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# M E M O R A N D U M

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**DATE:** 17 September 1997  
**TO:** Each Board Member  
**FROM:** Gerard Kelly  
**RE:** Proposed Determination for Queally Pig Slaughtering Ltd.

Application Details	
Name of applicant:	Queally Pig Slaughtering Ltd.
Location of activity:	Grannagh, Co. Kilkenny
Class and Nature of activity:	7.4 - The slaughter of animals in installations where the daily capacity exceeds 1500 units and where units have the following equivalents: 1 pig = 2 units.
Reg. No.	175
Licence application received:	1/10/96
Notices under article 11(2)(b)(ii) issued:	28/11/96
Information under article 11(2)(b)(ii) received:	2/4/97 11/4/97 23/5/97 11/8/97
Site Visit:	7/2/97
Submissions received:	1. Department of the Marine 2. Southern Regional Fisheries Board 3. Department of the Marine 4. Peter Sweetman & Associates
Existing Permits	Licence to discharge Trade Effluent to Waters from Kilkenny County Council (Ref. No. ENV/W/38/92)

## **Company Profile:**

Queally Pig Slaughtering Ltd. employ 270 people at their plant in Grannagh, Co. Kilkenny. The activity has the capacity to slaughter 240 pigs per hour. The expected maximum production is 10,000 pigs per week.

Hours of production at the plant are 0600 hrs to 1700 hrs Monday to Friday.

## **Process Description:**

Unit operations include lairage, slaughter, cleaning, evisceration, cutting and boning, curing/maturing, packing and dispatch.

**Lairage:** On arrival pigs are transferred to pens in the lairage area which has a capacity to hold 800 pigs. Pigs are usually slaughtered within 24 hours of arrival.

**Slaughter:** The pigs are stunned using carbon dioxide and then slaughtered by severing the jugular vein. The pig bleeds for 2.5 minutes and the blood is collected. The blood storage tank is emptied each day and used in pet food manufacture.

**Cleaning:** The carcass is then scalded, dehaired, singed and polished.

**Evisceration:** Red offal (liver, kidney, tongue, heart) is separated and dispatched for human consumption. Lungs are transferred off-site for rendering. The carcass is then split.

**Cutting and boning:** The head is removed and dispatched off-site for further processing. In the boning hall the meat is manually deboned with bones dispatched off-site for use as bone meal.

**Curing/Maturing:** Some pork cuts are injected with a brine solution. Sodium chloride is injected at a rate determined by the product specification. It is then covered with brine for 72 hours and allowed to dry for a further 72 hours.

Other materials used on-site include waste water treatment chemicals, detergents and disinfectants. Wastes are sent for rendering, landspreading and to landfill.

#### **Air Emissions:**

Boiler emissions are below new plant BATNEEC Guidance Note and TA Luft limits. A light fuel oil is used. Minor emission points comprise a blood storage tank vent, standby generator and water vapour vents from processing areas. Blood is chilled while stored on-site therefore odour problems are not expected. There is potential for odorous emissions from the wastewater treatment plant area if not managed properly.

#### **Emissions to water:**

The company was issued a licence to discharge treated effluent to the River Suir by Kilkenny County Council under the Water Pollution Act, 1977. Effluent from the waste water treatment plant on-site discharges to the River Suir at a point below low water mark. At the point of discharge the river is tidal with some samples exhibiting high chloride levels. The applicant has been unable to furnish information as to the exact configuration of the outfall and has been required under condition 6.8 of the proposed determination to report on the dispersion characteristics of the outfall. The maximum volumetric discharge at peak production periods is 1800 m<sup>3</sup>/day. The applicant has been required, under

condition 6.6, to provide sufficient balancing capacity prior to biological treatment to contain the daily maximum volumetric production of effluent.

There are approximately 700 dilutions available at 95%ile flow in the River Suir for the discharge from the facility. Using the Environmental Quality Objective (EQO) approach as discussed in the Suir Barrow Nore Estuary Water Quality Management Plan (WQMP) and taking account of BATNEEC, limits for the various parameters were decided as follows:

### **BOD**

At the proposed ELV of 100 mg/l approximately 7% of the assimilative capacity of the river at this point is taken up. The WWTP reduces BOD by 96% which meets our BATNEEC Guidance Note figure of > 90% BOD reduction. However it is considered that an ELV of 40 mg/l is an attainable ELV for this industry and the applicant has been given until 1 January 2000 to meet this figure.

### **Suspended Solids**

A suspended solids quality standard is not quoted in the WQMP or in the Agency's BATNEEC Guidance Note. From data submitted by the applicant the WWTP can meet a suspended solids ELV of 40 mg/l which is considered acceptable.

### **Total Ammonia (as N)**

Existing ammonia levels in the receiving water and its assimilative capacity mean that the discharge from the facility has no adverse environmental impact. The WWTP is capable of meeting an ELV of 10 mg/l which is also the new plant BATNEEC Guidance Note ELV.

### **Total Oxidised Nitrogen (as N)**

At present the WWTP can achieve an ELV of 60 mg/l. By 1 January 2000 the applicant must reduce this figure to 20 mg/l in line with what is considered new plant BATNEEC. for this activity. This will most likely necessitate the incorporation of an anoxic zone.

### **Total Phosphorus (as P), Orthophosphate (as P)**

A P level of 0.09 mg/l has been recorded close to the applicant's emission point. The WQMP for the River Suir suggests a Total P < 0.1 mg/l. As there is some concern regarding P levels in the river the applicant has been required to meet the BATNEEC Guidance Note ELV of 2 mg/l Total P (as P) by 1 January 2000. A limit of 1 mg/l Orthophosphate (as P) has also been set for this time.

### **Chloride**

At the emission point the water can be saline due to its tidal nature. The plant has no difficulty in meeting an ELV of 500 mg/l and this has been set in the proposed determination. Chloride levels in the river vary from 100 mg/l to 9000 mg/l.

### **Oils, Fats and Greases**

From previous analyses the WWTP has no difficulty meeting the BATNEEC Guidance Note ELV of 15 mg/l and this limit has been proposed.

### **Surface Water Discharge:**

Storm water run-off from the site is discharged to the River Suir. The applicant has been required to install a continuous conductivity meter on the surface water discharge line and to report to the Agency under condition 9.1.3 on warning and action levels. *Schedule 3(i) Surface Discharge Monitoring* of the proposed determination details analysis to be undertaken by the applicant.

### **Wastes Management:**

All landspreading activities from Queally Pig Slaughtering Ltd. (Reg. No. 175) and Dawn Meats (Exports) (Reg. No. 179) is to be undertaken and controlled by Dawn Meats (Exports). There are two hazardous wastes generated at the facility, waste oil and infectious material. Waste oil is taken by an agreed disposal contractor and infectious waste sent for rendering. All other wastes are to be disposed of using agreed waste contractors.

### **Noise Emissions:**

There have been complaints in relation to noise from Mr. and Mrs. Campion. The noise is most likely emanating from either the applicant or Dawn Meats (Exports). A noise survey was conducted in January 1997 by a consultant hired by the companies in conjunction with EPA personnel. At the time of the survey wind direction was not conducive to finding a noise impact at the Campion residence. A more recent survey by EPA personnel from 13 to 20 August 1997 involving 48 - 15 minute measurements from 2300 hrs to 0700 hrs each night appears to identify a noise of approximately 200 Hz. Because of this a further noise survey within two months of the date of grant of licence is called for under condition 8.3 of the proposed determination in order to isolate the source of the noise.

### **Submissions:**

Four submissions were received by the Agency.

### **1. Department of the Marine - 4 November 1996**

The DOM submitted a copy of a Southern Regional Fisheries Board letter commenting to Kilkenny County Council on their Trade Effluent Licence. With regard to BOD and Suspended Solids the Fisheries Board contend that trade effluent discharges from the facility have to meet discharge standards as set out in Annex 1 Table 1 of the Council Directive concerning Urban Waste Water Treatment (91/271/EEC) by 31 December 2000. However this is not the case as the relevant article states:

‘.....respect conditions established in prior regulations and/or specific authorisation by competent authority or appropriate body, in respect of all discharges from plants representing 4000 p.e. or more.’

While the directive is prescriptive about discharge standards for urban waste water treatment plants, it only asks for conditions to be established by a competent authority with respect to certain industrial sectors. It does not require the use of the same standards as those for urban waste water treatment facilities. In this case it is more appropriate to take the Environmental Quality Objective and BATNEEC approach as outlined in **Emissions to Water** above.

With regard to the adoption of a tidal discharge regime the applicant has been required under condition 6.8 to undertake a study on the adequacy of the outfall in ensuring the location and extent of the mixing zone is compatible with protection of the receiving waters.

### **2. Southern Regional Fisheries Board - 12 February 1997**

The Fisheries Board again refer to the urban waste water directive. The ELVs for P are the same as those proposed by the Board with Fats, Oils and Grease at 15 mg/l as compared to the Board's recommendation of 20 mg/l. Other ELVs are as discussed in the **Emissions to Water** section above. The submission goes on to deal with landspreading issues which this activity is not concerned with.

### **3. Department of the Marine - 19 March 1997**

This submission endorses the submission from the Southern Regional Fisheries Board of 12 February 1997.

### **4. Peter Sweetman & Associates - 17 July 1997**

Objects to the granting of a licence.

**Recommendation:**

The Board approve the proposed determination as submitted.

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Gerard Kelly  
Licensing & Control