
M E M O R A N D U M

DATE: 21 August 2001
TO: Each Board Member
FROM: Sean O Donoghue
RE: Submission on application for IPC licence from Flemings
Fireclays Manufacturing Limited, Reg. No. 527

Application Details	
Class of activity:	13.4
Licence application received:	30 th November 1999
Notices under Article 11(2)(b)(ii) issued:	18 th January 2000
Information under Article 11(2)(b)(ii) received:	22 nd June 2000, 21 st August 2000
Notices under Article 17 issued:	16 th October 2000
Article 17 compliance:	27 th July 2001
Site visits:	19 th January 2000, 11 th October 2000
Submissions:	None

Company

The company manufacture stoneware bricks, chimney flue liners and chimney pots for use in the construction industry. Clay and shale are dug by "himac" from a clay pit/quarry located about ¾ miles southeast of the factory site. This pit is expected to be exhausted by the end of 2001 approximately, whereupon extraction will commence at a second pit 1.5 miles northeast of the factory. The site as defined in the licence includes the factory site and both of the pit sites. The material is transported to the intake area on dumper trucks. The clay and shale are mixed, screened, and ground to a powder like mixture, and conveyed to extruders to produce bricks and flue liners, or to a moulding machine to produce chimney pots. The product is then preheated/dried before entering the kiln, where it is fired. It is then packed for despatch. The kiln runs 24hrs a day, seven days a week, with an output of 30,000 tonnes per year. A second kiln is due to be installed in the near future.

Proposed Determination

Air:

Fugitive dust from the pits or factory site is not significant, due to the nature of the material (coarse shale), and the method of extraction. The kiln is the only source of air emissions on site, with fluorides and chlorides naturally present in the clay released during the baking process in the kiln. The kiln uses light fuel oil (0.2%S) and propane.

Air emissions monitoring on site indicates that emission concentrations meet existing and new plant BATNEEC guidelines for all parameters (particulate, SO₂, CO, fluorides and chlorides). Dispersion modelling of the emission indicates that Max 1-hour GLCs will not breach any ambient limit (SO₂, particulates) or guide values. For HF, an emission of 7.9 mg/m³ gave a maximum ground level concentration of 1.2

$\mu\text{g}/\text{m}^3$, far below the $1/40^{\text{th}}$ of the occupational exposure limit value of $37.5 \mu\text{g}/\text{m}^3$ (2000/39/EC). Both the existing and the second kiln have been limited to new plant BATNEEC emission concentration standards.

The nature of the raw materials (coarse shale) is such that fugitive dust is not a problem on site. No dust complaints have been received. Both the pits are located relative to the plant such that no public roads are used to transport clay/shale from the pits to the factory nor are there any sensitive locations near the transport route.

Water:

Rainwater which collects in a sump in the floor of the clay/shale pit is pumped via a settlement pond to a small waterway which drains to the River Clogh. The pumping operation lasts only for 30 minutes per day. Analysis of this emission shows very low levels for all parameters measured. Suspended solids is the important parameter in this emission and a suspended solids limit on the emission has been set at 25 mg/l to ensure compliance with all water quality standards. Monitoring of the emission is required under Condition 6. No fuels, oils, or other chemicals are permitted to be stored at the clay pits under Condition 9. Domestic sewage is discharged to the council sewerage system which runs along the front of the site. Surface waters on the factory site discharge via three surface water drains. Two of these drain directly to the Clogh, no specific discharge point could be located for a third. Condition 9 requires the applicant to locate this discharge point for record purposes.

Waste:

Wastes generated on site are as follows: greenware is waste from the extrusion process which is returned to the process; waste oil is sent for off site recycling; grog (waste brick) is sold as fill to the construction industry; packaging & canteen waste is disposed of off site. Some unauthorised dumping of domestic waste by locals occurred in the past (up to approximately 10 years ago). Information on the extent of this dumping, and an investigation of the impacts is required under Condition 9. Hazardous waste such as batteries and fluorescent lamps are currently disposed of to off-site landfill, however the licence will require the licensee to use the services of an agreed hazardous waste disposal/recovery contractor.

Noise:

Noise monitoring conducted by the applicant indicates that noise sensitive locations will not be exposed to greater than the EPA guide values of $L_{\text{AEQ},15} 55/45 \text{ dB}_A$ at daytime/nighttime respectively. Some sections of the site boundary will exceed the guidevalues, but there are no NSLs near these sections of the boundary. There have been no complaints in the past from neighbours, and based on site visits there is no indication that noise could be a problem. While the kiln runs through the night, it should be noted that the rest of the factory works by day only, as does the excavation operations at the pits.

Residuals Management and Quarry restoration:

The PD requires the applicant to prepare a plan for the decommissioning of the Plant site as well as the restoration and rehabilitation of the quarry sites.

Energy use:

The licensee is required to carry out an energy efficiency audit and to submit a summary report as part of the AER. The audit programme is to be agreed in advance with the Agency, and the report's recommendations will be incorporated into the schedule of environmental objectives and targets under Condition 2.

Accidents and Emergency Response:

The licensee is required to put in place a documented Accident Prevention Policy and Emergency Response Procedure within six months of date of grant of licence. These policies are to be reviewed annually and to be made available on site for inspection by Agency personnel.

Submissions:

None were received.

Recommendations:

That the board approve the proposed determination as submitted.

Signed

Sean O Donoghue,
Inspector,
Licensing & Control.