

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

Site	Pembroke Refinery	Permit Ref	YP3930EX		
Operator/Permit holder	Valero Energy Ltd				
Regime	Installations				
Date of assessment	23/03/2017	Time in	14:00	Out	16:00
Assessment type	Audit				
Parts of the permit assessed	See below				
Lead officer's name	Broom, Mark				
Accompanied by					
Recipient's name/position	Neil White/ Environmental Engineering Manager	Date issued	30/05/2017		

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
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

Neil White Valero,

Clare James, Valero

David Pollack, ERM (CHP only)

Hannah Beeby, ERM (CHP only)

CHP Limit Values

Valero asked for confirmation on which BAT reference Note (BREF Note) and BAT conclusions (BATc) should be used for their combined Heat and Power (CHP) development. Previously NRW has used the Refineries BAT conclusions as the CHP is a combustion plant on a refinery site. However on detailed reading of the published BATc, it is clear in the definitions section on page L307/41 that this note and BAT conclusion only apply when the combustion plant burns a refinery fuel either on its own or with other fuels. This position is used again in the bubble limits BATcs 57 and 58 where is reiterates this position. Similarly the draft large combustion plant BATcs also say that refinery fuels burnt in a combustion plant is covered by the refinery BATc and not the draft LCP BATcs.

The table below shows compares the Refinery BATcs, the draft LCP BATcs and also the IED Chapter 3 requirements for new plant.

	NOx					CO					BATAEELs (either NEE or NTFU)			CEMS		BATc Bubble
	mm	dm	Annual 95th %ile of hm	am	BAT c	mm	dm	Annual 95th %ile of hm	am	BAT c	Net electric al efficien cy (NEE)	Net total fuel utilisati on (NTFU)	BAT c		BAT c	
IED Ch 3 part 2	5 0	5 5	100	-	-	10 0	11 0	200	-	-	-	-	-	(SO ₂ , Dust if RFG), NO _x , CO, O ₂ , Temperatu re, Pressure and water vapour	-	-
Refiner y	5 0	-	-	-	34	10 0	-	-	-	37	-	-	-	NO _x , CO,	4	Yes
LCP draft existing	-	3 5- 5	-	2 5- 5	44	-	-	-	-	-	46 - 54%	65 - 95%	40	NO _x , CO, O ₂ , Temperatu	4	No

plant		5		0											re, Pressure and water vapour		
LCP draft new plant	-	1 5- 4 0	-	1 0- 3 0	44	-	-	-	-	-	53 – 58.5 %	65 - 95%	40	NOx, CO, O2, Temperatu re, Pressure and water vapour	4	No	
IF RFG used between (0 and 100%)	5 0	5 5	100	-	-	10 0	11 0	200	-	-	-	-	-	SO2, Dust, NOx, CO, O2, Temperatu re, Pressure and water vapour	-	Yes	
If Only NG used and permit issued before LCP BATcs	5 0	5 5	100	5 0	-	10 0	11 0	200	-	-	>46 %	>65 %	-	NOx, CO, O2, Temperatu re, Pressure and water vapour	-	No	
If Only NG used and permit issued after BATcs publish ed	5 0	4 0	100	3 0	-	10 0	11 0	200	-	-	>53 %	>65 %	-	NOx, CO, O2, Temperatu re, Pressure and water vapour	-	No	

The key thing here is that Valero could choose to burn some refinery fuel gas in the new CHP and the Refinery BATcs would apply or to apply and get a permit for the CHP before the LCP BATcs are published to retain the 50 mg/m³ ELVs. The latter option would mean that the planning and permitting process could be decoupled with the permitting time line ahead of the planning one.

Noise from the proposed CHP is being modelled. Valero would like to have a technical on site meeting to discuss this issue with the planning department in Pembrokeshire CC and NRW.

Other issues

Bubble

Valero have been working on the NOx bubble with Envirossoft what have a system to manage the data coming from the CEMs. For the NOx results Valero are looking to use the quarterly spot results from their non-CEMS LCP to find a factor that relates to similar CEMed LCP. Then they will use the CEMs from the similar LCP to then infer a continuous NOX result for the non CEMed LCP for NOx. This seems a reasonable approach.

Butamer

The butamer heater is used to regenerate a catalyst that takes n-Butane and converts it to iso-Butane. This heater is used for around 12 to 18 hours twice a week. Valero are long to replace

this 1.75WMth heater with an electrical and steam system. They are planning to keep this heater as a standby rather than completely mothballing it.

Reporting of results against limit values

Valero have reported using a mathematical approach. Where the limit is set to 20 mg/l, then they will only report if/when the result is 20.5 or more as mathematically, the result is then rounded up to 21 whereas at 20.4 (or below) the result is rounded down to 20 and the Limit has not been breached. This approach shows the need to be clear in permits on setting the limit values. The Valero approach is mathematically sound..

Conclusions

Based on these discussions, Valero and ERM will look at fast tracking the permit to NRW. A consequence of the CHP not coming under the refinery BATcs is that it will not be able to go into the refinery bubble for NO_x (or SO₂) as it is not a refinery combustion plant until it burns a refinery fuel. When/if it does it could then be put into the bubble approach for the refinery as a whole.

EPR Compliance Assessment Report

**Report ID:
CAR_NRW0031496**

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Operator/Permit holder	Valero Energy Ltd	Date	23/03/2017

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			

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.