

Compliance Assessment Report

Report ID:
CAR_NRW0035632

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

Site	Barry Silicon Installation	Permit Ref	KP3734SH		
Operator/Permit holder	Navigator Terminals Windmill Limited				
Regime	Installations				
Date of assessment	28/08/2019	Time in	10:00	Out	13:00
Assessment type	Audit				
Parts of the permit assessed	Rountine submissions and audit actions				
Lead officer's name	Kemp, Andi				
Accompanied by					
Recipient's name/position	Andy Jackson/ Terminal Manager	Date issued	29/08/2019		

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
A1 - Specified by permit	A	
B4 - Infrastructure - Containment of stored materials	A	
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	A	
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

Compliance Assessment Report Navigator Windmill Terminal (KP3734SH): 28th Aug. 2019

Purpose of Compliance Assessment

This Compliance Assessment Report Form (CAR1) covers the following items:

- Previous lagoon sampling results
- Ad Hoc discussion about former PPC application and current status of regulations
- Previous actions from March 2019 CAR1
- Future regulatory topic – lagoon design and integrity
- Sampling and analysis of lagoon discharge

Present at this regulatory meeting were Andi Kemp (AK) Regulatory Officer NRW; Andy Jackson (AJ) Navigator Terminal Manager; Natalie Lewis (NL) SHE Manager.

Previous Lagoon Sampling Results

The operator has submitted three sample results for lagoon discharge since the last CAR1 form: 7th March, 25th June and 21st August 2019. There are no emission limit values (ELVs) for the discharge, but the operator currently has the sample analysed for visual oil / grease, methanol, TMS, suspended solids and pH.

Each set of the results shows no levels (if detected at all) of contamination to be of concern (above the former discharge results). pH is also within the previous permitted range of 6 – 10.

A discussion about sampling and analysis took place and is covered in another point below.

Ad Hoc discussion about former PPC application and current status of regulations

This came about when discussing the current permit requirements related to the sampling and analysis of the lagoon before the contents are discharged to the Cadoxton river.

Prior to the Environmental Permitting Regulations (EPR) in 2007, industrial activities that were prescribed in Schedule 1 of the then Pollution Prevention & Control Regulations 2000 (PPC), were permitted under this PPC regime. Originating from the Integrated Pollution Prevention & Control EC Directive (IPPC). There were several other authorising regulations in place at the time, covering discharges to controlled waters, groundwater authorisations and waste management activities, to name three. These four sets of regulations (variously covering environmental controls) were combined in the UK under the EPR 2007. In Europe several industrial directives were repealed and combined into the Industrial Emissions Directive (IED) in 2010, including IPPC. Whilst this did not fundamentally change what industrial activities were in scope, EPR had to be amended to account for this overarching EC Directive and so all permits for installations were varied to refer to the amended activity references in IED. The Navigator Windmill Terminal did not require a variation because it is a Directly Associated Activity (DAA) – an activity not needing a permit in its own right, but linked to an EPR installation, i.e. Dow.

The original permit application document for this terminal is: IPPC Permit Application Support, Vopak, July 2005 Final, Issue 1, 44358865 / R673, URS. This is still extant and used in conjunction with the permit that was issued from this application. The permit (KP3734SH) makes reference to parts of this application. Even though an earlier permitting regime is mentioned in these older documents, for Navigator, these are the current, existing permit application documents – this includes the Site Condition Report (formerly called the Application Site Report).

The status and content of the relevant permit application documents were pertinent to the discussion on sampling and analysis of lagoon discharges.

Previous actions from March 2019 CAR1

The CAR1 issued in March 2019 included 7 actions. Action 1 is the setup of the sampling and analysis

inspection. NRW has received responses to actions 2 – 7 incl. Action 1 will be closed out upon completion of that inspection.

Action 2 – received and accepted; concerned nitrogen blanket feed based on tank movements – action closed.

Action 3 – received and accepted; concerned the ERV lifting due to fouling of the PVRV. Action closed.

Action 4 – received and accepted; bund content calculations. Calculation data supplied for all bunds, which satisfy the 110% and 25% rules. Action closed.

Action 5 – received and accepted; firefighting foam checked annually and protected from UV radiation. Action closed.

Action 6 – received and accepted; this concerned inspection of other interceptors. Action closed.

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. Due:* At the same time as the sampling / lagoon inspection.

Action 7 – received and accepted; details areas that showed defects in a CCTV survey now repaired. Action closed.

Future regulatory topic – lagoon design and integrity

An inspection will be made of the lagoon in due course (likely to coincide with the sampling inspection), which will build on evidence submitted as part of the COMAH Safety Report and any pertinent revision items. The inspection will not require any repeat demonstrations (as that would be covered under COMAH) but will visually inspect the lagoon for any physical defects or deterioration. Things to be inspected would typically be joints, corners, water seals, floor, pipe / valve penetrations, condition of concrete etc.

Sampling and analysis of lagoon discharge

When the EPR permit was issued for this terminal the original discharge consent for lagoon discharges was rescinded and discharge conditions were incorporated into the permit. The permit conditions are:

- 2.2.2.3 and Table 2.2.4 – confirms discharge of **uncontaminated** water from the lagoon, via emission point W1 to the Cadoxton
- 2.2.8.1 and Table 2.2.11 – requires the reporting of lagoon samples to the regulator

The permit decision document acknowledges the former discharge consent but considered the discharge to be low risk and therefore no emission limit values or parameters were set. The Operating Techniques condition has not directly incorporated the sampling and parameters into the permit. Therefore the permit requires the lagoon to be sampled before discharge, via the permitted point to the permitted receptor and that the discharge should be uncontaminated. What now can be defined by agreement between the operator and regulator is:

- Parameters to be monitored
- Status of analysis
- A reporting template
- Upper controls levels that mean the discharge is not uncontaminated

The original discharge consent (details taken from the permit application document) contained these parameters and limits:

- pH – not less than 6 or greater than 10
- suspended solids – 50 mg/l
- BOD – 20 mg/l
- Mineral oils – 5 mg/l

The following documents have been referenced to aid in advising the operator and deciding on measures that are protective of the environment:

- M18 Technical Guidance Note Monitoring of discharges to water and sewer, EA v6 Sep. 2017 – this

provides advice on sampling and staff training, management systems, self auditing and an index of analytical methods

- ISO 5667 – 3 Water quality sampling, Part 3 Guidance on the preservation and handling of water samples
- Standard Methods for the Examination of Water and Wastewater 22nd ed.

The operator should consider these documents as references when reviewing or evaluating their procedures.

It was discussed during the meeting that pH would be retained as an obvious parameter to measure along with a visual assessment of any immiscible floating layers, e.g. oil / grease. The operator stores methanol and various polydimethylsiloxane and organosiloxane compounds in linear or cyclic form. Diesel, vehicle fuels and lubricating fluids will also be present on site. Therefore an analysis that can detect organic compounds should be sufficient to determine if the lagoon water has been contaminated, along with visual and pH. Suspended solids should not be required – as long as the operator desludges the lagoon periodically and samples correctly, i.e. the sampler does not scrape the sampling device across the sides or bottom of lagoon – it is believed the samples are taken from a tap valve.

Some general properties that the range of stored siloxane based materials exhibit (variously depending on individual compound), that may influence the most appropriate sampling and analytical methods to use are:

- Oily type liquids less dense than water
- Generally low solubility in water
- High vapour pressure
- High Henry's Law constant (atm m³/ mol) – tendency to move into the gas phase from the aqueous phase

The literature suggests that biodegradation is low / slow and the best way to identify PMDS fluids is via chromatography. This is apparently the method that Dow Silicones use when analysing Navigators' lagoon samples. Chromatography would also be suitable for methanol. This separation by chromatography is usually complemented by a mass spectrometer – the combined GCMS would identify and quantify the compounds present.

Therefore it can be proposed that the operator has their samples analysed for pH and organic content via GCMS, to differentiate between methanol and siloxane based compounds. This should be complemented

by a visual assessment for colour, visible solids and oil / grease floating on sample. The samples should be taken applying the best practice from the referenced guidance documents, e.g. analysed without delay (within 24 hrs), samples refrigerated, no headspace in sample bottle, glass bottle. When the analysis is reported to the operator, the template should be filled in, which should show:

- pH
- Siloxane compounds
- Methanol
- Visual
- Volume discharged and date

NRW is content to allow this analysis be carried out by Dow Silicones and this is because there are no ELVs or parameters stipulated in the permit and the risk is low. Dow also have expertise in the analysis of these compounds. Therefore this analysis does not need to be carried out within the MCerts framework – although it is sensible to note the guidance around MCerts requirements for examples of best practice.

An inspection (as per Action 1 Feb. 2019, from March 2019 CAR1) should now be arranged within the next 6 weeks, for the regulator to assess the sampling at the lagoon and analysis at Dow Silicones. The operator is to arrange this.

In terms of applying some control levels to warn of contaminated lagoon:

- pH – not less than 6 or greater than 10
- Methanol – 5 ppm
- Siloxane compounds combined – 5 ppm
- No visual oil / grease or gross solids content

Given the primary, secondary and tertiary containment engineering at the site, contamination should not get into the lagoon, so the levels above can be considered indicative of some leak or spill of some kind that needs investigating. The lagoon results over the years submitted to the regulator have never shown any contamination to the extent of the limits proposed above.

Lastly recommendation 2, 28th July 2016, which concerned the assessment of sampling procedure NTW-OPS-LAG-0001. Since then Navigator are the operator and the nomenclature of procedures changed. At today's meeting the sampling procedure was again submitted, procedure number: NTW-OPS-PROC-0027, issue 1. The previous procedure assessed consisted of a flow chart, but the document received today appears to be that same flow chart and a written covering procedure – it is assumed that there was also a written part to the earlier procedure, but NRW were not given it during that 2016 inspection. Therefore it is reasonable to presume the two procedures are the same and that the recommendation made still holds. That recommendation suggested: taking two samples – keep one held on site in case there is an issue with the initial sample and / or result and so a retest could be made; include in the procedure the necessity to analyse without delay (within 24 hrs) and keep sample refrigerated, with no headspace or sediment in bottle.

A separate CAR1 form will be compiled after the sampling, analysis and lagoon integrity inspection.

Action 2 Navigator Windmill 28th Aug. 2019: *The operator to create the template for reporting the lagoon sample results as discussed above.* **Due:** For next lagoon result submission.

END

EPR Compliance Assessment Report

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Site	Barry Silicon Installation	Permit Ref	KP3734SH
Operator/Permit holder	Navigator Terminals Windmill Limited	Date	28/08/2019

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.

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.