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

PERMIT OF PROCESS

THIS IS TO CERTIFY THAT THE PROCESS OF BLENDING, PACKING AND LOADING OF BULK CEMENT

at: **Lafarge Aggregates Ltd, Readymix Plant, Mountsorrel Quarry, Wood Lane, Quorn, Loughborough LE12 8GE**

National Grid Ref:: SK 577152 (Plan No.1/014)

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: Lafarge Aggregates Ltd,
Registered Office The Business Centre, Watermead Business Park, Syston, Leicester, LE7 1PF

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 twelve 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 the Permit unless otherwise stated.

Refer to:-
1) Variation Notice dated 14 June 1993
2) Variation Notice dated 11 January 1995
3) Variation Notice dated 18 April 2000
4) Variation Notice dated 14 November 2003
5) Variation Notice dated 4 January 2006

Signed on behalf of Charnwood Borough Council Dated 4 January 2006

Signed …… Counter-signed ……
(Delegated officer for the purpose)

Environmental Health. Southfields,, Southfield Road, Loughborough

Lafarge Aggregates, Ltd
Readymix Plant, Mountsorrel Quarry, Wood Lane,Quorn, LE12 8GE

1.0 Process Description

1.1 Purpose

The purpose of the process is the manufacture of ready mixed concrete. The ready mixed concrete is formed by homogeneously mixing sand, gravel, cement, water and admixtures.

The process involves the blending and use of bulk cement. On this site cement is taken to include: ordinary Portland cement, sulphate resisting Portland cement, Portland blast furnace cement, Portland pulverised fuel ash cement. Other powders used as cementitious materials or partial cement replacements in this process include: ground granulated blast furnace slag, pulverised fuel ash.

1.2 Plant Detail

The process utilises:

1) 4 silos which store bulk cement for use in the manufacture of ready-mixed concrete. All silos are equipped with reverse air filters.
2) Concrete mixer
3) 2 tonne weigh hopper
4) Aggregate bins with a total of 200 tonne capacity
5) 2 No.2750 litre water storage tanks.
6) Additive tanks

The Plant layout is shown on Plan Ref.2/014 attached to this Permit.

1.3 Plant Operation

Sand is delivered to the plant via 24, 30 or 38 tonne capacity HGV's and is deposited into ground storage bays or directly in a ground feed hopper.

Bulk cement is delivered to the depot in sealed cement tankers, in varying capacities from 15 to 25 tonnes, and discharged under pressure (15psi maximum) to storage silos.

Aggregates are obtained from Mountsorrel Quarry as required. No stock piling is necessary at the cement plant.

Cement is discharged from the silo to the cement weigh hopper by overhead gravity discharge or via sealed screw conveyor through a butterfly valve. These arrangements are totally sealed. During discharge, displaced air is exhausted to a filter or to the internal area around the hopper; there is no release to atmosphere.

From the weigh hopper cement is discharged to the truck mixer barrel. The other materials have been discharged separately and mixing takes place by the helical screws within the rotating barrel. Alternatively, materials can be fed into the mixer building where they are then discharged as a wet mix into the truck mixer barrel.

The mix selection is computer controlled at this plant.

Waste materials from the process include:

a) Returned concrete that could not be delivered.
b) Wash-out from the barrels of the truck mixers at the end of each day.

This waste material is deposited in the truck mixer wash-out system which allows the solids to dry out and overflow water to be filtered for authorised disposal off-site. The dried solids are disposed to landfill.

2.0 Monitoring, Sampling and Measurement of Emissions

2.1. As part of the proper supervision of the process the operator shall monitor and make tests and inspections of the process. All sampling and tests required must be carried out when cement and cementitious powders are being blended, transported or conveyed from one receptacle to another.

2.2. The visual assessment will be undertaken from a point approximately 50m from the plant indicated in Plan 2/014 attached.

2.3. When any visible escape of dust is observed or when any malfunction or breakdown likely to lead to an escape of dust is found, then:

a) Immediate investigation shall be carried out.

b) Prompt corrective action shall be taken.

c) The observation, finding, result of the investigation and action(s) taken under heading (b) and (d) in this condition shall be entered in the log required by condition 2.4.

d) If the corrective action is not immediately effective then action to mitigate any effects shall be taken.

2.4. All inspections and assessments shall be recorded in a log book on a daily basis. Details of recorded visual assessments shall include:

(i) Date of observation
(ii) Time of observation
(iii) Wind direction
(iv) Wind speed
(v) Weather conditions
(vi) Position of observation
(vii) Assessment
(viii) Identification of observed plant

The log book must be retained by the operator for a minimum of two years and made available for examination by the Local Authority.

2.5 All audible and/or visual high level warning alarms fitted to silos shall be checked on a weekly basis by a designated and competent member of staff.

2.6 Details of all checks and inspection of the high level warning alarms and indicators attached to the silos shall be recorded in the log book (required under condition 2.4) on the day of inspection. These details shall include, for each silo's system:

(i) Date of the inspection
(ii) Time of the inspection
(iii) Name of the person carrying out the check
(iv) Description of any defects noted
(v) Suggested further action

3.0 Emission Limits

3.1 All emissions to air other than steam or water vapour shall be colourless and free from persistent mist.

3.2 All emissions to air shall be free from persistent fume and free from droplets.

4.0 Materials Handling

4.1 Dust producing materials, other than bulk cement and cementitious materials, shall be contained, wherever practicable.

4.2 Bulk cement and all other cementitious materials held on site shall be stored in silos.

4.3 All silos shall be vented to suitable arrestment plant. A reverse air jet filter is deemed to be suitable for the purpose of this condition. Each silo shall be equipped with a reverse air jet filter to retain airborne cement but allow release of pressurised air. Arrestment plant fitted to silos shall be of sufficient size (and kept clean) to avoid over pressurisation during delivery.

4.4 The efficiency of all arrestment plant shall be designed and maintained to ensure the concentration of total particulate matter in all emissions to air shall not exceed 100mg/m^3. These limit values for emission concentrations are to be taken as being at reference conditions of 273K and 101.3Kpa without correction for water vapour content.

4.5 The transfer of cement other than delivery to silo storage shall be, from silos by:

i) Gravity feed through a valve into a cement weigh hopper situated immediately below,

or

ii) Sealed screw conveyor through a butterfly valve, both of these arrangements shall be totally sealed from the outside atmosphere, displaced air shall be exhausted via a breather pipe to a separate filter or to the internal area around the weigh hopper; and from weigh hoppers by:

a) Gravity feed from the weigh hopper into the truck mixer barrel

or

b) Screw conveyor, after a butterfly valve is opened.

4.6 Truck mixers shall be loaded in such a way as to prevent or minimise dust emissions

4.7 All truck mixers loaded with dry materials shall be loaded in the enclosed loading areas.

4.8 All storage silos shall be equipped with a suitable high level indicator. The rotating paddle type indicator is deemed suitable for the purposes of this condition..

4.9 Internal transport of dusty materials other than cement and cementitious materials shall be carried out so as to prevent or minimise airborne dust emissions.

4.10 Conveyors shall be at sufficient capacity to handle maximum loads. Conveyors shall be provided with protection against wind whipping, for example, by fitting side boards.

4.11 Conveyor discharges shall be arranged to minimise free fall at all times.

4.12 During delivery from tankers, steps shall be taken to avoid venting air to silos at a rate which is likely to result in over-pressurisation of the silos. Particular care shall be taken at the end of the delivery. During the charging of the silos, care shall be taken to ensure that the transfer lines are securely connected to the tanker discharge point and the silo delivery inlet point. All tanker drivers shall be informed during training or from written instructions prior to the start of delivery, of the correct procedures to be followed during delivery to silos.

4.13 Delivery tankers used shall have sufficient valve work to allow a gradual release to occur by carefully controlled venting.

5.0. General Operations

5.1. Essential spares and consumables shall be held in stock for all plant and the equipment concerned with the control of emissions to the air..

5.2. Any malfunction or breakdown leading to abnormal emissions shall be dealt with promptly and process operations adjusted until normal operations can be restored.

5.3. All malfunctions or any breakdowns leading to abnormal emissions to atmosphere shall be recorded in the log book (required under condition 2.4).

5.4. For all malfunctions or any breakdown, leading to abnormal emissions likely to have an effect on the local community the Local Authority shall be informed without delay.

5.5. All spillages which may give rise to dust emissions shall be cleaned up promptly by wet handling. Dry handling of dusty spillages over 5Kg shall not be permitted. Damp materials cleared shall be disposed of to the truck mixer wash settlement pit on site. Major spillages shall be dealt with using a vacuum cleaning system. It shall not be necessary for vacuum cleaning equipment to be kept on site provided such equipment can be readily obtained on the same day the spillage occurs and interim measured such as dampening are taken immediately.

5.6. All accumulations of dust shall be cleared as soon as possible, where necessary deposits should be damped prior to clearing. Particular attention shall be paid to deposits on supporting structures and roofs in order to minimise wind entrainment of any deposited dust.

5.7. All roadways within the boundary of the site and all other areas where there is regular movement of vehicles shall be kept clean, in order to prevent or minimise dust generation.

5.8 All reverse air jet filters shall be inspected at least once a month, If defects or significant binding are detected corrective action shall be taken promptly and wherever possible before another delivery occurs. Operators shall record in the log book required to be kept by condition 2.4 of the Permit, all cases where deliveries are made prior to corrective action being taken. (Reduced inspection

frequency may be permitted by the local authority where pressure drop sensors are used to monitor any of the filter-types mentioned in this condition. Reduced inspection rates will be subject to prior written agreement with the Borough of Charnwood).

5.9 All pressure relief valves, where fitted to silos, shall be checked at least once a week or before a delivery takes place, whichever is the larger interval. Immediately it appears that the valve may have become unseated the delivery shall cease and no further delivery shall take place. The valve shall be examined and reseated if necessary before further delivery.

EXPLANATORY NOTES

These notes do not comprise part of Permit Serial No.014 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 1.1 to 5.9 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.