw Power Station
The Leys
Aberthaw
near Barry
Vale of Glamorgan
CF62 4ZW

Variation application number
EPR/RP3133LD/V007

Permit number
EPR/RP3133LD

Aberthaw Power Station

Permit number EPR/RP3133LD

Introductory note

This introductory note does not form a part of the notice

The following notice gives notice of the variation of an environmental permit.

This Environment Agency-led Variation has been made to reduce emission limit values (ELVs) for oxides of nitrogen (NO_x), to reflect improvements made in NO_x control at Aberthaw Power Station since the issue of the original permit in 2007.

The variation includes a clause which allows reversion to the original NO_x ELVs on written agreement from the Environment Agency, if the operator provides written justification to the Environment Agency that the fuel diet is restricted, and that this will limit the extent to which thermal input biasing can be used to control NO_x emissions.

The schedules specify the changes made to the original permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit

Description	Date	Comments
Application EPR/RP3133LD received	Duly made 31/03/06	Application for permit
Additional information requested	26/07/06	
Additional information received	04/10/06, 01/11/06, 10/11/06, 05/12/06, 01/03/07, 16/03/07, 08/08/07, 10/08/07, 22/08/07, 05/09/07, 11/09/07	
Permit determined EPR/RP3133LD	21/12/07	Permit issued
Variation determined GP3635XF	09/01/08	Variation issued
Variation application EPR/RP3133LD/V003	Duly made 05/03/10	
Variation determined EPR/RP3133LD/V003	13/05/10	Variation issued
Variation application EPR/RP3133LD/V004	Duly made 31/01/11	
Further information received	23/03/11	Addendum to application
Variation determined EPR/RP3133LD/V004	20/06/11	Variation issued
Variation application EPR/RP3133LD/V005	Duly made 08/12/11	
Variation determined EPR/RP3133LD/V005	06/02/12	Variation issued
Application EPR/RP3133LD/V007 (Environment Agency led)	Approved 12/11/12	Environment Agency led variation request
Environment Agency led Variation determined EPR/RP3133LD/V007	12/11/12	Variation issued

Other Part A installation permits relating to this installation

Operator	Permit number	Date of issue
RWE npower plc	DP3432SW	30/03/07
RWE npower plc	BP3339BH	04/05/07

Other existing Licences/Permits/Registrations relating to this site

Holder	Reference Number	Date of issue
RWE npower plc	21/57/31/0040	30/03/07

End of introductory note

Notice of variation

Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies

Permit number
EPR/RP3133LD

issued to:
RWE npower plc ("the operator")

whose registered office is

**Windmill Hill Business Park
Whitehill Way
Swindon
Wiltshire
SN5 6PB**

company registration number 3892782

to operate a regulated facility at

**Aberthaw Power Station
The Leys
Aberthaw
Vale of Glamorgan
CF62 4ZW**

to the extent set out in the schedules.

The notice shall take effect from 12/11/2012

Name

Date

Eirian MacDonald

12/11/2012

Authorised on behalf of the Environment Agency

Schedule 1 – conditions to be deleted

None

Schedule 2 – conditions to be amended

The following conditions are amended as detailed, following an Environment Agency initiated variation:

Table S4.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit ^a (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
Windshield A1 [153 metre high 3 flue stack located at NGR ST023663]	Particulate Matter	Large Combustion Plant designed to operate on low volatile content coal	55 mg/m ³	48hour mean as 97%ile	Continuous	BS EN13284-2 ^{1, 2}
Windshield A1 [153 metre high 3 flue stack located at NGR ST023663]	Particulate Matter	Large Combustion Plant designed to operate on low volatile content coal	50 mg/m ^{3d}	Calendar monthly average	Continuous	BS EN13284-2 ^{1, 2}
Windshield A1 [153 metre high 3 flue stack located at NGR ST023663]	Particulate Matter	Large Combustion Plant with FGD designed to operate on low volatile content coal	25 mg/m ^{3d}	Calendar monthly average	Continuous	BS EN13284-2 ^{1, 2}
Windshield A1 [153 metre high 3 flue stack located at NGR ST023663]	Sulphur dioxide	Large Combustion Plant designed to operate on low volatile content coal	400 mg/m ³ ^{b, c}	Calendar monthly average	Continuous	BS EN 14181 ^{1, 2}
Windshield A1 [153 metre high 3 flue stack located at NGR ST023663]	Sulphur dioxide	Large Combustion Plant designed to operate on low volatile content coal	440 mg/m ³ ^{b, c}	48hour mean as 97%ile	Continuous	BS EN 14181 ^{1, 2}
Windshield A1 [153 metre high 3 flue stack located at NGR ST023663]	Oxides of nitrogen	Large Combustion Plant designed to operate on low volatile content coal	1100 mg/m ^{3e}	Calendar monthly average	Continuous	BS EN 14181 ^{1, 2}
Windshield A1 [153 metre high 3 flue stack located at NGR ST023663]	Oxides of nitrogen	Large Combustion Plant designed to operate on low volatile content coal	1210 mg/m ^{3e}	48hour mean as 95%ile	Continuous	BS EN 14181 ^{1, 2}

Table S4.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit ^a (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
Windshield A2 [96 metre high flue located at NGR ST024 662]	-	Large Combustion Plant (Black start open cycle gas turbine unit 7)	-	-	-	-
Windshield A3 [96 metre high flue located at NGR ST024 662]	-	Large Combustion Plant (Black start open cycle gas turbine unit 8)	-	-	-	-
Windshield A4 [96 metre high flue located at NGR ST024 662]	-	Large Combustion Plant (Black start open cycle gas turbine unit 9)	-	-	-	-
A5 [25 metre high single flue stack located at NGR ST03058 65958]	Particulate Matter and entrained droplets	PFA recycling plant seawater scrubber	No visible release	-	-	-
A5 [25 metre high single flue stack located at NGR ST03058 65958]	Ammonia	PFA recycling plant seawater scrubber	2 mg/m ³	As per extractive method	Annual extractive test	US EPA Method 26
A7, A8, A9 [Biomass handling]	Particulate Matter	Biomass milling plant cyclone exhausts	No visible release	-	-	-
A10 [Ash handling across the installation]	Particulate Matter	Ash silo and recovery process vents	No visible release	-	-	-
A11 [Utilities]	Particulate Matter	Domestic boiler and waste wood burner flues	No visible release	-	-	-
A12 [Storage tank vents across the installation]	-	Displacement and pressure relief vents associated with liquid fuel and raw material storage	-	-	-	-

¹ Subject to the detailed requirements and interpretations agreed with the Environment Agency in the Joint Environmental Programme, Joint Industry/Environment Agency Working Group In stack monitoring, publication **“Monitoring SO₂ and NO_x and Dust Emissions from Power Stations – A Guide to Current Best Practice for the Operators of Coal and Oil Fired Boilers”** PT/06/BE1916/R, D.P.Graham, December 2006 (or any subsequent revision to this agreed in writing with the Environment Agency)

² Subject to the detailed requirements and interpretations agreed with the Environment Agency in the Joint Environmental Programme, Joint Industry/Environment Agency Working Group In stack monitoring publication **“Use of CEMs for Reporting Emissions of SO₂, NO_x and Dust under PPC and the LCPD. A Guide to Current Best Practice for the Operators of Coal and Oil Fired Boilers ”**Graham, D.P., Salway, G, PT/06/BE1917/R, December 2006” (or any subsequent revision to this agreed in writing with the Environment Agency)

^a Excludes start up and shut down.

^b A desulphurisation rate of **94%** will replace the ELV where the LCP cannot meet the ELV due to characteristics of the fuel as set out in the application or as a result of an unforeseeable fluctuation in fuel quality.

^c Until 31 December 2015 plants of a rated thermal input greater than 400MW, which from 1st January 2008 onwards do not operate more than 2 000 hours a year (rolling average measured over a period of 5 years), shall be subject to a monthly limit value for sulphur dioxide of 800mg/m³ and a 48 hourly mean as a 97thile of 880mg/m³.

^d The monthly average particulate matter emission limit value for LCP operating temporarily with both FGD abated and non-FGD abated units will be 50 mg/m³. The monthly average particulate matter emission limit value of 25 mg/m³ will apply upon completion of commissioning of all FGD abated units.

^e Upon written agreement from the Environment Agency combustion plant designed to operate on low volatile fuels shall be subject to a monthly average emission limit value for nitrogen oxides of 1200mg/m³ and a 48 hourly mean as a 95thile of 1320mg/m³. Such agreement will be considered following notification of a justified restriction of fuel diet resulting in combustion and ancillary plant performance that limits the implementation of thermal input biasing to control oxides of nitrogen releases.

Table S4.4 Annual limits (Excluding start up and shut down except where otherwise stated).

Substance	Medium	Limit (including unit)		Emission Points
Sulphur dioxide	Air	Assessment year	Installation A Limit (includes start up and shut down)	A1 – A3 (Unit 7, 8 and 9 flues respectively)
		01/10/06-31/12/07	50,700 tonnes	
		01/01/08-31/12/08 and subsequent years	39,000 tonnes	Windshield A1
Sulphur dioxide	Air	Assessment year	Operator B limit ^a	Relevant processes
		01/10/06-31/12/07	103,610 tonnes	
		01/01/08-31/12/08 and subsequent years	46,142 tonnes	
Sulphur dioxide	Air	Process B limit		Windshield A1
Sulphur dioxide	Air	11.4 tSO ₂ /GWh averaged across each assessment year until 31/12/07		Boiler plant not fitted with FGD ^b
Oxides of nitrogen	Air	Assessment year	Installation Annual Emission Limit (includes start up and shut down)	A1 – A3 (Unit 7, 8 and 9 flues respectively)
		01/01/12-31/12/12	36,000 tonnes	
		01/01/13-31/12/13 and subsequent years	33,000 tonnes	Windshield A1
Oxides of nitrogen	Air	Assessment year	Operator B Limit ^a	Relevant processes
		01/01/08 –31/12/08 and subsequent years	68,710 tonnes	
Oxides of nitrogen	Air	Process B limit		Windshield A1
Cadmium and its compounds, expressed as cadmium (Total Cd)	Controlled Water	30 kg ^c		W1 and W2 (including start-up and shut-down) shut down
Lead and its compounds, expressed as lead (Total Pb)	Controlled Water	970 kg ^c		W1 and W2 (including start-up and shut-down) shut down
Mercury and its compounds, expressed as mercury (Total Hg)	Controlled Water	60 kg ^c		W1 and W2 (including start-up and shut-down) shut down
Zinc and its compounds, expressed as zinc (Total Zn)	Controlled Water	380 kg ^c		W1 and W2 (including start-up and shut-down) shut down

^a or such other limit for that year as has been approved by the Agency following notification by the operators on form SO1 or NO1(as referred to in Schedule 5, table S5.4).

^b In the case of an installation which contains boiler plant with and without FGD fitted in any assessment year the tSO₂/GWhr limit shall apply on the basis of an appropriate pro-rating, subject to prior approval by the Agency of the basis of the calculation.

^c Determined from discharge monitoring by differential mass balance following completion of pre-operational measure reference PM2 in Table S1.4 of Schedule 1 in this permit or as agreed in writing following completion of improvement condition reference IC23 in Table S1.3 of Schedule 1 in this permit.

Schedule 3 – conditions to be added

None