

## Compliance Assessment Report CAR\_NRW0044701

**Permit being assessed:** YP3930EX.

**For:** Pembroke Refinery, **held by:** Valero Energy Ltd

**At:** Valero Energy Ltd , Pembroke Refinery, Pembroke, Pembrokeshire, SA71 5SJ.

**Type of assessment:** Site Inspection,

**Reason:** Routine.

**On:** 06/06/2024 between 09:00 and 16:00.

**Parts of permit assessed:** See below.

**NRW Lead Officer:** Michael Launder.

**Report sent to:** Manager Environmental Engineering, Valero Pembroke HES Department, on 30/08/2024.

### 1. Summary of our findings (full details in section 4)

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR1A - Installations - Management - General Management	Assessed (A)	
IR2C - Installations - Operations - Operating techniques	Assessed (A)	
IR3A - Installations - Emissions and monitoring - Emissions to water, air or land	Assessed (A)	
IR4C - Installations - Information - Notification	Action only (X)	

Result types are explained in more detail in the 'Important Information' section below.

Total non-compliances recorded	Total non-compliance score
0	0

How we use the non-compliance score to calculate your annual fee is explained in the 'Important Information' section below.

### 2. What action is required?

Criteria	Action needed	Complete by
IR4C	On completion of the VRU reliability study, operator to submit a summary to NRW, detailing most common failure modes	28/11/2024

Criteria	Action needed	Complete by
	and any proposed changes to the site sparing strategy in response.	

Compliance criteria codes are listed in the 'Important information' section below.

### 3. What will happen next?

Any non-compliance we have identified and recorded on this form is an offence. It can result in criminal prosecution and/or suspension or revocation of your permit.

#### **At this time, we do not intend to take any further action.**

This statement does not stop us from taking additional enforcement action if further relevant information comes to light or offences continue.

### 4. Details of our assessment

#### Introduction

This Compliance Assessment Report was completed following a site visit by Michael Launder on 6 June 2024. The aim of the visit was to discuss the outcome of the site internal EERA audit, proposals to reopen crude import lines between the refinery and the Valero Pembrokeshire Oil Terminal, and to inspect areas of the jetty where losses of product to water had recently been reported. The Valero Manager Environmental Engineering and Senior HES Specialist accompanied the Industry Regulation Officer during the visit.

#### EERA Audit

The Environmental Excellence and Risk Assessment programme is an internal corporate standard supporting the Valero Environmental Management System. An EERA audit at the Pembroke Refinery was carried out during 2023 and identified a number of actions and points of clarification relating to the EPR Permit.

- Road Tanker Wagon Vapour Recovery Unit (RTW VRU)

The RTW VRU (emission point A20) minimises release of VOC to atmosphere by diverting otherwise fugitive vapours through a carbon bed filtration system prior to venting. The Pembroke refinery has a single RTW VRU and during downtime for maintenance or repair, the vapour is vented to air unabated. Depending on availability of parts, the lead time for repairs can be up to 4 weeks.

The EERA audit requires the site to complete a reliability study on the RTW VRU, and Valero are seeking clarification on notification timescales to NRW in the event of downtime.

We understand that the first response to VRU downtime is for a mobile repair unit to be deployed to site by the manufacturer within 3 days. If the mobile unit does not carry the required spares to effect a repair immediately, the lead time can be up to 4 weeks.

In the event that VRU downtime exceeds the mobile repair unit response time and parts are required to be ordered with a longer lead time, NRW should be informed as soon as the operator becomes aware of the situation.

**Action: On completion of the VRU reliability study, operator to submit a summary to NRW, detailing most common failure modes and any proposed changes to the site sparing**

**strategy in response.**

- Out of service waste water treatment plant equipment

The auditors identified out of service equipment within the waste water treatment plant and queried the Valero process for reporting this to NRW in situations where the discharge is still meeting limits specified by the permit.

The malfunction of any equipment that may reduce the capacity or efficacy of the WWTP, and ultimately compliance with the emission limit values in the permit, should be reported to NRW immediately. For example, loss of clarifier function to the extent that suspended solids limits may be exceeded, or depleted biological treatment capacity (cold weather inhibition or mass die-off of bacteria) that may cause total N or ammoniacal N limits to be exceeded.

Further to this, operating conditions that may lead to other breaches of the permit, for example condition 3.2.1 relating to emissions of substances not controlled by emission limits or condition 3.3.1 relating to odour, should be reported to NRW as soon as the operator becomes aware of the situation.

- Loss of flare

A further action from the audit requires the operator to clarify trigger points for reporting loss of flare.

Current procedures require the HES Department to be notified of any loss of the sweet or sour flares, and NRW are to be informed if the flare cannot be reignited within 3 hours. In the event the flare cannot be reignited within 6 hours, single flare operation is commenced.

For the alkylation unit flare, again NRW would be notified within 3 hours of loss of flare. During an extended outage of the alky flare beyond 6 hours. Whether or not the flare is active, the Acid Relief Neutraliser would continue the process of neutralisation of the hydrogen fluoride through addition of caustic. Should the flare not be reignited within 6 hours, the alkylation unit would be placed into a circulation mode.

These trigger points are agreed to be appropriate. Further to this, any operating conditions that may lead to other breaches of the permit, for example condition 3.2.1 relating to emissions of substances not controlled by emission limits or condition 3.3.1 relating to odour, should be reported to NRW as soon as the operator becomes aware of the situation. Permit condition 4.3.1 also requires the operator to report to NRW "an incident or accident which significantly affects or may significantly affect the environment".

- Releases to atmosphere

An action from the audit requires the operator to clarify trigger levels for reporting leaks to atmosphere to NRW.

The site EPR permit does not specify a minimum limit below which the operator is not required to notify NRW of releases to atmosphere.

Such releases, of any scale, may be breach in of permit conditions 3.1.1 and 3.2.1 relating to emissions of substances not controlled by emission limits. Permit condition 4.3.1 also requires the operator to report to NRW "an incident or accident which significantly affects or may significantly affect the environment".

It was agreed that the inclusion of NRW in reports issued to the Health and Safety Executive under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) would be an appropriate threshold and means of notification.

For the release of gases in the open air, the RIDDOR threshold is 500 kg or more of a flammable gas. This is agreed to be appropriate for most site arising gases such as refinery fuel gas, but hydrogen sulphide and hydrogen fluoride will require a lower threshold for notification to NRW.

There may be further scope to align reporting of incidents with other RIDDOR requirements. This will be followed up separately with the operator.

- Releases to ground

Further clarification was sought from the auditors on the application of the decision tree used by the operator to determine whether a spill of hydrocarbon to ground is required to be reported.

The site EPR permit does not specify a minimum limit below which the operator is not required to notify NRW of releases to ground.

Such releases, of any scale, may be breach in of permit conditions 3.1.1 and 3.2.1 relating to emissions of substances not controlled by emission limits. Permit condition 4.3.1 also requires the operator to report to NRW "an incident or accident which significantly affects or may significantly affect the environment".

The decision tree as presented appears to not be suitable as a basis for decisions on whether to report a spill, as the application of the down-gradient and surface water proximity criteria do not sufficiently account for volume spilled nor reflect potential environmental harm arising from increased volume spilled. This issue appears to arise from the retrofitting of reporting criteria onto a decision tree intended for post-incident monitoring of soil and groundwater. The operator has agreed to review the decision tree.

#### C-Track Diesel Spill Update

The ERM Environmental Consultant seconded to Valero presented an update on the most recent borehole and surface water monitoring relating to the No 1 Diesel Sea Line (Pipe Track C) leak in January 2022.

Immediately after the incident, downgradient surface water results showed high levels of total petroleum hydrocarbon, up to 1720 µg/l (February 2022). Since then, recorded total petroleum hydrocarbon has been decreasing and recent results from January 2024 have been below the limit of detection.

Also in response to the spill, three groundwater monitoring boreholes were installed in 2022, two close to the spill location and one close to the site perimeter fence line. The perimeter well has consistently returned non-detect results for total petroleum hydrocarbon, diesel range organics and BTEX, while the other wells where dissolved product was detected are showing decreasing trends.

One borehole close to the leak was installed with shallow and deep sections. The deep well consistently contains a layer of free phase product. Immediately after the spill, up to 2.73m of product was recorded in this well. Since 2022, the product level has recharged/rebounded several times after baildown and removal, and now recharging very slowly since the most recent bailout in late 2023.

The update was reviewed by NRW Hydrogeology Lead Specialist who advised that the operator should incorporate further sampling into the monitoring programme to confirm the declining trend in dissolved product, continue to monitor the free-phase product and undertake further baildown as required.

#### VPOT/Refinery Crude Transfer Line

A disused crude oil transfer line across the Milford Haven Waterway between Valero Pembroke Refinery and Valero Pembroke Oil Terminal is proposed for reinstatement. Amendments to EPR permits for both sites are required to bring the crude line back into use, to reflect additions to the site operations and to update the site operating techniques.

The project team (including HES Senior Manager, Manager Project Engineering, Team Lead Process Engineering, Staff Project Engineer) went through a number of queries. requesting clarification around the application process and timescales for determination. A number of areas requiring further clarification were followed up with NRW Installations Permitting Team and reported back to the operator

#### LDAR Questionnaire

During the visit a template Leak Detection and Repair (LDAR) questionnaire, focussed on the management and maintenance of gas pipelines across the site, was shared with the operator. The completion of this questionnaire is a precursor to a targeted audit of LDAR management at Valero.

The questionnaire was sent to the operator on 6 June 2024 and a completed form returned on 1 August 2024. The completed form will comprise the basis of a site based audit, planned for Q4 2024.

#### No. 3 Kerosene Sea Line Releases

During the visit, both points of the No. 3 Kerosene Sea Line where leaks had been reported were visited.

Further detail relating to these incidents and the visit to the jetty will be covered in a separate CAR.

If you have any queries about this report, or to discuss completion of any actions, please contact the NRW Officer named above.

## Important information

### Legal status of this report

Your permit is issued to you under the Environmental Permitting Regulations. You have a responsibility to comply with the conditions of your permit and prevent pollution/harm of the environment. You must also ensure that you comply with any other relevant legislation that may apply to your site's operations.

This report explains the findings of our assessment and any action you are required to take. We categorise non-compliance using our guidance for assessing non-compliance at regulated sites.

When we find potential non-compliance/s we will normally give you advice on how to maintain compliance.

To correct non-compliance, we may:

- require you to take specific actions
- issue a notice
- review the conditions of your permit.

Any advice and guidance we give will be without prejudice to any other enforcement response that we consider may be required.

### Assessment results and non-compliance categories (used in section 1):

Assessment result	Description
Assessed (A)	Assessed or assessed in part, no evidence of non-compliance found
Action only (X)	Action only relating to the activity assessment
Ongoing (O)	Ongoing non-compliance, not scored

Non-compliance category	Description	Score
C1 Major	Potential to have a major, serious, persistent and/or extensive impact or effect on the environment, people and/or property	60
C2 Significant	Potential to have a significant impact or effect on the environment, people and/or property	31
C3 Minor	Potential to have a minor or minimal impact or effect on the environment, people and/or property	4
C4 No environmental impact	Non-compliance at a regulated site that cannot foreseeably have any impact on the environment, people and/or property	0.1

### How we use assessment scores

The number and severity of non-compliances recorded in a year will affect your annual subsistence fee the following year. A non-compliance factor is added to your site's Operator

Performance Risk Appraisal (OPRA) score when we calculate your fee to reflect the additional resource we use to assess permit compliance.

**If your assessment result in Section 1 is suspended, what does this mean?**

In line with our guidance, we may suspend scores for up to six months to allow time for remedial action to be taken. Suspended scores will be re-instated if the action is not completed.

**Full list of Industry compliance criteria (used in section 1 and 2):**

**1. Management**

- IR1A – General management
- IR1B – Finance (only applicable to Landfill)
- IR1C – Energy efficiency
- IR1D - Efficient use of raw materials
- IR1E - Avoidance, recovery and disposal of wastes produced by the activities
- IR1F - Multiple operator installations

**2. Operations**

- IR2A – Permitted activities
- IR2B – The site
- IR2C – Operating techniques
- IR2D – Technical requirements
- IR2E – Improvement programme
- IR2F – Pre-operational conditions
- IR2G – Landfill engineering (only applicable to Landfill)
- IR2H – Waste acceptance (only applicable to Landfill)
- IR2I – Leachate levels (only applicable to Landfill)
- IR2J – Closure and aftercare (only applicable to Landfill)
- IR2K – Landfill gas management (only applicable to Landfill)

**3. Emission and Monitoring**

- IR3A – Emissions to water, air or land
- IR3B – Emissions of substances not controlled by emission limits
- IR3C – Odour
- IR3D – Noise and vibration
- IR3E – Monitoring
- IR3F – Pests
- IR3G – Air quality management plans
- IR3H – Monitoring for the purposes of the Industrial Emissions Directive (this heading includes Large Combustion Plants)
- IR3I – Fire

**4. Information**

- IR4A – Records
- IR4B – Reporting
- IR4C – Notification

**Enforcement response**

Any non-compliance with a permit condition is an offence and we may take legal action against you. Action we take can include prosecution, serving a notice on you and/or

suspension or revocation of your permit. See our Enforcement and Sanctions Guidance for further information.

### **Data protection notice**

You should make sure that anyone named in this report knows that the information it contains will be processed by Natural Resources Wales to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s).

We may also use and/or disclose the report in connection with:

- offering or providing you with our literature or services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. 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 our service
- Freedom of Information Act or Environmental Information Regulations requests.

We may also pass it on to our agents or representatives to do these things on our behalf.

### **Disclosure of information – this report will be available to view on-line**

If you think this report contains commercially confidential information that should not be placed on our public register, you must contact your local Natural Resources Wales office within **fifteen working days** of receiving this report, using the contact details in the accompanying email or letter. You must give a full explanation of why it should not be added to our public register, including specifying which information is commercially confidential. We will assess your request and respond to you within twenty working days to let you know if we agree to your request.

### **What do I do if I disagree with the report or have a complaint?**

If you disagree with this compliance assessment report, you should contact the lead officer without delay to discuss your concerns.

If you are unable to resolve the issue with the lead officer or their line manager you should contact our Customer Contact team on 0300 065 3000 (Monday to Friday 08:00 to 18:00), or email [enquiries@naturalresourceswales.gov.uk](mailto:enquiries@naturalresourceswales.gov.uk) for details of how to raise your dispute further through our Complaints and Commendations procedure.

If you are dissatisfied with our response, you can contact the Public Services Ombudsman for Wales by phone on 0300 7900203 or by email at [ask@ombudsman.wales](mailto:ask@ombudsman.wales)

### **Welsh Language Standards**

We are committed to establishing Natural Resources Wales as a naturally bilingual organisation. We will provide compliance reports in your preferred language.