



EPR Compliance Assessment Report

Report ID: BL1096IB/0193339

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

Site	PADESWOOD CEMENT WORKS	Permit Ref	BL1096IB
Operator/ Permit holder	Castle Cement Limited		
Date	25/10/2013	Time in	09:30
		Out	12:50
What parts of the permit were assessed	Various		
Assessment	Site Inspection	EPR Activity:	Installation: X Waste Op: Water Discharge:
Recipient's name/position	Gary Young (Plant Manager)		
Officer's name	Stuart Ross	Date issued	12/11/2013

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	N	
	2. Closure & decommissioning	N	
	3. Site drainage engineering (clean & foul)	N	
	4. Containment of stored materials	N	
	5. Plant and equipment	C3	1.1
c) General management	1. Staff competency/ training	N	
	2. Management system & operating procedures	C3	1.1
	3. Materials acceptance	N	
	4. Storage handling, labelling, segregation	N	
d) Incident management	1. Site security	N	
	2. Accident, emergency & incident planning	N	
e) Emissions	1. Air	N	
	2. Land & Groundwater	N	
	3. Surface water	N	
	4. Sewer	N	
	5. Waste	N	
f) Amenity	1. Odour	N	
	2. Noise	N	
	3. Dust/fibres/particulates	N	
	4. Pests, birds & scavengers	N	
	5. Deposits on road	N	
g) Monitoring and records, maintenance and reporting	1. Monitoring of emissions & environment	C3	2.3.14
	2. Records of activity, site diary, journal & events	N	
	3. Maintenance records	N	
	4. Reporting & notification	N	
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	3	Total compliance score (see section 5 for scoring scheme)	12
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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.

Comments

This Compliance Assessment Report follows a site inspection on 25/10/13 including a review of recent complaints regarding dust and plume colour. Subsequent to the site inspection, further information on the issues discussed was provided by Hanson (as requested) by e-mail on 01/11/13.

The comments (and where appropriate permit breaches) are based on the inspection and additional information.

1. Plume Colouration

At 13:32 on 23/10/13 a local resident reported that the plume from the kiln stack was pink in colour. This was substantiated by Natural Resources Wales following an inspection of the plume from various angles. The pink colouration was most intense at the stack exit and then quickly dispersed.

The colour of the plume is not itself a compliance issue but its cause may be linked to permit conditions that control the use of alternative fuels, raw materials and kiln operating conditions.

Hanson reported that Kiln 4 had been operational and steady from midnight and that the kiln was stopped at approx 13.10 for a suspected blockage in the tower. This stopped the main kiln fan and immediately stops all raw material and fuel feed to the calciner. The raw mill and coal mill will also stop. Prior to the shutdown MBM, Cemfuel and coal were being used to fire the kiln / calciner and were stopped at the point of kiln shutdown. Coal feed was maintained to the main burner in the kiln, at a much reduced rate and it was during this time that the pink plume was reported and substantiated.

Kiln operating and emissions data has been provided and confirms the above account and that continuously monitored emissions were compliant with permitted limits during normal kiln operation.

Further reports of a pink plume were received from members of the public at 11:53 on 04/11/13 and 10.45 on 08/11/13.

Batch analysis for Cemfuel being used between 02/10/13 and 30/10/13 was provided and shows compliance with the permitted specification (table S2.1). For all parameters there was significant headroom including iodine and metals. Whilst SRF was not in use during the incident on 23/10/13, please provide the full analysis (as per table S2.1) for SRF used prior to this incident and up to 08/11/13. Please do so by 22/11/13.

Hanson has collected samples of raw meal (containing limestone, sand and PFA), coal, SRF, MBM and water. The samples have been sent for halide analysis - please forward the results to NRW as soon as they become available.

2. HCl CEM Failure (Emission Point A8)

On 19th / 20th September 2013 the Continuous Emissions Monitoring of HCl stopped for approximately 16 hours due to a fault with the CEM.

A CEM failure is known as a 'WID abnormal operation' and permit condition 2.3.14 requires that if the period exceeds 4 hours then waste derived fuels shall cease to be burnt as soon as practicable until 'normal operation' is restored.

This condition was breached and there is the potential for elevated emissions of HCl to go unchecked with a potential environmental impact. This breach attracts a CCS score of 3. All other continuous monitoring occurred as required by the permit and no emissions limits were exceeded.

Procedures should have been in place to clearly identify the CEM fault to the kiln operator / appropriate personnel and appropriate action taken to repair / re-set the CEM within the 4 hour period and if this not possible cease to burn waste.

Permit condition 1.1 requires that the operator shall manage and operate the activities in accordance with a written management system that identifies and minimises the risk of pollution and by using sufficient competent persons and resources. This condition has been breached and attracts a CCS score of 3.

Hanson have conducted root cause analysis and identified areas for remedial action including refresher training for shift managers on permit and WID compliance requirements, and an investigation into the potential improvement to the 'fuels off' protocol to ensure wastes cease to be burnt four hours after CEMS equipment failure.

Due to concerns raised by this incident, WID compliance will be subject to audit by NRW before year end.

3. Dust Releases

a) High Pressure Water Jetting

Dust releases from the pre-heater tower / kiln inlet area were observed by NRW staff on 10/09/13 and 23/10/13. Hanson has reported that these incidents coincided with high pressure water jetting of the kiln system to remove build up / blockages although the link is not certain.

Whilst we accept blockages may occur in the kiln system requiring removal by high pressure water jetting, we require justification that all appropriate measures are being taken to prevent and minimise emissions (dust / fumes) caused by this activity. In the first instance, please provide a copy of the existing procedure / method statement for tower cleaning / jetting works by 22/11/13. I note that you are currently revising this procedure - please forward a revised copy upon completion.

b) CCTV Coverage - kiln inlet area

Thank you for confirming that an order has been placed to provide additional or alternative coverage of this area. This will allow potential fugitive emissions to be detected and managed more effectively and forms part of your appropriate measures to prevent and minimise dust emissions. Please keep me up to date with progress.

c) Kiln bypass skip area

During the inspection it was noted that there is potential for dust releases from the partially enclosed bypass duct chute / skip. Thank you for confirming that a door will be fitted to the enclosure during the next kiln shut down at the end of November.

d) Raw Meal Re-circulating Screw

A Part A notification was received 01/11/13 reporting a loss of raw meal from the raw meal silo recirculation screw due to a mechanical failure. This incident was reported by a member of the public who witnessed a cloud of dust on the site.

The Part B notification received 01/11/13 reported that the screw conveyor transporting meal to the top of the silo snapped near the non-drive end. The rotation monitor that was in place on the screw did not detect the failure and the preceding equipment continued to feed the screw. Material backed up behind the snapped section forcing a path between the screw casing and screw lid. The material fell approximately 70ft to ground level inside the building. The momentum of the material carried it out of the building where it was visible.

In response the rotation monitor has been re-positioned so that it will identify a failure in the screw. The feed system is programmed such that the feed system will stop should the screw fail. Spilt dust was cleaned up immediately from the affected areas. An incident of this nature has potential for a minor impact on offsite air quality.

This incident is a breach of permit condition 1.1 (CCS3) in so far that appropriate maintenance checks should have been made to ensure the rotation monitor was effective in detecting a failure to minimise the risk of pollution.

4. Noise

Thank you for providing a copy of your acoustic camera survey and proposed remedial actions. We have reviewed the reports and have the following comments;

a) All noise readings obtained have been reported as dB and not weighted to dB(A) to account for the relative loudness perceived by the human ear. This is particularly important when assessing the offsite impact and should be used in future reports.

b) FFT / sound level scatter graphs for offsite noise surveys are included in the report. The data would be better presented (in future) as a histogram which is typical for presenting such data. It also enables dominant frequencies to be more easily identified.

c) The report identifies a number of noise sources that are / may cause an offsite impact (particularly through tonal contributions):

- Clinker cooler building – fan/motor/discharge pipe
- Kiln Shell Fans
- Clinker cooler stack
- Clinker cooler heat exchange fans
- Raw mill ID fan
- Water cooling pump

The report also highlights that further noise mitigation measures could be taken to reduce noise from the raw mill ID fan including closing the enclosure doorway, insulating the fan, motor and exit flue and possibly the addition of building insulation. The report states that the dominant 200Hz tone from the fan exit can be seen at a number of receptor locations.

We welcome the remedial plan developed in response to the noise survey which provides a brief description of possible remedial measures along with costs and timescales for completion. However, the plan does not propose any remedial measures for the raw mill ID fan which at face value appears to be an omission / requires further justification.

Whilst the remedial plan provides a summary of your proposed actions, we seek further clarification as to the acoustic design rationale of the proposed mitigation measures and ideally the anticipated reduction at source (benefit). Options should be subject to a brief cost benefit analysis to demonstrate that your chosen remedial option is BAT.

If remedial works are completed that do not meet BAT then further work may be required at additional cost.

Please review your remedial plan considering the points raised above and provide additional information requested by 22/11/13. If you require additional time please contact me to discuss.

d) Maintenance - the noise survey identified that a high level noise source (air slide DCE filter) on the raw mill elevated conveyer platform had its noise level reduced from around 72dB to around 50dB following the repair / balancing of components. This is a significant noise reduction that shows the importance of planned preventative maintenance which could have avoided this issue. Please advise how your maintenance system identifies and prevents issues of this nature for all potentially significant noise sources. Please do so by 22/11/13.



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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.

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.

X

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			
B5	C3	Remedial measures already taken.	12/11/13
C2	C3	Abnormal operation / HCL CEM failure - implement remedial measures as detailed in your report received 01/11/13	15/11/13
G1	C3	Abnormal operation / HCL CEM failure - implement remedial measures as detailed in your report received 01/11/13.	15/11/13

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 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 (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.