

Compliance Assessment Report

Report ID:
CAR_NRW0034460

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	15/11/2018	Time in	10:00	Out	15:00
Assessment type	Report/Data Review				
Parts of the permit assessed	Abatement, maintenance, emissions, monitoring				
Lead officer's name	Leakey, Antony				
Accompanied by	Broom, Mark,Cowie, Douglas				
Recipient's name/position	Richard Powell/ Station Chemist	Date issued	14/01/2019		

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
C2 - General Management - Management system and operating procedures	C3	1.1.1
E3 - Emissions - Surface water	C3	3.1.2

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	2	Total compliance score (see section 5 for scoring scheme)	8
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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 Q1 2018

Report review and Site Visit - 15 November 2018

EP operation and maintenance

A detailed presentation was provided on the operation and maintenance of the station electrostatic precipitators. Key points of note:

- Rapping settings have not been adjusted for several years and no optimisation has yet been carried out following the HVM coal conversion.
- Zone 4 (rear) rapping settings appear to be set continuously (10 second interval with 10 or 20 second duration).
- Scour (power off) rapping is only carried out during periods of continuous operation.
- Replacement/upgrade work has been carried out during outages since 2006, including wires, HT cabling and surge resistors and plate repairs.
- Some higher cost repairs have been deferred due to limited budgets and intermittent operation.

RWE should review EP optimisation and refurbishment needs in light of the tightening requirements for dust emissions under the LCP Bref and the need to continue to minimise carry over of trace metals into the FGD plant.

ACTION: RWE to review the need for EP optimisation and refurbishment.

Oil interceptor inspection and cleaning

RWE have developed a set of inspection criteria for the oil mop system, which are captured in the electronic log system. Maintenance check criteria for planned maintenance activity on the oil mop assemblies are under development.

ACTION: RWE to provide an update at next site inspection.

Coal diet trials

Operation during September-December 2018 has continued to be intermittent and further optimisation will be undertaken between January-April 2019 if sufficient operation is undertaken. An update to the fuel conversion commissioning report (IC41) will be provided in May 2019 (see SU/SD threshold item below).

Dust deposition

Higher than normal dust deposition levels are noted at the Quarry North location during November 2018. Composition of the dust should be reviewed if any landfilling operations were undertaken

during the period.

ACTION: RWE to review ash disposal operations during November 2018.

Boiler House Panel Replacement

Based upon the incremental cost for apparently “like-for-like” replacement materials in terms of attenuation properties, NRW is content that the costs appear to be excessive compared to the potential reduction in sound levels achieved.

RWE should note, however, that the methodology used to assess the potential noise impact levels is approximate and may not be conservative. Only detailed noise modelling is likely to provide higher confidence. Noise measurements should be used to verify that the actual off-site noise levels are acceptable under the worst-case conditions, e.g. night-time, when the replacement panels have been installed.

If elevated noise levels likely to cause complaint are apparent, then further measures may be necessary to prevent or minimise noise.

ACTION: RWE to undertake a noise measurement assessment to show that replacement boiler house panels have not increased off site noise levels unacceptably.

LCP Bref

Regulation 61 Notice response received and is under assessment.

Dust abatement breakdown

At the end of September during start up for a shakedown run flue gas conditioning feeds failed, and dust emissions were high. Attempts to improve dust emissions later in the day to compensate for the poor starting emissions failed and a marginal monthly average breach of the dust ELV occurred, the monthly average being made of data amounting to little more than a day's worth of hourly values as the station had not operated earlier in the month.

RWE propose to apply the malfunction and breakdown provisions in the IED Protocol. However, as drafted the provisions are triggered by breach of the daily average, which, in this case, wasn't exceeded. The daily average threshold that should be used is derived from the annual 95th percentile daily ELV by multiplying by 1.2, so in this case it is $35 \times 1.2 = 42 \text{ mg dust/m}^3$.

The actual daily average was 23.2 mg dust/m^3 . The monthly average was 20.32, falling to 19.71 upon application of the malfunction and breakdown provisions and exclusion of the highest hour from the reported average data. There were at least 3 valid daily averages in the month to allow a valid monthly average to be reported.

Failure of the EP flue gas conditioning systems is a genuine breakdown situation. The IED does not state that the malfunction and breakdown provisions should not be applied to the monthly average even though the daily ELV is not exceeded. The UK regulators have agreed that the IED Protocol should be updated to reflect the situation where compliance with monthly average ELVs are compromised by malfunction or breakdown of abatement plant and there are insufficient running hours in the month to bring the average down into compliance. It was also agreed that the revised provisions should be applied retrospectively. The breakdown is therefore considered to be a valid application of the IED malfunction and breakdown provisions which allow up to 120 hours per annum of unabated or partially abated operation.

There remain the underlying management causes of the EP flue gas conditioning systems breakdown to consider. The SO₃ conditioning feed was lost due to freezing of molten sulphur in a section of unheated pipework upstream of the converter due to the long duration of cold plant

maintained during the no-demand summer period. This could have been anticipated if a thorough review of plant warm-up requirements had been undertaken. RWE should note that thawing of frozen solids such as sulphur in pipelines can result in pipe wall failure if melting occurs unevenly between solid plugs of material.

The ammonia conditioning feed was unavailable due to a suspected leak. Delays in rectification were caused due to contract issues.

Given the limited impact upon emissions of the abatement failure, the breakdown cause is a minor category 3 breach of permit condition 1.1.1. A full investigation into the systems failure has been undertaken.

ACTION: RWE to provide details of procedural and plant improvements identified and timescale for implementation.

Unit 9 start-up & shut down threshold

Unit 9 SU/SD will operate with a 295 MWgen SU/SD minimum threshold load and corresponding Stable Export Limit (SEL) for a trial period from 1/1/19 until 31/3/19.

The current MSUL/MSDL for all units is 395 MWgen and the necessary changes have been completed in the CEMs data handling software to reflect the proposed change in operation for Unit 9.

It was originally anticipated that the Unit 9 Low NOx Boiler conversion would allow a lower SEL capability and this was incorporated into the post-commissioning reporting requirements for improvement conditions IC37 and IC41 (HVMC conversion post-commissioning report).

RWE will need to provide an update to the improvement condition response upon completion of the trial and refer to the response as further information to the LCP Bref permit review Regulation 61 Notice response if a new SU/SD threshold is to be permanently adopted before the permit review for the station is completed.

ACTION: RWE to provide an updated response to IC41 upon completion of the trial.

Procal CEM low NOx range calibration function error

In setting up a low range NOx channel on the CEMs to improve measurement resolution following reductions in NOx emissions, misinterpretation of the requirements between RWE and the CEM OEM (IRIS, formerly Procal) resulted in implementation of an invalid calibration function. As there was limited operation during the affected period and the issue was identified quickly by RWE, only a limited set of emissions data are affected.

The issue has not caused any ELV compliance problems and any data corrections can be made before the reporting date for the operating period. Therefore, the error is not considered to be a breach of permit condition 3.6.1 given the limited duration and impact of the event.

It is also noted that the anticipated limited running regime will make completion of full QAL2 testing problematic and so full compliance with EN14181 is unlikely to be achievable.

ACTION: RWE to provide updated emissions reports as necessary.

Eels Regulations (England and Wales) 2009

Improvement condition IC35 – an exemption notice requiring implementation of alternative compensatory measures has now been issued following review of the cost benefit assessment for best practice screening submitted under this improvement condition, which can now be considered

to have been completed.

It should also be noted that the alternative compensatory measures required in the exemption notice have already been completed and so no further action is required until the projected station closure or decommissioning date of 31/12/2025.

Emissions review

The station has continued with limited operations, including brief Capacity Market proving runs.

Insufficient sample volumes have been available for composite seawater discharge monitoring and consideration should be given to spot sampling.

ACTION: RWE to review seawater sampling regime and propose alternative to composite samples.

The elevated zinc result in September 2018 is likely to be associated with the variable running regime and continuing difficulties with representative sampling and preservation. The result is therefore considered to be a minor Category 3 breach of permit condition 3.1.2 and the above action will address the likely causes.

END

EPR Compliance Assessment Report

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Operator/Permit holder	RWE Generation UK plc	Date	15/11/2018

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.

In respect of the above non-compliance you have been issued with a warning. At present we do not intend to take further enforcement action. This does not preclude us from taking additional enforcement action if further relevant information comes to light or offences continue.

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			
E3	C3	RWE to review seawater sampling regime and propose alternative to composite samples.	30/09/2019
C2	C3	RWE to provide details of procedural and plant improvements identified and timescale for implementation.	31/03/2019

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.