

Compliance Assessment Report

Report ID:
CAR_NRW0036313

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

Site	Barry Silicone Plant	Permit Ref	BR9685IX			
Operator/Permit holder	Dow Silicones UK Limited					
Regime	Installations					
Date of assessment	10/12/2019	Time in	10:00	Out	17:00	
Assessment type	Report/Data Review					
Parts of the permit assessed	Emissions control and management					
Lead officer's name	Leakey, Antony					
Accompanied by						
Recipient's name/position	Judith Sartor/ Environmental Specialist	Date issued	10/02/2020			

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	
C2 - General Management - Management system and operating procedures	C3	1.1.1
E1 - Emissions - Air	C3	3.1.2
E3 - Emissions - Surface water	A	
E5 - Emissions - Waste	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	2	Total compliance score (see section 5 for scoring scheme)	8
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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

Dow Silicones UK Ltd reporting review and Site Visit Report - 10/12/19

CWW Bref and TOC BAT AEL

A further discussion covering options for achieving the TOC BAT AEL and the Bref footnote criteria for effluent TOC loading was undertaken. A review of the now issued regulators' CWW Bref interpretation guidance suggests that the methanol recovery columns on the MeCl plants could be considered as pre-treatment. Mass balance data for the MRCs showing that the quantity of methanol recovered is not of significant economic value may provide the necessary evidence for this position. It is also necessary to demonstrate that the loading criteria in the Bref footnotes will be met.

ACTION: Dow Silicones to produce a case with supporting evidence for TOC BAT AEL compliance using footnote 4.

W716 reaction column replacement

It is noted in the TOC reduction discussion that a new reaction column is to be installed in 2020 on the hydrolysis process. Details of the changes should be recorded to update the permit application details if necessary.

ACTION: Dow Silicones to provide an update at next site meeting.

Cadoxton WFD failure

The WFD failure is associated with DO depletion in the lower reaches of the Cadoxton downstream of the Dow discharge and are correlated with increased saline conditions. A review of Dow effluent salinity suggests that there may be a contribution, but it is unlikely to be the sole cause. Further investigation, including sampling of the Cadoxton downstream of the discharge, may be useful in assessing impacts associated with the salinity of the effluent.

ACTION: Dow Silicones to provide an update at next site meeting.

ERU dioxin emissions

Monthly monitoring of dioxin/furan results continue to remain in compliance. The limited data variability suggests that quarterly monitoring is now appropriate. The likely cause is now considered to be the over-feeding of chlorinated compounds to the ERU during an abnormal start up situation. No further actions are required.

WWT plant

The review of WWT asset criticality is progressing and key controls identified. Improved instrumentation including influent and effluent TOC meters will be operational by September 2020.

A DPR brine filter press trial will establish the prospects for reduction of solids carry over to primary WWT with potential benefits for filter cake waste classification.

ACTION: Dow Silicones to provide updates as necessary.

W931 methanol heat exchanger failure

The incident has been subject to initial investigation under COMAH and details provided to HSE. It has been agreed that further follow up will be undertaken under EPR, but some aspects of the incident will be incorporated into the COMA intervention plan for 2020/21. EPR follow-up on actions will be undertaken after March 2020.

W931 MeCl ELV exceedance

Following a power failure on 23/11/19 at 2300h the MeCl plants were being brought back into service on 29/11/19 when pressure surges caused the vent feeds to the ERU to trip to atmospheric venting. Start-up was suspended but the daily MeCl mass release ELV was exceeded by around 15%.

Initial investigation suggests that inexperience of restarting from crash trips and lack of clarity in the SOP on how to manage pressures through the plant contributed to the pressure surges.

The small increase in MeCl emissions is unlikely to cause any significant air quality impacts, although it is noted that there were some reports of chemical odour in Barry around the time of the increased venting. Dow Silicones are to provide details of the venting rates and times. The ELV exceedance is considered to be a minor category 3 breach of permit condition 3.1.2. The failure to provide sufficient training and adequate SOPs constitutes a breach of permit condition 1.1.1. This is a low impact category 3 non-compliance because of the limited potential for significant effects upon air quality. Identification of actions to prevent a recurrence is continuing as part of the RCA.

ACTION: Dow Silicones to provide an update at next site meeting.

Hazardous waste audit follow-up

A more detailed procedure for classifying wastes for disposal to landfill was reviewed. The procedure does not describe how waste categorisation is recorded, although historic reports are available.

ACTION: Dow Silicones to provide copies of historic waste categorisation reports and revise the procedure to include recording of waste composition review outcomes.

ISO14001 certificated

The current group EMS certification will lapse without renewal on 28 November 2020. This is a corporate policy and will not affect the current EMS implementation. There may be implications for the installation EPOPRA score.

ACTION: Dow Silicones to review the Barry EPOPRA score including the EMS element when the certification lapses.

W941 Reboiler condition

New tube wall thickness data in April 2019 have shown no deterioration. The next measurements are not due until the turnaround later in 2020.

ACTION: Dow Silicones to provide updates as necessary.

Monitoring returns and notification review

Monitoring data for Q4 and 2019 has been reviewed and no breach of permit conditions was identified other than those already addressed in previous correspondence.

END

EPR Compliance Assessment Report

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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.

In respect of the above non-compliance you have been issued with a warning. At present we do not intend to take further enforcement action. This does not preclude us from taking additional enforcement action if further relevant information comes to light or offences continue.

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			
E1	C3	Identification of actions to prevent a recurrence is continuing as part of the operator	30/04/2020
C2	C3	Identification of actions to prevent a recurrence is continuing as part of the operator	30/04/2020

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.