

Compliance Assessment Report CAR_NRW0039607

Permit being assessed: KP3734SH.

For: Barry Silicon Installation , held by Navigator Terminals Windmill Limited

At: Vopak Terminal Windmill Ltd Hayes Road , Sully, Penarth, Vale of Glamorgan, CF64 5RZ.

Type of assessment carried out: Site Inspection, Reason: Routine.

On 22/03/2022.

Parts of permit assessed: Lagoon releases and integrity fugitive emissions

NRW Lead Officer: Andi Kemp.

Report sent to: Andy Jackson, Terminal Manager on 25/03/2022.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
A1 - Specified by permit	Assessed (A)	
B3 - Infrastructure - Site drainage engineering (clean and foul)	Assessed (A)	
E3 - Emissions - Surface water	Assessed (A)	
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	Assessed (A)	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	Assessed (A)	

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

Total number of 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?

No action required.

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

Compliance Assessment Report (CAR1) Navigator Windmill Terminal: EPR KP3734SH, 23rd March 2022

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Purpose Of Compliance Assessment

This CAR1 covers routine submissions from mid-2020 until the present and any actions raised in the previous CAR1 report. The pertinent permit conditions are:

- 2.2.2.3 and Table 2.2.4 – uncontaminated surface water from lagoon
- 2.2.4.1 – fugitive emissions – methanol floating roof and other tank losses
- 4.1.2, 4.1.4 – reporting of specified data, see Schedule 2

The last CAR1 report was issued on 21st July 2020 and confirmed the close out of previous actions and itself issued the following action:

Action 1 Navigator 21st July 2020: *Update the regulator on the following items:*

- *Was valve V022 fixed when that tank came off line in Jan. 2020?*
- *What is the schedule for the floating roof seals nearing their end of life?*
- *Is the estimated methanol loss of 42 kg (2019) including the leak from V022 during 2019?*

Due: 31st August 2020

In addition, there is one extant open action:

Action 1 Navigator Windmill 28th Aug. 2019: *In the light of the above response and recommendation 1 Feb. 2019 (Mar. 2019 CAR1), NRW and operator to use these responses and drainage plan (URS Site Drainage Plan, Fig. A3, May 2005) to discuss the location of the interceptors and lengths of the drainage system inspected by CCTV.*

This will remain open but will be completed when normal site visits resume. This action built upon a recommendation in the Feb. 2009 CAR1:

Recommendation 1 Navigator Windmill February 2019: *To complement this survey, the areas that have been surveyed should be recorded on a site drainage plan, so any abandoned areas or areas not surveyed and damaged areas, can be seen immediately in relation to the site layout.*

Action 1 Navigator Windmill 28th Aug. 2019 still open.

Action 1 from August 2019 will be dealt with by way of a brief inspection and examination of drainage plans on site – this to be arranged later in 2022. A date can be fixed when on site on 29th March for the COMAH emergency planning inspection.

Action 1 July 2020 – a response was received in December 2020 and is copied below:

Action 1 Navigator 21st July 2020: Update the regulator on the following items:

- Was valve V022 fixed when that tank came off line in Jan. 2020? *This was believed to be due to a release from a flange, the gasket of this flange was changed during the planned tank outage in January, however unfortunately the subsequent reports show this release has now worsened. Readings were taken twice in 2020 (both in second half of year due to difficulties getting contractors to site due to COVID)*
August value for V022 = 4370ppm
November value for V022 = 2850 ppm
Work is now planned to replace the valve and inspect the flange faces. If flange faces are in poor condition we may need to fabricate new spool pieces. We can do this work without tank outage, however will need some thought due to the availability of isolations for this valve.
- What is the schedule for the floating roof seals nearing their end of life? *3 of the 4 Internal floating roof seals have been replaced. Tk102 is scheduled for replacement Sept 2021*
- Is the estimated methanol loss of 42 kg (2019) including the leak from V022 during 2019? *The calculations include all points on the system. There is a threshold of 500ppm. Above 500ppm, they are reported as leaks for corrective action. The calculation of methanol loss as fugitive emissions however does consider the summation of releases from all points (i.e. above and below 500ppm threshold). So to confirm, yes the 42kg includes this leaking valve*

Updates on valve replacements and other leaks are contained within the annual submissions – see below.

Action 1 21st July 2020 closed.

Routine Annual Submissions

Submissions have been made for 2020 and 2021. Both years are assessed together below.

No discernible trends in waste production – it is noted that tank cleaning accounts for the majority of hazardous waste and cess pit waste accounts for most of the non-hazardous waste. Waste minimisation options are limited at this site, but the waste production is also limited. Note comments about cess pit eventually being decommissioned – although there will still be sanitary waste as the site is not on the main sewer.

Energy use trends are stable, with a slight reduction in use in 2021 due to running one D4 tank, a month-long shutdown and milder weather meaning less demand on the trace heating system.

Mass releases are also lower in both 2020 and 2021 and the operator explains this as less throughput due to Dow Dragon Plant closing and 4 seals on the methanol floating roof tank replaced.

The end of each annual submission contains the fugitive emissions survey results. 398 points are tested using US EPA Method 21, with action levels threshold at >500 ppm. The surveys are done twice a year. This only covers the methanol tanks – the other tanks are fixed roof and blanketed with nitrogen. These summaries provide useful information on progress with replacing floating roof seals and having a fitter on site at the time of the monitoring to fix issues as they are detected wherever possible. Overall the emissions have decreased.

Lagoon Releases

Lagoon releases are checked when the operator submits the data covering TOC (Dow GC – FID), pH and visible oil. Results have been checked from July 2020 through to March 2022 and are all compliant.

There have been occasions when Dow have not had their TOC equipment operating and other arrangements have been made between the regulator, operator and Dow, where in the absence of providing a TOC result, methanol and total siloxanes are used.

Earlier in 2021 an integrity issue was detected with the lagoon as water was held at volume for a hydrostatic test. It was then agreed to only hold water in the lagoon up to a certain volume as the potential breach would be higher up the lagoon wall seal. Another issue in July 2021 was that standing water in the lagoon failed a pH test and exceeded the limit. No water was released and firewater was added to dilute the lagoon contents. It is believed that biological processes in the water (held since May 2021) could have led to this increase in pH. It certainly would not be methanol or the siloxanes. The site checked bunds and valves and found no evidence of leaks. The operator provided a comprehensive investigation and evidence supporting the increase in alkalinity due to rapid algal growth using up carbon dioxide in the water. The site also provided evidence of the successful retest after firewater addition.

Another workaround was agreed to allow works to be carried out on the lagoon, which meant releasing lagoon water with only pH testing and visual – it was agreed that the overall integrity of the lagoon and successful repair outweighed the negligible risk to surface waters. This was due to the necessity to carry out the works without waiting the (up to) three days Dow analysis turnaround.

Action 1 Navigator Windmill 23rd March 2022: Operator to update the regulator on the integrity repairs and current state of the lagoon, including a summary of the routine daily, weekly or other periodic surveillance, maintenance and testing of the lagoon structure. **Due: 30th April 2022.**

END

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.

What are suspended scores?

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 and Waste action criteria (used in section 1 and 2):

A: Permitted activities

- A1 Specified by permit

B: Infrastructure

- B1 Infrastructure – Engineering for prevention and control of emissions
- B2 Infrastructure – Closure and decommissioning
- B3 Infrastructure – Site drainage engineering (clean and foul)
- B4 Infrastructure – Containment of stored materials
- B5 Infrastructure – Plant and equipment

C: General management

- C1 General management – Staff competency/training
- C2 General management – Management system and operating procedures
- C3 General management – Materials acceptance
- C4 General management – Storage, handling, labelling and segregation

D: Incident management

- D1 Incident management – Site security
- D2 Incident management – Accidents, emergency and incident planning

E: Emissions

- E1 Emissions – Air
- E2 Emissions – Land and groundwater
- E3 Emissions – Surface water
- E4 Emissions – Sewer
- E5 Emissions – Waste

F: Amenity

- F1 Amenity – Odour
- F2 Amenity – Noise
- F3 Amenity – Dust/fibres/particulates and litter
- F4 Amenity – Pests/birds and scavengers
- F5 Amenity – Deposits on road

G: Monitoring and records, maintenance and reporting

- G1 Monitoring and records, maintenance and reporting – Monitoring of emissions and environment
- G2 Monitoring and records, maintenance and reporting – Records of activity, site diary/journal/events
- G3 Monitoring and records, maintenance and reporting – Maintenance records
- G4 Monitoring and records, maintenance and reporting – Reporting and notification to Natural Resources Wales

H: Resources efficiency

- H1 Resource efficiency – Efficient use of raw materials
- H2 Resource efficiency – Energy efficiency

Enforcement response

Any permit condition non-compliance 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 20 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 – 18:00), or email 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

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.