

This memo has been cleared for submission to the Director by the Programme Manager.

Signed: MSD Date: 10-5-12

Máire Buckley



**OFFICE OF CLIMATE,  
LICENSING &  
RESOURCE USE**

**INSPECTORS REPORT ON A LICENCE APPLICATION**

To:	Directors	
From:	Ann Marie Donlon	- Licensing Unit
Date:	10 <sup>TH</sup> MAY 2012	
RE:	REVIEW OF AN IPPC LICENCE – PFIZER NUTRITIONALS IRELAND LIMITED, LICENCE REGISTER P0395-03	

Application Details	
Licensee:	Pfizer Nutritionals Ireland Ltd.
Location of Installation:	Coolrahee, Askeaton, Co. Limerick
Class of activity:	7.2.2 (treatment and processing of milk) & 2.1 (50MW combustion plant)
Category of Activity under IPPC Directive (2008/1/EC):	6.4 (c) & 1.1
Section 87(1)b notice sent:	28/07/2011
Review form received:	03/11/2011
Notices under Article 90 issued:	21/12/2011; 26/01/2012
Information under Article 90 received:	09/01/2012; 23/03/2012
Supplementary material submitted by applicant	17/04/2012
Submissions received:	26/09/11, 07/10/11, 19/10/11, 23/12/11, 13/03/2012

**1.0 Reason for Licence Review**

This installation manufactures dairy products namely baby food and have a combustion plant exceeding 50MW thermal output. The installation was granted a licence by the Agency on 27/10/2000 and revised licence on the 23/01/2004. This was technically amended on the 09/06/2006 for the purposes of bringing the licence into conformity with the IPPC Directive 96/61/EC and on the 14/06/2007 relating to the boilers and fuel type. The licence was transferred from AHP Manufacturing B.V. t/a Wyeth Nutritionals Ireland to Pfizer Ireland Pharmaceuticals on the 25/01/11. The licence was again transferred on 24/10/11 to Pfizer Nutritionals Ireland Limited. The licensee is a legal entity of normal status and the associated companies registration office (CRO) number is 393631.

On 28<sup>th</sup> July 2011, the Environmental Protection Agency initiated a review of the IPPC licence held by Pfizer Nutritionals Ireland Ltd. for the installation located at Coolrahee, Askeaton, Co. Limerick, IPPC licence register number P0359-02. The review was initiated by writing to the licensee and placing a newspaper notice in the Irish Independent. The reasons for initiating the review are in light of the following:

Requirements under the following Regulations:

- (1) The European Communities Environmental Objectives (Surface Waters) Regulations 2009; and
- (2) The European Communities Environmental Objectives (Ground Water) Regulations 2010.

## 2.0 Emissions to Surface Waters

The process effluents discharge to the Deel Estuary (SH\_060\_0600).

Process waste water and sanitary waste water are treated at the on-site waste water treatment plant (WWTP) and discharge via SW1. The waste water treatment plant comprises of preliminary (screen, fat removal system, balancing) and secondary (sequencing batch reactor) treatment stages. Denitrification occurs within the waste water treatment plant and phosphorus is removed by chemical precipitation. The effluent is discharged via cascade steps to impart aeration into the effluent. Priority substances are not limited in the existing licence. The process effluent emission has been in compliance with its existing licence limits.

Backwash from the potable water treatment plant discharges to the Deel estuary via storm water emission point reference SW8. The waste water is from backwashing of filters and regeneration of the softeners. This discharge is not currently monitored under the existing licence. As part of this review the licensee undertook a once off monitoring event that resulted in BOD, suspended solids, orthophosphate of 4mg/l, 50mg/l and 0.18mg/l respectively and high levels of sodium and chloride.

There are eight storm water emission points but only one is currently monitored.

### 2.1. Receiving waters and impact

The following table summarises the main considerations in relation to the Deel Estuary downstream of the process effluent discharge.

**Table 1.0 Receiving waters**

<b>Characteristic</b>	<b>Information</b>	<b>Comment</b>
Receiving water name and code	Deel Estuary (SH_060_0600)	Transitional water. Flows into the Lower Shannon Estuary.
Trophic status	Intermediate (2007-2009)	Due to MRP & BOD
WFD Status	Moderate (2011)	Unchanged from 2009 and moderate due to elevated MRP & BOD & reduced fish
WFD Risk	1a – at risk (2008)	Objective is to restore by 2021
WFD Protected Areas	River Shannon and River Fergus estuaries SPA (4077)  Lower River Shannon cSAC (2165)	Direct discharge  Water dependant habitats

		~0.8km downstream
WMU Action plan	Shannon RBD transitional and Coastal Waters Action programme	Installation not specified.
	Deel /Shannon estuary water management unit action plan	Installation identified as a pressure and causing risk.

The Deel /Shannon estuary water management unit action plan states that 95% of the total phosphorus is from diffuse sources mainly agriculture. Although the Deel estuary has intermediate trophic status, it has not been designated nutrient sensitive under the Urban Waste Water Treatment Directive. The Deel River feeding the estuary has poor status.

There are approximately 24 dilutions available in the receiving water (computed from salinity measurements and freshwater inflow from the Deel River @ 95%ile flow<sup>1</sup>). The median salinity of the Deel Estuary is 1.805psu as reported in the EPA Water Quality in Ireland 2007-2009.

Table 2.0 considers the contribution from the process emission point SW1 (2800m<sup>3</sup>/day) having regard to the water quality standards. The background value for BOD is the mean of summer and winter values reported in the EPA report *Water Quality in Ireland 2007-2009* for the Deel Estuary. The water quality standard for BOD in transitional waters is a 95%ile standard only. Given that the water body fails the water quality standard for orthophosphate an adjusted background concentration of 0.03mg/l is used which is in accordance with the criteria set out in the *Guidance, Procedures and Training on the Licensing of Discharges to Waters and to Sewer for Local Authorities* issued by the Water Services Training Group for freshwater. Most phosphorus input is from land based sources via rivers and it is therefore, reasonable to consider that sea water has negligible levels of orthophosphate. This estuary is strongly influenced by riverine input which may explain the failure of the waterbody due to orthophosphate levels. Further, the following assessment considers the 95%ile flow (low flow) of the riverine input.

**Table 2: Mass Balance**

Parameter	Background Concentration (mg/l)	Current ELVs (mg/l)	Proposed ELVs (mg/l)	Contribution from the discharge Note 1 (mg/l)	Predicted downstream concentration Note 1 (mg/l)	standard (mg/l) (good) Note 2
BOD	2	100 kg/day	100 kg/day	1.37	3.37	4
PO <sub>4</sub> -P	0.03	2 (as TP)	<b>0.75</b> Note 3	0.029	0.059	0.060

**Note 1:** Based on proposed ELVs.

**Note 2:** European Communities Environmental Objectives (Surface Waters) Regulations 2009.

**Note 3:** As discussed below ELV will be expressed as 0.75mg/l TP.

Table 2 demonstrates the required orthophosphate levels in the process effluent emission in order to achieve the requirements of the European Communities Environmental Objectives (Surface Waters) Regulations 2009. The licensee reported in the review form that

<sup>1</sup> The 95%ile flow for hydrometric station 24029 is reported by the Agency as a conservative 0.68m<sup>3</sup>/s.

orthophosphate levels are very low at < 0.05mg/l in the discharge. The total phosphorus data provided indicates that total phosphorus levels are generally less 0.75mg/l (98% compliant). The 2010 AER indicates that mass loading of phosphorus in the discharge is less than 15% of the current licence limit. The Recommended Determination (RD) specifies an emission limit value (ELV) of 0.75mg/l for total phosphorus effective from the date of grant of licence. If the emission was all orthophosphate the environmental quality standard would still be observed but orthophosphate is a component of total phosphorus, so the proposed ELV is conservative.

The waste water undergoes nitrification and denitrification consequently the current total nitrogen licence limit is 15mg/l. This limit is carried forward to the RD. The RD removes the mass loading limits for all parameters except BOD as the concentration limits are demonstrated to be achievable and are BAT for this sector.

This installation carries out a dairy activity, food manufacture, and therefore priority substances are not a characteristic of emissions to water and are not dealt with in any further detail.

The RD requires continuous pH and conductivity monitoring of the backwash from the water treatment plant within six months of the date of grant of licence (SW8). The RD requires the establishment of trigger levels and a response programme.

The licensee considers that monitoring of all eight storm water emissions is not BAT due to the high capital costs and implications of providing sampling at such locations. They consider that there are health and safety issues relating to heavy traffic, steep slopes and requirements for a deep excavation if such points were to be installed. The licensee proposes to monitor four storm water emission points which did not include SW8 which includes the backwash from the water treatment plant. There is one oil interceptor on the site serving one storm water emission point (SW5).

Monitoring is important in the control of losses from the installation. The RD requires in addition to continuous monitoring on SW8, monitoring of seven storm water emission points and the monitoring locations for three of the seven points can be agreed with the OEE. The agreed locations may not capture all drainage but would focus on higher risk areas. Further the RD requires the provision of silt traps and oil interceptors within six months of the date of grant of the licence.

## **2.2 Specific Standards or Objectives for Protected Areas**

In considering the application regard was had to the requirements of standards or objectives laid down for protected areas specifically the following:

### Habitats and Species of European Sites directly dependant on water

The Deel Estuary is part of the Lower River Shannon candidate Special Area of Conservation (cSAC 002165) and the River Shannon and River Fergus estuaries SPA (4077). The installation discharges directly into this SPA but upstream of the cSAC. The conservation objectives for the cSAC and SPA are to maintain or restore the favourable conservation condition of the Annex I habitats and Annex II species for which the cSAC/SPA has been selected.

As previously highlighted, this review is for the purposes of assessing existing discharges in the context of new environmental quality standards and objectives and does not consider any further increase in the ELVs for emissions to waters. The Agency has examined the scope of the European Communities (Birds and Natural Habitats) Regulations 2011 and within the limited scope of this review, the Agency is satisfied that the discharge will not

likely have a significant effect on the Lower River Shannon cSAC and River Shannon and River Fergus estuaries SPA (4077). With respect to water quality, the ELVs in the RD aim to achieve good status in the Deel estuary, and hence, will contribute to the favourable conservation objectives for the area.

### **2.3 Emission controls and environmental quality standards**

The ELV's specified in the RD have been established according to the combined approach whereby the stricter of the requirements which would result from the application of limits which aim to achieve the quality standards and the application of limits based on BAT.

The ELVs specified in the RD aim to achieve the environmental objectives and standards established in the European Communities Environmental Objectives (Surface Waters) Regulations 2009.

### **3.0 Emissions to Groundwater**

No aspect of the activity gives rise to point or diffuse source of pollutant input to groundwater.

The existing licence requires groundwater monitoring of the site. The OEE have advised that bacteriological contamination was detected in the wells but that they are satisfied that contamination is from an offsite source associated with a nearby municipal wastewater treatment plant (EPA licence D0315-01) and tidal influences. The OEE forwarded relevant reports to Limerick County Council in August 2007. The installation is located on the estuary and there are no designated shellfish areas nearby. The RD carries forward the requirement to monitor groundwater and includes faecal coliforms and total coliforms in the suite of parameters to be monitored.

The requirements specified in the RD aim to achieve the environmental objectives and standards set out in the European Communities Environmental Objectives (Ground Water) Regulations 2010.

### **4.0 Updating the existing licence**

The OEE advised that gas oil with sulphur content not exceeding 0.1% by mass is now used at installation and consequently, the note 1 to the tables of *Schedule 1 (i) Emissions to Atmosphere* of the existing licence is no longer relevant and has not been carried forward to the RD.

The RD has transposed all relevant existing licence conditions from P0359-02 into the Agency's current licence format. Consequently the RD specifies amendments and additional requirements.

Table 3 summarises the amendments made to the existing licence as a result of changes to the following;

- Adjustments approved by the OEE.
- Once off assessments and reports being closed out.
- Statutory and format updates of conditions.
- The European Communities Environmental Objectives (Surface Waters) Regulations 2009.
- The European Communities Environmental Objectives (Groundwater) Regulations 2010.

The licensee has clarified that their class of activity is 7.2.1. This installation was licenced in 2004 under class 7.2 of the EPA Act 1992. The technical amendment in 2006 to achieve conformity with the IPPC Directive did not change the class of activity. The Protection of the Environment Act 2003 amended the First Schedule and introduced Class 7.2.1 to reflect the IPPC Directive and class 7.2 became 7.2.2 with additional wording so that 7.2.1 takes precedence. The licensee is operating above the thresholds specified in class 7.2.1 and the RD incorporates this amendment to ensure compliance with Annex I of Council Directive 2008/1/EC (IPPC Directive). This installation only takes in and processes milk powder and the Agency considers that milk powder comes within the scope of 'milk' referred to in the class of activity 7.2.1.

As part of this review, there were three submissions from one individual relating to noise (discussed in more detail below). The Office of Environmental Enforcement (OEE) advised that noise is significant aspect of the activity that has generated complaints. The submissions are more fully dealt with below however, having regard for the requirements of BAT, the RD updates the emission limits and interpretation of noise measurements. The RD further requires a mitigation and control programme for noise sources to ensure on-going awareness and controls for this aspect of the activity given the rural nature of its location.

**Table 3: List of new or amended conditions proposed in the RD**

<b>Condition or Schedule No.</b>	<b>Reason for change</b>	<b>Description</b>
1.1, 1.2, 8.5, 8.7, 8.9	Statutory	Scope of licensable activities, waste requirements
2.1.1, 3.1, 3.2, 3.4, 6.1, 6.2, 11.7	Better management	Suitably qualified manager, infrastructure, notice board, retention of composite samples for EPA, sampling and analyses requirements, CEN standards, record keeping
2.2.2.8, 2.2.2.9, 4.5, 6.8, 6.12, 6.14, Sch B.4	BAT	Maintenance programme, efficient process control, interpretation of noise measurements, fugitive emission programme, inspection of valves and flanges, noise monitoring and control and monitoring programme for noise sources, noise limits
3.8, 6.17, Sch B.2, Sch C.2.2, Sch C.2.3	SW regs	Silt traps/ oil interceptors required to protect surface waters, continuous monitoring of backwash, establishing trigger levels and a response programme, monitoring of emissions
3.6, 3.11, 6.5, 6.9, 6.10, 12.2.1, Sch C.6	GW regs	Bunding, protect wellheads, groundwater monitoring equipment, integrity testing, drainage system maintenance. Statement of measures (ELRA), monitoring groundwater

## **5.0 Cross Office Liaison**

The OEE provided advice and guidance on the status of existing licence conditions, in particular they advise on fuel use and provided their assessment of the groundwater conditions at the installation. They also advised that there were 16 noise complaints recorded in 2010, 6 recorded in 2011 and 2 so far for 2012. OEE requests the existing licence conditions relating to noise be brought into compliance with BAT, which would for example mean the removal of the 2dB leeway provided in the existing licence on the interpretation of compliance with noise limits.

## 6.0 Submissions

Five submissions were received, three of which are from the one individual, Mr. Declan Prendiville.

### A. Mr. Declan Prendiville

I have read all three submissions and the following paraphrases Mr. Prendiville's concerns.

- (i) *Mr. Prendiville highlights that the installation has caused noise nuisance to such an extent that it is having a negative effect on the quality of his life and on the welfare of his animals. He says he has been forced to relocate most of his greyhounds. Mr. Prendiville reports he has had noise monitoring carried out by a qualified environmental scientist and the results have shown that noise levels at night are above the limits set in the company's IPPC licence, in particular there is a tonal component of the noise. He requests that the Agency review the noise reduction proposals as required by the licence and determine if the proposal was carried out. The excessive noise levels are intermittent. He has met factory management. He suspects that noise levels can be adjusted and that noise monitoring visits should be unannounced.*

*He requests the Agency to consider the question of noise pollution, non-compliance and order tonal noise to be eliminated or reduced.*

*In his submission received on the 7<sup>th</sup> October 2011, Mr. Prendiville makes an official noise complaint and he details dates when the noise was horrendous. The management met him but their proposal was unsatisfactory. Mr. Prendiville acknowledges that the installation does not run continuously at these excessive noise levels and that the factory will submit compliant noise monitoring results. He requests the Agency to carry out independent unannounced monitoring at times of excessive noise.*

*In his submission received on the 19<sup>th</sup> October 2011, Mr. Prendiville advises that nothing has been done regarding noise levels and he details further dates when he was subjected to horrendous noise including a lot of banging. He wants to know what the Agency is doing about the situation.*

#### *Comment:*

Mr. Prendiville's written noise complaints were forwarded to the Office of Environmental Enforcement. The existing licence specifies noise emission limits of 55/45 dB(A) (Leq, 15 mins) and prohibits tonal or impulsive component in the noise emission. The interpretation condition states that noise from the activity at specified noise sensitive locations shall not exceed the limits by more than 2dB(A).

The EPA Guidance Note for Noise in relation to Scheduled Activities 2<sup>nd</sup> Edition states that while BAT must be applied on a case by case basis, the noise attributable to on-site activities shall not generally exceed 55 dB/45dB by daytime/night-time at any noise sensitive locations and does not provide a 2dB(A) leeway. The RD updates the noise limits (55/45 dB(A) LAeq (30 minutes)) and interpretation in line with BAT. It should be noted that tonal and impulsive noise is prohibited.

Noise is an aspect of the activity that requires to be regularly monitored and maintained under strict supervision due to the amount of noise emitting equipment on-site (chillers, fans, compressors etc.). It is reasonable in these circumstances that the licensee should have a noise mitigation and control programme for noise bearing equipment. The RD specifies a noise mitigation and control programme for noise sources. Independent noise monitoring is a matter for the Office of Environmental Enforcement.

**B. Health Services Executive**

Mr. Thomas Boland, Environmental Health Officer of the Health Services Executive wrote that the Health Service Executive had no comment to make from a public health perspective in relation to the review.

**C. Department of Agriculture, Food and the Marine**

Mr. Noel O'Connor wrote that the Department of Agriculture, Food and the Marine had no comment.

**7.0 Charges**

The charge specified in the RD of €9,250 is the amount invoiced by OEE for 2012.

**Recommendation**

I recommend that a Proposed Determination be issued subject to the conditions and for the reasons as drafted in the RD.

Signed

  
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Ann Marie Denlon

**Procedural Note**

In the event that no objections are received to the Proposed Determination of the application, a licence will be granted in accordance with Section 87(4) of the Environmental Protection Agency Acts 1992 and 2011 as soon as may be after the expiration of the appropriate period.



Figure 1: Pfizer Nutritionals Ireland Limited

