

Compliance Assessment Report

Report ID:
CAR_NRW0026736

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

Site	Barry Silicon Plant	Permit Ref	BR9685IX
Operator/Permit holder	Dow Corning Ltd		
Regime	Installations		
Date of assessment	12/10/2016	Time in	10:00
Assessment type	Site Inspection	Out	16:00
Parts of the permit assessed	Emissions, waste, procedures		
Lead officer's name	Leahey, Antony		
Accompanied by			
Recipient's name/position	Judith Sartor/ Environmental Specialist (EH&S Delivery)	Date issued	05/12/2016

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. 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
B4 - Infrastructure - Containment of stored materials	A	
C2 - General Management - Management system and operating procedures	A	
E1 - Emissions - Air	A	
E2 - Emissions - Land and groundwater	A	
E3 - Emissions - Surface water	A	
F3 - Amenity - Dust/fibres/particulates and litter	A	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	A	
H1 - Resource Efficiency - Efficient use of raw materials	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

Dow Corning Limited Site Visit Report

Site visit – 12/10/16

Business Update – the restructured ownership of the Dow Corning joint venture to become part of Dow Chemical Company has resulted in reorganisation of the Barry operations, including the loss of a significant number of staff. The new Site manager is now Kepa Diaz De Mendibil.

Fugitive dust sources – fugitive dust sources at the site were reviewed to ensure continued reduction of potential off-site emissions.

The W424 grinder replacement bucket elevator installation was underway and will eliminate fugitive silicon dust emissions from this area.

Temporary waste inventory on the old landfill area has reduced significantly since shipment of DPR for recovery in Germany commenced and now stands at 5,800 tonnes compared to more than 10,000 tonnes in January 2016. The area is expected to be clear by 2018 to allow remediation.

Construction of a second waste storage area is planned. This should be under cover in order to minimise fugitive emissions.

ACTION: Dow Corning to provide details of waste storage proposals when available.

Over 1000 tonnes of construction waste has accumulated on the old landfill area and urgent consideration needs to be given to its future use or removal. Options include temporary construction of wind breaks and stock dividers for the residual DPR inventory until it is cleared, followed by use in the landfill remediation.

ACTION: Dow Corning to confirm total quantity and age of construction and demolition waste and proposals for use on site.

ERU optimisation

The reduced residence time implementation has resulted in reductions of 31% in hazardous DPR and 59% in non-hazardous DPR production. Chloromethane venting has remained static as there is a trade-off between increased DPR recovery and vent processing. This is currently considered to be optimal as waste reduction will drive wider environmental improvements than simply reducing VOC emissions. However, the various BRef requirements relating to VOC releases should be kept under review when making investment decisions associated with the unit.

The ERU cooling steam flow meter was found to be over reading by approximately 50% and residence times were actually significantly higher than estimated. This instrument should be considered environmentally critical and subject to calibration checks. This aspect will be included in the venting strategy SOP.

Venting strategy SOP training updates will be completed by 30 November 2016.

ERU cleaning regime emissions have been re-examined (see NWG Environmental test report dated 26/7/16) and no significant issues found. Potential future emissions peaks should be checked by carrying out by occasional scheduling of monitoring during online cleaning activities.

ACTION: Dow Corning to provide update on outstanding ERU actions at next quarterly meeting.

W957 Hydrogen Plant CO breach

The elevated release point A50 CO emissions were caused by the same heat exchanger failure that occurred prior to repairs in 2008. An improved design will be installed during 2017.

ACTION: Dow Corning to provide an update on installation programme at next site meeting.

TFS Green List Waste Export

A review of waste exports under the Annex VII "Green list" was undertaken. RG6000 Gum (unfilled) goes to India under contract with Veolia. A similar waste rubber polysiloxane scrap containing additives with hazardous properties was also exported via a similar route. These hazardous properties are related to inhalation hazards associated with silica and are claimed to not be manifested in the waste rubber due to inextricable encapsulation. However, new GHS requirements mean that these properties appear on the datasheet.

It is currently unclear whether or not an up-to-date waste classification assessment to WM3 has been undertaken, although earlier work by Dow Corning concluded that the waste was non-hazardous. A WM3 assessment would be the main basis for determination of whether the export can continue as a green list.

ACTION: Dow Corning to provide details of waste classification assessment undertaken or carry out an assessment.

River Cadoxton Abstraction

Eel pass installation is now complete and the weir obstruction is now mitigated at the abstraction point and the exemption notice schedule requirement relating to eel passage is discharged.

Partial costings for compliant screening have been received and initial indications suggest that installation may be cost beneficial. However, a more rigorous cost-benefit assessment is considered to be necessary. Some screen options (notably the Goffo) are potentially acceptable but detailed installation and maintenance costs are required. Further discussion regarding requirements will be undertaken at next site meeting.

In order to allow time to complete a detailed CBA the timescale for completion of the exemption notice schedule requirement relating to eel screening or alternative measures is now extended by 12 months until **31 December 2017**.

Complaints review

Four noise complaints were received during the summer shutdown, 2 of which were at night and related to jetting operations when barriers were not erected. It is unclear whether the requirement for barriers is a procedural requirement.

ACTION: Dow Corning to provide details of noise management process for turnaround and maintenance activities at next site meeting.

New Tank 140 vent requirements

A new recycle tank may have vent emissions of siloxane vapour due to displacement on level changes. Consideration should be given to installation of a conservation (pressure/vacuum) vent if safety and economic considerations allow in order to minimise losses.

W322 hot oil burner upgrade

The current 3-4 MWth unit has emissions greater than 200 mg/m³. An upgrade to achieve MCPD compliance is proposed during 2017. Note that MCPD sets minimum standards and IED BAT requirements may require lower emissions. MCPD new plant standards may be considered to represent BAT in the future for upgraded plant.

ACTION: Dow Corning to provide details of expected emissions levels and justification when available.

Release point A120 monitoring

Recent variation improvement condition IP33 requires monitoring of dust releases from this new release point. As compliance is based upon visual appearance, assessment on this basis accompanied by photographic evidence is considered to be a sufficient response.

Internal environmental inspections

A review of environmental checklists for internal use was undertaken. An example of an internal environmental inspection on the speciality polymers plant was reviewed. It is noted that W410 vent A78 temperature is regularly above the upper limit for minimising xylene releases and related procedural requirements upon alarm are omitted. However, no corrective actions are recorded in PART 4.

ACTION: Dow Corning to provide details of corrective actions required and completed.

Monitoring return and notification review

Monitoring data has been reviewed and no breach of permit conditions was identified.

END



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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.

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 reports should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within twenty 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.