

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

Site	Afan Combined Heat And Power Facility	Permit Ref	ZP3032KQ		
Operator/Permit holder	Dwr Cymru Cyfyngedig				
Regime	Waste Operations				
Date of assessment	06/02/2019 - 14/03/2019	Time in	N/A	Out	N/A
Assessment type	Report/Data Review				
Parts of the permit assessed	4.2.1, 4.2.2				
Lead officer's name	Thomas, Ffion				
Accompanied by					
Recipient's name/position	Andrew Dixon/ Site manager	Date issued	14/03/2019		

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
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 compliance assessment report form has been completed following review of the 2017 Annual performance data submission for Afan CHP EPR ZP3032KQ, operated by Dwr Cymru, received on and clarification provided 28th March 2018

Part of permit assessed:

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency (NRW) by 31 January (or other date agreed in writing by the Environment Agency (NRW)) each year. The reports(s) shall include as a minimum:

(a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretative review of that data; (note)

(b) the annual production/treatment data set out in schedule 4 table S4.2; and

(c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

Note: The date of this submission has been agreed previously with the regulator and therefore the submission prior to 31st March is not considered a permit breach. This submission date agreement of the interpretative report allows the submission to co-exist with other government required energy production data.

Data submission review:

Emissions to air monitoring for the period Jan 18 to Dec 18 was received. The emission testing occurred over the 12th – 13th December 2018

A review of the emissions and trend tracking has been undertaken for the last 7 years.

Emissions to air - annual return			2011		2012		2013		2014		2015		2016		2017		2018	
Parameter	Limits	results	uncertainty %	results	uncertainty %	results	uncertainty %	results	uncertainty %	results	uncertainty %	results	uncertainty %	results	uncertainty %	results	uncertainty %	
A1- CHP unit 1	Nox	500	386.1	3	405.4	3.5	370.2	2.1	487.23	3	495.31	2	449.9	2	418.48	4	492.01	2
	CO	1400	896.8	3.6	824.5	1.8	1188.7	3	723.8	2	800.44	2	825.61	3	677.65	2	940.35	3
	SO2	339	54.1	0.43	89.7	4.2	234.7	10.5	27.33	13	22.78	13	22.06	13	13.9	13	12.83	13
A2 CHP unit 2	Nox	500	451.4	1.6	331.8	3.4	409.2	4	386.62	3	458.97	2	349.36	2	N/A	N/A	484.4	2
	CO	1400	859.7	3.5	787.6	1.8	3085.1	2.8	736.58	2	913.45	2	826.59	3	N/A	N/A	837.15	3
	SO2	339	20	0.33	38.1	1.8	236.5	11	26.84	13	34.65	13	7.32	13	N/A	N/A	11.61	13
A3 Boiler unit 1	Nox express	170	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	NA	124.22	3	136.24	3	134	2
	CO	75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	NA	0.1	3	2.1	3	34.65	3	
	SO2	360	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	NA	3.79	4	5.22	4	2.96	3	
A4 Boiler unit 2	Nox	130	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	NA	143.4	3	142.65	3	142.89	2	
	CO	30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	NA	7.87	3	5.24	3	4.13	3	
	SO2	339	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	NA	13.41	4	6.83	4	24.01	3	
	operational	>1900 C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA

The emissions are within permit limit for CHP1, the trends slightly higher for NOX, CO

Despite the note included on the submission (believed to have remained as a typo from last year) CHP 2 emission tests were undertaken. The trends against previous years are within those seen over previous years and within permit limits.

The performance indicators data was submitted, and clarification confirmed via email on 28th March.

A review of the performance indicators and trends are tracked below:

performance indicators	2011	2012	2013	2014	2015	2016	2017	2018
Electrical Energy generated	9179MWh	7900MWh	9300.6MWh	no record	10669MWh	10495.03MWh	10,451.56MWh	7,389.39MWh
Thermal Energy generated	8566MWh	9500MWh	11763Wh		13450MWh	12123.84MWh	13,586.43MWh	13,828.32MWh
Total Biogas input into CHP engines	28026MWh	34295MWh	29070.4MWh		3545MWh	007,605.0m ³ 63430.5MWh	6,893,285m ³	6,005,003M ³
Total biogas into boilers	2404MWh	512MWh	98.5MWh		no data submitted	161,310m ³ 1702.9MWh	31,433m ³	13,215m ³
Engine (electrical) efficiency	34%	%	31.99%		no data submitted	1.73KWh/m ³ biogas 27%		27.90%
Boiler (thermal) efficiency	134%	%	126%		3.0MWh/m ³ biogas	8418	CHP1: 5123h CHP2: 4382h	CHP1: 5420h CHP2: 2946h
Hours of operation for CHP engines	8516hrs	8829hrs	8337 hrs		no data submitted	35,45h <10% of time <8%	584h <10% of time <8%	3653h >10% of time >8%
Operational hours of flare	47hrs	84hrs (0.9% of time)	11 Hrs (0.1% of time)		no data submitted			
Operational hours of boilers fired on biogas	2248hrs (2.6% of time)	3304hrs (3.7% of time)	72 hrs (0.8% of time)		<10%	65hrs	62h	97h
Abnormal operation of pressure release valves	None	None	No abnormal operations		no abnormal operation	none	no data available	no data is available
Water usage	13423m ³	18829m ³	17029m ³		no data submitted	35,732m ³	45,011m ³	35,162m ³

Operator comments are noted:

Operator's comments :

The plant had a very challenging year from an Operations perspective with safety issues on both engines and generators which have been partially sorted out but still ongoing. Due to these issues, both engines have been running at a lower power load than in previous years. This has an positive impact on the gas emission as the figure have decreased slightly, however the plant had to flare more gas than in previous years. In any case, we understand the parameters have not changed significantly and the plant continuous to comply with the environmental requirements.

Considering the above the appearance of some changes to the performance data this year would be expected, the total energy generation is lower to previous years and the flare time is higher. We note that the permit limits have not been breached during this year despite the operational difficulties.

NRW encourage the continued operator communication (which is noted to have greatly improved over recent years)

END

EPR Compliance Assessment Report

**Report ID:
CAR_NRW0034824**

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

Site	Afan Combined Heat And Power Facility	Permit Ref	ZP3032KQ
Operator/Permit holder	Dwr Cymru Cyfyngedig	Date	06/02/2019

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.