

Compliance Assessment Report

Report ID:
CAR_NRW0033145

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

Site	Pembroke Power Station	Permit Ref	DP3333TA			
Operator/Permit holder	RWE Generation UK plc					
Regime	Installations					
Date of assessment	06/03/2018	Time in	10:00	Out	16:30	
Assessment type	Audit					
Parts of the permit assessed	See Below					
Lead officer's name	Dunn, Karen					
Accompanied by						
Recipient's name/position	Ben Williams / Lead Environmental Engineer	Date issued	06/04/2018			

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
A1 - Specified by permit	A	
B2 - Infrastructure - Closure and decommissioning	A	
C2 - General Management - Management system and operating procedures	A	
E3 - Emissions - Surface water	A	
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	A	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	A	

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	0	Total compliance score (see section 5 for scoring scheme)	0
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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

This was a pre-arranged visit and the company representatives present were:

Ben Williams – Lead Environmental Engineer

Dafydd Williams – Environmental Engineer

The following agenda items were provided in advance:

- EMS ISO 14001:2015 Certification
- Reporting 4.2.2 – Reporting date change since IED CH III variation
- Emissions Monitoring Condition 3.1.3 – Guidance to be provided in respect of the IED
- Update on current foam project / position coming into Spring
- Progress / stage of DMAGIC on FRR efficiency / Environmental Monitoring
- Publication of the LCP BREF and BAT conclusions and current NRW position

AOB

Introduction

This was a routine audit and the main objective was to go through the current position concerning the NRW environmental permit review. The permit review is triggered by the publication of the revised Best Available Techniques (BAT) Reference Document for Large Combustion Plants (BREF) in August 2017. This visit also sought to obtain an update from the operator on on-going projects associated with foam reduction and the fish return and recovery (FRR) system. Emissions monitoring permit condition 3.1.3 was also reviewed with the operator and a discussion held on how it has been transposed from the Industrial Emissions Directive (IED) and to provide the associated guidance.

Site Overview

This routine visit followed a period of adverse weather conditions involving snow and ice across the UK. The operator explained that they had experienced an issue with frozen pipework on the back of one of the units during the exceptionally cold period. It was initially thought to be a result of a missing section of lagging however further investigation by the operator, identified a problem with the trace heating on the pipework which was found to be the reason for the frozen pipes or 'reference lines'. The knock on from the frozen reference lines impacted on operations and the units had to be managed carefully through the freezing conditions to respond to customer demand. There was a large demand for electricity in the day during this period of cold weather and the operator was 2 shifting in the evening keeping the units warm overnight to prevent any further issues of freezing.

Environment Management System ISO14001:2015 Certification

An Environment Management System (EMS) helps organisations identify, manage, monitor and control their environmental matters in a 'holistic' way. Since the last routine visit the operator has successfully achieved certification of their EMS which NRW acknowledges as a success and demonstration of the commitment of the operator to environmental management. The operator outlined and demonstrated the newly certificated EMS explaining how the system will be externally audited in the future and the proposed frequency. As Pembroke Power Station was audited and formed part of project for achieving certification it is likely that another of the operator's portfolio will be externally audited next, returning to Pembroke in around 2 years' time. Central EMS documents sit within PAMS and site-specific implementation records or local procedures remain where necessary. A question was raised regarding the tracking of permit deadlines and dates for document reviews and where this would sit within the EMS. An example of the waste and water minimisation 4-year review due date of later in the year was used.

Recommendation: Operator to consider the best way to track deadlines and due dates for document reviews within the new EMS and to consider the requirements of the permit since the chapter III variation to capture any changes.

Reporting 4.2.2 – Reporting date change since IED CH III variation

The change to the operators permit to incorporate the requirements of the Industrial Emissions Directive Chapter III variation came into effect on 1 January 2016. The variation saw a deadline change for the reporting required under 4.2.2 from 31 March each year to 31 January. Due to reporting constraints and the tight deadline of the 31 January it was stated by the sector lead during the determination period that it could be agreed locally back to 31 March. To prevent the operator from having to revisit this local agreement each year, it can be confirmed on this CAR form that the reporting deadline for condition 4.2.2 is the 31 March as opposed to January 31 annually.

Recommendation: KD to speak with permitting during the determination of LCPD BREF review to see if there is any scope for reinstating the 31 March deadline in the permit for reporting condition 4.2.2, to prevent it becoming lost in the visit reports.

Emissions Monitoring Condition 3.1.3

Environmental permit condition 3.1.3 has been replicated below for ease of reference:

3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

A discussion was held on the requirements of condition 3.1.3 which has been transposed directly from 'Article 16 – Monitoring requirements' of the IED. The deadline for a response is 5 years from the Chapter III variation which came into effective on 1 January 2016 making it 1 January 2021.

It is understood that the Pembroke Power Station or 'power island' element consisting of the 5 units is built on a 'green field' site just outside of the footprint for the old oil-fired power station. The cooling water pipework and non-technical buildings are sited on reclaimed land. The operator advised that the application for the environmental permit would have included the baseline conditions for the new installation. A discussion was had regarding the presence of any boreholes that would have been used as part of that original baseline study. Currently there are no exploratory boreholes on site for the installation however there is associated information in the sites accident management plan. 'Article 16' allows for a risk-based approach to be taken and this will be considered by the operator to meet condition 3.1.3 using the associated guidance and the information supplied during the permit application stage. A hard copy of the guidance for the baseline study was provided to the operator for consideration in discharging this permit condition. The guidance however can also be found via the following link and outlines the 8-stage approach

for a baseline report. In undertaking this exercise the operator will be able to assess the need / risk for the periodic monitoring outlined by the IED.

[http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0506\(01\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0506(01)&from=EN)

Update on Foam Reduction Project

The engineering structures that sought to reduce the foam formation in the power station seal pit has been successful when operational. The system however has been mechanically problematic which has impacted on its reliability. Most recently the system has consisted of the front penstocks only as the rear ones were removed following damage to the gates and runners. The seal pit with the volume of water going through it is an aggressive environment and damage has now occurred to the mechanism or spindles used to open and close the front penstocks. At the time of the visit the spindles needed to be replaced and the project had been split into two working groups which are looking at the whole system. The week before this NRW visit there was a workshop at the station which considered the current system holistically and sought to identify what is wrong with it to seek a resolution. From the workshop an action plan has been produced to address the issues raised. Louise Mc Donnell an RWE mechanical engineer at the station has been assigned to the project and tasked with getting the front penstocks operational and working correctly. Tony Barnett an engineer based in RWE in Swindon is also assigned to the project. A discussion was held over the number of complaints of foam received in 2017 which was 4 and how the operator has kept the community updated through the local liaison committee. Members of the public who have noticed the foam from the discharge point and gone to their community representatives have found them to be up to date on the matter.

Recommendation: Operator to keep NRW updated at the next routine visit on the working groups tasked to address the issues with the foam reduction system.

Update on Environmental Monitoring

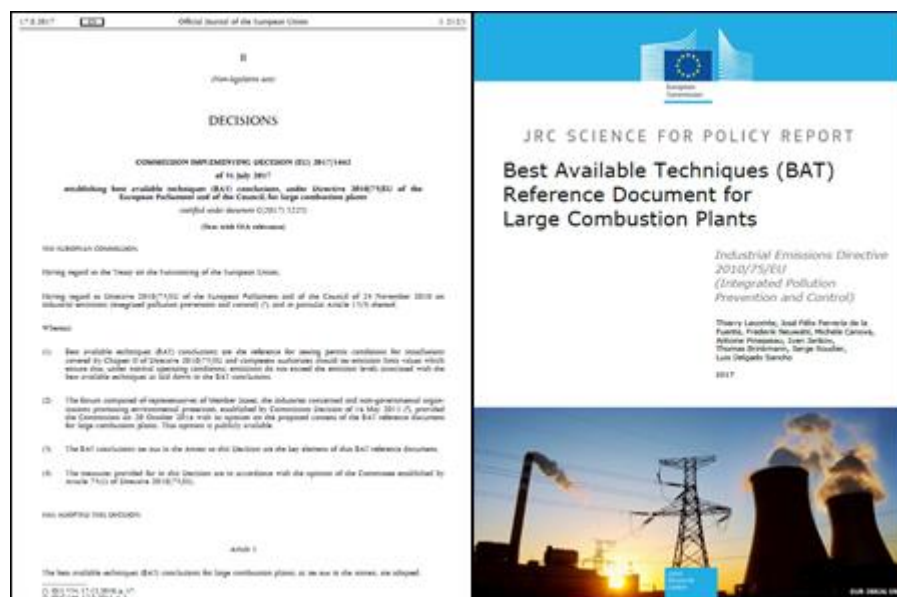
It has been recognised by the operator that the efficiencies of the Fish Return and Recovery (FRR) system are not as good as first commissioned. It has also been recognised that a greater amount of biomass has entered the 'trash' baskets and this was discussed in the annual reporting. At the annual environmental monitoring meeting with NRW in December 2017 the operator explained how an investigation into the root cause to the drop in efficiency of the FRR had begun. The operator applied 'DMAGIC' which is a 6-staged approach adopted by the operator to address the matter. The operator explained the stages and approach at the annual meeting and how they have been applied to the matter to identify and improve the efficiency of the system. During this routine visit KD enquired at what stage the operator was at in the application of the stepped approach. The root cause analysis tree is now complete, and a detailed design will be drawn up by the end of March 2018. A meeting is taking place each month on the actions identified and these have been prioritised. The operator is not quite at the trial stage on one of the drum screens and this is expected to be ready around June 2018 with a full refurbish of the screens taking place in 2019. In using the DMAGIC approach everything has been considered in what the root cause could be and an example was discussed which involved the speed of rotation of the drum screens to ensure they are working as effectively and efficiently as possible. It is considered however that the root cause of the reduction in efficiency is bio-fouling of the system which the operator is looking to address at the trial stage.

Recommendation: Operator to keep NRW updated at the next routine visit on the work to address the issue with the reduction in efficiency of the FRR system at the cooling water intake.

On-going work associated with the abstraction also includes the running of laboratory trials using clupeids to ensure the effectiveness of the strobes installed at the intake to distract fish. This work is being undertaken with the help of specialist contractors who are undertaking the trials and have firstly developed a method for the collection of clupeids, which are a very sensitive fish species.

Publication of the LCP BREF and BAT conclusions and current NRW position

On 17 August 2017 the revised Best Reference Document (BREF) for Large Combustion Plant and associated Best Available Techniques Conclusions (BATc) (<http://eippcb.jrc.ec.europa.eu/reference/>) was published.



Following the publication an environmental permit review is triggered by 'Article 21(3) of the IED where the competent authority has to reconsider and update any environmental permit conditions. Those subject to the revised BREF will need to be compliant with the associated BATc by the fourth-year anniversary of the publication date which will be 16 August 2021.

UK regulators are currently reviewing the scope of the BREF and considering what it means for associated permitted sites. During this visit KD went through some slides on the current approach being taken by NRW. A copy of the slides was provided to the operator for ease of reference during the LCPD permit review process. The slides were compiled by Karl Shepherd (KS) who is the NRW combustion lead within the Evidence Policy and Permitting (EP&P) department.

At present an interpretive document is being compiled and discussions are being held between UK regulators and industry to establish consistency in the application of the BREF. The document aims to provide clarification on various aspects of the BREF and what they mean for operators of large combustion plant in the UK. There are however general principles which have been established from previous permit reviews. The main one being 'no backsliding' from the current emission limit values (ELV's). None of the general principles should be a surprise to the operator as they were also applied to the IED Annex V Chapter III variation.

(NB/ There was a typographic error on the slides shared with the operator as identified during the visit - Slide 10 should read 17 August 2017 which is the official date of the publication of the BREF).

AOB

Emission Calibration

The operator explained an emission calibration matter that was identified as part of an internal audit. On review of the data some minor amendments were required to the IED CON2 submission for 2017. KD advised during the visit that this submission had yet to be reviewed so it was agreed a re-submission of the data following the internal quality assurance was appropriate. During the write up of this routine visit the operator submitted the annual reports in line with the environmental permit condition 4.2 along with the updated 2017 IED CON 2 reporting form.

Conclusion

This routine audit took a broad approach, the main objective was to go through the current NRW position on the permit review process, triggered by the publication of the revised BREF. This objective was driven by the NRW combustion sector to facilitate in the review process required by the IED. The visit also aimed to provide advice and guidance on a condition which was added to the operators permit in respect of monitoring requirements outlined in the IED for baseline reports and groundwater and soil analysis. There were a few on-going matters which were also discussed some of which have not been included in this report due to their commercial sensitivity. However, the Haven monitoring programme was touched upon and NRW welcomes the investigations into both the efficiencies on the FRR and the laboratory trials being undertaken on clupeids. NRW also acknowledges that the operator has achieved certification of the EMS which demonstrates a real commitment to protect the environment and respond to changing environmental conditions and socio-economic needs. Since the last routine visit the operator on 1 October 2017 entered into the first of the capacity market agreements. This means that the operator has now got a few additional obligations. One of these obligations is that the power station remains connected to the Grid for the next 5 years. Furthermore, there is also an obligation on the operator to provide electricity in times of 'system stress'. No permit breaches were identified during this routine visit.

[End]

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EPR Compliance Assessment Report

**Report ID:
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Site	Pembroke Power Station	Permit Ref	DP3333TA
Operator/Permit holder	RWE Generation UK plc	Date	06/03/2018

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.

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			

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.