

Compliance Assessment Report CAR_NRW0037553

Permit being assessed: JP3632ZH.

For: Barry CHP , held by Dow Silicones UK Limited

At: Wimborne Road - Dock 2, Barry, Vale of Glamorgan, CF63 3DH.

Type of assessment carried out: Report/Data Review, Reason: Routine.

On 31/12/2020.

Parts of permit assessed: Emissions control, noise and emissions

NRW Lead Officer: Antony Leakey.

Report sent to: Judith Sartor, Environmental Specialist on 10/02/2021.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
B1 - Infrastructure - Engineering for prevention and control of emissions	Assessed (A)	
E1 - Emissions - Air	C3 Minor (Suspended)	3.1.2
F2 - Amenity - Noise	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
1	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
E1	Complete HP boiler low NOx burner upgrade when COVID-19 restrictions allow.	31/12/2021

Action 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**Dow CHP reporting and compliance assessment review – 31/12/20****LCP Bref Review/end of TNP**

The gas turbine upgrades have been completed successfully during the latter end of 2020 resulting in a significant reduction in routine NOx emissions. HP boiler upgrading may be delayed due to the ongoing COVID-19 restrictions.

NRW has agreed an approach that will allow HP boiler operation exceeding the Annex V NOx ELV for 8-11 weeks after 1 July 2020 during delayed upgrading and statutory inspection works. So far 3.5 weeks of HP boiler operation above the Annex V NOx ELV have been required due to delays caused by COVID-19 restrictions.

The permit condition 3.1.2 non-compliance has been recorded as minor category 3 due to the very limited effect on air quality as the emissions were within previously permitted levels and continued for a limited period of time. The non-compliance has been suspended as there is a credible plan to achieve compliance (upgrade programme) already in place.

CEM AST work was undertaken in December 2020.

ACTION: Dow Silicones to provide a further update on upgrading and commissioning progress, including any CEM management changes, at next meeting.

Noise control

Several noise complaints were received by NRW from local residents about overnight noise from the Dow Silicones site at Barry on 22/23 January 2021.

The main chemical processes were shut down on Tuesday 19th January. Whilst the main steam stop valve (final HP steam isolation from the common 60 bar g header) was isolated, the valve packing failed which led to a significant steam leak causing fence line noise levels of up to 75 dB.

A live temporary repair was arranged on Friday 22nd January (HRSG-A was still online supplying steam to the main site). Unfortunately, the HP system in CHP tripped on Thursday 21st January. This resulted in a complete shutdown of the 60 bar g HP main.

The repair proceeded on Friday 22nd, but with no pressure on the downstream side of the valve the repair failed to hold when Dow restarted HRSG-A overnight. On Saturday 23rd a second repair with pressure in the HP main was successful.

The valve was overhauled during the May 2019 TAR and stem packing would be expected

to last between 3 and 5 years between overhauls. Dow typically overhaul every 2-3 years during full site shutdowns.

The expected service life of the temporary repair is around 2 years. Dow maintenance guidelines require temporary repairs to be rectified at the next shutdown opportunity which will be in June 2021 when a permanent repair on the valve will be undertaken.

There is no evidence to suggest the other two HRSG main steam stop valves are failing and these are currently planned to be serviced in 2022. The need for a review of service interval in light of the recent failure will be undertaken by the Dow reliability team.

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

The event and associated noise level were not witnessed by an NRW officer and therefore is not a breach of permit condition 3.4.1. Also, there are no apparent management system failings associated with the maintenance regime for the valve.

Monitoring returns and notification review

Monitoring data for Q3 and Q4 2020 and no breach of permit conditions was identified other than those already addressed in previous correspondence.

It is noted that >10 days of invalid CEM data was accumulated during Q1 2020 on emission point A1 of the LCP. The cause of the invalidation is unclear. The proposed preventative actions will be reviewed at the next compliance meeting.

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

TNP Annual Verification Reports were reviewed and it is noted that flow quality assurance is not undertaken, and mass emissions reporting appears to rely upon flow factors. A review of validation and implementation of these flow factors is required to ensure that reporting is being undertaken to the required standard.

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

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.