

Compliance Assessment Report

**Report ID:
CAR_NRW0031966**

This form will report compliance with your permit as determined by an NRW officer

Site	Aberthaw Power Station	Permit Ref	RP3133LD		
Operator/Permit holder	RWE Generation UK plc				
Regime	Installations				
Date of assessment	07/06/2017	Time in	10:00	Out	16:00
Assessment type	Audit				
Parts of the permit assessed	Emissions, monitoring, infrastructure				
Lead officer's name	Leakey, Antony				
Accompanied by	Harvey, Caitriona				
Recipient's name/position	Amy Lavisher/ Environmental Engineer	Date issued	03/08/2017		

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations or the licence under the Water Resources Act 1991 as amended by the Water Act 2003. A detailed explanation is captured in "Compliance Assessment Report Detail" (Section 2) and any actions you may need to take are given in the "Action(s)" (section 4). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). CCS Scores can be consolidated or suspended where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your local office.

Permit conditions and compliance summary	CCS Category	Condition(s) breached
B1 - Infrastructure - Engineering for prevention and control of emissions	A	
C4 - General Management - Storage, handling labelling and Segregation	A	
E1 - Emissions - Air	A	
E2 - Emissions - Land and groundwater	A	
E3 - Emissions - Surface water	A	
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	A	
	C4	3.5.1

KEY: See Section 5 for breach categories, suspended scores will be indicated as such.

A = Assessed or assessed in part (no evidence of non-compliance), **X** = Action only,

O = Ongoing non-compliance, not scored.

Number of breaches recorded	1	Total compliance score (see section 5 for scoring scheme)	0.1
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If the Number of breaches recorded is greater than zero, please see Section 3 for our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- The part(s) of the permit that were assessed (eg. Maintenance, training, combustion plant, etc)
- Where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- Any non-compliances identified
- Any non-compliances with directly applicable legislation
- Details of any multiple non-compliances
- Information on the compliance score accrued inc.
- Details of advice given
- Any other areas of concern
- Any actions requested
- Any examples of good practice
- A reference to photos taken

Aberthaw Power Station site visit and report review Q2 2017

Unit 7 flow AST report and TNP Annual Verification Report review

The tracer dilution method was used (which is the Standard Reference Method to BS EN 16911-1 and UKAS accredited) to verify the calculated flow reported by the site. All requirements of BS EN 16911-2 (the part of the standard that refers to Flow Calculations) were passed. The flow calculation showed a very good agreement with the Standard Reference Method (SRM), which resulted in a calibration function of $y = 0.98x + 0.00$ i.e. gradient of 0.98, offset of 0.00 (however where flow is calculated, BS EN ISO 16911-2 only requires verification and not calibration, hence no calibration factors are actually applied as the relationship between SRM and AMS shown is good, plus there is no Flow meter/CEM).

The calculations of the Flow variability test also passed, where the standard deviation of the differences between SRM and CEM (calculated) flows was 5.17, which is less than the Uncertainty multiplied by the kv (22.54), which is required for BS EN 14181 (Standard for Quality Assurance of CEMs). The flow calculation validity test also passed the relevant criteria, culminating in a Valid Calibration Range of 576.46 Nm³/s.

The information contained in Aberthaw power station TNP Annual Verification Report for 2016 matches the figures with Uniper Technologies Flow report (variability, QAL2 factors, Valid Calibration range).

One point of note is that the recent efficiency line calculations submitted on 12 May 2017 reflect an increase in thermal efficiency due to the base load regime during the operating period. The validity of retaining this efficiency value in the flue gas flow calculations is questionable given the projected forward operating pattern of the station and should be reviewed.

ACTION: RWE to review flue gas flow calculations in light of expected forward operating pattern and provide an update at next site meeting.

Site Visit - 7 June 2017

An overview tour of the **coal handling plant modifications** was undertaken ahead of restocking and further operating trials using bituminous coal.

New procedures are being implemented requiring weekly thermal checks of unconsolidated coal and monthly for consolidated coal. A temperature of 60°C will trigger investigation. Full peripheral access will be maintained around the stock areas to facilitate self-heating and fire management.

A complete system clean down has been undertaken in order to set the benchmark for future housekeeping. Coal spills will now be cleaned up as a priority in order to limit accumulations around potential heat sources.

All conveyor runs are protected by linear fuse wire heat detection and IR heat flux detection over conveyor surfaces. Carbon monoxide detection is installed in the coal bunkers. The exact location of the sensor heads was unclear at the time of the visit.

ACTION: RWE to confirm location of CO sensors in coal bunkers.

Coal diet trials

In light of the demonstration of system improvements described above, stocking and firing trials of bituminous coals using the modified fuel conveying route and mill safety systems can commence.

The application for permanent change in fuel diet to the full range of hard coals and the associated BAT assessment remains in determination.

Black start OCGTs

The black start OCGT flue replacement needs to be undertaken during the summer outage period and will be done on a like-for-like basis due to the lead time. A review of the air quality impact assessment for the current flue design should be undertaken to confirm the expected low process contribution to ambient pollutant levels.

ACTION: RWE to provide review of OCGT AQ Impact at next site meeting.

FGD inlet dust data

A review of the data in March resulted in EP inspections being scheduled for all units during the summer outage. The outcome of these inspections and any works undertaken will be followed up at the next inspection.

ACTION: RWE to provide an update on EP outage inspections and outcomes at next site meeting.

Ammonia release

During a COMAH intervention on 20 July 2017 examining emergency preparedness at Aberthaw power station details of an ammonia release and associated off site odour complaint came to light. The release occurred during preparation of an anhydrous ammonia storage tank for internal inspection. The tank "heel" remaining after emptying through normal transfer routes had been removed by transfer and absorption into a road tanker. The tank was then filled with nitrogen and vented to atmosphere in order to purge remaining ammonia vapour before ventilation with ambient air to facilitate entry.

During the nitrogen venting an ammonia odour complaint was received from an upwind residential location, some distance from the ammonia storage facility. It is thought that wind swirl associated with an incoming tide had taken the vented gases "back" towards the residence.

Estimates of the quantity of ammonia likely to have been released are not available, but should be possible based upon the final pressure in the storage tank prior to nitrogen being introduced. An impact assessment associated with the ammonia venting (short term only) may also then need to be carried out depending upon quantity and duration.

This release was not notified to NRW at the time and reasoning for this, given the offsite impact and lack of quantification of the release quantity, requires clarification.

ACTION: RWE to provide rationale for non-reporting of ammonia release and quantify

release and impact at next site meeting.

DO probe failure

The DO measurement loss occurred around the time of transition to the new multi-measurement instruments and spares of the old instruments had not been maintained in anticipation of changing to the more robust 3 instrument voting arrangement. Testing during commissioning of the FGD system has also established that at pH 6 or above greater than 75% oxygen saturation is achieved. The DO measurements are not used for process control and are purely for indication as pH is the critical parameter.

Based upon the above considerations temporary loss of this process monitoring data is not considered to be of significance. Consequently this is considered to be an administrative category 4 non-compliance with permit condition 3.5.1 in line with procedures that require all non-compliance to be recorded.

Deposition gauge composition

The composition analysis and electron micrograph associated with the unusually high deposition data around Aberthaw for the period 4/1-2/2/17 suggests that the material may be cement dust. It is known that cement works fugitive emissions were elevated during this period.

Low sulphur coal specification

It was noted that as the station conversion to bituminous coal-firing progresses, the stock of low sulphur coal for use during any operational periods of FGD malfunction or breakdown will need to comply with the specification set out in the IED Compliance Protocol for conventional fuel stations, rather than the sulphur composition associated with low volatile coals available to Aberthaw.

ACTION: RWE to confirm low sulphur coal composition at next site meeting.

Emissions review

The station has not operated since the end of March 2017 and there are no emissions to review against permit limits and there are no current trends that require review.

END

EPR Compliance Assessment Report

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Operator/Permit holder	RWE Generation UK plc	Date	07/06/2017

Section 3 – Enforcement Response

You must take immediate action to rectify any non-compliance and prevent repetition. Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.

Section 4 – Action(s)

This section summarises the actions identified during the assessment along with the timescales for when they will need to be completed.

Criteria Ref.	CCS Category	Action required/advised	Due Date
See Section 1 above			
G1	C4	New multi-probe system installed.	03/08/2017

Section 5 – Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- Advise on corrective actions verbally or in writing
- Require you to take specific actions verbally or in writing
- Issue a notice
- Require you to review your procedures or management system
- Change some of the conditions of your permit
- Decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you

- We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.
- Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and/or suspension or revocation of the permit.

See our Enforcement and Civil Sanctions guidance for further information

This report does not relieve the site operator of the responsibility to

- Ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- Ensure you comply with other legislative provisions which may apply

Non-compliance scores and categories

CCS category	Description	Score
C1	A non-compliance that could have a major environmental effect	60
C2	A non-compliance which could have a significant environmental effect	31
C3	A non-compliance which could have a minor environmental effect	4
C4	A non-compliance which has no potential environmental effect	0.1

Operational Risk Appraisal (Opra) - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

Section 6 – General information

Data protection notice

The information on this form will be processed by the Natural Resources Wales (NRW) to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s). The NRW may also use and/or disclose it in connection with:

- Offering/providing you with its literature/services relating to environmental matters
- Consulting with the public, public bodies and other organisations (eg. Health and Safety Executive, local authorities) on environmental issues
- Carrying out statistical analysis, research and development on environmental issues
- Providing public register information to enquirers
- Investigating possible breaches of environmental law
- Assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Regulations request

The NRW may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

Disclosure of information

The NRW will provide a copy of this report to the public register(s). However, if you consider that any information contained in this report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within fifteen working days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

Customer charter

What can I do if I disagree with this compliance assessment report?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with officer's line managers using the informal appeals procedure. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 0300 065 3000 (Mon to Fri 08.00 – 18.00) and ask for the Customer Contact team or send an email to enquiries@naturalresourceswales.gov.uk. If you are still dissatisfied you can make a complaint to the Public Services Ombudsman for Wales. For advice on how to complain to the Ombudsman phone their helpline on 0845 607 0987.

Welsh Language

If you would like this form in Welsh please contact your Regulatory Officer.