

LICENSING UNIT MEMORANDUM	
<b>TO:</b>	DIRECTOR
<b>FROM:</b>	Ann Marie Donlon
<b>C.C:</b>	
<b>DATE:</b>	5 <sup>th</sup> June 2007
<b>RE:</b>	Request for an amendment to the IPPC licence of AHP Manufacturing B.V. t/a Wyeth Nutritionals Ireland, Reg. No. P0395-02

AHP Manufacturing B.V. trading as Wyeth Nutritionals Ireland, Askeaton, Co. Limerick was granted a licence on the 27/10/2000 and a revised licence on the 23/01/2004. A section 82(11) Amendment to the licence was issued on 09/06/2006 to bring the licence into conformity with the IPPC Directive. The activities carried out on-site are described as:

- Class 7.2 (the manufacture of dairy products where the processing capacity exceeds 50 million gallons of milk equivalents per year) and
- Class 2.2 (the burning of any fuel in a boiler or furnace with a nominal heat output exceeding 50 MW).

The quantity of milk powder and milk derivatives used in the process is approximately 90 tonnes per day (yearly average). Consequently, the installation comes within the scope of the IPPC Directive due to the combustion plant only - category 1.1 (combustion installations with a rated thermal input exceeding 50MW).

A range of infant nutritional products is produced on site including canned powder baby food formula and liquid Ready-To-Feed formula in glass bottles and Tetra-Packs. The company is in operation 24 hours per day, Monday to Friday with additional operations at weekends as required.

The licensee requested a technical amendment to its IPPC licence for the following reasons:

1. Increase emission limit values for Boilers 1 and 3.

Pant	Parameter	Current ELV (mg/m <sup>3</sup> )	Proposed ELV (mg/m <sup>3</sup> )
CHP	NO <sub>x</sub>	300 – Natural gas	300 – natural gas
		450 – Gas oil*	450 – Gas oil
	SO <sub>2</sub>	--	155 – Gas oil
Boilers 1 & 3	NO <sub>x</sub>	115 – natural gas	300 - natural gas
		220 – Gas oil*	300 – Gas oil
	SO <sub>2</sub>	340 – Gas oil*	340 – Gas oil

\* These emission limit values apply when Gas oil in use as a back-up fuel in the boilers and in the case of emergencies for the CHP plant.

2. Fuel switch to gas oil from natural gas in the CHP and boilers.

The request for a Technical Amendment is considered below.

An air dispersion model for combustion plant fired on gas oil (0.2%S) was undertaken.

CHP and boilers fired on gas oil at full load.

Parameter	AQS	Maximum ground level concentration ( $\mu\text{g}/\text{m}^3$ )	Including background <sup>Note 1</sup>
Annual Average NO <sub>2</sub> /NO <sub>x</sub>	40/30	10/10	28/ 33
99.79 <sup>th</sup> ile NO <sub>2</sub> (1 Hour)	200	127	218
Annual average SO <sub>2</sub>	20	8.4	17.4
99.73 <sup>th</sup> ile SO <sub>2</sub> (1 hour)	350	151	342
99.18 <sup>th</sup> ile SO <sub>2</sub> (24 hour)	125	63	---

*Note 1: Background levels taken from EPA Air Quality Report, 2005 (Zone C/D - worst case)*

The predicted impact of emissions indicates that air quality standards will be observed. When background levels are added (worst case), there is a potential for the air quality standards to be exceeded. However the model assessment considered the worst-case scenario modelling CHP and boilers on full load for a year. Normal operations require only the CHP with one boiler operating and the other on hot standby.

The WHO air quality guideline for sulphur dioxide, 2006 of  $20\mu\text{g}/\text{m}^3$  (24 hr average) will not be observed. However BAT is to use low sulphur fuels. Sulphur content of gas oil will reduce to 0.1% from 1st January 2008.

The proposed ELV of  $155\text{mg}/\text{m}^3$  SO<sub>2</sub> for the CHP using gas oil is higher than calculated stoichiometrically from sulphur content of fuel with 0.2%S (expected -  $115\text{mg}/\text{m}^3$  @15% oxygen). The recommended amendment specifies emission limit values (ELV) for sulphur oxides based on sulphur content of gas oil. The CHP emission limit values for nitrogen oxides when fired on gas oil are as specified in the existing licence.

Monitoring data for boilers fired on natural gas indicates that emission limit value of  $200\text{mg}/\text{m}^3$  NO<sub>2</sub> can be achieved. This ELV has been typically applied in licences for existing boilers fired on gas and is specified in the recommended amendment. An ELV of  $300\text{mg}/\text{m}^3$  NO<sub>2</sub> for boilers fired on oil is proposed and specified in the recommended amendment. These limit values are consistent with the limits specified in the UN Convention on Long Range Transboundary Air Pollution (the Gothenburg Protocol).

The proposal for increasing emission limit values and a fuel switch to gas oil can be accommodated by a technical amendment to the licence. The recommended amendment attached to this report specifies emission limit values for boiler 1 and 3, and the CHP when fired on natural gas or gas oil. The ELV's relate to CO, NO<sub>x</sub> and SO<sub>x</sub>. Boiler No. 2 is currently decommissioned and isolated and will not be used unless required due to failure of boilers 1 or 3. The recommended amendment specifies that the operation of boiler no.2 requires the prior agreement of the Agency.

It is noted that the licence does not specify monitoring of particulate emissions from the dryers and agglomerator. The licensee carries out biannual monitoring. Although monitoring is not expressly provided in the licence, particulate monitoring may reasonably be regarded as having been contemplated by the terms of the licence as a whole.

The recommended amendment makes further requirements in relation to monitoring of particulate emissions from dryers and agglomerator.

Recommendation

The proposal regarding the fuel switch and emissions to air can be accommodated, in accordance with section 96(1)(c) of the EPA Acts, 1992 and 2003, by the issue of a Technical Amendment.

The Agency requirement to monitor particulate emissions can be accommodated, in accordance with section 96(1)(b) of the EPA Acts, 1992 and 2003, by the issue of a Technical Amendment.

*pp* Grace Bernap  
Ann Marie Donlon  
Office of Licensing & Guidance