

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

Site	Milford Haven Refinery	Permit Ref	AP3830XQ		
Operator/Permit holder	Puma Energy Uk Ltd				
Regime	Installations				
Date of assessment	21/06/2016	Time in	10:00	Out	14:00
Assessment type	Audit				
Parts of the permit assessed	Management				
Lead officer's name	Evans, Gary Lewis				
Accompanied by	Jenkins, Nicholas				
Recipient's name/position	Richard Livock/ Environmental Engineer	Date issued	06/07/2016		

## 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	
B2 - Infrastructure - Closure and decommissioning	A	
C2 - General Management - Management system and operating procedures	A	
C4 - General Management - Storage, handling labelling and Segregation	A	
E1 - Emissions - Air	A	
F1 - Amenity - Odour	A	
G2 - Monitoring and Records, Maintenance and Reporting - Records of activity, site diary/journal/events	A	
G3 - Monitoring and Records, Maintenance and Reporting - Maintenance records	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.

<b>Number of breaches recorded</b>	<b>0</b>	<b>Total compliance score</b> (see section 5 for scoring scheme)	<b>0</b>
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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

### Attendees

Graham Moore

Richard Livock

Gary Evans

Nick Jenkins

### Agenda

1. Regulation 60 Review
2. Odour complaint
3. Effluent Treatment Plant Aeration
4. Any Other Business

### Introduction

The visit was arranged as part of the ongoing inspection programme for the permitted facility and to review a recent complaint.

## **Regulation 60 Notice EPR (BREF Conclusions)**

Natural Resources Wales have recently issued Puma Energy Limited (Puma) with an Environmental Permitting Regulation 60 Notice requesting information to support a permit review taking into account an assessment of current operational controls against the Refinery EU BAT Reference (BRef) document. Not all aspects within the BRef document will be applicable as the company no longer operate as a crude oil refinery at the Milford Haven terminal, however a number of the controls will be applicable to a fuel distribution terminal.

The Operator is required to provide a response to the Notice by 30 June 2016, detailing all relevant Best Available Techniques Conclusions from the BRef document. NRW will be reviewing the submitted information to produce a new consolidated environmental permit based upon the schedule 1 activity of handling crude oil. However the permit will not require all aspects under the Industrial Emissions Directive (like what) as the activity is not referenced in the Directive.

NRW will require an updated EOPRA to support the notice.

We discussed the reporting of baseline conditions in line with point 7 of the Regulation 60 notice. We agreed that as a baseline report was submitted in 2007 and there is a continuation to adhere to their SPMP that a description of this method would satisfy the relevant point.

## **Progress with Refinery Units Removal**

The facility is now being operated as a large scale fuel distribution terminal, and as outlined in the meeting, the operator indicated that it intends to start the process of removing the old refinery process units. This removal activity has been delayed by the prospective buyer (Byco). Byco is a Pakistani refining company which has experience of similar demolition and removal projects in Milford Haven i.e. at the Waterston Refinery which is now in operation in Pakistan. The contract will be organised by ABB with the demolition being undertaken by WRD. Puma, Murphy Oil Corporation and Byco are currently developing a strategy to facilitate the operation. NRW will be reviewing the planned activities to ensure that the operator minimises their environmental impact. Currently Puma has responsibility for the demolition process as the environmental permit holder. If it considers necessary to relinquish its responsibilities, the operator should consider a permit transfer.

## **Odour complaint North of Puma (Walwyn's Castle area)**

17 May 2016 NRW received an odour report from a member of the public in the Walwyn's Castle area, alleging that a chemical odour was emanating from the installation.

NRW responded by 1) sending a local officer to the area to investigate 2) reporting the matter to operator. The local NRW officer could not detect a strong chemical odour on arriving in the area, however this was approximately 1 hour after the initial report.

The operator instigated their odour management plan; carried out a review of the meteorological conditions along with their operational activities.

Subsequently the Industry Regulation Team Leader has visited the reporter and they outlined that the odour was strong and similar to diesel. As a result of this report NRW will be attending future reports to try and

identify the odour and potential source.

#### Current site inventory

The Company have nominally increased the tank utilisation by approximately 30 - 40% compared with historical refining operation prior to shutting down. Distillate (Diesel and Kerosene) makes up the largest proportion of material stored with the remainder of the material being crude oil and gasoline.

#### Maintenance activities/ Loading and unloading activities (tanks/road and rail) (during report)

Puma outlined that there was limited maintenance taking place on the date of the odour report, as outlined below:

- Cleaning of Tank Roof (No4) no chemicals used only water jetting.
- General Mechanical inspection on Tank No 10 seals.
- Excavation of a pipeline near jetty gate entrance in Gelliswick.

The above activities are not known to cause significant odours off site, and it would be anticipated that properties nearer to those activities would have identified an odour if the activities resulted in a significant odour issue.

#### Current controls on tanks (floating roof seals/fixed roof, etc)

Puma follow the industry standards (American Petroleum Institute **API 650 Standard** – Welded Tanks for Oil Storage) for tank design and maintenance including **BS 2654:1989** (Specification for manufacture of vertical steel welded non-refrigerated storage tanks with butt-welded shells for the petroleum industry). This standard has now been superseded by **BS EN 14015:2004** - Specification for the design and manufacture of site built, vertical, cylindrical, flat-bottomed, above ground, welded, steel tanks for the storage of liquids at ambient temperature and above.

The company has started a programme to review the seals and controls on their current storage tanks to ensure they are at Best Available Technology in line with the recent EPR Regulation 60 Notice. The review will be specifically looking at the potential of VOC releases from the tanks taking into account the BRef – BAT conclusion 49. (BAT 49). Puma expect this work to be completed in Q4 (calendar) of 2016/17.

#### BAT Conclusions for storage and handling processes

In order to reduce VOC emissions to air from the storage of volatile liquid hydrocarbon compounds,

*BAT is to use floating roof storage tanks equipped with high efficiency seals or a fixed roof tank connected to vapour recovery system.*

*High efficiency seals are specific devices for limiting losses of vapour, e.g. improved primary seals, additional multiple (secondary or tertiary) seals (according to quantity emitted).*

*The applicability of high efficiency seals may be restricted for retrofitting tertiary seals in existing tanks.*

Puma has a number of floating roof tanks with primary and secondary seals, however as outlined above the company has outlined that a full review of all tank seals and VOC controls has started and will continue across the whole facility.

### Water draw off

As part of the on-site operations on fuel storage facilities, it is common practice to remove excess water from fuel storage tanks, which is known as water draw off. We reviewed the maintenance data to identify whether this activity coincided with the the odour reports, however this was not the case. The operator did advise that it was offloading distillate from the ship Miss Lucy on the 12, 14 and 19 May 2016 but again this did not correlate with the odour report.

### Effluent Treatment – Lagoon Aeration

Puma utilises an aeration system as part of their effluent treatment process prior to final discharge. The permitted activity currently requires the company to continue with this activity to ensure that the effluent is treated and compliant with consented discharge limits. The company has chosen to reduce the number of aeration unit in operation on the effluent lagoons as a result of reduced load following the closure of the refining activity (reduction from 12 aerators to 4), however it is important to note that the installation has had historical issues around the operation of the lagoon system, which resulted in the initiation of the aeration units. NRW is concerned that the removal of aeration from the middle lagoon could result in loss of bacterial activity which is key in treating the effluent and importantly marinating? the stability of the lagoon.

NRW has previously required Puma to review the sludge levels within the lagoons prior to any reduction in aeration. Puma has completed an assessment of the sludge levels which identified a build-up of sludge in some areas of the lagoon system i.e. south and west-. As a result NRW do not recommend a further reduction in the number of aerators on the lagoon system due to a significant odour episode resulting from a septic situation in the lagoons. There is increased risk of this occurring during warmer ambient temperatures and can be difficult to recover, as the previous operator experienced.

We would expect Puma to review their operation taking into account a management of change prior to any further reduction in aeration. The change would need to be reviewed in accordance with our EPR Guidance on change of operation and could result in a permit variation.

Puma advised that their OMP has not be reviewed since March 2016 and therefore would need to consider the proposed demolition work\_ as the activity falls within the Puma permitted boundary.

### AOB

As result of reviewing new BAT techniques Puma will be reviewing the change options using a cost benefit tool; however the company wish to obtain further guidance on the cost of harm references used in these types of reviews.

NRW will feedback appropriate references on the cost of environmental harm

## EPR Compliance Assessment Report

**Report ID:  
CAR\_NRW0023734**

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Site	Milford Haven Refinery	Permit Ref	AP3830XQ
Operator/Permit holder	Puma Energy Uk Ltd	Date	21/06/2016

### 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.

Other than the provision of advice and guidance, at present we do not intend to take further enforcement action in respect of the non-compliance identified above. This does not preclude us from taking enforcement action if further relevant information comes to light or advice isn't followed.

### 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.