

EPR Compliance Assessment Report

Report ID: BR9685IX/0256561

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

Site	Barry Silicon Plant EPR/BR9685IX			Permit Ref	BR9685IX	
Operator/ Permit holder	DOW CORNING LTD					
Date	29/01/2016			Time in	09:00	Out 17:00
What parts of the permit were assessed	Emissions, waste storage, complaints					
Assessment	Site Inspection	EPR Activity:	Installation	X	Waste Op	Water Discharge
Recipient's name/position	Environmental Team Leader					
Officer's name	Tony Leakey			Date issued	29/01/2016	

Section 1 - Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation and any action you may need to take are given in the "Detailed Assessment of Compliance" (section 3). 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			Condition(s) breached
a) Permitted activities	1. Specified by permit	N	
b) Infrastructure	1. Engineering for prevention & control of pollution	A	
	2. Closure & decommissioning	N	
	3. Site drainage engineering (clean & foul)	N	
	4. Containment of stored materials	N	
	5. Plant and equipment	A	
c) General management	1. Staff competency/ training	N	
	2. Management system & operating procedures	C3	1.1.1(a);
	3. Materials acceptance	N	
	4. Storage handling, labelling, segregation	A	
d) Incident management	1. Site security	N	
	2. Accident, emergency & incident planning	N	
e) Emissions	1. Air	A	
	2. Land & Groundwater	A	
	3. Surface water	C4	3.1.2;
	4. Sewer	N	
	5. Waste	N	
f) Amenity	1. Odour	N	
	2. Noise	N	
	3. Dust/fibres/particulates	A	
	4. Pests, birds & scavengers	N	
	5. Deposits on road	N	
g) Monitoring and records, maintenance and reporting	1. Monitoring of emissions & environment	A	
	2. Records of activity, site diary, journal & events	N	
	3. Maintenance records	N	
	4. Reporting & notification	A	
h) Resource efficiency	1. Efficient use of raw materials	N	
	2. Energy	N	

KEY: C1, C2, C3, C4 = CCS breach category (* suspended scores are marked with an asterisk),
A = Assessed (no evidence of non-compliance), N = Not assessed, NA = Not Applicable, O = Ongoing non-compliance – not scored

Number of breaches recorded	2	Total compliance score (see section 5 for scoring scheme)	4.1
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If the Total No Breaches is greater than zero, then please see Section 3 for details of 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 (e.g. 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 suspended or consolidated scores.
- details of advice given
- any other areas of concern
- all actions requested
- any examples of good practice.
- a reference to photos taken

This report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

Site visit – 7/5/15

TFS – some issues with delayed approvals were discussed and it is understood that these are now resolved.

Complaints review – a summary of 2014 and 2015 YTD complaints was reviewed. The majority were butadiene odours, which have been under investigation by NRW. Some repeat noise complaints were also evident, although no primary source has been attributed. This may need to be reviewed during 2016.

D4/D5 cyclics – a review of the need for more detailed release and environmental monitoring requirements may be necessary in light of potential for environmental persistence and bioaccumulation. This is likely to be carried out as part of the BREF review process.

Site visit – 9/9/15

The scene of the **W306 fire** on 30/5/15 was visited and confirmed to be a minor incident caused by inadequate preparation for hot work adjacent to a filter drip tray likely to contain flammable siloxane. All materials were contained within the site containment systems and limited smoke was produced, so there were no off-site impacts.

A review of the Dow Corning investigation shows that there were training and procedural failings that contributed to the incident cause. Actions are in place to address these issues. As there was potential for escalation of the incident due to the continuing hydrogen evolution after the initial fire was tackled this is considered to be a low impact category 3 breach of the permit management condition 1.1.1(a).

No further actions are considered to be necessary and the **investigation actions will be followed up at the next site visit.**

Fugitive dust sources – potential fugitive dust sources at the site were visited to review potential for off-site impacts following complaints to the North of the plant.

The grinder plants were visually inspected. The main W940 plant has no filter bag burst detection and reliance is placed upon routine bag replacement to prevent significant silicon dust emissions. This may need to be examined under the BREF permit review. A duct failure on 23/8/15 had left a range of silicon particles and lumps scattered across the plant levels below the duct. These were larger particle sizes and there was no evidence of significant fine dust blow. However, this failure is **potentially reportable under permit condition 4.3.1 and this will be followed up at the next site visit.**

W424 grinder showed more signs of routine fugitive emissions due to bucket elevator leakage, although this appeared to be localised and unlikely to cause off-site effects. Replacement is planned, although the timescale is not clear.

ACTION: Dow Corning to confirm replacement timescale for W424 bucket elevator.

Waste storage areas were also visited. The “Alamo” is well contained and there was no evidence of fugitive dust emissions. The old landfill area contained significant inventory of DPR due to reduced recovery outlets in Europe. Despite wet conditions there were areas of apparently dry powder due to the poor cohesive and wetting properties of the material. Dust blow under high wind speeds is possible. **Consideration should be given to use of surfactants to improve wetting or PVA to seal storage mounds expected to remain undisturbed for sufficiently long periods of time.**

ERU optimisation

The initial 2 second residence time trial to increase ERU through put to reduce venting to atmosphere has been successful in demonstrating no deterioration in emissions performance. A further trial to reduce residence time to 1.5 seconds is to be undertaken, with the addition of AOX analysis of the caustic scrubber effluent in case of carryover of chlorinated compounds from the water scrubber.

ACTION: Dow Corning to provide next ERU trial monitoring report when available.

River Cadoxton Abstraction

A proposal to modify the abstraction point to meet best practice, including an eel pass at the weir has been submitted. The exemption notice requires implementation within 1 year of the proposals. The proposal will be reviewed at the next site meeting.

CHP IED Chapter III Review

The CHP plant permit has been reviewed and updated to incorporate IED Chapter III requirements. Some aspects will need review during the transitional period until the large combustion plant BREF BAT conclusions come into effect. In particular measures needed to achieve the Chapter III minimum emissions standards will need to be established.

Annual Fugitive Releases Report (Permit condition 4.2.5)

The 2014 report is noted. The increased inventory on the landfill storage area is noted, see comments under site inspection of 9/9/15. The fugitive emissions to air summary raises questions over the potential severity of some events and whether or not they should be reported as separate incidents. In particular, the events resulting from instrumentation, failed equipment, blown discs and excess flow to scrubbers will be reviewed at the next site meeting.

SPMP Report (Permit condition 4.2.6)

The 2015 report is noted.

Annual EMS Review (Permit condition 4.2.7)

The 2014 report is noted. Please provide an update on Area 5 final plant scrubber design review at the next site meeting.

Monitoring return and notification review

Monitoring data has been reviewed and the following aspects are noted:

A43 – high HCl result on 5/2/14 is be within measurement method error and is not considered to be permit condition breach. It is understood that further high results in Q3 are due to blocked scrubber water distribution nozzles and modifications have now been made to the low flow

parameters to ensure early detection of blockage before emissions approach the ELV.

W1 – high copper results exceeding the 95%ile ELV during April are attributed to pumping problems and solids carry over from primary to secondary WWTP. Pump reliability issues have been addressed and clarifier polymer changes have been addressed. This is considered to be a minor no impact breach of permit condition 3.1.2 because the copper levels were not significantly higher than the ELV and the duration of each excursion was brief meaning that any impact on achievement of the EQS in the river is likely to be small.

No other breach of permit conditions was identified.

END

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Section 3- Enforcement Response		Only one of the boxes below should be ticked	
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.			X
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.			
We will now consider what enforcement action is appropriate and notify you, referencing this form.			

Section 4- Action(s)			
Where non-compliance has been detected and an enforcement response has been selected above, this section summarises the steps you need to take to return to compliance and also provides timescales for this to be done.			
Criteria Ref.	CCS Category	Action Required/Advised	Due Date
See Section 1 above			
C2	C3	Investigation action follow up at next site visit.	14/3/16
E3	C4	No action specified	N/A

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 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 which 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 fulfill 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 (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 and taking any resulting action
- preventing breaches of environmental law
- assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Information 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 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 the officer's line managers. 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.