



**ENVIRONMENT
AGENCY**

Permit with introductory note

Pollution Prevention and Control Regulations 2000

**Blue Circle Industries plc
Lafarge Cement UK
Aberthaw Business Unit
East Aberthaw
Barry
CF62 3ZR**

Permit number

BL3986

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Introductory note

This introductory note does not form a part of the Permit

The following Permit is issued under Regulation 10 of the Pollution Prevention and Control Regulations 2000 (S.I.2000 No.1973) ("the PPC Regulations") to operate an installation carrying out one or more of the activities listed in Part 1 to Schedule 1 of those Regulations, to the extent authorised by the Permit.

The Permit includes conditions that have to be complied with. It should be noted that aspects of the operation of the installation which are not regulated by those conditions are subject to the condition implied by Regulation 12(10) of the PPC Regulations, that the Operator shall use the best available techniques for preventing or, where that is not practicable, reducing emissions from the installation.

Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Brief description of the installation regulated by this permit

The Aberthaw site operates a single dry process kiln (Number 6) with a maximum production capacity of 565,000 tonnes per annum of clinker.

The main raw materials consist of carboniferous and siliceous materials suitable for cement clinker production. The raw materials are normally stored in covered reception hoppers, or if full, on an open stockpile adjacent to the hoppers and then blended with slag and iron oxide before transportation to stone storage silos. These materials are sourced from Aberthaw quarry which is covered by this permit. This installation does not include the soon to be developed South Quarry at Aberthaw. Raw materials are then secondary crushed prior to being weighed and milled in a closed circuit grinding mill system to produce raw meal. Transport of stone is carried out on covered belt conveyors. Dust laden air from the primary and secondary crushers are treated by bag filtration before release to atmosphere via 13.5 metre and 4.2 metre stacks.

The raw meal is pneumatically transported to a system of blending silos before discharge to storage silos prior to being fed to the kiln for clinker manufacture. The raw material is extracted from storage, weighed and pneumatically conveyed to a four stage preheater which precedes the rotary kiln. The material is converted at the kiln to cement clinker at a production rate of typically 1720 tonnes per day. Dust laden air from the raw meal blending and storage silos and feed systems are treated by bag filtration before release to atmosphere via a 17.8 metre stack.

The kiln is fired at high temperature with pulverised fuel, usually a coal and petroleum coke mixture. The pulverised fuels are stored in open stockpiles. Following kiln repairs gas oil is used to preheat the kiln; gas oil is only occasionally used to produce clinker.

The cement clinker passes through planetary coolers attached to the kiln before transportation to enclosed storage areas prior to final grinding into cement. Exhaust gases from the kiln are treated by a newly installed bag filter before discharge to atmosphere via a 100.6 metre chimney. There is no external exhaust from the coolers as the gases are drawn into the kiln. Dust laden gases from the clinker conveying and coal-grinding systems are treated by bag filtration systems before discharge to atmosphere via stacks of height 6.5 to 38 metres above ground level.

A closed circuit cement mill system (3000 HP mill) grinds the cement clinker with gypsum and limestone to produce the finished cement. Dust laden air from the 3000 HP cement mill is treated by bag filtration systems before release to the atmosphere via stacks of height 30 and 29 metres.

The cement is pneumatically transported from the mill house to storage silos. Storage silos are fitted with unitary fabric filters which discharge direct to atmosphere at the height of the silos. Cement held in these silos is loaded into road tankers or bagged. Occasionally clinker is despatched directly for processing elsewhere at other locations. Dust laden air from the cement bag and bulk loading facility are treated by fabric filtration systems before release to atmosphere through stacks of height 25 and 15 metres above ground level.

Particulate material is released at high level from the cement kiln, relatively high level from the 3000 HP cement mill and at lower level from a wide range of abatement plant fitted to contain emissions from other sources. Sulphur dioxide, oxides of nitrogen, carbon dioxide and carbon monoxide are also released at high level from the cement kiln chimney.

Drainage from the coal stockpile areas passes through two settling pits, fitted with surface interceptor plates, prior to mixing with other site water from the quarry in the works feed aqueduct. The combined stream is discharged to the River Kenson. Water draining from the lorry wash is discharged to the works feed aqueduct or directly to the River Thaw following successive treatment in three oil interceptor systems. There are no releases to public sewers.

Releases to land consist mainly of general industrial waste, cement waste, kiln bricks and general office waste. The onsite landfill does not form part of the installation boundary.

Other PPC Permits relating to this installation

Permit holder	Permit Number	Date of Issue
Not Applicable		

Superseded Licenses/Consents/Authorisations relating to this installation

Holder	Reference Number	Date of Issue
Blue Circle Industries PLC	AI0713	27/08/1993
Variation to IPC Authorisation	AP6826	18/01/1995
Variation to IPC Authorisation	BA2679	28/04/1998
Variation to IPC Authorisation	BE2379	30/11/1998
Variation to IPC Authorisation	BF2013	31/01/1999
Variation to IPC Authorisation	BF9131	23/07/1999
Variation to IPC Authorisation	BH7911	28/01/2000
Variation to IPC Authorisation	BK4545	14/02/2001
Variation to IPC Authorisation	BK7439	01/04/2001

Talking to us

If you contact the Agency about this Permit please quote the Permit Number.

The Operator should use the Emergency Hotline telephone number (0800 80 70 60) or any other number notified to it to give a notification under condition 5.1.1.

Confidentiality

The Permit requires the Operator to provide information to the Agency. The Agency will place the information onto the public registers in accordance with the requirements of the PPC Regulations. If the Operator considers that any information provided is commercially confidential, it may apply to the Agency to have such information withheld from the register as provided in the PPC Regulations. To enable the Agency to determine whether the information is commercially confidential, the Operator should clearly identify the information in question and should specify clear and precise reasons.

Variations to the permit

This Permit may be varied in the future. The Status Log within the Introductory Note to any such variation will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued.

Surrender of the permit

Before this Permit can be wholly or partially surrendered, an application to surrender the Permit has to be made. For the applicant to be successful, they would have to be able to demonstrate to the Agency, in accordance with Regulation 19 of the PPC Regulations, that there is no pollution risk and that no further steps are required to return the site to a satisfactory state.

Transfer of the permit or part of the permit

Before the Permit can be wholly or partially transferred to another person, a joint application to transfer the Permit has to be made by both the existing and proposed holders, in accordance with Regulation 18 of the PPC Regulations. A transfer will be allowed unless the Agency considers that the proposed holder will not be the person who will have control over the operation of the installation or will not ensure compliance with the conditions of the transferred Permit. If the Permit authorises the carrying out of a specified waste management activity, then there is a further requirement that the transferee is considered to be a "fit and proper person" to carry out that activity.

Status Log

Detail	Date	Comment
Application BL3986	Received 28/08/01	
Commercial Confidentiality Claim	Received 28/08/01	Company withdrew claim by letter dated 12/09/01
Response to request for information	Request dated 12/10/01	Response dated 02/01/02 Final submission of revised application on CD format
Response to request for information	Request dated 10/01/02	Response dated 31/07/02 Response dated 15/08/02 Response dated 06/12/02
Operator's first request to extend deadline of response to request for information	Request dated 05/04/02	Request accepted and confirmed on 08/07/02
Operator's second request to extend deadline of response to request for information	Request dated 02/08/02	Request accepted and confirmed on 07/08/02
Operator's third request to extend deadline of response to request for information	Request dated 08/08/02	Request accepted and confirmed on 08/08/02. Information received on 15/08/02
Response to request for information	Request dated 03/10/02	Response dated 21/10/02
Permit BL3986	Determined 21/01/03	

End of introductory Note.

Permit

Pollution Prevention and Control
Regulations 2000



**ENVIRONMENT
AGENCY**

Permit

Permit number

BL3986

The Environment Agency (the Agency) in exercise of its powers under Regulation 10 of the Pollution Prevention and Control Regulations 2000 (S.I. 2000 No. 1973), hereby authorises **Blue Circle Industries PLC** ("the Operator"),

Of/ whose Registered Office is

The Old Rectory

Misterton

Lutterworth

Leicestershire

LE17 4JP

Company registration number 00066558

to operate an Installation at

Lafarge Cement UK

Aberthaw Business Unit

East Aberthaw

Barry

CF62 3ZR

to the extent authorised by and subject to the conditions of this Permit.

Signed

A handwritten signature in black ink, enclosed in a rectangular box.

P Burgess

Authorised to sign on behalf of the Environment Agency

Date

21 January 2003

Conditions

1 The permitted installation

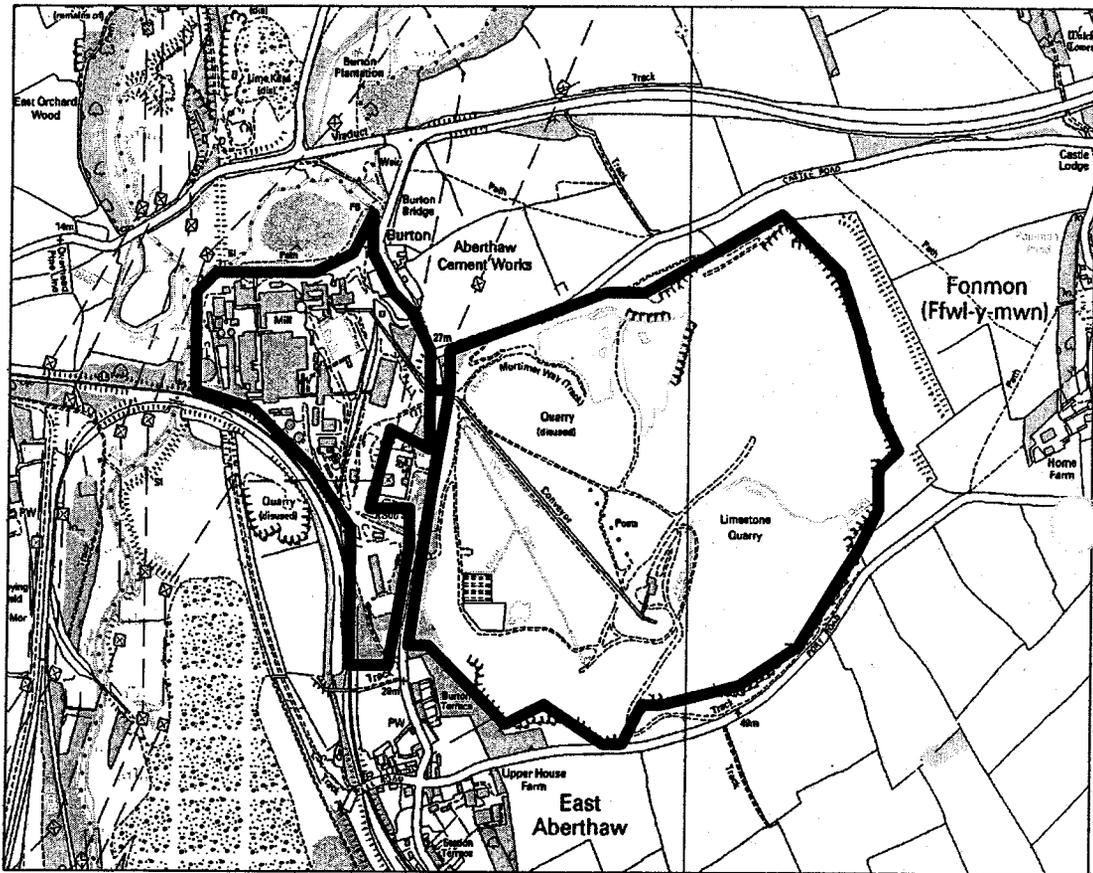
1.1.1 The Operator is authorised to carry out the activities and/or the associated activities specified in Table 1.1.1.

Table 1.1.1

Activity under Schedule 1 of the Regulations/ Associated Activity	Description of specified activity	Limits of specified activity
Producing or grinding cement clinker [Schedule 1 Activity – Chapter 3, Section 3.1, Part A(1)(a)]	The operation of a dry cement making process.	Area defined in the site layout plan, resubmitted in response to the request for further information Notice.
Raw material storage, handling and preparation [directly associated activity]	Receipt of raw materials or recovery of raw materials from quarry. Preparation and storage of raw materials or process feedstocks. The raw meal is pneumatically transported to a system of blending silos before discharge to storage silos prior to being fed to the kiln for clinker manufacture.	Recovery of raw materials from the quarry floor or receipt on site through crushing, blending, other processing and feeding materials to the kiln system. Area defined in the site layout plan, resubmitted in response to the request for further information Notice.
Fuel storage and preparation [directly associated activity]	The raw fuel mix is stored on open stockpiles prior to grinding into pulverised fuel, which is stored in hoppers and then fired to the kiln.	Area defined in the site layout plan, resubmitted in response to the request for further information Notice.
Product handling, storage and despatch [directly associated activity]	Product handling, storage, packing and despatch.	The cement is pneumatically transported from the mill house to storage silos. Cement held in these silos is loaded into road tankers or bagged. Area defined in the site layout plan, resubmitted in response to the request for further information Notice.

1.1.2

The activities authorised under condition 1.1.1 shall not extend beyond the Site, being the area shown edged in bold on the plan below



Reproduced from the Ordnance Survey map with the permission of the Controller of Her Majesty's Stationery Office ÓCrown Copyright 2000. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings.

Note: The quarry area is included within the installation boundary though blasting activities are not.

1.1.3 There are no pre-operation conditions

2 Operational Matters

2.1 Management techniques and control

2.1.1 The Permitted Installation shall, subject to the conditions of this Permit, be managed and controlled as described in the documentation specified in Table 2.1.1, or as otherwise agreed in writing by the Agency.

Table 2.1.1 : Management and control

Description	Parts	Date Received
Application	The response to question 2.1 given in section 2.1 of the application	Final Resubmitted Application (CD format) on 04/01/02
Response to Second Schedule 4 Part1 Notice	Response to questions B2.1 (1 to 5)	15/08/02

2.1.2 All plant, equipment and technical means used in operating the Permitted Installation shall be maintained in good operating condition.

2.1.3 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.

2.1.4 A copy of this Permit and those parts of the application referred to in this Permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.

2.1.5 All staff shall be fully conversant with those aspects of the Permit conditions, which are relevant to their duties and shall be provided with appropriate training and written operating instructions to enable them to carry out their duties.

2.2 Raw materials (including water)

2.2.1 The Operator shall, subject to the conditions of this Permit, use raw materials (including water) as described in the documentation specified in Table 2.2.1, or as otherwise agreed in writing by the Agency.

Table 2.2.1 : Raw materials (including water)

Description	Parts	Date Received
Application	The response to question 2.2 given in section 2.2 of the application	Final Resubmitted Application (CD format) on 04/01/02

2.2.2 Gas oil shall contain less than 0.2% sulphur content by weight.

2.3 **Operating Techniques**

2.3.1 The Permitted Installation shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the documentation specified in Table 2.3.1, or as otherwise agreed in writing by the Agency.

Table 2.3.1: Operating techniques

Description	Parts	Date Received
Application	The response to questions 2.3 given in section 2.3 of the application	Final Resubmitted Application (CD format) on 04/01/02
Response to Second Schedule 4 Part 1 Notice	Response to questions B2.3 (1 to 8) and B2.3.8	15/08/02

2.4 **Groundwater protection**

2.4.1 The Permitted Installation shall, subject to the conditions of this Permit, be controlled as described in the documentation specified in Table 2.4.1, or as otherwise agreed in writing by the Agency.

Table 2.4.1: Groundwater protection

Description	Parts	Date Received
Application	The response to questions 2.4 given in section 2.4 of the application	Final Resubmitted Application (CD format) on 04/01/02

2.5 Waste handling and storage

2.5.1 The Operator shall, subject to the conditions of this Permit, handle and store waste as described in the documentation specified in Table 2.5.1, or as otherwise agreed in writing by the Agency.

Table 2.5.1: Waste handling and storage

Description	Parts	Date Received
Application	The response to question 2.5. given in section 2.5 of the application	Final Resubmitted Application (CD format) on 04/01/02
Response to Second Schedule 4 Part1 Notice	Response to questions B2.5 (1 to 5)	15/08/02

2.5.2 Waste materials specified in Table 2.5.2 shall only be stored on the site in the location and manner specified in that Table.

TABLE 2.5.2: Waste stored on site

Description of Waste	Location of Storage on Site	Manner of Storage	Storage Conditions
Off-spec raw meal / cement kiln dust	On site quarry	Covered by separate Waste Management License WML No.25	
Waste oil	Special Waste Bay	Secure Drums	Drums to be clearly marked, held on contained concrete hard standing within the Special Waste Bay
General process waste	Ref-S1 on site application plan, in front of Raw Mill	Secure containers	Concrete hard standing
Plastic & Nylon waste	Ref-S2 on site application plan, near Packing Plant	Secure containers	Hard standing
Damaged Bags	Ref-S3 & S8 on site application plan, S3 directly in front of Packing Plant, S8 next to bag loading shed	Secure containers	Hard standing
Scrap Metal	Ref-S4 & S5 on site application plan, S4 next to Clinker store, S5 near the Electrical Shop	Secure containers	Hard standing
Paper & Cardboard	Ref-S6 & S7 on site application plan, S6 between Offices and Central Control, S7 directly opposite the Vehicle Repair Shop.	Secure containers	Hard standing

2.6 Waste recovery and disposal

- 2.6.1 The Operator shall, subject to the conditions of this Permit, recover and dispose of waste as described in the documentation specified in Table 2.6.1, or as otherwise agreed in writing by the Agency.

Table 2.6.1: Waste recovery and disposal

Description	Parts	Date Received
Application	The response to question 2.6 given in section 2.6 of the application	Final Resubmitted Application (CD format) on 04/01/02
Response to Second Schedule 4 Part1 Notice	Response to question B2.6	15/08/02

2.7 Energy Efficiency

2.7.1 The Operator shall, subject to the conditions of this Permit, use energy as described in the documentation specified in Table 2.7.1, or as otherwise agreed in writing by the Agency.

Table 2.7 1: Energy efficiency

Description	Parts	Date Received
Application	The response to question 2.7 given in section 2.7 of the application	Final Resubmitted Application (CD format) on 04/01/02
Response to Second Schedule 4 Part1 Notice	Response to question B2.7	15/08/02

2.7.2 The Operator shall produce a report annually on the energy consumption of the installation. The report shall provide a breakdown of energy consumption and include the associated environmental releases. The report shall be used to identify opportunities for improvements in efficiency and changes in process.

2.7.3 The Operator shall have an energy efficiency plan which shall be updated annually.

2.8 Accident prevention and control

2.8.1 The Operator shall, subject to the conditions of this Permit, prevent and limit the consequences of accidents as described in the documentation specified in Table 2.8.1, or as otherwise agreed in writing by the Agency.

Table 2.8.1 : Accident prevention and control

Description	Parts	Date Received
Application	The response to question 2.8 given in section 2.8 of the application	Final Resubmitted Application (CD format) on 04/01/02
Response to Second Schedule 4 Part1 Notice	Response to questions B2.8 (1 to 2)	15/08/02

2.9 Noise and vibration

2.9.1 The Operator shall, subject to the conditions of this Permit, control noise and vibration as described in the documentation specified in Table 2.9.1, or as otherwise agreed in writing by the Agency. It shall be noted that the Agency has required a further report into options available to the Operator for noise abatement, the implementation of the specified abatement measures chosen as a result of this work, and the assessment of the efficacy of these measures (and the reassessment of BAT for noise), as detailed in Improvement Items 9.5, 9.9, 9.16 & 9.17, and the response to these improvement items will determine the nature of any future conditions to be imposed upon the operator under this section of the.

Table 2.9.1 : Noise and vibration

Description	Parts	Date Received
Application	The response to question 2.9 given in section 2.9 of the application	Final Resubmitted Application (CD format) on 04/01/02
Response to Second Schedule 4 Part1 Notice	Response to question B2.9	15/08/02

2.10 Monitoring

2.10.1 The Operator shall, subject to the conditions of this Permit, carry out, evaluate and assess monitoring as described in the documentation specified in Table 2.10.1, or as otherwise agreed in writing by the Agency.

Table 2.10.1 : Monitoring

Description	Parts	Date Received
Application	The response to question 2.10 given in section 2.10 of the application	Final Resubmitted Application (CD format) on 04/01/02
Response to Second Schedule 4 Part1 Notice	Response to questions B2.10 (1 to 18)	15/08/02
Response to Third Schedule 4 Part1 Notice	Response to Second Schedule 4 Part1 Notice	21/10/02

- 2.10.2 Where requested in writing by the Agency, the Operator shall provide at least 14 days advance notice of undertaking monitoring/spot sampling.
- 2.10.3 There shall be provided:
- a safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2, unless otherwise specified in that Schedule and
 - b safe means of access to other sampling/monitoring points when required by the Agency.
- 2.10.4 The sampling and analysis to meet the periodic measurement requirements of emissions to air, as set out in Table 6.1.2 and reference measurements in order to calibrate continuous emission monitoring equipment shall be carried out as given by CEN standards. Until such time as the appropriate CEN standards are available, the following national standards shall be used.
- a Carbon Monoxide – ISO/CD 12039.
 - b Particulate – BS6069:Section 4.3, BS ISO 10155(for continuous monitoring equipment).
 - c Nitrogen Oxides – BS ISO 10849
 - d Sulphur Dioxide – BS6069:Section 4.1, BS ISO 11632,BS6069:Section 4.4(for continuous monitoring equipment).
- 2.11 **Decommissioning**
- 2.11.1 The Operator shall, subject to the conditions of this Permit, make provision for decommissioning the installation as described in the documentation specified in Table 2.11.1, or as otherwise agreed in writing by the Agency.

Table 2.11.1 : Decommissioning

Description	Parts	Date Received
Application	The response to question 2.11 given in section 2.11 of the application	Final Resubmitted Application (CD format) on 04/01/02

2.11.2 A site closure plan shall be maintained such that, upon definitive cessation of activities, the installation can be decommissioned safely and that pollution risks from the site are minimised.

2.12 **Multi-operator installations**

2.12.1 This is not a multi-operator installation

3 Records

- 3.1.1 A record (a "Specified Record") shall be made of:-
- a** any malfunction, breakdown or failure of plant, equipment or techniques (including down time and any short term and long term remedial measures) that may have, has had or might have had an effect on the environmental performance of the Permitted Installation. These records shall be kept in a log maintained for that purpose;
 - b** all monitoring and sampling taken or carried out in accordance with the conditions of this permit and any assessment or evaluation made on the basis of such data;
- 3.1.2 There shall be made available for inspection by the Agency at any reasonable time:
- a** Specified Records;
 - b** any other records made by the Operator in relation to the operation of the Permitted Installation ("Other Records")
- 3.1.3 A copy of any Specified or Other Records shall be supplied to the Agency on demand and without charge
- 3.1.4 Specified Records and Other Records shall:-
- a** be legible;
 - b** be made as soon as reasonably practicable;
 - c** indicate any amendments which have been made and shall include the original record wherever possible; and
- 3.1.5 Specified Records and Other Records shall be retained for a minimum period of 4 years from the date when the records were made at the location.
- 3.1.6 For all waste received at or produced from the Permitted Installation, the Operator shall record (and shall retain such records for a minimum of 4 years)
- a** its composition, or as appropriate, description;
 - b** the best estimate of the quantity produced;
 - c** its disposal routes; and
 - d** the best estimate of the quantity sent for recovery.
- 3.1.7 A record shall be made at the Permitted Installation of any complaints concerning the Installation's effect or alleged effect on the environment. The record shall give the date of complaint, time of complaint, a summary of any investigation and the results of such investigation. Such records shall be made in a log kept for this purpose.

4

Reporting

- 4.1.1 All reports and notifications required by this Permit, or by Regulation 16 of the PPC Regulations, shall be sent to the Environment Agency at the address notified in writing to the Operator by the Agency.
- 4.1.2 The Operator shall report the parameters listed in Table S2 to Schedule 2 as follows:
- a in respects of the emission points specified;
 - b for the reporting periods specified in Table S2 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;
 - c giving the information from such results and assessments as may be required by the forms specified in those Tables; and
 - d sending the report to the Agency within 28 days of the end of the reporting period.
- 4.1.3 The Operator shall, within 36 months of the issue of this Permit, submit a report on potential environmental improvements to the Permitted Installation. For each of the subject areas identified in Section 2 of the appropriate technical guidance, the report shall assess the costs and benefits of alternative techniques that may provide environmental improvement. This shall include, but not be limited to, those techniques listed in guidance. The methodologies used should be based on those given in Agency guidance note H1 and should justify, against the BAT criteria, where potential improvements are not planned to be implemented. As part of their management system the Operator shall submit an updated report every 36 months.
- 4.1.4 Where the Operator has a formal environmental management system applying to the Permitted Installation which encompasses annual improvement targets the Operator shall, not later than 31 January in each year, provide a summary report of the previous year's progress against such targets.
- 4.1.5 Fugitive emissions shall be reviewed on an annual basis and a summary report on this review shall be sent to the Agency detailing such releases and the measures taken to reduce them.

5 Notifications

- 5.1.1 The Operator shall notify the Agency **without delay** of:-
- a** the detection of an emission of any substance which exceeds any limit or criteria in this Permit specified in relation to the substance;
 - b** the detection of any fugitive emission which has caused or may cause pollution unless the quantity emitted is so trivial that it would be incapable of causing pollution;
 - c** the detection of any malfunction, breakdown or failure of plant or techniques which has caused or may have the potential to cause pollution; and
 - d** any accident which has caused or may have the potential to cause pollution.
- 5.1.2 The Operator shall submit written confirmation to the Agency of any notification under condition 5.1.1 of this Permit by sending:-
- a** the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and
 - b** the more detailed information listed in Part B of that Schedule as soon as practicable thereafter;
- and such information shall be in accordance with that Schedule.
- 5.1.3 The Operator shall give written notification as soon as practicable, of any of the following
- a** permanent cessation of the operation of any part of or all of the Permitted Installation;
 - b** cessation of the operation of any part of or all of the Permitted Installation for a period, likely to exceed 1 year; and
 - c** resumption of the operation of any part of or all of the Permitted Installation after a cessation notified under 5.1.3(b).
- 5.1.4 The Operator shall notify the following matters to the Agency, in writing, within 14 days of their occurrence:
- a** *where the Operator is a registered company:*
 - i** any change in the Operator's trading name, registered name or registered office address;
 - ii** a change to any particulars of the Operator's ultimate holding company (including details of an ultimate holding company where the Operator has become a subsidiary);
 - iii** any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.

- 5.1.5 Where the Operator has entered into a Climate Change Levy Agreement with the Government, the Operator shall, within 14 days, notify the Environment Agency, in writing, in the event that the Secretary of State has not re-certified that agreement.
- 5.1.6 Where the Operator has entered into the Emissions Trading Scheme by taking on a voluntary target with a financial incentive, the Operator shall, within 14 days, notify the Environment Agency, in writing, of either:
- a) a decision by the Operator to withdraw from the scheme, or
 - b) failure to comply with the emissions trading scheme at the end of the 5 year period covered by the scheme.

6 **Emissions**

6.1 **Emissions into air**

6.1.1 Emissions to air from the emission point(s) specified in Table 6.1.1 shall only arise from the source(s) specified in that Table.

Table 6.1.1: Emission points into air

Emission point reference/description	Source	Location of emission point
A1	Chimney to No.6 cement kiln	Point A1 on the site layout plan, resubmitted in response to the request for further information Notice.
A2	3000 HP cement mill dust plant	Point A2 on the site layout plan, resubmitted in response to the request for further information Notice.
A3	3000 HP cement mill separator	Point A3 on the site layout plan, resubmitted in response to the request for further information Notice.
A4	3000 HP cement mill- conveyor to cement mill clinker hopper	Point A4 on the site layout plan, resubmitted in response to the request for further information Notice.
A5	Combined discharge from closed circuit venting system on coal milling plant	Point A5 on the site layout plan, resubmitted in response to the request for further information Notice.
A6	OPC bag loading facility	Point A6 on the site layout plan, resubmitted in response to the request for further information Notice.
A7	OPC bag loading facility	Point A7 on the site layout plan, resubmitted in response to the request for further information Notice.
A8	Silo reserved for bulk cement	Point A8 on the site layout plan, resubmitted in response to the request for further information Notice.
A9	Silo reserved for bagged cement	Point A9 on the site layout plan, resubmitted in response to the request for further information Notice.
A10	Raw meal blending, storage, handling and kiln feed facility	Point A11 on the site layout plan, resubmitted in response to the request for further information Notice.
A11	Clinker handling system from kiln to storage	Point A12 on the site layout plan, resubmitted in response to the request for further information Notice.
A12	Primary stone crusher at Aberthaw Quarry	Point A13 on the site layout plan, resubmitted in response to the request for further information Notice.
A13	Secondary stone crusher within the cement works	Point A14 on the site layout plan, resubmitted in response to the request for further information Notice.

A14	Coal mill vacuum plant	Point A15 on the site layout plan, resubmitted in response to the request for further information Notice.
A15	Rapid hardening cement bulk loading facility	Point A17 on the site layout plan, resubmitted in response to the request for further information Notice.
A16	Clinker conveyors to main clinker store	Point A18 on the site layout plan, resubmitted in response to the request for further information Notice.
A17	PLC bulk cement loading dust plant	Point A20 on the site layout plan, resubmitted in response to the request for further information Notice.

6.1.2 The limits for emissions into air for the parameter(s) and emission point(s) set out in Table 6.1.2 shall not be exceeded.

6.1.3 The Operator shall carry out monitoring of the parameters listed in Table 6.1.2, from the emission points and at least at the frequencies specified in that Table.

Table 6.1.2: Emission limits into air

Parameters	Emission Point A1			Periodic	Frequency and duration
	Hourly Average	Daily Average	Annual Average		
Particulate matter mg m ⁻³	30	See Improvement item 9.2	-	30	Continuous and annual periodic monitoring
Sulphur dioxide mg m ⁻³	1200	800	-	1000	Continuous and annual periodic monitoring
Oxides of nitrogen (as NO _x) mg m ⁻³	2400	1600	-	2400	Continuous and annual periodic monitoring
Carbon Monoxide mg m ⁻³	1500	1000	-	1500	Continuous and annual periodic monitoring
Cadmium & Thallium & their compounds (total) Note 3	None	None	None	0.05	Annual periodic monitoring
Hg and its compounds Note 3	None	None	None	0.05	Annual periodic monitoring
Sb,Sn,As,Pb,Cr,Co,Cu, Mn,Ni and V and their compounds (total) mg m ⁻³	None	None	None	0.5	Annual periodic monitoring
Dioxins & Furans I-TEQ ng m ⁻³	None	None	None	0.1	Annual periodic monitoring

- 6.1.4 The Operator shall carry out monitoring of the parameters listed in Table 6.1.4, from the emission points and at least at the frequencies specified in that Table.

Table 6.1.4: Emission limits into air

Parameters	Total Particulates (mg/m ³)			Periodic	Frequency and duration
	Hourly Average	Daily Average	Annual Average		
Emission Point A2	40	30	None	30	Continuous and annual periodic monitoring
Emission Point A3	40	30	None	30	Continuous and annual periodic monitoring
Emission Point A4 to A17	No evidence of deposition in the vicinity of the release point				

- 6.1.5 The release of agglomerates of particulate material from A1, whether attributable to detachment of material from the chimney lining or to agglomeration of particulate material within the stack gases, shall be minimised.
- 6.1.6 The installation shall be controlled so as to minimise the release of particulate matter during the handling and storage of all materials, to include all raw materials, processed materials and dust collected in abatement plant.
- 6.1.7 All plant, casings, ductwork, seals and associated equipment shall be made and maintained so that leakage into or out of that plant and equipment is minimised at all times.
- 6.1.8 The installation shall be controlled so as to minimise offensive odours detectable outside the Operator's premises.
- 6.1.9 Any spillage or deposits shall be removed with the minimum of delay by techniques that avoid the generation of air blown dust. Roadways and buildings shall be kept clean.
- 6.1.10 The sulphur content of fuels used for combustion in the installation shall be recorded.
- 6.1.11 The Continuous Emission Monitors shall be utilised to indicate compliance and shall be calibrated, at appropriate intervals, as agreed with the Environment Agency, but not less than once per year. The analytical uncertainty shall be presented in writing to the Agency, accompanied by details of the calibration methods.
- 6.1.12 Methods to calibrate automated, continuous, measurement systems shall be carried out as specified by the appropriate CEN-standards. If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality, as agreed in writing with the Environment Agency, shall apply. The reference measurements used shall be agreed in writing with the Environment Agency. The results of the assessment shall be submitted, to the Environment Agency in writing, within one month of the completion of the assessment.

- 6.1.13 Assessment of compliance for periodic monitoring shall take into account the percentage uncertainty for the selected method of sampling and analysis for each relevant pollutant. Table 6.1.2.

6.2 Emissions to land

6.2.1 There shall be no emission to land from the Permitted Installation

6.2.2 The Operator shall notify the Agency, as soon as practicable, of any information concerning the state of the Site which affects or updates that provided to the Agency as part of the Site Report submitted with the application for this Permit.

6.3 Emissions to water [other than emissions to sewer]

6.3.1 Emissions to water from the emission point(s) specified in Table 6.3.1 shall only arise from the source(s) specified in that Table

6.3.2

Table 6.3.1: Emission points into water

Emission Point Reference.	Source	Receiving Water
W1	Process cooling waters, site drainage from coal stockpile area and general drainage NGR ST 0313 6758	River Kenson estuary
W2	Lorry wash and general site drainage NGR ST 0303 6738	River Thaw estuary

6.3.3 Limits for the emissions to water for the parameter(s) and emission point(s) set out in Table 6.3.3 shall not be exceeded.

6.3.4 The Operator shall carry out monitoring of the parameters listed in Table 6.3.3, from the emission points and at least at the frequencies specified in that Table.

Table 6.3.3: Emission limits into water

Parameter	Emission Point W1	Emission Point W2	Monitoring Frequency
Oil and Grease mg l ⁻¹	6	10	Weekly
Suspended Solids mg l ⁻¹	50	70	Weekly
pH max	9	9	Weekly
pH min	6	6	Weekly

6.3.5 There shall be no emission into water from the Permitted Installation of any substance prescribed for water for which no limit is specified in Table 6.3.3 except in a concentration which is no greater than the background concentration.

6.3.6 The following provisions shall be made:

- a) the effective use of bunds around oil storage tanks. (Any spillage shall be removed for special treatment or off site disposal)
- b) the passage of wash-down and surface waters through an effective oil/water separator; and
- c) the designation of areas provided with suitable hard standing for the loading and unloading of off-site vehicles, and the restriction of such loading and unloading operations to those areas.

6.4 **Emissions to sewer**

6.4.1 No emission shall be made into any sewer from the Permitted Installation

6.5 Emissions of heat

6.5.1 There are no conditions specific to emissions of heat.

6.6 Emissions of noise and vibration

- 6.6.1 The provisions proposed in the Application with regards to emissions of noise have been assessed. The Agency considers that further work is required before emission limit(s) can be set, in conjunction with the requirements imposed by Improvement Items 9.5, 9.9, 9.16 & 9.17. Accordingly, no emission limit(s) are proposed at this time.

7

Transfer to effluent treatment plant

7.1.1

No transfer from the Permitted Installation shall be made to effluent treatment plant.

8 **Off site conditions**

8.1.1 There are no off site conditions.

9 Improvement programme

- 9.1.1 The Operator shall complete the requirements specified in Table 9.1.1 by the date specified in that Table, and shall send written notification of the date of completion of each requirement to the Agency, at the Reporting Address, within 14 days of the completion of each such requirement.

Table 9.1.1: Improvement programme requirements

Reference	Requirement	Date
9.1	The Operator to provide a plan demonstrating compliance with Sulphur in Oil Directive 1999/32/EEC.	28/02/03
9.2	The Operator having installed new particulate abatement to kiln no.6 to the satisfaction of the Environment Agency, shall provide the following: A report detailing the work (including the bag filter installation) carried out during the recent shutdown, trended emissions monitoring for the period (January 2003 to end June 2003) for NO _x , SO _x , CO and particulates from A1 and proposals for further reduced ELV's for each substance given the above results.	30/06/03
9.3	The Operator shall establish a monitoring programme or method of calculation for the air and water emissions identified in the application, such that information is available for annual reporting of emissions in accordance with the Environment Agency's Inventory of Sources and Releases. The programme and methods of calculation shall be submitted to the Environment Agency.	30/06/03
9.4	The operator shall investigate the performance of the continuous emission monitor for particulate matter on the Cement Mill. Investigations (in consideration of BS ISO 10155:1995) shall determine whether a satisfactory calibration function can be applied to all operational conditions and identify proposals to achieve quantitative continuous monitoring for particulate matter releases. A report giving such proposals shall be sent to the Environment Agency.	30/06/03
9.5	The Operator to provide a report to the Agency detailing areas where noise abatement may be achieved by undertaking work(s) to item(s) of plant and equipment identified in the operators response of the 12 th August 2002, giving dates / timescales and estimated cost(s) for this work'	30/06/03
9.6	The Operator shall provide a report detailing a review of options considered to achieve reduced NO _x , SO _x and CO releases from the main kiln stack. The report to have regard to BAT and where applicable the Operator to provide an implementation plan detailing work schedules and associated timescales.	01/09/03
9.7	The Operator shall provide a report detailing proposals for a dust deposition monitoring system. The report to include implementation details or robust justification for not progressing this item.	01/09/03
9.8	The Operator shall carry out a detailed review of site secondary containment facilities and provide a report detailing improvements to be made with appropriate timescales for implementation.	31/01/04
9.9	The Operator shall prepare a decommissioning plan and submit a copy to the Environment Agency.	31/01/04
9.10	The Operator shall complete a detailed installation wide water usage audit and provide a report to the Environment Agency identifying opportunities for improvement.	31/01/04
9.11	All underground effluent and process water drainage systems shall be mapped and a report on their condition shall be provided to the Environment Agency.	31/01/04

9.12	The Operator shall complete an annual review of monitoring equipment used and the availability of MCERTS. An annual report detailing any proposed changes to be forwarded to the Environment Agency at the reporting address.	31/01/04 and annually thereafter
9.13	<p>The Operator shall conduct a comprehensive waste audit. This shall identify all of the wastes produced by the installation. For each waste stream identified, the quantity produced and the current management or disposal method used shall be stated.</p> <p>Information from the audit shall be used to identify opportunities for improved efficiency, changes in process and waste reduction.</p> <p>A copy of the report and action plan submitted to the Environment Agency by the date opposite</p> <p>The waste audit shall be reviewed every 36 months and recommendations for further improvements shall be incorporated into a report and submitted to the Environment Agency within 6 months of each audit.</p>	31/01/04
9.14	Having completed improvement condition 9.5 the Operator to undertake works to implement the abatement measures specified in this report, in prior agreement with the Agency.	01/03/04
9.15	Having completed improvement condition 9.14 the Operator to undertake a further noise survey to assess the efficacy of these measures, in prior consultation with the Agency. As part of this condition, the Operator shall revisit the original noise monitoring assessment and obtain background noise measurements representing conditions whereby the plant is non-operational.	01/06/04

Interpretation

10.1.1 In this Permit, the following expressions shall have the following meanings:

"Authorised Officer"

means any person authorised by the Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, powers specified in Section 108(4) of that Act.

"Background concentration"

means the same as "background quantity" as defined in paragraph 11 to Part 2 to Schedule 1 of the PPC Regulations.

"Fugitive emission"

means an emission from any point other than those specified in the Tables in part 6 of this Permit.

"LAeq"

means the A-weighted equivalent continuous equal energy level (dBA)

"Monitoring"

includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

"Normal Operation"

includes all periods of kiln operation except plant start-up, shutdown where:

- plant start-up for the kiln is the period from when the flame is established until the feed exceeds 80% of capacity, up to a maximum of 4 hours. Start-up duration should be minimised having regard for BAT;
- plant shut-down for the kiln is the period from cessation of kiln feed; and for raw mill and coal mill is up to 20 minutes after mill stop sequence is initiated;

"Permitted Installation"

means the activities and the limits to those activities described in Table 1.1.1 of this Permit.

"PPC Regulations"

means the Pollution Prevention and Control Regulations 2000 (S.I. 2000 No. 1973) and words and expressions defined in the PPC Regulations shall have the same meanings when used in this Permit.

"Staff"

includes employees, directors or other officers of the Operator, and any other person under the Operator's direct or indirect control, including contractors.

"Substances prescribed for water"

means those substances mentioned in paragraph 13 of Part 2 of Schedule 1 to the PPC Regulations.

"Daily" means a 24 hour period from 0600 hrs to 0600 hrs

"Year" means calendar year ending 31 December.

- 10.1.2 Where a minimum limit is set for any emission parameter, references to exceeding the limit shall mean that the parameter shall not be less than that limit.
- 10.1.3 Limits on oxides of nitrogen are calculated as nitrogen dioxide equivalent.
- 10.1.4 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means;
- a** in relation to gases from combustion processes, the concentration in dry gas at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 10%; and/or
 - b** in relation to gases from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

11 Written agreement to changes

11.1.1 When the qualification "or as otherwise agreed in writing" is used in a condition of this Permit, the Operator shall seek such agreement in the following manner:

- a** the Operator shall give the Agency written notice of the details of the proposed change, indicating the relevant part(s) of this Permit; and
- b** such notice shall include an assessment of the possible effects of the proposed change (including waste production) on risks to the environment from the Permitted Installation.

11.1.2 Any change proposed according to condition 11.1.1 and agreed in writing by the Agency, shall not be implemented until the Operator has given the Agency prior written notice of the implementation date for the change. As from that date, the Operator shall operate the Permitted Installation in accordance with that change, and any relevant documentation referred to in this Permit shall be deemed to be amended.

Schedule 1

Confirmation of condition 5.1.1 notifications, in accordance with condition 5.1.2

This Schedule outlines the information that the Operator must provide to the Agency to satisfy condition 5.1.2 of this Permit.

Units of measurement used in information supplied under Part A and B requirements must be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the PPC Regulations.

Returns should contain

Part A

- Name of Operator.
- Permit Number
- Location of Installation.
- Date information provided.
- Time, date and location of the emission.
- Identity and details of the substance[s] emitted to include:-
 - Best estimate of the quantity or the rate of emission, and the time during which the emission took place.
 - Environmental medium into which the emission took place.
 - Measures taken, or intended to be taken, to stop the emission.

Part B

- Any more accurate information on the matters notified under Part A.
- Measures taken, or intended to be taken, to prevent a recurrence of the incident.
- Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment or harm which has been or may be caused by the emission.
- The dates of any Part A notifications within in the previous 24 months.

- Name
- Post.....
- Signature
- Date
- Statement that signatory is authorised to sign on behalf of

Schedule 2

Reporting of monitoring data

Parameters for which reports shall be made, in accordance with conditions 4.1.2 of this Permit, are listed below.

Table S2: Reporting of monitoring data

Parameter	Emission point	Reporting period	Period begins	Form No.
Sulphur dioxide mg m ⁻³	A1	Every 12 mths	01/01/03	Summary of hourly averages ¹
		Every 3 mths	01/01/03	
Oxides of nitrogen mg m ⁻³	A1	Every 12 mths	01/01/03	Summary of hourly averages ¹
		Every 3 mths	01/01/03	
Dioxins I-TEQ	A1	Every 12 mths	01/01/03	
Particulates mg m ⁻³	A1, A2, A3,	Every 12 mths	01/01/03	
	A1,A2,A3	Every 3 mths	01/01/03	Summary of hourly averages ¹
Suspended solids mg l ⁻¹	W1, W2	Every 3 mths	01/01/03	
PH	W1, W2	Every 3 mths	01/01/03	
Oil & Grease	W1, W2	Every 3 mths		

Schedule 3

Forms to be used

Unless otherwise agreed in writing between Agency and the Operator, the following Agency forms are to be used for reports submitted to Agency.

Media/parameter	Form Number	Date of Form
Air	A1	20/12/02
Air	A2	20/12/02
Water	W1	20/12/02
Energy	E1	20/12/02
Raw Material & Waste Return	RM1	20/12/02
Environmental Complaints	C1	20/12/02

END OF PERMIT