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POLLUTION PREVENTION AND CONTROL ACT 1999
 POLLUTION PREVENTION AND CONTROL (ENGLAND AND WALES) REGULATIONS 2000

PERMIT OF PROCESS

THIS IS TO CERTIFY THAT **the use of bulk cement in the manufacture of concrete blocks**

at: **INTERFUSE LTD, 80 HIGH STREET, SYSTON, LEICESTERSHIRE, LE7 8GQ**

National Grid Ref: SK 6233119

(The site location is shown on Appendix 1/022 which forms part of this Permit)

has been duly permitted in accordance with Regulation 10 of the Pollution Prevention and Control (England and Wales) Regulations 2000 subject to the conditions outlined in this document.

Name of Operator: Interfuse Ltd
Registered Office 80 High Street, Syston, Leics. LE7 8GQ

This Permit shall apply only to the premises occupied by the applicant, as specified and described in the Application for Permit submitted to the Borough of Charnwood. This Permit, consisting of 11 pages, shall be subject to replacement, variation or amendment, as may be considered appropriate by the Borough of Charnwood at any time, according to provisions of Regulations 12, 15, and 17 of the Pollution Prevention and Control (England and Wales) Regulations 2000

The conditions contained herein shall apply from the date of Permit unless otherwise stated.

- Refer to Variation Notice dated 28 March 1996
- Refer to Variation Notice dated 21 January 1998
- Refer to Variation Notice dated 20 January 2004
- Refer to Variation Notice dated 10 July 2006

Signed on behalf of Charnwood Borough Council

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 Matthew Holford, Environmental Health Manager
 (the delegated officer for the purpose)

Dated 10 July 2006

Counter-signed

Directorate of Housing and Health, Environmental Protection
 Southfields Road, Loughborough LE11 2TX

INTERFUSE LIMITED, 80 HIGH STREET, SYSTON

I.0 Process Description**I.1 Purpose**

The purpose of the process to produce concrete blocks from cement and other ingredients.

This process is included in Schedule I, Chapter 3, Section 3.1, Part B of the Pollution Prevention and Control (England and Wales) Regulations 2000. Best available techniques for the process are contained in the Secretary of State's Guidance Note PG3/1(04).

I.2 Plant Detail

The premises are located at High Street, Syston, as shown outlined red on the attached map, Appendix 1/22.

The plant consists of the following:-

- (a) Aggregate receiving hopper
- (b) Covered aggregate conveyor
- (c) Enclosed 4 round aggregate storage bins situated over an enclosed weigh belt
- (d) Covered feed conveyor to skip
- (e) Aggregate skip hoist
- (f) Mixer situated on mixer platform above the block machine inside the main building
- (g) One cement silo with WAM reverse jet filter dust arrestment equipment, high level alarm and safety valve. Silo capacity 90 tonne. Service contract held with R W Vessey, Thurmaston.
- (h) One pulverised fuel ash (PFA) silo with WAM reverse jet filter dust arrestment equipment, high level alarm and safety vale. Silo capacity 90 tonne. Service contract held with R W Vessey, Thurmaston.
- i) Screw conveyors and weigh hopper (for cement and PFA)
- j) Water Pump and storage tank
- k) Wet holding hopper beneath mixer
- l) Metering conveyor
- m) Block making and curing equipment (within block making building)

The layout of the site is shown in Appendix 2/22

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1.3 Plant Operation

Raw materials include 15mm furnace bottom ash, fines, gravel, sand, granite, limestone, lytag, cement (OPC) and pulverised fuel ash (PFA).

The raw materials are delivered by outside haulage with sheeted lorries and are off-loaded into the respective storage bays at the site.

Cement and PFA are both delivered by the manufacturers in sealed bulk tankers and are discharged under pressure into their respective marked silos.

The material from the storage bays are carried by a front loading shovel and tipped into a receiving hopper. It is transferred by covered conveyor up to four round covered aggregate storage bins, below which is an enclosed weigh belt. After the required amount of aggregate has been discharged onto the weigh belt, it is transferred by a covered feed conveyor into the skip.

The skip hoist is then moved up by cable to the mixer unit situated on a platform above the block machine inside the main building.

The material is then released by a sealed hatch door into the mixer.

Cement and PFA are discharged from the silos by sealed screw conveyors into a weigh hopper and then into the mixer beneath, water is then added to the mix as required.

The mixed material is discharged into a wet holding hopper and released into the block machine.

The blocks are moulded and pass from the block machine on steel pallets. These pallets are then transferred by a finger car train into the ovens for curing. The heat for the ovens is provided by a non-pressurised gas fired boiler which heats a hot oil pipe system within the curing chambers. The blocks are cured over approximately 24 hours at around 50⁰ celcius.

The block machine, curing ovens and cubing machinery are housed within the industrial building.

Finished blocks are stored in the yard.

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I.4 Summary of External Emission Points

Emission Point	Emissions
1. Bulk cement silo	Particulate
2. PFA silo	Particulate
3. Gas-fired boiler	Combination products
4. Curing oven stacks	Steam, volatiles from curing blocks (trivial)
5. External fugitive sources such as storage bays, receiving hopper, covered conveyor, scraper, waste storage bay, finished block storage yard	Particulate

2.0 Emission Limits and Controls

- 2.1 All emissions to air other than steam or water vapour shall be colourless and free from persistent mist. All emissions to air must be free from persistent fume and free from droplets.
- 2.2 The concentration of total particulate matter in all emissions to air from contained sources (including arrestment plant) must not exceed 100mg/m^3 expressed at reference conditions (273 Kelvin and 101.3 Kpa without correction for water vapour content).
- 2.3 Dilution air shall not be introduced into the arrestment plant system in order to achieve the maximum emission concentrate specified in condition 2.2
- 2.4 There shall be no visible emissions of dust from any source that go beyond the site boundary.

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3.0 Monitoring Sampling and Measurement of Emissions

- 3.1 Regular visual assessments of dust emissions shall be made on a random basis, at least daily, by the operator. The assessments shall be made having regard to the possible sources of dust emission which shall include storage areas and plant.
- 3.2 Visual assessments of emissions shall be made during charging of silos with cement and PFA having regard to the possible sources of emissions.
- 3.3 All visual assessments shall be recorded in the log book required by condition 3.4. The log book shall include the following details regarding visual assessments:
- (a) The date and time of observation.
 - (b) Weather conditions.
 - (c) Wind direction.
 - (d) Position of observer.
 - (e) Assessment
 - (f) Identification of observed area or plant
 - (g) Remedial action taken (if appropriate).
 - (h) Name of person completing the log book.
- 3.4 The results of all monitoring and inspections shall be recorded in a log book retained by the operator for a minimum of four years and made available by the operator for examination by Charnwood Borough Council.
- 3.5 Where there is evidence that airborne dust is going beyond the site boundary, an inspection and assessment must be carried out either by a British Standard method, or another method to be agreed with the local authority to identify those processes giving rise to the dust. Once the source of the dust is established, a corrective action plan shall be agreed with the local authority.

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4.0 Process Controls

- 4.1 Bulk cement and all other cementitious materials such as PFA shall be stored in silos. All silos shall be vented to suitable arrestment plant, for example bag filters in order to meet the emissions standards in conditions 2.1 and 2.2. Any new silo filtration plant shall be designed to operate an emissions standard of less than 10mg/m³, for particulate matter.
- 4.2 Visual assessment of emissions from the arrestment plant to the silo shall be undertaken while all bulk deliveries are made.
- 4.3 Storage silos shall be equipped with audible and/or visual high levels alarms to warn of over-filling. The correct operation and use of all such alarms shall be checked on a weekly basis by a designated and competent person. Details of these checks shall be recorded in the log book required under condition 3.4 on the day of inspection and the details shall include::
- (a) Date and time of inspection
 - (b) Name of the person carrying out the check
 - (c) Description of any defects noted
 - (d) Suggested further action
- 4.4 In order to prevent fugitive emissions when charging storage silos with cement and PFA the blowing pressure of the tanker shall not exceed the maximum pressure acceptable for the transfer pipe, safety valves, silo and filter units.
- 4.5 A sign shall be displayed at the point of delivery of cement and PFA advising of the correct delivery pressure to be applied.
- 4.6 Materials which may generate airborne dust emissions (other than cement and cementitious materials) shall be delivered, stored and handled so as to prevent or minimise dust emissions.
- 4.7 Aggregates which are not stored under cover shall be enclosed by three sided bays and the height of stored materials shall not exceed the height of the bay walls to prevent the entrainment of dust by wind.
- 4.8 The transfer of cement and PFA, other than delivery to site storage, shall be by sealed screw.

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- 4.9. Internal transport of dusty materials other than cement and PFA shall be carried out so as to prevent or minimise airborne dust emissions. Conveyors shall be of sufficient capacity to handle maximum loads and shall be covered to provide protection against wind-whipping.
- 4.10. Conveyor discharges shall be arranged to minimise free fall at all times.
- 4.11. All spillages which may give rise to dust emissions shall be cleaned up promptly by wet handling. Dry handling of dusty spillages shall not be permitted other than in fully enclosed buildings.
- 4.12. All accumulations of dust and materials liable to produce dust on roofs, walls and support structures shall be cleared as soon as possible. Where necessary, to prevent or minimise airborne dust emissions, these deposits should be dampened prior to clearing.
- 4.13. Any new silos shall be installed with automatic protection systems to control the delivery of material from the tanker to the silo so that it is not possible to overfill or over-pressurise the silo.
- 4.14. Delivery to silos from road vehicles shall only be made by tankers with an on-board (truck-mounted) relief valve and filtration system, or another equivalent system agreed with the local authority.

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5.0 General Operations

- 5.1 When visible dust emissions are observed or when any malfunction or breakdown likely to lead to an escape of dust is found, then:
- (a) An immediate investigation shall be carried out.
 - (b) Prompt remedial action shall be taken.
 - (c) The observation, finding, result of investigation and remedial action taken shall be entered in the log book required by condition 3.4, and
 - (d) If the remedial action is not immediately effective then action to mitigate any effects shall be taken.
- 5.2 In the event of malfunctions and breakdowns causing dust emissions and where remedial action is unsuccessful, Charnwood Borough Council shall be notified in writing within 24 hours detailing:
- (a) The time and nature of the malfunction or breakdown
 - (b) The remedial action taken
 - (c) The nature, extent and effect of emissions
- 5.3 In the event of a breakdown of any arrestment plant the operator shall immediately notify Charnwood Borough Council by telephone.
- 5.4 Roadways in normal use and all other areas where there is regular movement of vehicles including the yard areas shall be hard surfaced.
- 5.5 All hard surfaced roadways and yard areas shall be cleaned at weekly intervals or more frequently during periods of prolonged dry weather using road sweeping equipment.
- 5.6 Vehicle exhausts shall not, wherever practicable, be directed below the horizontal.
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EXPLANATORY NOTES

These notes do not comprise part of Permit Serial No.022 but contain guidance relevant to the Permit.

1. You should note that Regulation 12(10) of the Regulations provides that in relation to any aspect of the process not regulated by conditions 2.1 to 5.6 the best available techniques ('BAT') shall be used for the purpose of preventing or, where that is not practicable, reducing emissions into the air.

Section 3(7) of the Regulations describes 'BAT' as meaning the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole.

2. This Permit is issued under the Pollution Prevention and Control (England and Wales) Regulations 2000. The responsibility you have under legislation for Health, Safety and Welfare in the workplace remains in force. In addition, the Permit does not relieve you of your obligations to obtain planning permission, hazardous substances consent, discharge consent from the Environment Agency Building Regulations approval, or a Waste Disposal Licence.
 3. Any proposed 'change in operation' in the process (within the meaning of Regulation 2(1)) shall be notified to Charnwood Borough Council as required by Section 16(1) of the Regulations.
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