Annual Environmental Report

January-December 2010

Queally Pig Slaughtering T/A Dawn Pork and Bacon
Grannagh,
Co. Kilkenny

IPPC Licence Registration Number: PO 175-01

1.0 INTRODUCTION

This is the eleventh Annual Environmental Report, referred to hereafter as AER, covering environmental performance at the Queally Pig Slaughtering (T/A Dawn Pork and Bacon) facility in Grannagh, Co Kilkenny. Throughout this report Queally Pig Slaughtering will be referred to as Dawn Pork and Bacon. The AER has been prepared in accordance with the requirements of condition 2.8.2 of Integrated Pollution Prevention and Control (IPPC) Licence No. PO 175-01 issued by the Environmental Protection Agency (EPA). This report has been compiled as outlined in the EPA guidance note for AER.

The AER is viewed by the Management of Dawn Pork and Bacon as an important part of company communication, both internally and publicly on environmental matters.
The class of activity that takes place at Dawn Pork and Bacon is Class No. 7.4 and can be described as follows; The slaughter of animals in installations where the daily capacity exceeds 1500 units and where one unit has the following equivalents, 1 pig = 2 units.

Dawn Pork and Bacon has it origin in the Queally Group. Part of the group's original activities included the production of live pigs and in 1986 it was decided by the group to introduce a natural flow to the groups activities by slaughtering and processing own pigs, thus maximising the groups potential.

In view of such, a new purpose built factory was constructed at Grannagh close to Waterford City. This facility would eventually house what is now Dawn Pork and Bacon. The factory is comprised of 10,125 sq. m containing one of the most modern and technically efficient pork processing plants in Europe.

Dawn Pork and Bacon has evolved and progressed its activities at a rapid pace since its inception in 1986. It has established its factory, trained its staff, produced and marketed a quality product while remaining a profitable enterprise throughout this time. In 1995 a new de-boning, packing and storage facility adjacent to the existing premises was introduced. This expansion plus the alterations to some existing facilities allowed the company to increase killing, de-boning and trimming throughout.

1.2 Description of site activities

The facility at Grannagh is located on a site of approximately 30 acres on the main Waterford to Limerick Road, approximately 4 miles outside Waterford City. The River Suir is located to the east of the plant and runs into Waterford Harbour.

The on-site Waste Water Treatment Plant, referred to hereafter as WWTP, is located on the banks of the River Suir, slightly upstream from the main factory. The WWTP is also used by Dawn Meats Exports Ltd. to treat wastewater however, the day to day operation and monitoring of the WWTP is under the control of Dawn Pork and Bacon.

The raw effluent flows by gravity to the WWTP, where it is pumped thought primary screening. Dawn Meats Exports Ltd. influent is pumped through a screw conveyor and Dawn Pork influent is pumped through a rotary screen. Both influent streams mix in a sump before they are transported to a DAF unit. The Dawn Pork and Bacon influent comprises of all the wastewater from the slaughtering and processing facility, skip area and lorry wash.

From the DAF unit the influent is fed to equalisation or balance tanks to allow further agitation and mixing before the main activated sludge process. The remainder of the WWTP consists of an anoxic zone, two aeration basins, two clarifiers, a dewatering plant and sludge holding facilities.

The final effluent from the WWTP is discharged into the River Suir from a dispersion pipe, which runs approximately 20m out to the River Suir.

1.2.1 Brief description of process

Operations at Grannagh have the capacity to slaughter 10,000 pigs per week. In addition to slaughtering, there are facilities for cutting, boning, curing, chilling and freezing of pork and bacon products.

Normal hours of production at the plant are 6.00am to 6.00pm, Monday to Friday. Cleaning operations, which are vital component of daily activity, continue until 11.00 p.m. The refrigeration plant operates continuously and controls the temperature of the chill rooms and the cold store.

The current workforce including management, administrative, maintenance and production staff stands at 270 people. Markets currently being served by Dawn Pork and Bacon include Europe, Japan, Korea, USA, Russian and the Irish Domestic Market.

The plant is both EU and USDA approved. The plant participates in Bord Bia pig meat quality assurance scheme and the BRC standard.

Groundwater is used as a water supply to the plant, with boreholes located off- site to the south east of the plant. The water is chlorinated, prior to on-site storage and use.

The energy supply for the plant is derived from electricity, natural gas and oil combustion, with two hot water boilers and one heating boiler present on the site.

Following a comprehensive identification and evaluation process it was concluded that the significant environmental aspects due to site activities for 2010 are as follows:

- Effluent discharge
- Energy consumption
- Waste management
- Odour management

These environmental aspects will be discussed later in this report.

1.3 Dawn Pork and Bacon Environmental Policy

The following page displays Dawn Pork and Bacon's Environmental Policy. As can be seen it is endorsed by Senior Management at Dawn Pork and Bacon and confirms our commitment to pollution prevention, waste minimisation and compliance with legal obligations.

DAWN PORK AND BACON

ENVIRONMENTAL POLICY

Dawn Pork and Bacon adhere to the Environmental Management System standard ISO 14001:2004. ISO 14001:2004 allows us to reduce environmental risk, comply with all legal requirements and implement a policy of continual environmental protection in our daily operations. Subsequently, the following environmental policy is adhered to;

Dawn Pork and Bacon are committed to:

- At a minimum comply with all relevant legal and other requirements in relation to the environment.
- We will incorporate environmental considerations into our business planning processes and implement a policy of continual improvement.
- We will implement and continually improve an environmental training system for employees, contractors and other relevant personnel.
- We endeavour to incorporate and continually improve a programme of corrective action to remedy the causes of complaint from the community and uncontrolled emissions and discharges.
- We will adopt the sustainable use of natural resources by promoting pollution prevention principles i.e. reduction of waste, recycling and reuse of input materials.
- Actively encourage a positive environmental culture through leadership, employee involvement, consultation and communication.

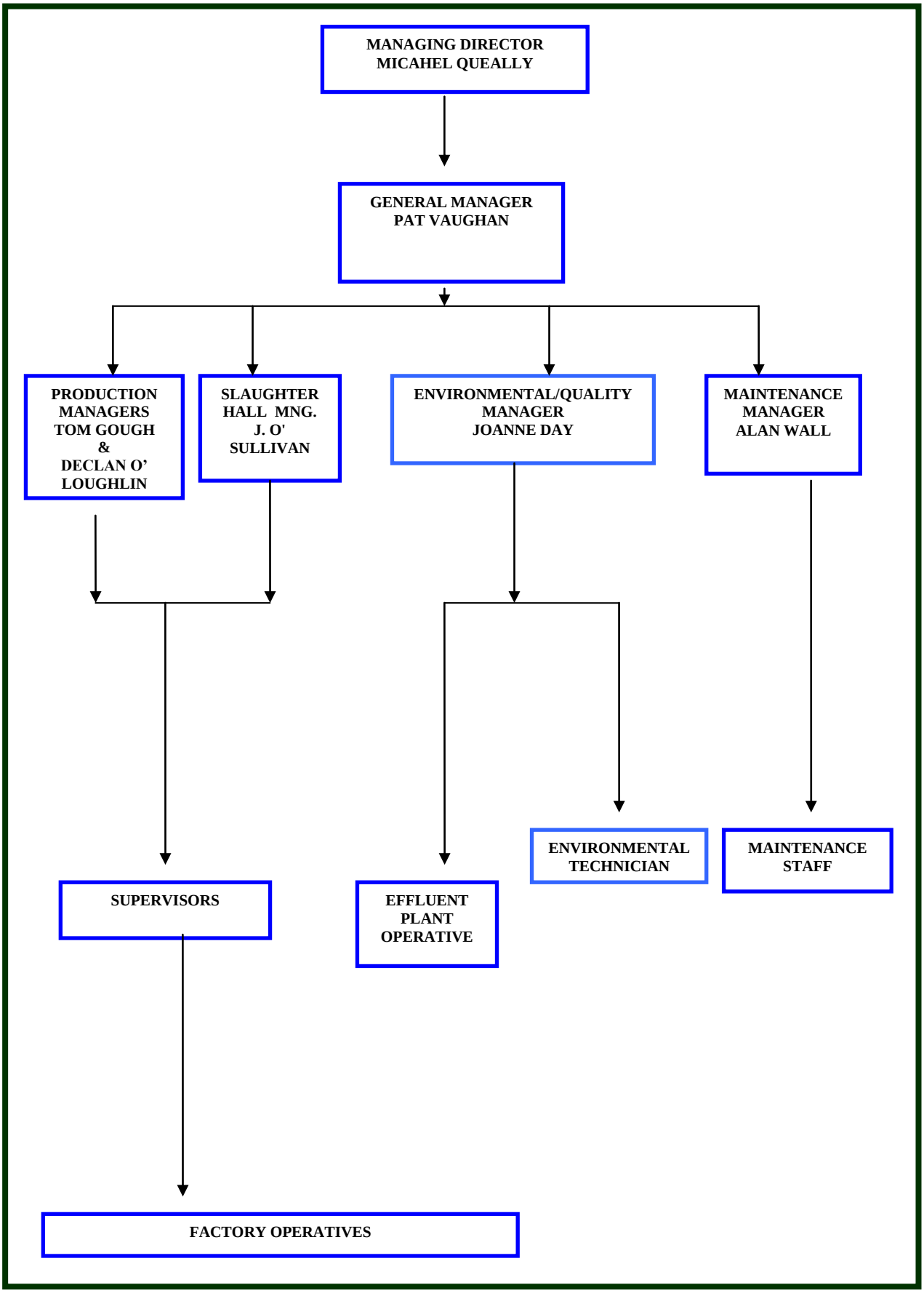
'Sound Environmental practices make for sound business practices'

Signed Pat Vaughan

Pat Vaughan
General Manager

Date 24/10/08

1.4 Organisation Chart



2.0 SUMMARY INFORMATION – 2010

Included in the following pages are the self monitoring results for Dawn Pork and Bacon final effluent and surface water discharge.

2.1 Emissions to waters - 2010

This section includes the self monitoring data from the final effluent discharge point at Dawn Pork and Bacon. This data was submitted to the EPA during 2010 as part of the biannual reports.

Table 1: Schedule 1(i) Emissions to Water

Emission Point Reference No:	EW- 1
Name of Receiving Waters:	River Suir
Location:	Grannagh, Co. Kilkenny
Volume to be emitted:	$1800m^3$ in one day $90m^3$ rate per hour
Parameter	Emission limit value 2010
pH	6-9
Temperature	25^0 C
COD	100mg/l
BOD	40mg/l
Suspended Solids	60mg/l
Nitrates (as N)	20mg/l
Total Ammonia (as N)	10mg/l
Total Phosphorus (as P)	2mg/l
Orthophosphate	1mg/l
Detergents	5mg/l
Oils, fats and Grease	15mg/l

AER Electronic Reporting System Printout is located in Appendix 1.

Water is used for cleaning and sanitising purposes in a number of unit operations carried out on a regular basis. Following delivery of animals, trucks and trailers are washed down. The effluent from the truck wash goes through a screening process and then drained to the effluent plant. During the slaughtering process and subsequent process such as scalding, de-hairing scrapping etc. water is used to clean and sanitise surfaces, water from internal cleaning goes to the WWTP.

The onsite Laboratory is equipped to monitor and report effluent analysis in an accurate and timely manner. Equipment maintained in the lab includes an analytical balance, drying oven, desiccators, filter papers, filtration apparatus, a vacuum pump, DO meter, COD kit wash and reagent bottles, pipettes graduated cylinders, microscope, fridge, pH meter and distiller water. The lab technician is fully trained and proficiency testing regulated by the EPA is conduct at intervals throughout the year. In 2010, Dawn Pork and Bacon performed well in the proficiency testing.

All internal lab procedures are review and approved by the Environmental Manager. Chemical Oxygen Demand (COD), Suspended Solids, Ammonia and Nitrates are analysed daily in-house by a trained laboratory technician. Total Phosphate is analysed weekly in-house by a trained laboratory technician. Biochemical Oxygen Demand (BOD), Oils, Fats and Grease (OFG) and Detergents are analysed at a frequency required by IPPC Licence PO 175-01 Schedule 1(iii) Monitoring of Emissions to Water, by an external laboratory.

Table 2: Summary of mass emissions to water 2010

Parameter	2010 Mass emission (Kg/year)	Licensed Mass emissions (Kg/year)
Volume Discharged (m^3)	555,895	657,000
COD	38,912	65,700
Suspended solids	6,670	39,420
Nitrates	1,806	13,140
BOD	8,727	26,280
Total Phosphorus	300	1,314
Orthophosphate	100	657
Detergents	198	3,285
Oils, Fats and Grease	711	9,855
Ammonia	1,589	6,570

Table 2 shows 2010 and licensed mass emissions from monitoring point EW 1. EW1 is located in the Dawn Pork and Bacon WWTP, it is the point where treated effluent leaves WWTP and enters the River Suir.

In table 2 on page 7 licensed mass emission figures are based on the Emission Limit Values,(ELV) multiplied by maximum allowable flow (m3) and converted to kg/year by multiplying by 365 days.

To calculate mass emissions for 2010 and a daily figure in mg/L (determined in-house or in an external lab) for each parameter was multiplied by flow (m3) and converted to kg/year by multiplying by 365 days.

The following paragraphs outline some of the operational control measures in place in the on site WWTP:

- pH and temperature monitoring.
- Monitoring and control of RAS (return activated sludge) and MLSS (nixed liquor suspended solids)
- Regular maintenance and calibration of lab and WWTP equipment
- Chemical dosing in the WWTP to decease the phosphate concentration.
- Monitoring of DO (dissolved oxygen) levels in the aeration basins
- The on-site Dissolved Air Floatation unit (DAF), allows removal of most OFG (Oils fats and grease) before influent enters the WWTP.
- Effluent flow monitoring
- Sludge dewatering on a single belt press

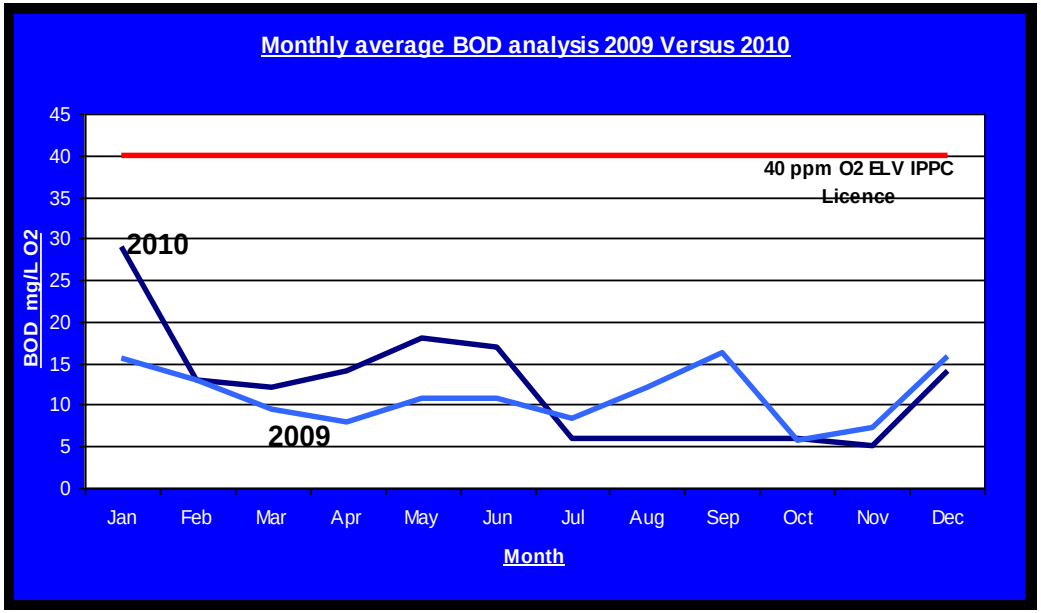
The following graphs, detail the comparison between 2009 and 2010 monthly emissions data from EW1.

COD, BOD, Suspended Solids, Total Nitrogen, Total Phosphate, Orthophosphate, OFG, pH, Temperature, and Detergents are all represented on the following graphs.

The monthly average figures for each parameter for 2009 and 2010 are represented on each graph. The X-axis (horizontal axis) of each graph displays the month i.e. (January to December) and the Y-axis (vertical) displays the concentration of each parameter in final effluent in mg/L of effluent analysed.

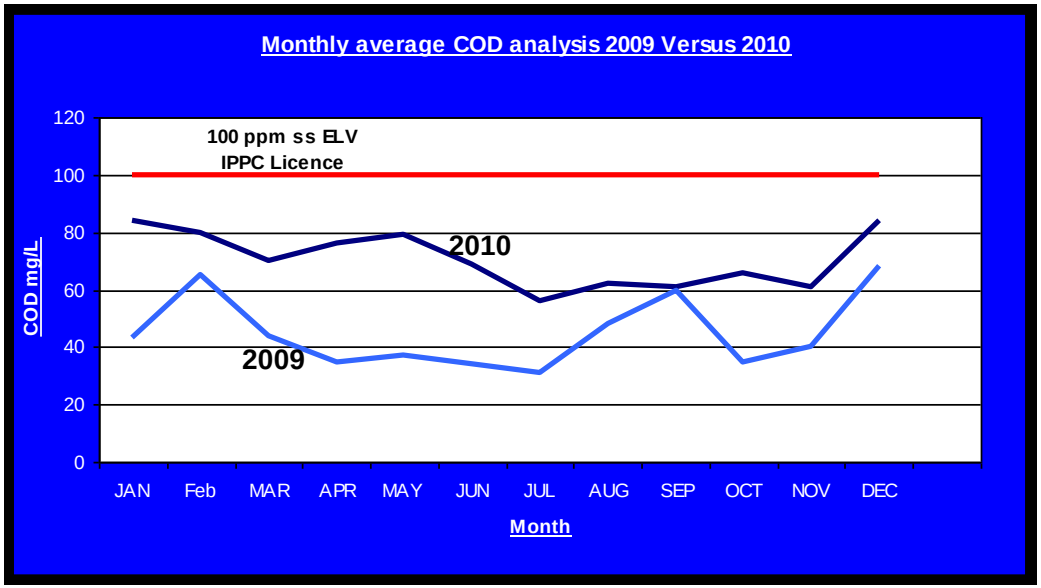
The red line in each graph indicates the ELV as set by IPPC Licence PO 175-01 Schedule 1(iii) Monitoring of Emissions to Water.

Graph 1: BOD in Final Effluent 2009 versus 2010



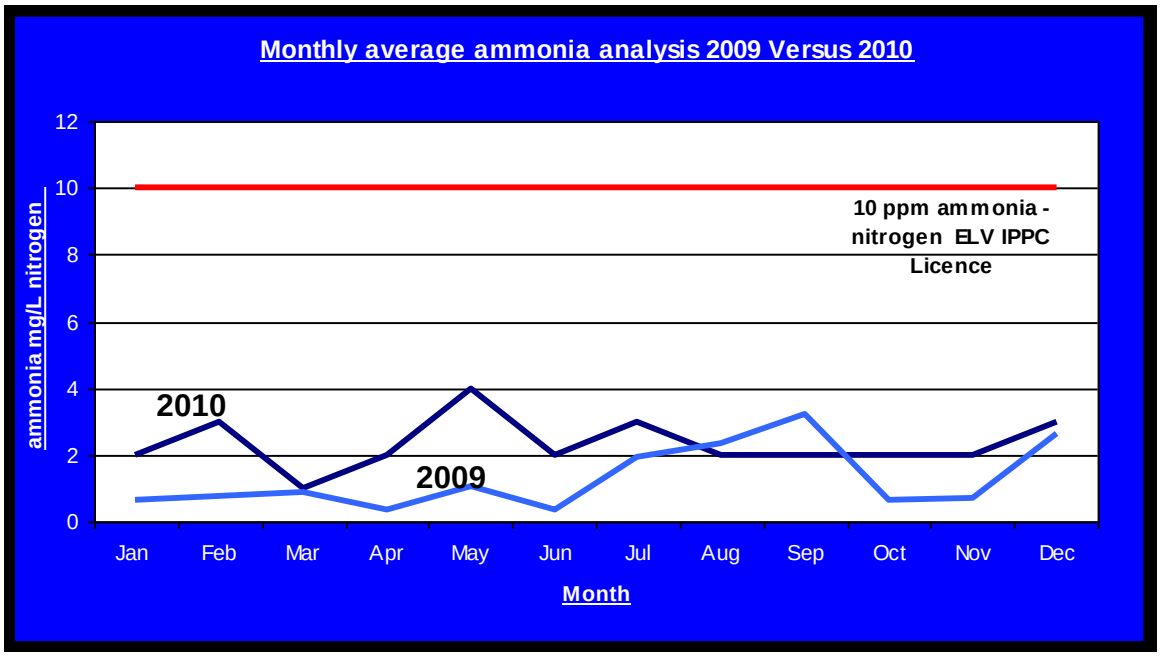
As seen from graph 1 and 2 , monthly BOD and COD concentrations in final effluent remained similar in 2010 when compared to 2009. Both sets of data are well within the ELV set in IPPC Licence PO 175-01 Schedule 1(iii) Monitoring of Emissions to Water.

Graph 2: COD in Final Effluent 2009 versus 2010



In January of each year there is an accumulation of raw material (live pig) in suppliers farm over the Christmas shut down. The loading on the WWTP would increase, similarly in December of each year production will increase due to customer demand.

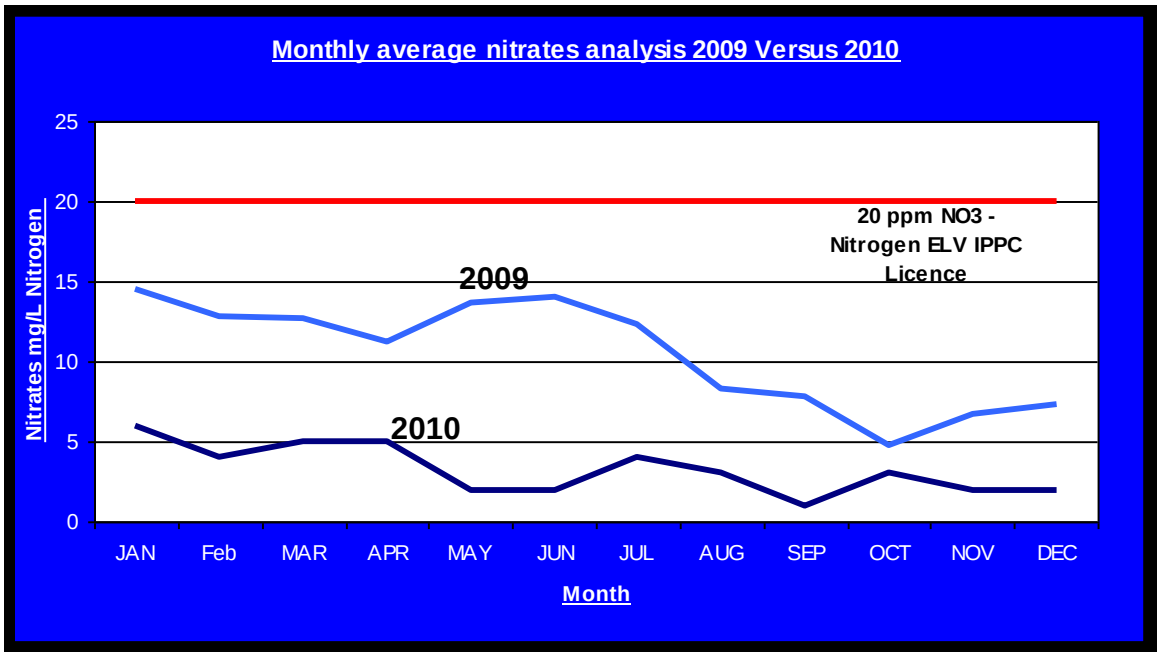
Graph 3: Ammonia in Final Effluent 2009 versus 2010



Graph 3 shows the trend in ammonia concentration in final effluent in 2009 and 2010. It can be seen from graph 3 that ammonia levels remained with in ELV at all times.

Seasonal temperature changes will have a effect on nitrifying bacteria and subsequently ammonia concentrations in the final effluent. When the ambient temperature rises(summer months) growth rate of nitrifying bacteria population increases and this leads to a decrease in ammonia concentrations through the nitrification process. pH, dissolved oxygen and total ammonia concentration also have a effect on the nitrification process.

Graph 4: Nitrate in Final Effluent 2009 versus 2010

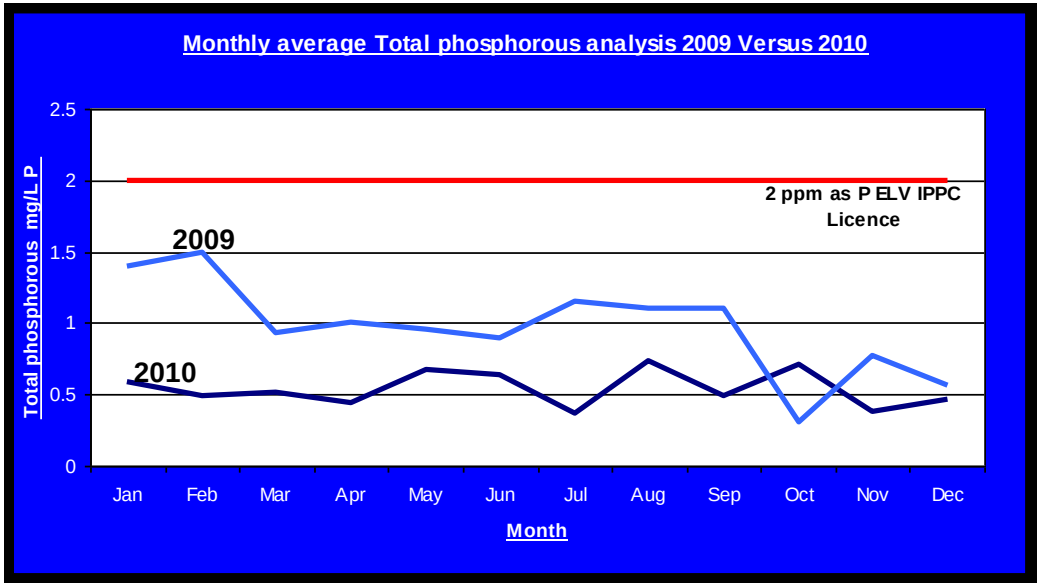


As seen from graph 4 above nitrates in 2010 decreased. Denitrification takes place in the Anoxic zone and it leads to the production of Nitrogen gas. For denitrification to occur nitrate and organic matter need to be present. This process occurs in the absence of oxygen so bacteria in the anoxic zone use nitrate (NO_3) as the oxygen source.

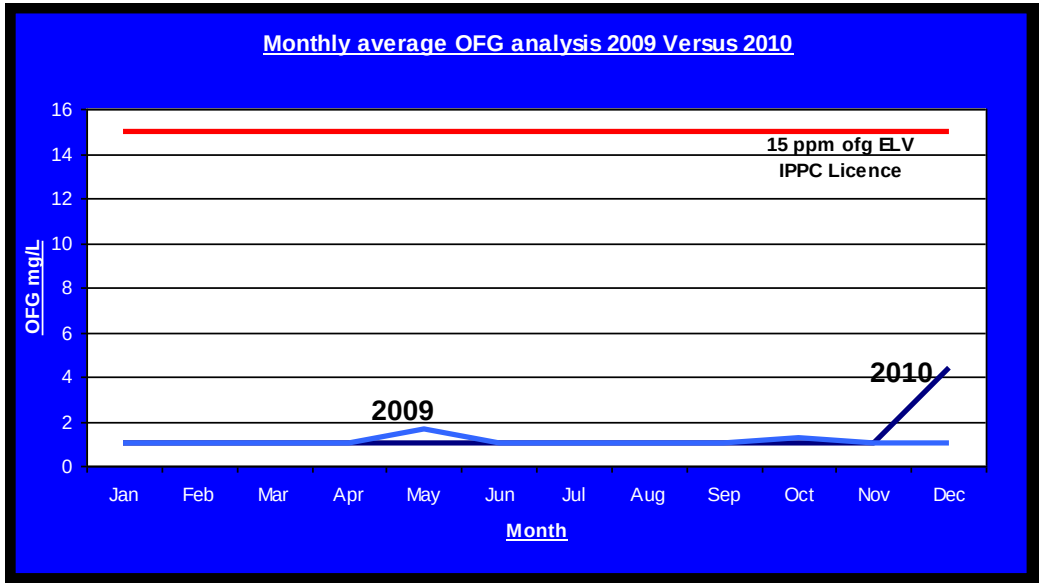
The decrease in final effluent nitrate in 2010 can be attributed to efficient operation of the Anoxic zone:

- pH control between 6.5-7.5, a pH meter is installed at the outlet from the anoxic zone.
- A rich source of BOD i.e. approx 2.9kg of BOD per kg of Nitrate removed, BOD is monitored weekly, using a composite sample.

Graph 5: Total Phosphate in Final Effluent 2010 versus 2009



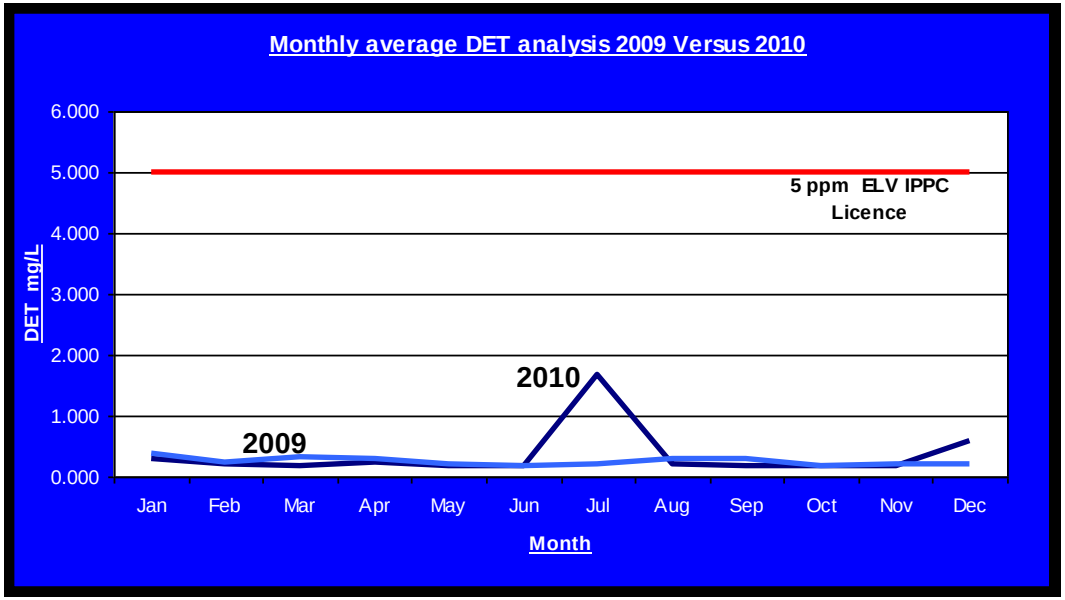
Graph 6: OFG in Final Effluent 2010 versus 2009



On analysis of graph 5, it can be deduced that the ELV for Total phosphate is 2mg/L P. The monthly average figure for 2009 was generally 1.5mg/L P (+/- 0.5 mg/L P).The monthly average for 2010 was 1.07 mg/L P Therefore, TP on a average monthly basis has decrease by 29% in 2009. This is a direct result of operation control in the WWTP. An example of operational control in the WWTP would be chemical dosing to keep TP within ELV. Phosphorous exists in three main forms in waste water. Ortho-phosphate, polyphosphate and organic phosphate.

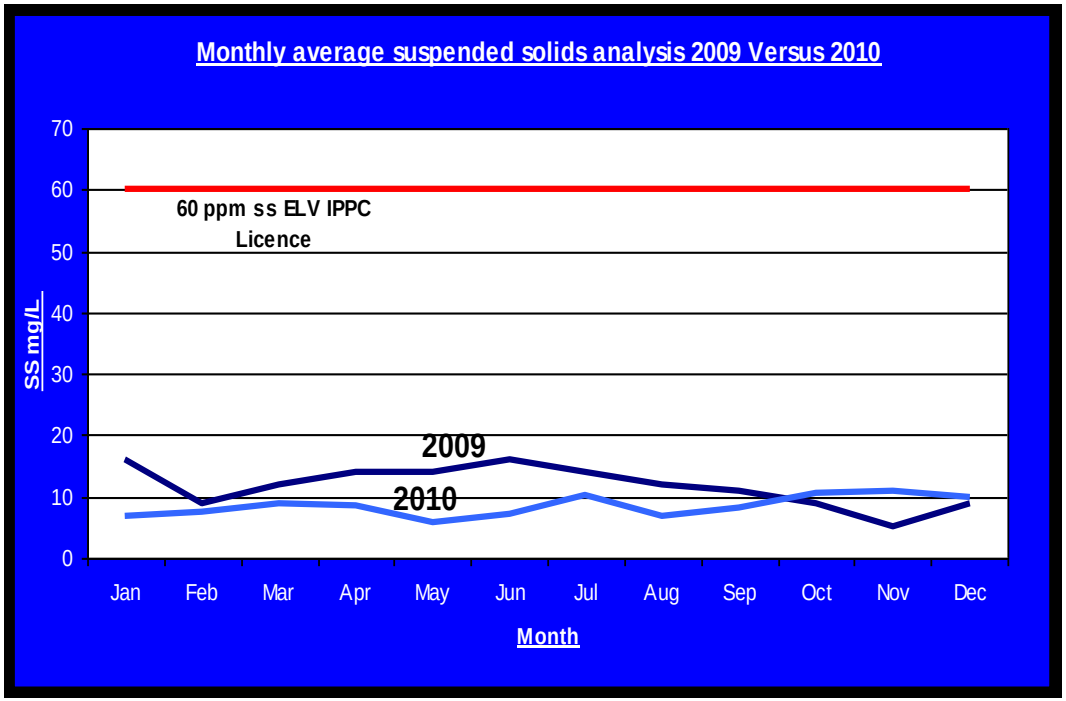
OFG in 2010 and 2009 are both within ELV. From graph 6, the ELV for OFG is 15 Mg/L and with an average of 1 mg/L throughout 2009 and 2010 the DAF unit at Dawn Pork and Bacon has proven very efficient.

Graph 7: Detergents in Final Effluent 2010 versus 2009



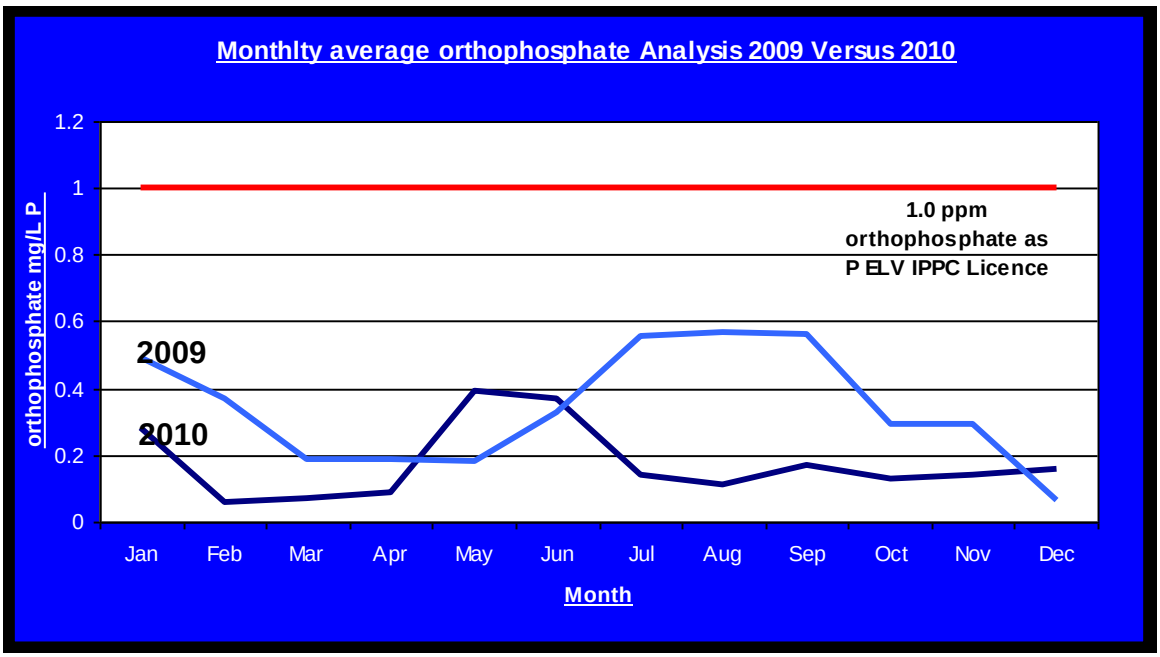
Upon review of graph 7, it can be said that detergents in EW1 effluent are of similar concentrations in both 2009 and 2010. With a monthly average concentration of <1 mg/L detergents are within the ELV of 5 mg/L.

Graph 8: Suspended Solids in Final Effluent 2009 versus 2010



Graph 8 represents the suspended solids emitted to the River Suir from EW1 during 2010 and 2009.

Graph 9: Orthophosphate in Final Effluent 2010 versus 2009



Phosphorus occurs in natural water and wastewaters almost solely as phosphate. Phosphates may enter water from agricultural run-off, biological and industrial wastes. A certain amount of phosphate is essential for most plants and animals, but too much phosphate in water can contribute to eutrophictation, especially when large amounts of nitrogen are also present. Therefore it is important to monitor the levels of phosphates released in the final effluent.

Monitoring pH and temperature has a vital role to plan in the maintenance of a good quality effluent. The pH and temperature must remain within ELV so the effluent does not disrupt the natural aquatic environment to which it is discharges. In 2010 pH and temperature measurements were within in ELV for all discharges.

2.2 Surface Water Results

The programme for managing our surface water IPPC Licence requirements has been integrated into our EMP and objectives and targets 2010, it can be viewed in section 3.0 of this report.

Table 3: Schedule 3 (i) Surface Water Discharge Monitoring

Emission Point Reference No:	EW- 3
Name of Receiving Waters:	River Suir
Location:	Grannagh, Co. Kilkenny
Parameter	Monitoring frequency 2010
Conductivity	Continuous
COD	Monthly
Total Ammonia	Quarterly
Suspended Solids	Quarterly
Chloride	Quarterly
Fats, oils and grease	Quarterly
Visual inspection	Weekly

It can be deduced that there is no significant variation in results between 2010 and 2009.

Table 4: 2010 and 2009 Average Surface Water Monitoring Results

Parameter	COD	Total ammonia	Suspended solids	Chloride	FOG	Visual inspection
2009	13.0	0.38	8.5	32	<1	No Visible contamination
2010	15.0	0.57	8.5	41	<1	No Visible contamination

2.2 Emissions to Atmosphere

As stated in IPPC Licence PO 175-01 condition 5 emissions to atmosphere are discussed in the following paragraphs:

2.2.1 Condition 5.1 of IPPC Licence states that odours and air emissions shall be managed so they do not cause environmental nuisance. During 2010 odour audits were conducted to ensure that no environmental nuisance arose. There were no complaints from employees or the public during 2010 in relation to this issue.

2.2.2 Condition 5.2 of IPPC Licence informs that an annual boiler emissions test must be submitted to the EPA as part of AER. The 2010 boiler efficiency test is located in appendix 2 of this report.

2.2.3 There were no non-conformances in relation to air emissions during 2010.

2.2.4 Data for waste arising 2010

Table 5 outlines the quantity of waste generated during 2010. The data is reported in tonnes/annum.

Table 5: Quantity of waste arising in 2010

EWC Code	Hazardous/ non hazardous	Description of waste	Quantity tonnes / annum	Method of disposal /recovery	Location of disposal/ recovery
20202	Non-Hazardous	Cat 2	1,622.24	Processing	Off – Site (Ireland)
20202	Non - Hazardous	Blood (Cat 3)	1,759.96	Processing	Off – Site (N.Ireland)
20202	Non- Hazardous	Offal (Cat 3)	3,108.10	Processing	Off – Site (Ireland)
20202	Non- Hazardous	Lungs and Liver (cat 3)	766.14	Pet food	Off – Site (Ireland)
200101	Non- Hazardous	Pallets	328 pallets	Recovery (R0)	Off – Site (Ireland)
200101	Non- Hazardous	Packaging and office waste	5733.00	Recycling / landfill (R0) (D1)	Off – Site (Ireland and abroad)
020204	Non- Hazardous	Sludge from effluent plant	5,733.47	Land spreading (R10)	Off – Site (Ireland)
130208	Hazardous	Oil	1,000 liters	Recovery by distillation (R13)	Off – Site (Ireland)
160506	Hazardous	Lab waste	0.05	Incinerated (D10)	Off – Site (abroad)
180101	Hazardous	Blades and sharps	0.181	Incinerated (D10)	Off – Site (abroad)
200121	Hazardous	Flourescent tubes	0.116	Recycled	Off – Site (abroad)

Note

The codes in the method of disposal column refer to table 10 Table of codes to be used in completing waste information table as in EPA guidance note for annual environmental report.

2.2.5 Waste disposal contractors.

Each waste stream generated at Dawn Pork and Bacon is disposed of through approved waste contractors. The approved status is given by the EPA and/or the Department of Agriculture, Fisheries and Food (DAFF). Table 6 below outlines the waste licence/IPPC Licence and/or animal by-product processing approval number.

Table 6(a) Details of waste disposal contractors and animal by-product rendering plants

Waste/animal by-product	Disposal/rendering facility	Waste licence number/IPPC licence number and/or DAFF approval number	Comment
Cat 2	Dublin By-products, Dunlavin, Co. Wicklow	IPPC Licence P0041-02	
Blood (Cat 3)	APC Technologies, 2 Silverwood Ind. Estate, Craigavan, Co. Armagh	REN /241/89 – as issued by DAFF	
Offal (Cat 3)	Western Proteins, Ballyhaunis co. Mayo	IPPC Licence P0048-02 and R918 as issued by DAFF	
Lungs and Liver (cat 3)	Premier Petfoods, Cahir, Co. Tipperary	ID3 - as issued by DAFF	
Pallets			Broken pallets are sent off-site and are repaired. They are re-used in production
Packaging and office waste	Greenstar , Six Cross Roads, Buttlerstown, County Waterford.	W0116-02 and waste collection permit WCP/KK/054/02	
Sludge from effluent plant	Agrilife Ltd, Tourin, Cappoquinn, Co. Waterford	WCP/KK/317/06 and see PO 179-01 Dawn Meats (exports) IPPC Licence nutrient management plan.	

Table 6(b) Details of waste disposal contractors and animal by-product rendering plants

Waste/animal by-product	Disposal/rendering facility	Waste licence number/IPPC licence number and/or DAFF approval number	Comment
Electronic waste Bulbs	Irish Lamp recycling, Woodstock Industrial Estate, Kilkenny road, Athy, Co. Kildare.	02/2000 B	
Electronic waste printer cartridges and cellular equipment	Redeem PLC, 8 Ashcourt, Ashbourne Industrial Park, Ashbourne, Co. Meath		The waste is transferred to England to be recycled.
Oil	Safety Kleen Ireland Ltd, Unit 5, Airton Road, Tallaght, Dublin 24.	W0091-01	
Lab waste	Veolia, Corrin, Fermoy, Co. Cork	W0050-02, waste collection permit number WCP-CK08-0578-01	Veolia collect and transfer the waste to Sava in Holland. The waste is incinerated in Holland.
Blades and sharps	Sterile Technologies Ireland Ltd. Unit 430 Beech Road, Western Industrial Estate Naas Road, Dublin 12	W0055-02 Waste collection permit WCP/KK/170(A)/07	Waste is transferred to Germany to be incinerated

2.3 Agency Monitoring and Enforcement

During 2010 Dawn Pork and Bacon final effluent samples were collected and analysed by the EPA. The samples were grab samples.

The site audit conducted by the EPA on the 06.05.10, highlighted two non-conformances. Preventative and corrective action was implemented, details of which have been communicated to the EPA.

2.4 Energy and Water consumption

Table 7: Energy Consumption 2010

Energy Type	Total used 2010
Natural Gas	334,759.00 (M^3)
Electricity	5,245,500 kwh
Oil	168,204.00 (litres)

Table 8: Water Consumption 2010

Water Source	Total 2010
Water	48,716,432.00 (GALS)

The well water used to supply the factory is pumped at a rate of up to 800m^3/day. The water is extracted from the well at a rate of 100cu/hr. See appendix 3 for licence specific report on annual groundwater monitoring.

2.5 Environmental complaints and incidents

There were no environmental complaints or incidents recorded for Dawn Pork and Bacon for 2010.

3.0 MANAGEMENT OF THE ACTIVITY

Senior Management at Dawn Pork and Bacon conduct an annual review of the EMS. The outcome of this review are outlined in the following pages.

3.1 Environmental Management Programme Report

Following a comprehensive identification and evaluation process it was concluded that the significant environmental aspects due to Dawn Pork and Bacon process for 2010 are as follows:

- Effluent discharge
- Energy consumption
- Waste Management
- Odour Management

Therefore these aspects have been managed in the Dawn Pork and Bacon EMP and schedule of objectives and targets for 2010.

As part of our IPPC Licence we are required to monitor;

- Boiler efficiency
- Ground water
- WWTP Sludge
- Equipment Calibration

It was therefore agreed by Senior Management to manage these requirements in the EMP and schedule of objectives and targets for 2010 also.

As part of continual environmental improvement at Dawn Pork and Bacon, environmental training for employees is also managed in the 2010 EMP and schedule of objectives and targets.

The following pages detail the objectives and targets 2010, the EMP 2010 and the proposed objectives and targets and EMP for 2011.

Dawn Pork and Bacon

Environmental

Objectives and Targets

2010 and 2011

DAWN PORK AND BACON ENVIRONMENTAL OBJECTIVES AND TARGETS 2010

Issued by: Anne-Marie Danaher DATE: 20.12.10

Approved by Joanne Day DATE: 20.12.10

REV: 03

REF: DERC 17

DAWN PORK AND BACON

OBJECTIVE	EMP	Target	Completion date	Status	Responsibility	Indicator
Pollution Prevention		**Comply with condition 6.2, 9.2.1, 9.1.4, 9.3. schedule1(ii) and 1(i) IPPC license PO-175-01 To comply with condition 4.4.6 Operational control ISO 14001:2004**				
	EMP 01	Monthly/quarterly surface water monitoring	On-going	Complete	AMD	DERC 45
	EMP 02	Waste water effluent inspection	On-going	Complete	AMD	Records
	EMP 03	Complete groundwater analysis	Mar -10	Complete	AMD/Sarah	Report
	EMP 04	Equipment calibration	On-going	Complete	AMD/J Day	Record
	EMP 05	Noise Monitoring Survey	June 10	Complete	AMD/Joanne Day	Report
Energy conservation		**Reduce energy usage by 5% in 2010 over 2009 figures per 1000 pigs**				
	EMP 10	Introduction of SCADA for chill temperature management	July 2010	Complete	Maintenance	Visual
Waste Management		**To comply with condition 2.6 and schedule 2(iii) waste analysis IPPC license PO-175-01 To comply with condition 4.4.2 Competence training and awareness ISO 14001:2004**				
	EMP 06	Waste sludge analysis	June 10/Dec 10	Complete	AMD/Joanne Day/Ray Hayes	Report

OBJECTIVE	EMP	Target	Completion date	Status	Responsibility	Indicator
Odour Management		**Implement control measures for odour management**				
	EMP 07	Odour audit	ongoing	Complete	AMD/J. Day	Reports
Reduce contribution to global warming and help achieve Ireland GHG emission reduction.		**To comply with condition 5.2 of IPPC License PO 175-01 and to inform haulage companies (indirect aspect) to be environmental aware. To comply with condition 4.4.6 Operational control ISO 14001:2004**				
	EMP11	Financial Investment	Feb 2010	Complete	AMD/J. Day	Documented report
	EMP 08	Boiler efficiency testing	Sept 10	Complete	AMD/MB	Report
Create Environmental awareness		**To comply with condition 2.6 IPPC license Po-175-01 To comply with condition 4.4.2 Competence training and awareness ISO 14001;2004**				
	EMP 12	Train employees and contractors on procedures	DEC 10	Complete	AMD/Joanne Day	DERC 31 environment department training matrix.

DAWN PORK AND BACON ENVIRONMENTAL OBJECTIVES AND TARGETS 2011

Issued by: Anne-Marie Danaher DATE: 31.01.11

Approved by Joanne Day DATE: 31.01.11

REV: 04

REF: DERC 17

DAWN PORK AND BACON

OBJECTIVE	EMP	Target	Completion date	Status	Responsibility	Indicator
Odour Management		**Implement control measures for odour management**				
	EMP 07	Odour audit	ongoing	ongoing	AMD/J. Day	Reports
Reduce contribution to global warming and help achieve Ireland GHG emission reduction.		**To comply with condition 5.2 of IPPC License PO 175-01 and to inform haulage companies (indirect aspect) to be environmental aware. To comply with condition 4.4.6 Operational control ISO 14001:2004**				
	EMP 08	Financial Investment	Dec 11	Ongoing	AMD/J. Day	Documented report
	EMP 06	Boiler efficiency testing	Sept 11	Pending	AMD/MB	Report
Create Environmental awareness		**To comply with condition 2.6 IPPC license Po-175-01 To comply with condition 4.4.2 Competence training and awareness ISO 14001;2004**				
	EMP 09	Train employees and contractors on procedures	DEC 11	Ongoing	AMD/Joanne Day	Records
Pollution Prevention		**Comply with condition 6.2, 9.2.1, 9.1.4, 9.3. schedule1(ii) and 1(i) IPPC license PO-175-01 To comply with condition 4.4.6 Operational control ISO 14001:2004**				
	EMP 01	Monthly/quarterly surface water monitoring	On-going	On-going	AMD	DERC 45
	EMP 02	Waste water effluent inspection	On-going	On -going	AMD	Records
	EMP 03	Complete groundwater analysis	End Mar -11	On - going	AMD/Sarah	Report
	EMP 04	Equipment calibration	On-going	On - going	AMD/J Day	Record
Waste Management		**To comply with condition 2.6 and schedule 2(iii) waste analysis IPPC license PO-175-01 To comply with condition 4.4.2 Competence training and awareness ISO 14001;2004**				
	EMP 05	Waste sludge analysis	June 11/Dec 11	On-going	AMD/Joanne Day/Ray Hayes	Report

Dawn Pork and Bacon

EMP

2011

ISSUED BY: Anne-Marie Danaher	DATE: 28.01.11
APPROVED BY: Joanne Day	DATE: 28.01.11

REF; EMP 01

REV: 04

PAGE 1 OF 1

DAWN PORK AND BACON

SUBJECT: EMP 01 DAWN PORK AND BACON SURFACE WATER DISCHARGE MONITORING (Project method)

1.0 PURPOSE:
To monitor the quality of the surface water in accordance with condition 9.1.4 of the IPPC licence.

2.0 SCOPE
This procedure applies to emission point reference numbers EW-3.

3.0 RESPONSIBILITY
- 3.1 Environmental Technician
  - 3.1.1 Collect samples on monthly basis to be test internally according to IPPC Licence PO 175-01.
  - 3.1.2 Collect samples quarterly to be tested externally for oils, fats and grease.
  - 3.1.3 Verify surface water inspection record.
  - 3.1.4 Report monitoring results to Environmental Manager
- 3.2 WWTP Operator
  - 3.2.1 Daily inspection of surface water monitoring point
- 3.3 Environmental Manager
  - 3.3.1 Implement corrective/preventative action if results are out of spec.

4.0 DEFINITIONS
n/a

5.0 Project Method

- 5.1 The Environmental Technician will ensure that samples of surface water from the specified point are collected.
- 5.2 Samples of surface water are analysed internally and submitted for analysis to a nominated external laboratory.
- 5.3 One litre samples are sent quarterly for external analysis.
- 5.4 Conductivity is monitored continuously
- 5.5 COD and ph are monitored monthly.
- 5.6 Total ammonia, suspended solids, chloride are monitored internally quarterly.
- 5.7 Visual inspection is also carried out on a daily basis.
- 5.8 All results are included in the AER/biannual reports sent to EPA

6.0 REFERENCES
- 6.1 IPPC Licence P0175-01 Schedule 3(i)
- 6.2 DERC 17 Dawn Pork and Bacon Environmental Objectives and Targets
- 6.3 DERC 04 Dawn Pork and Bacon Register of Environmental aspects
- 6.4 ISO 14001:2004 Condition 4.4.6 Operational Control

7.0 RECORDS
- 7.1 Surface water monitoring record DERC 29
- 7.2 DRC 84 Environmental Lab Training Matrix
- 7.3 DERC 45 Surface water monitoring results

8.0 TIMEFRAME
- 8.1 Ongoing 2011

ISSUED BY:	DATE:
Anne-Marie Danaher	28.01.11
APPROVED BY:	DATE:
Joanne Day	28.01.11

REF: EMP 02

REV: 04

DAWN PORK AND BACON

SUBJECT: DAWN PORK AND BACON WASTE WATER MONITORING (project method)

1.0 PURPOSE

The purpose of this EMP is to;

1.1 Monitor and continually improve the quality of treated wastewater discharges from the on-site effluent treatment plant.

2.0 SCOPE

2.1 This procedure applies to collection, analytical results interpretation and communication of effluent from emission point EW1, located at discharge point for the clarifier in the WWTP.

3.0 RESPONSIBILITY

3.1 Environmental Manager

3.1.1 The Environmental Manager has the responsibility to ensure that this EMP is adhered to.

3.1.2 The Environmental Manager has the responsibility to notify the EPA of any non-conformance. The notification must include, cause for nonconformance and corrective/preventative action..

3.2 Effluent Plant Operative

3.2.1 The WWTP operative has the responsibility to ensure samples are collected according to this procedure.

3.3 Environmental Technician

3.3.1 The Environmental Technician has the responsibility to ensure samples are tested according to IPPC licence PO175-01 and Dawn Pork and Bacon Environmental Laboratory Manual.

3.3.2 The Environmental technician must also ensure results are interrupted and communicated in an accurate and timely manner.

4.0 DEFINTIONS

4.1 **Continual Improvement** refers to an ongoing process of performance enhancement. In the context of this environmental standard, it means that you need to enhance your organization's overall environmental performance by enhancing its environmental management system and by improving its ability to manage the environmental aspects of its activities, products, and services. Continual improvements can be achieved by carrying out internal audits, performing management reviews analyzing data, and implementing corrective and preventive actions

4.2 **Documented Procedure** A documented procedure describes and controls a logically distinct process or activity, including the associated inputs and outputs.

SUBJECT: DAWN PORK AND BACON WASTE WATER MONITORING (project method)

4.3 **EMS Environmental Management System** a management system is a network of interrelated elements. Elements include responsibilities, authorities, relationships, activities, functions, processes, practices, procedures, and resources. A management system uses these elements to establish policies and objectives and to develop ways of applying these policies and achieving these objectives

4.4 **Non-Conformance**: Failure to comply with a requirement of Dawn Pork and Bacon EMS and/or IPPC Licence PO 175-01.

4.5 **Record** is a document that contains objective evidence which shows how well activities are being performed or what kind of results are being achieved. It always documents what has happened in the past.

4.6 **WWTP** Waste Water Treatment Plant

5.0 Project Method

5.1 Sample collection

5.1.1 Samples are collected by the WWTP operator each morning at approx. 8:30am.

5.1.2 Samples are taken from aeration basin 1, aeration basin 2, and balance tank. Composite samples area taken of influent from Dawn Pork and Bacon and Dawn Meats and the final discharge.

5.1.3 Before samples are collected the collection container must be rinsed thoroughly with the sample it is going to contain.

5.1.4 Once samples have been taken the sampling containers from the composite sampler should be washed, to ensure no residue is left in the sampling container.

5.1.5 Split sample should be collect in one large container, homogenized and then split into smaller containers..

5.1.6 Homogeneous samples are really important, so mixing the contents of the sampling containers from the composite sampler before taking final sample to lab is mandatory.

5.2 Sample analysis

5.2.1 Samples of treated wastewater will be analysed in-house or submitted for analysis to a nominated external laboratory. The frequency of testing for specific analytical parameters are (using standard methods);

Frequency	Parameter
Continuous	pH, Temperature, Flow
Daily	COD, Suspended solids, Total Ammonia (as N)
Weekly	BOD, Nitrates (as N), Total Phosphorous (as P), Detergents
Monthly	Oils, fats and Grease

5.2.1 Samples will be analyzed by external labs for parametric values for Biochemical Oxygen Demand (BOD), Detergents (DET) and Oils, Fats and Grease.

5.2.2 All analytical monitoring result must be signed and dated by the analyst.

5.2.3 In-house samples will be analyzed according to in-house procedures and IPPC licence PO 175-01 requirements.

5.3 Interpretation/Communication of analytical results

5.3.1 The Environmental Manager will review the analytical results on a weekly basis.

5.3.2 If there are any results that exceed of ELV the environmental technician will alert the Environmental Manager immediately, a non-conformance/corrective action form will be filled out

6.0 REFERENCES

6.1 ISO 14001:2004 condition 4.4.6 Operational control

6.2 Dawn Pork and Bacon IPPC Licence PO175-01 condition 10 Monitoring and Schedule 1 (i) Emission to Water, Schedule 1(ii) effluent treatment control, Schedule 1(iii) Monitoring of emissions to water.

6.3 IPPC licence PO 175-01 condition 4 notification

6.4 Dawn Pork and Bacon site Environmental Procedure DESP 04 Notification of Environmental Incidents.

6.5 Local Government (Water Pollution) Act, 1977 and Local Government (Water Pollution) (Amendment) Act, 1990

6.6 Local Government (Water Pollution) Regulations, 1978
6.7 Local Government (Water Pollution) Regulations 1983
6.8 Local Government (Water Pollution) Regulations, 1992
6.9 Water Quality (Dangerous Substances) Regulations 2001
6.10 Local Government (Water Pollution) (Amendment) Regulations, 1996
6.11 The Local Government (Water Pollution) (Amendment) Regulations, 1999
6.12 Local Government (Water Pollution) (Fees) Regulations 2001
6.13 Water Services Act 2007
6.14 European Communities (Water Policy) Regulations 2003
6.15 Water Policy Regulations (Amendment) Regulations 2004
6.16 Waste Water Discharge (Authorisation) Regulations 2007
6.17 European Communities (Quality of bathing waters) Regulations, 1992-1994
6.18 European Communities Quality of Bathing waters Regulations, 1996-1998
6.19 Local Government (Water Pollution) (Control of Cadmium Discharges) Regulations, 1985
6.20 Water Quality (Dangerous Substances) Regulations 2001
6.21 Fisheries Acts, 1959-1997:
6.22 European communities (Good Agricultural Practice for Protection of Waters) (Amendment) Regulations 2006

7.0 RECORDS

7.1 DERC 02 Final Discharge report
7.2 DERC33 Environmental non-compliance/corrective action
7.3 DERC 57 Dawn Pork and Bacon final effluent emission limit
7.4 DERC69 Frequency matrix for environmental analysis
7.5 DRC 84 Environmental Lab Training Matrix.

8.0 TIMEFRAME

8.1 Ongoing 2011

ISSUED BY:	DATE:
Anne-Marie Danaher	**28.01.11**
APPROVED BY:	DATE:
Joanne Day	**028.01.11**

REF: **EMP 03**
REV 04
PAGE 1 OF 1

DAWN PORK AND BACON

SUBJECT: EMP 03 GROUND WATER QUALITY MONITORING (Project method)

1.0 PURPOSE

1.1 The purpose of this procedure is to monitor groundwater resources over time to determine the impact, if any, of on-site activities on its overall quality.

.2 To maintain and continually improve the analysis and quality of ground water on site.

.3 To implement and achieve Dawn Pork and Bacon Environmental Objectives and Targets.

2.0 SCOPE

2.1 The groundwater-monitoring programme applies to the borehole on site.

3.0 RESPONSIBILITY

3.1 The Environmental Manager has overall responsibility for the co-ordination of this project.

4.0 DEFINITIONS

4.1 N/A

5.0 PROJECT SUMMARY

5.1 The borehole, already in existence in the site is to be used as a monitoring borehole.

5.2 Samples of groundwater are to be collected from the borehole in the first quarter of each year.

5.3 Samples will be submitted for chemical analysis for a range of parameters.

5.4 The report will be submitted to the EPA as part of AER.

6.0 REFERENCES

6.1 ISO 14001:2004 Condition 4.4.6 Operation al Control:

6.2 External Lab report

7.0 TIMEFRAME

7.1 First quarter 2011

ISSUED BY:	DATE:
Anne-Marie Danaher	28.01.11
APPROVED BY:	DATE:
Joanne Day	28.01.11

REF: EMP 04

REV 03

PAGE 1 of 1

SUBJECT: EMP 04 CALIBRATION OF ON-SITE EQUIPMENT (Project Method) DAWN PORK AND BACON

1.0 PURPOSE

1.1 The purpose of this procedure is to continually optimise the operation of equipment at the Dawn Pork and Bacon site.

1.2 To implement and achieve Dawn Pork and Bacon Environmental Objectives and Targets.

2.0 SCOPE

2.1 This project applies to;

- 2.1.1 Effluent plant equipment
  - 2.1.1.1 Surface water conductivity probe at EW 3
  - 2.1.1.2 pH Probe in the Balance Tank
  - 2.1.1.3 Chart recorder in the Plant room (WWTP)
  - 2.1.1.4 pH / Temperature probe at EW1
  - 2.1.1.5 Flow meter at EW 1
  - 2.1.1.6 DO meter in Aeration tank 1 and 2
- 2.1.2 Lab equipment(environmental lab)
  - 2.1.2.1 Oven
  - 2.1.2.2 Scales
  - 2.1.2.3 Spectrophotometer
  - 2.1.2.4 Handheld DO probe
  - 2.1.2.5 Conductivity probe
  - 2.1.2.6 pH probe.

3.0 RESPONSIBILITIES

3.1 The Environmental Manager has overall responsibility for the co-ordination of this project with the support of the Maintenance Manager and Environmental Technician.

4.0 PROJECT METHOD

4.1 On site effluent plant equipment is calibrated every three months in-house by the Environmental Technician.

4.2 On site effluent plant equipment is calibrated annually by external consultants.

4.3 The Environmental Technician must arrange for external consultant to come on-site following Environmental Manager approval.

4.4 Annual calibration of lab equipment is organised by the Environmental Technician following Environmental Manager approval.

5.0 REFERENCES

5.1 ISO 14001:2004 Condition 4.4.6 Operational control

5.2 IPPC Licence PO 175-01 Condition 5.2

6.0 RECORDS

6.1 Calibration Certs

7.0 TIMEFRAME

7.1 October 2011

ISSUED BY:	DATE:
Anne-Marie Danaher	28.01.11
APPROVED By:	DATE:
Joanne Day	28.01.11

REF: EMP 05

REV: 05

DAWN PORK AND BACON

SUBJECT: EMP 05 WASTE SLUDGE ANALYSIS (Project Method)

1.0 PURPOSE

1.1 The purpose of this procedure is to ensure that the waste sludge is analysed in accordance with condition 7.5.2 of IPPC Licence P0175-01.

1.2 To achieve Dawn Pork and Bacon Environmental Objectives and Targets

2.0 SCOPE:

2.1 This procedure applies to the sludge generated from the WWTP process.

3.0 RESPONSIBILTY

3.1 It is the responsibility of the Environmental Technician to ensure this procedure is carried out.

4.0 DEFINITIONS

4.1 N\A

5.0 PROCEDURE

5.1 A composite sample of sludge is collected on a bi-annual basis. An analysis of the following parameters is carried out by an external contract laboratory using standard methods;

5.1.1 % Dry matter

5.1.2 Total N

5.1.3 Total P

5.1.4 Total K

5.2 The results of the analysis are reported to the EPA in the AER.

5.3 Results are filed in the organic waste register.

6.0 REFERENCES:

6.1 External Laboratory reports for sludge analysis.

6.2 IPPC licence PO 175-01 Schedule 2(iii)

7.0 RECORDS:

7.1 Organic waste register DERC 19

7.2 Dawn Pork and Bacon Objectives and Targets DERC 17

7.3 Dawn Pork and Bacon Register of environmental aspects and impacts

8.0 TIMEFRAME

8.1 June and December 2011

ISSUED BY: Anne-Marie Danaher	DATE: 28.01.11
APPROVED BY: Joanne Day	DATE: 28.01.11

REF: EMP 06

REV 04

PAGE 1 of 1

DAWN PORK AND BACON

SUBJECT: EMP 06 ANNUAL BOILER EFFICIENCY TESTING PROJECT METHOD

PURPOSE

.1 The purpose of this procedure is to continually improve the atmospheric emissions from boilers at the Dawn Pork and Bacon site.

.2 To implement and achieve Dawn Pork and Bacon Environmental Objectives and Targets.

2.0 SCOPE

2.1 This project applies to the three boilers on – site.

3.0 RESPONSIBILITIES

3.1 The Environmental Manager has overall responsibility for the co-ordination of this project with the support of the Maintenance Manager.

4.0 DEFINITIONS

4.1 N/A

5.0 PROJECT METHOD

5.1 A programme of boiler efficiency testing is carried out both internally through regular maintenance and also by contracting to a heating service specialist.

5.2 After testing, the boilers are correctly balanced (air intake adjusted etc.) if required, to ensure that it is working to the optimum efficiency level.

5.3 All test equipment is traceable to National Standards.

6.0 REFERENCES

6.1 ISO 14001:2004 Condition 4.4.6 Operational control

6.2 IPPC Licence PO 175-01 Condition 5.2

7.0 RECORDS

7.1 Boiler Efficiency report

8.0 TIMEFRAME

8.1 September 2011

ISSUED BY:	DATE:
Anne-Marie Danaher	28.01.11
APPROVED BY:	DATE:
Joanne Day	28.01.11

REF: EMP 07

REV: 04

DAWN PORK AND BACON

SUBJECT: EMP 07 ODOUR SURVEY/AUDIT (Project method)

1.0 PURPOSE

1.1 The purpose of this procedure is to ensure that an odour survey is conducted in the event of any odour complaints or odour causing a nuisance beyond the site boundary or at sensitive locations, and

1.2 To ensure that environmental records are used to initiate corrective action.

1.3 To manage Dawn Pork and Bacon Significant Environmental Aspects and Impacts and to achieve environmental Objectives and Targets.

2.0 SCOPE

2.1 This procedure covers specific areas around the factory.

2.2 This procedure applies as a result of an odour identified through a complaint or to demonstrate compliance.

3.0 RESPONSIBILITY

3.1 It is the responsibility of the Environmental Manager to ensure;

- 3.1.1 An investigator is identified to conduct the odour survey.
- 3.1.2 Action to mitigate any (actual or potential) odour is undertaken.
- 3.1.3 Corrective and preventative action is effective.
- 3.1.4 Results of actions are communicated to all personnel involved.

3.2 The investigator is responsible for;

- 3.2.1 Undertaking the odour survey as outlined in the following procedure.

4.0 DEFINITIONS

4.1 N\A

5.0 Project Method

5.1 INVESTIGATOR

- 5.1.1 Where possible the person investigating the odour complaint or conducting the survey should;
- 5.1.2 Avoid strong food or drinks for at least half an hour before undertaking the survey.
- 5.1.3 Colds, sinusitis or sore throat can affect the sense of smell.
- 5.1.4 The health and safety of the individual undertaking the assessment should not be compromised. Containers or vents should never be sniffed where there is any possibility of them containing or having contained substances which may be harmful or if the content in unknown.
- 5.1.5 As a preventative measure and ongoing performance improvement a weekly odour audit is conducted.

5.2 LOCATION

- 5.2.1 The survey will include a walk around the perimeter of the site.
- 5.2.2 A number of factors will determine the choice of location, including;
  - 5.2.2.1 Complaints received
  - 5.2.2.2 Proximity of housing to the installation

5.2.3 When completing the odour audit the following ranking is used.

- 0 – No detectable odour
- 1 = Slight odour detected within small area
- 2 = Pungent odour detectable over large area

5.2.4 To make an accurate observation, the observation period should be over a standard time, generally 5 minutes at each location. During this time the extent and intensity can be evaluated.

5.2.5 If an odour is detected, depending on the extent the following must be completed;

5.2.6 Identify immediately the source of the odour.

5.2.7 Put measures in place to minimise/eliminate the odour e.g. addition of odour block

6.0 REFERENCES:

5.1 ISO 14001:2004 Condition 4.4.6 Operational control

5.2 IPPC Licence PO 175-01 Condition

6.0 RECORDS:

6.1 Odour inspection report DERC 81

6.2 Wind direction report DERC 83

7.0 TIMEFRAME

7.1 On-going throughout 2011

ISSUED BY: ANNE-MARIE DANAHER amdanaher	DATE: 28.01.11
APPROVED BY: JOANNE DAY Joanne Day	DATE: 28.01.11

REF: EMP 08
REV : 01
PAGE 1 of 1

DAWN PORK AND BACON

SUBJECT: EMP 08 FINANCIAL INVESTMENT

1.0 PURPOSE

.1 To promote and continually improve the environmental monitoring data produced by internal laboratory at Dawn Pork and Bacon

.2 To implement and achieve Dawn Pork and Bacon Environmental Objectives and Targets.

2.0 SCOPE

2.1 This procedure applies to the on-site effluent plant and on-site laboratory.

3.0 RESPONSIBILITY

3.1 The Environmental Manager has overall responsibility for the co-ordination of this project.

4.0 PROJECT SUMMARY

4.1 Financial investment is undertaken in the form of completing the Intercalibrations programme run by the EPA and T.E. Labs.

4.2 Samples are analysed 5 time per year.

4.3 A budget is also allocated for the environmental laboratory and the onsite effluent treatment plant for consumables and new equipment that may be required to be purchased.

4.4 All new purchases are approved by the Environmental Manager.

4.5 Provision are also made by senior management to fulfil investment requirements as stated IPPC licence PO175-01.

5.0 REFERENCES

N/A

6.0 TIMEFRAME

6.1 Ongoing 2011 – Reviewed Dec 2011

ISSUED BY: Anne-Marie Danaher	DATE: 28.01.11
APPROVED BY: Joanne Day	DATE: 28.01.11

REF: EMP 09

REV 02

PAGE 1 of 1

DAWN PORK AND BACON

SUBJECT: EMP 09 Environmental Training (Project Method)

1.0 PURPOSE

.1 To promote and continually improve the environmental awareness throughout the factory

.2 To implement and achieve Dawn Pork and Bacon Environmental Objectives and Targets.

2.0 SCOPE

2.1 This procedure applies to all production operations on site.

3.0 RESPONSIBILITY

3.1 The Environmental Manager has overall responsibility for the co-ordination of this project.

4.0 PROJECT SUMMARY

4.1 A new environmental induction training programme has been put in place which will be delivered to all new employees at induction.

4.2 Further training will be provided to the effluent plant operative where necessary.

5.0 REFERENCES

5.1 Condition 4.4.2 Competence training and awareness ISO 14001:2004

6.0 TIMEFRAME

6.1 December 2011

APPENDIX 1

PRTR emissions data

Environmental Protection Agency

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.11

REFERENCE YEAR	2010

1. FACILITY IDENTIFICATION

Parent Company Name	Queally Pig Slaughtering Limited
Facility Name	Queally Pig Slaughtering Limited
PRTR Identification Number	P0175
Licence Number	P0175-01

Waste or IPPC Classes of Activity

No.	class_name
7.4.1	The operation of slaughterhouses with a carcass production capacity greater than 50 tonnes per day

Address 1	Grannagh
Address 2	Co. Waterford
Address 3	
Address 4	
Country	Ireland
Coordinates of Location	-7.16756 52.278
River Basin District	IESE
NACE Code	1011
Main Economic Activity	Processing and preserving of meat
AER Returns Contact Name	Joanne Day
AER Returns Contact Email Address	amdanaher@dawnpork.com
AER Returns Contact Position	Quality/Enviromental Manager
AER Returns Contact Telephone Number	051 870210
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	051 850783
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	0
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
8(a)	Slaughterhouses

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4.2 RELEASES TO WATERS

Link to previous years emissions data

[PRTR# : P0175] Facility Name : Quesalty Pig Slaughtering Limited] Filename : PRTR EMISSION DATA.xls] Return Year : 2010] 04/04/2011 13:20

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
		Method Used						
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
		Method Used						
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
		Method Used						
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
238	Ammonia (as N)	M	OTH	Nessler reagent method using DR2800 spectrophotometer	1589.0	1589.0	0.0	0.0
303	BOD	M	OTH	5 day carbonaceous Reactor digestion method using DR2800	6670.0	6670.0	0.0	0.0
306	COD	M	OTH	spectrophotometer	38912.0	38912.0	0.0	0.0
305	Detergents (as MBAS)	M	OTH	Colorimetric	198.0	198.0	0.0	0.0
314	Fats, Oils and Greases	M	OTH	FTIR	711.0	711.0	0.0	0.0
327	Nitrate (as N)	M	OTH	Cadmium reduction method using DR2800 spectrophotometer	1906.0	1906.0	0.0	0.0
332	Ortho-phosphate (as PO4)	M	OTH	Phosver 3 Powder pillow method using DR2800 spectrophotometer	305.0	305.0	0.0	0.0
240	Suspended Solids	M	OTH	Gravimetric	6670.0	6670.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

[PRTR# : P0175 | Facility Name : Queally Pig Slaughtering Limited | Filename : PRTR EMISSION DATA.xls | Return Year : 2010] 4/4/2011 13:25

Please enter all quantities on this sheet in Tonnes 0

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non-Haz Waste :Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non-Haz Waste :Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	02 02 04	No	5733.0	sludges from on-site effluent treatment	R10	M	Weighed	Offsite in Ireland	Agri-Life Ltd.,WCP/KK/317(A)/06	Tourin ,Cappoquinn,Waterford,,Ireland		
Within the Country	20 01 01	No	105.8	paper and cardboard	R5	M	Weighed	Offsite in Ireland	Greenstar Ltd,WO116-02	Six Cross Roads,Carraganant,Butlerstown,Waterford,Ireland		
To Other Countries	16 05 06	Yes	0.05	laborotory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	D10	M	Weighed	Abroad	Veolia Ltd.,WCP-CK-06-0578-01 Waste Licence W0050-02	Comn,Fermoy,Cork,,Ireland	Sava GmbH and Co. KG,AS1G00508,Osterteuete 1,25541 Brunsbuttle,,,,Germany	Osterteuete 1,25541 Brunsbuttle,,,,Germany
To Other Countries	11 01 13	Yes	0.1	degreasing wastes containing dangerous substances	R13	M	Weighed	Abroad	Safety Kleen Ireland Ltd.,WCP-DC-09-1223-01 Waste Licence W0099-1	Unit 5,Airton Road,Tallaght,Dublin ,Ireland	Solvent Resource Mangement Ltd,TP334SF,Weeland Road,Knottingly,West Yorkshire,WF11 8DZ,United Kingdom	Weeland Road,Knottingly,West Yorkshire,WF11 8DZ,United Kingdom
To Other Countries	18 02 02	Yes	0.181	wastes whose collection and disposal is subject to special requirements in order to prevent infection	D10	M	Weighed	Abroad	SRCL Ltd .WCP-DC-09-1178-01 Waste Licence W0055-02	Unit 420-430 Beech Road,Western Industrial estate,Naas Road,Dublin 12,Ireland	Eco Safe Systems Ltd,W0054-02,Unit 1A Allied Industrial Estate,Kylemore Road,Ballyfermot,Dublin 10,Ireland	Unit 1A Allied Industrial Estate,Kylemore Road,Ballyfermot,Dublin 10,Ireland
Within the Country	02 02 02	No	1622.0	animal tissue waste Cat 2	R3	M	Weighed	Offsite in Ireland	Dublin Products Limited,P00-709 IPPC Licence R910 DAFF Licence	Tomant Lower,Dunlavin,Wicklow,,Ireland		
Within the Country	02 02 02	No	1760.0	animal tissue waste blood	R3	M	Weighed	Offsite in Ireland	APC Technologies,DAFF AB	2 Silverwood Industrial Estate,Craigavon,Armagh ,BT66 6LN,United Kingdom		
Within the Country	02 02 02	No	3108.0	animal tissue waste offal	R3	M	Weighed	Offsite in Ireland	Dawn Country Meats limited t/a Western Proteins,P0049-02 IPPC Licence	Hazel Hill ,Ballyhaunis,Mayo,,Ireland		
Within the Country	02 02 02	No	766.0	animal tissue waste petfood	R3	M	Weighed	Offsite in Ireland	Premier Proteins,ID 3	Cahir,,,,Tipperary,Ireland		
Within the Country	20 01 21	Yes	0.116	fluorescent tubes and other mercury-containing waste	R5	M	Weighed	Offsite in Ireland	Irish lamp Recycling Ltd.,WCP/KK/030(A)/05 Waste Permit 02/2000	Blackpark,Kilkenny Road,Athy,Kildare,Ireland	Irish Lamp recycling Ltd,02/2000B,Blackpark,Kilkenny Road,Athy,Kildare,Ireland	Blackpark,Kilkenny Road,Athy,Kildare,Ireland

* Select a row by double-clicking the Description of Waste then click the delete button

APPENDIX 2

Boiler Efficiency Testing 2010

GasFix Ireland Ltd

B731

Four Piers,Cregg, Carrick on Suir, Co Tipperary.
Tel: 051 641118 Fax: 051 641122 Mobile: 086 256 1732 086 3808066 email: gasfix@iol.ie

Service Record / Commissioning / Fault Report

Client	Contact Name
Address	Tel No.
	Purchase Order No.
	Date

Service ✓ | Commissioning | Call Out

Burner Make	Boiler Make: No.
Model	Model
Serial No.	Serial No.
Spec No.	Input Kw / Output Kw
Fuel / Output Kw	

Isolate power supply to appliance

	Checked	N/A
Clean burner head	✓	
Check spark probe	✓	
Check flame probe		
Check photo/UV cell	✓	
Check/Change nozzles	✓	
Clean fan	✓	
Clean burner body	✓	
Clean sight glass	✓	
Clean boiler	✓	
Check for oil leaks	✓	
Check for gas leaks		
Check air pressure sw		
Check gas pressure sw		
Check for water leaks		
Check seals	✓	
Check flues	✓	
Test fire burner	✓	
Check/Reset combustion	✓	

Flue Analyses

	High	Low
Flue temperature	172.7	
O2 content %	3.6	
Gross efficiency %	87.7	
Net efficiency %	89.5	
Excess air %	20.6	
CO2 content %	10.8	
CO content ppm	16	
Ambient temp		
Draught Mbar		
Gas inlet pressure Mb		
Burner pressure Mb		
Oil pressure bar	12	
Nozzle Size/Degrees	1.50/60°	
Smoke No.	0	

Parts used:

Remarks: Serviced Burner / Re-Set. All O.K.

Time Sheet

Date	Travelling Time	Arrive	Depart	Total	Office Use
11/11	1 Hrs	10.20		Hrs	
	Hrs			Hrs	
	Hrs			Hrs	

Engineer Signature: Client Signature:

Subject to terms & conditions. Copies may be inspected at our offices. Queries must be made within 5 days.

GasFix Ireland Ltd.

Four Piers,Cregg, Carrick on Suir, Co Tipperary.
Tel. 051 641118 Fax. 051 641122 Mobile 086 256 1732 086 380 8066 email. gasfix@iol.ie

Service Record / Commissioning / Fault Report

Client	Dawn Pork and Bacon
Address	Grannagh
	Waterford

Contact Name	Alan
Tel No.	051 870 210
Purchase Order No.	
Date	22/01/2011

Service	x	Commissioning	Call Out

Burner Make:	Riello		
Model:	RS 190		
Serial No.	0234 0000 009		
Spec No.	835 T1		
Fuel	NG20	Output Kw	

Boiler Make:	Buderus	No.	2
Model:	SK 735		
Serial No.	See Below		
Input Kw		Output Kw	1900

Isolate power supply to appliance

	Checked	N/A
Clean burner head	x	
Check spark probe	x	
Check flame probe	x	
Check photo/UV cell		x
Check/Change nozzles		x
Clean fan	x	
Clean burner body	x	
Clean sight glass		x
Clean boiler	x	
Check for oil leaks		x
Check for gas leaks	x	
Check air pressure sw	x	
Check gas pressure sw	x	

Check for water leaks		x
Check seals	x	
Check flues	x	
Test fire burner	x	
Check/Reset combustion	x	

Flue Analyses

	high	Low
Flue temperature	206.4	127.6
O2 content %	3.50%	4.71%
Gross efficiency %	81.50%	84.30%
Net efficiency %	89.90%	92.90%
Excess air %	19.80%	41.50%
CO2 content %	9.93%	9.33%
CO content ppm	0	0
Ambient Temp	15.70	15.70
Nox	x	x
Gas inlet pressure Mb	90	90
Burner pressure Mb	13	2.5

Oil pressure bar		
Nozzle Size/Degrees		
Smoke No.		

Parts used:

Remarks:

Time Sheet

Date	Travel Time Hrs	Arrive	Depart	Total Hrs	Office Use

Engineer Signature: J Wilb Client Signature: Alan Wall

GasFix Ireland Ltd.

Four Piers,Cregg, Carrick on Suir, Co Tipperary.
Tel. 051 641118 Fax. 051 641122 Mobile 086 256 1732 086 380 8066 email. gasfix@iol.ie

Service Record / Commissioning / Fault Report

Client	Dawn Pork and Bacon
Address	Grannagh
	Waterford

Contact Name	Alan
Tel No.	051 870 210
Purchase Order No.	
Date	22/01/2011

Service	x	Commissioning		Call Out	

Burner Make:	Riello		
Model:	RS 190		
Serial No.	02262 000 529		
Spec No.	835 T1		
Fuel	NG20	Output Kw	2290

Boiler Make:	Buderus	No.	1
Model:	SK 725		
Serial No.			
Input Kw		Output Kw	1600

Isolate power supply to appliance

	Checked	N/A
Clean burner head	x	
Check spark probe	x	
Check flame probe	x	
Check photo/UV cell		x
Check/Change nozzles		x
Clean fan	x	
Clean burner body	x	
Clean sight glass		x
Clean boiler	x	
Check for oil leaks		x
Check for gas leaks	x	
Check air pressure sw	x	
Check gas pressure sw	x	

Check for water leaks		x
Check seals	x	
Check flues	x	
Test fire burner	x	
Check/Reset combustion	x	

Flue Analyses

	high	Low
Flue temperature	190	128.6
O2 content %	3.80%	4.16%
Gross efficiency %	82.10%	83.90%
Net efficiency %	90.65%	92.50%
Excess air %	22.30%	50.70%
CO2 content %	9.73%	9.54%
CO content ppm	0	0
Ambient temp	15.70	15.7
Nox	x	x
Gas inlet pressure Mb	90	90
Burner pressure Mb	14.5	3

Oil pressure bar		
Nozzle Size/Degrees		
Smoke No.		

Parts used:

Remarks:

Time Sheet

Date	Travel Time Hrs	Arrive	Depart	Total Hrs	Office Use

Engineer Signature: J Wall Client Signature: Alan Wall

APPENDIX 3

Groundwater Analysis 2010

Certificate of Analysis

Dawn Pork and Bacon

Ms Joanne Day

Grannagh

Co. Waterford

Clogherane
Dungarvan
Co Waterford
Ireland

Tel : +353 (0) 58 48300
Fax: +353 (0) 58 42855

Email: info@lancasterlabs.com

Sample No: **100004947**
PO Number: 26196
Batch Number: Sampled 15.02.2010

Sample Type: Water
Description: Well Water/Water Potability
Date Received: 15-Feb-2010
Date Started: 15-Feb-2010

TEST	RESULT
Cl. perfringens - SOP 1.1053	<1 cfu/100ml
Coliforms - SOP 1.1051	<1 cfu/100ml
E. coli - SOP 1.1059	<1 cfu/100ml
Enterococci - SOP 1.1052	<1 cfu/100ml
Total Bacterial Count @ 22°C - SOP 1.1050	<1 cfu/ml

Signed: Sandra Foley Analyst 3

Date Authorised: **20-Feb-2010**

This report has been produced electronically.

Report Generated On: 23-Feb-11 9:02

Certificate of Analysis

Dawn Pork and Bacon

Ms Joanne Day

Grannagh

Co. Waterford

Clogherane
Dungarvan
Co Waterford
Ireland

Tel : +353 (0) 58 48300
Fax: +353 (0) 58 42855

Email: info@lancasterlabs.com

Sample No: **210001263**
PO Number: 26186
Batch Number: Well Water, 05/02/10

Sample Type: EU Directive (Audit List)
Description:
Date Received: 05-Feb-2010
Date Started: 05-Feb-2010

Analysis End Date: 05-Mar-2010

TEST	RESULT
* 1,2-dichloroethane - Subcontracted	<0.08 µg/L
* Acrylamide - Subcontracted	<0.020 µg/L
* Aluminium - Subcontracted	9 µg/L
* Antimony - Subcontracted Laboratory Method	<0.12 µg/L
* Arsenic - Subcontracted Laboratory Method	<0.37 µg/L
* Benzene - Subcontracted Laboratory Method	<0.06 µg/L
* Benzo(a)pyrene - Subcontracted Laboratory Method	2 ng/L
* Boron - Subcontracted	26 µg/L
* Bromate - Subcontracted	<0.6 µg/L
* Cadmium - Subcontracted	<0.06 µg/L
* Chromium - Sub-contracted	1.0 µg/L
* Colour - SOP 2.1014	<10 Hazen
* Conductivity - SOP 2.1015	797µS/cm Temp:19.9 °C
* Copper - Sub-contracted	<2.7 µg/L
* Cyanide - Sub-contracted	<0.7 µg/L
* Epichlorohydrin - Subcontracted	<0.10 µg/L
* Fluoride - Palin Test	0.1mg/L
* Iron - Sub-contracted	<10 µg/L
* Lead - Subcontracted	<0.5 µg/L
* Manganese (as Mn) - Sub-contracted	<1.8 µg/L
* Mercury (as Hg) - Subcontracted Laboratory Method	0.038 µg/L
* Nickel - Subcontracted	0.9 µg/L
* Nitrate (as N) - SOP 2.1179	6.06 mg/L
* Odour - APHA 20th Edition	Odourless
* Pesticides (Sub) - Organochlorine Pesticides (Water)	124_TCB_<0.002 µg/L Aldrin_<0.003 µg/L Alpha_HCH_<0.002 µg/L Beta_HCH_<0.002 µg/L Chlordane-Alpha_<0.002 µg/L Chlorothalonil_<0.003 µg/L Cyfluthrin_<0.003 µg/L Cypermethrin_<0.003 µg/L Delta_HCH_<0.002 µg/L Deltamethrin_<0.004 µg/L Dichlobenil_<0.001 µg/L

* Pesticides (Sub) - Organochlorine Pesticides (Water)	Dieldrin_<0.002 µg/L
	EndosulfanA_(alpha-Endosulfan)_<0.003 µg/L
	EndosulfanB_(beta-Endosulfan)_<0.003 µg/L
	Endrin_<0.003 µg/L
	Fenvalerate_<0.003 µg/L
	Gamma-HCH_(Lindane)_<0.002 µg/L
	Heptachlor_<0.002 µg/L
	Heptachlor_Epoxide_<0.002 µg/L
	Hexachlorobenzene_<0.002 µg/L
	Hexachlorobutadiene_<0.002 µg/L
	Isodrin_<0.003 µg/L
	Methoxychlor_<0.003 µg/L
	op-DDD_(TDE)_<0.002 µg/L
	op-DDE_<0.002 µg/L
	op-DDT_<0.002 µg/L
	PCB_-_Arochlor_1254_<0.018 µg/L
	Permethrin-cis_<0.003 µg/L
	Permethrin-trans_<0.004 µg/L
	pp-DDD_(TDE)_<0.003 µg/L
	pp-DDE_<0.002 µg/L
	pp-DDT_<0.002 µg/L
* Pesticides (Sub) - Organophosphorus Pesticides (Water)	Azinphos_methyl_<0.004 µg/L
	Carbophenothion_<0.012 µg/L
	Chlorfenvinphos_<0.005 µg/L
	Demeton-S-Methyl_<0.006 µg/L
	Diazinon_<0.006 µg/L
	Dichlorvos_<0.008 µg/L
	Dimethoate_<0.005 µg/L
	Fenitrothion_<0.004 µg/L
	Malathion_<0.004 µg/L
	Mevinphos_<0.004 µg/L
	Parathion_ethyl_<0.006 µg/L
	Phorate_<0.009 µg/L
	Phosalone_<0.007 µg/L
	Pirimiphos_methyl_<0.009 µg/L
	Propetamphos_<0.007 µg/L
	Triazophos_<0.003 µg/L
* Polycyclic Aromatic Hydrocarbons (Sub) - Polycyclic Aromatic Hydrocarbons (Waters)	Benzo(b)fluoranthene_<0.001 µg/L
	Benzo(ghi)perylene_0.001 µg/L
	Benzo(k)fluoranthene_<0.001 µg/L
	Benzo_3_4_pyrene_0.002 µg/L
	Indeno(1_2_3cd)pyrene_<0.002 µg/L
	Total_PAHs_4_Constituents_0.00100 µg/L
* Selenium - Subcontracted Laboratory Method	1.6 µg/L
* Sodium (as Na) - AAS	18mg/L
* Taste - Sub-contracted	NONE
* Tetrachloroethene (Sub) - Subcontracted Laboratory Method	<0.05 µg/L
* Total Organic Carbon - USP 32	254ppb
* Total Trihalomethanes - Subcontracted	Bromodichloromethane_<0.08 µg/L
	Bromoform_<0.16 µg/L
	Chlorodibromomethane <0.09 µg/L
	Chloroform_<0.9 µg/L
	Total_THM_0 µg/L
* Trichloroethene (Sub) - Subcontracted Laboratory Method	<0.05 µg/L
* Turbidity - APHA 20th Edition	0.02NTU
* Vinyl Chloride - Subcontracted	<0.1 µg/L
Ammonium -NH4 - SOP 2.1179	ND<0.02 mg/L
Chloride - SOP 2.1179	32 mg/L
Nitrite (as N) - SOP 2.1179	ND<0.02 mg/L
pH - SOP 2.1025	7.12

Sulphate - SOP 2.1179	21 mg/L	

Signed: Carmel Fitzpatrick, Operations Manager

Date Authorised: **05-Mar-2010**

This report has been produced electronically.

Microchem Laboratories/Microchem Laboratories (Ireland) Limited trading as Lancaster Laboratories
Company Directors: Petrus Thomas Adrianus van der Zande (Dutch); James Robert Ewen Coley (UK)
Registered office: 25/28 North Wall Quay, Dublin 1.
Registered in Ireland number 155075

Report Generated On: 23-Feb-11 9:00

APPENDIX 4

Noise Monitoring Report 2010

August 2010

Noise Impact Assessment Report

Dawn Pork and Bacon
IPPC Licence Reg. No. P0175-01

Grannagh Industrial Estate
Grannagh
Co. Kilkenny

MALONE O'REGAN

MALONE O'REGAN

Form ES - 04

MALONE O'REGAN
ENVIRONMENTAL SERVICES LTD

2B Richview Office Park
Clonskeagh, Dublin 14
Tel: +353- 1- 260 26 55
Fax: +353- 1- 260 26 60
Email: enviro@MORce.ie

Title: Noise Impact Assessment Report (Dawn Pork and Bacon)

Job Number: E0778

Prepared By: Jose Alonso **Signed:** JC Alonso

Checked By: Siobhan Maher **Signed:** Siobhan Maher

Approved By: Siobhan Maher **Signed:** Siobhan Maher

Revision Record

Issue No.	Date	Description	Remark	Prepared	Checked	Approved
1	06/08/10	Noise Impact Assessment Report	Final	JA	SM	SM

Table of Contents

List of Figures

List of Tables

Appendices

Executive Summary

In accordance with the requirements of Condition 8.3 of Integrated Pollution Prevention & Control (IPPC) Licence Register No. P0175-01, issued to Queally Pig Slaughtering Ltd. (trading as Dawn Pork and Bacon (DP&B)), Grannagh Industrial Estate, Co. Kilkenny, a noise survey of the site operations was undertaken on the 25th-26th of May, 2010 and 24th-25th of June 2010.

Conditions 8.1.1 and 8.1.2 of the site's IPPC licence give day and night time noise limits at any noise sensitive locations in the vicinity of the site as follows:

- Day time $L_{Aeq, T}$ 55dB(A)
- Night time $L_{Aeq, T}$ 45dB(A)
- No **clearly audible** tonal component or impulsive component in noise emissions at any noise sensitive location.

The methodology followed was in accordance with the recommendation of the International Standards Organisation Documents: ISO 1996-1:2003 and ISO 1996-2:2007, EPA Guidance Note on Noise in Relation to Scheduled Activities, 2nd edition, 2006 and EPA Environmental Noise Survey Guidance Document, 2003.

Monitoring was carried out around the facility boundary and at a nearby noise sensitive location (NSL) located approx. 750m south west of the facility. Day time noise monitoring took place at 7 boundary monitoring locations and at the NSL. Night time monitoring took place at 4 of these locations, to ensure accurate representation of the on-site noise sources at night time and in the NSL. The survey locations utilised around the boundary correspond to the initial baseline and subsequent surveys completed to date. Frequency analysis was carried out at all locations (boundary and NSL) during both day and night time periods.

Tonal noise was detected during the first visit of May 2010 at the nearby sensitive receptor (Campion-Kinsella residence). This was linked to the WWTP and therefore DP&B carried out a maintenance check and rectified the problem. A second visit was then conducted and tones were not observed either objectively or subjectively at the receptor. Noise monitoring results for NSL during day and night time periods were below the day and night time licence limit. Other than the tonal issue which was rectified, overall the noise levels were similar to those recorded during previous surveys.

Therefore it can be concluded that DP&B are in compliance with Condition 8.1 and 8.2 of their IPPC licence P0175-01 and that there are no significant impacts on noise sensitive receptors as a result of operations at the site.

1.0 Introduction

In accordance with the requirements of Condition 8.3 of Integrated Pollution Prevention & Control (IPPC) Licence Register No. P0175-01, issued to Queally Pig Slaughtering Ltd. (trading as Dawn Pork and Bacon (DP&B)), Grannagh Industrial Estate, Co. Kilkenny, a noise survey of the site operations was undertaken on the 25th-26th of May, 2010 and 24th-25th of June 2010.

The purpose of the survey was to evaluate noise emissions from the facility and to ascertain the impact, if any, on the nearest noise sensitive receptors. Conditions 8.1 and 8.2 of the site's IPPC licence give day and night time noise limits at any noise sensitive locations in the vicinity of the site as follows:

- Day time $L_{Aeq,T}$ 55dB(A)
- Night time $L_{Aeq,T}$ 45dB(A)
- No **clearly audible** tonal component or impulsive component in noise emissions at any noise sensitive location.

The Dawn Pork and Bacon (DP&B) facility operates between 06:00 and 18:00 hours, Monday to Friday, with cleaning operations taking place until approximately midnight. The dispatch of finished product takes place until 18.00 hrs. Intake of animals into the lairage may occur up to 19.00 hrs when slaughtering is scheduled for the next day.

Both the refrigeration plant and effluent treatment plant operate continuously. Boilers are started at 05:00 hrs each day in order to allow slaughtering to commence at 07:30 hrs. Extraction fans used to remove steam during cleaning processes in the boning hall are operated from 17.00 to approximately 22.30 hrs.

The activities at the time of the survey were representative of current production practices at the plant. All potentially significant noise sources were operational during the time of monitoring. The aerators, which form part of the effluent treatment plant, are operated alternatively over individual hourly periods throughout the 24 hour period.

2.0 Methodology

Noise monitoring was undertaken on the 25th-26th of May, 2010 and 24th-25th of June 2010. A second visit was conducted in June 2010 as tonal noise was detected during the first visit of May 2010 at the nearby sensitive receptor. This was linked to the WWTP and therefore DP&B carried out a maintenance check and rectified the problem.

Weather conditions on 25th-26th May were mainly dry, sunny and calm during the day time monitoring period and clear and calm during the night time monitoring period. Weather conditions on the 24th- 25th June were overcast and dry with light breeze at intervals during the day and night time monitoring periods.

Measurement

The methodology followed was in accordance with the recommendation of the International Standards Organisation Documents: ISO 1996-1:2003 and ISO 1996-2:2007, EPA Guidance Note on Noise in Relation to Scheduled Activities, 2nd edition, 2006 and EPA Environmental Noise Survey Guidance Document, 2003.

The EPA Guidance Note of 2006 is currently being reviewed. It is understood from the EPA that ISO1996:2 2007 should supersede the 2006 Guidance Note where advice differs.

Equipment

Noise measurement was carried out using a Bruel & Kjaer 2250 Hand-held Analyser Sound Level Meter (Type 1), equipped with Frequency Analysis Software BZ7223 and Logging Software BZ7224. The monitoring equipment was calibrated before monitoring using a Bruel & Kjaer sound level calibrator type 4231. The noise levels were measured using the A-weighted network, and a fast sampling interval. At all sample locations the noise meter was positioned at a minimum of 3.5 meters away from any reflecting surfaces, and mounted on a tripod 1.5 meters above ground level.

Monitoring Locations

Table 1 below gives a description of the monitoring locations, which are illustrated on Figures 1 and 2. The survey boundary locations utilised correspond to the initial baseline and subsequent surveys completed every 2 years to date.

Table 1 Summary of Locations

Monitoring Location	Description
NM1	South western site boundary, close to the effluent treatment plant.
NM2	Western site boundary, adjacent to DP&B chillers.
NM3	North western site boundary, adjacent to site entrance.
NM4	North eastern site boundary.
NM5	Eastern site boundary, adjacent to extraction fan.
NM6	South eastern site boundary, adjacent to Aerator 1.
NM7	Southern site boundary.
NM8 (NSL)	Noise sensitive receptor located approx 750m south west of the facility (Campion Kinsella)

Day time noise monitoring took place at all monitoring locations while night time monitoring took place at the NSL and at NM1, NM3, NM5 and NM7 to ensure accurate representation of the on-site noise sources at night time. Frequency analysis was carried out at all locations during both day and night time periods.

3.0 Results

Table 2 below describes the predominant noise sources at each location and Tables 3 and 4 outline the monitoring results for the day and night time monitoring events.

Table 2 Description of Predominant Noise Sources

Monitoring Location	Day time Noise Sources	Night time Noise Sources
NM1	A constant humming noise from the WWTP and an air extraction vent from the Dawn Meats (DM) facility were the main noise sources at this location. A truck left the engine running in the loading/unloading area of the DM adjacent facility (approx 20m from the noise meter) during the first half of the monitoring period. Other noise sources were a truck being washed close to this monitoring point, Trucks and cars passing nearby in the road between DP&B and DM, unloading of pigs into lairage, trucks passing by the truck washing area and banging at intervals in the adjacent DM facility (unloading from a conveyor belt into an open container).	A constant humming noise from the WWTP and an air extraction vent from the adjacent DM facility were the main noise sources at this location. A refrigerated truck parked nearby was also constantly audible. A conveyor belt running in the DM facility was also audible (cleaning activities).
NM2	Chiller units were the main noise source at this location. Other noise sources were passing trucks and forklifts on the adjacent road and speed ramps, a loader loading rubble into a trailer nearby and pigs inside the building.	N/A
NM3	Busy passing traffic on the N24 was the predominant noise source. Other noise sources were vehicles entering/leaving the site, banging in a neighbouring facility and a truck collecting waste. Plant activities from the loading/unloading area were audible at this location.	Intermittent passing traffic on the N24 was the predominant noise source. Extraction fans were audible in background. Other noise sources were cars leaving the site, some with the windows open and the radio loud and people talking at the security hut nearby.
NM4	Busy passing traffic on the N24 was the predominant noise source. Other noise sources were plant activities from the loading/ unloading area, reverse beepings from onsite vehicles, a car beeping and announcement through onsite speakers.	N/A

Table 2 Description of Predominant Noise Sources (Continued)

Monitoring Location	Day time Noise Sources	Night time Noise Sources
NM5	Traffic on the N24 was audible at this location. Waste items moving in chute to a container (banging noise) were audible at intervals. Other noise sources were reverse beepings from onsite vehicles and wildfowl. The WWTP was not audible.	Extractor fan facing the monitoring location was not in operation during the monitoring. Intermittent passing traffic on N24 was the predominant noise source, and hum from WWTP was audible in the distance. Other noise sources were a banging noise from inside the building (cleaning activities) and wildfowl.
NM6	Whirring and humming noise from the WWTP aerators and water flowing were the predominant noise sources at this location. An opened ladder access vibrating in the one of the WWTP tanks was also audible.	N/A
NM7	Whirring and humming noise from the WWTP aeration tanks was the predominant noise source at this location. The screener in the WWTP was also audible intermittently at this location. Other noise sources were traffic in the adjacent access road, announcement through the facility speakers and wildfowl.	Whirring and humming noise from the WWTP aeration tanks and water flowing in the WWTP were the predominant noise sources at this location. Air extraction units from the DM adjacent facility were also audible at this location. One car also pass by on the adjacent access road.
NM8 (NSL)	Activities from DP&B site were not audible at this location during the monitoring period. The main noise source was continuous distant traffic on nearby national roads and traffic on the adjacent local road. Other noise sources vehicle were reverse beepings and banging from another nearby facility, wildowl and intermittent movement of leaves of nearby trees	Activities from DP&B site were not audible at this location during the monitoring period. The main noise source was continuous distant traffic on nearby national roads. Other noise sources were three cars passing by on the adjacent local road, a dog barking and cattle in the distance, a vehicle engine noise in the distance vehicle, wildfowl and intermittent movement of leaves of nearby trees

Table 3 Summary of Day time Noise Measurements

Location	Monitoring Event & Time	$L_{Aeq,\ 15\ mins}$ (dB)	$L_{A10,\ 15\ mins}$ (dB)	$L_{A90,\ 15\ mins}$ (dB)
NM1	25/06/10 – 10:22	65	68	60
	14/04/08 – 12:30	65	66	63
	22/03/06 – 15:20	65	64	60
NM2	26/05/10 – 10:26	75	76	74
	14/04/08 – 12:52	70	72	67
	22/03/06 – 17:46	87	87	85
NM3	25/05/10 – 11:09	63	63	50
	14/04/08 – 13:44	64	67	54
	22/03/06 – 18:29	62	65	53
NM4	25/05/10 – 11:33	57	60	50
	14/04/08 – 14:00	61	65	52
	22/03/06 – 18:12	56	58	50
NM5	25/05/10 – 12:10	58	54	51
	14/04/08 – 10:56	55	58	51
	22/03/06 – 16:48	60	54	51
NM6	25/06/10 – 09:44	58	59	57
	14/04/08 – 11:37	60	62	59
	22/03/06 – 15:57	74	78	60
NM7	25/06/10 – 10:02	57	57	55
	14/04/08 – 12:10	65	66	64
	22/03/06 – 15:39	66	65	55
NM8 (NSL)	25/06/10 – 12:03	49	46	34

Table 4 Summary of Night time Noise Measurements

Location	Monitoring Event & Time	$L_{Aeq,\ 15\ mins}$ (dB)	$L_{A10,\ 15\ mins}$ (dB)	$L_{A90,\ 15\ mins}$ (dB)
NM1	24/06/10 – 23:58	59	60	59
	14/04/08 – 22:23	58	60	57
	22/03/06 – 22:17	64	64	63
NM3	25/05/10 – 23:01	53	56	46
	14/04/08 – 22:59	57	61	46
	22/03/06 – 23:51	57	59	41
NM5	25/05/10 – 23:24	44	46	40
	14/04/08 – 22:05	52	53	43
	22/03/06 – 23:31	44	43	40
NM7	24/06/10 – 23:18	57	57	56
	14/04/08 – 22:41	60	61	59
	22/03/06 – 22:40	56	56	54
NM8 (NSL)	24/06/10 – 22:09	44	38	27

4.0 Discussion

The DP&B facility is surrounded by industrial facilities to the west and southwest and the N24 to the north, all of which contribute to background noise levels. The nearest sensitive receptors are located approximately 250m to the north-west of the facility along the N24, where traffic dominates the noise environment. Due to these factors, the impact of noise emissions from the facility is often masked by the numerous separate noise emissions emanating from the neighbouring facilities and traffic on the N24.

NM1

Day time
During the day time, noise levels at this location could be attributed to the aeration tanks in the WWTP, facility and yard activities such as cleaning of trucks after pigs have been unloaded, passing trucks and unloading of pigs into the lairage. The air extraction in the adjacent Dawn Meats facility and trucks in the loading/ unloading area of Dawn Meats also contributed to the recorded noise levels. The day time $L_{Aeq\ 15\ mins}$ value of 65dB for this location is the same as that recorded during the last surveys carried out in 2006 and 2008. This indicates that activities at the facility have not changed significantly since 2006. The $L_{A90\ 15\ mins}$ value of 60dB is the same as recorded in 2006 and 3dB lower than that recorded at the last monitoring event.

Night time
The corresponding night time $L_{Aeq\ 15\ mins}$ value of 59dB is similar to 2008 monitoring event but 5dB lower than the $L_{Aeq\ 15\ mins}$ value recorded during 2006, which is thought to have resulted from a lower number of refrigerated trucks parked nearby. The noise levels recorded are not thought to significantly impact the noise sensitive receptors due to their distance from this monitoring point.

NM2

Day time
The $L_{Aeq\ 15\ mins}$ noise level recorded in 2010 was 75dB, which is 5dB higher than the one recorded in 2008. The predominant noise sources at this location were the chiller units. Traffic on the adjacent road also contributes to the noise levels at this location. Due to the busy industrial environment in the area the noise levels at this location will not significantly affect the nearest noise sensitive receptors.

The $L_{Aeq\ 15\ mins}$ noise level recorded in 2006 of 87dB were due to the operation of a generator during the 2006 monitoring event which is typically in operation between 17:00 and 18:00 hrs each day. However, the generator has not been in operation during previous noise monitoring events and was not in operation during the 2008 monitoring event. Due to careful control of operating hours of the generator, it is not thought to significantly impact the noise environment at the nearest sensitive receptors.

NM3 and NM4

Day time
These locations are dominated by traffic noise on the N24 which is the predominant noise source at both day and night time. Day time $L_{Aeq\ 15\ mins}$ levels of 63dB and 57dB were recorded at NM3 and NM4 respectively. In general, these are similar to those recorded in previous events. The background $L_{A90\ 15\ mins}$ levels were similar to those recorded in previous

events at both locations, as shown on Table 3. Therefore it can be stated that the overall noise levels as a result of operational activities at the facility have maintained since 2006 at these locations.

Night time – NM3
The night time $L_{Aeq\ 15\ mins}$ noise level at NM3 is 53dB, which is lower than in previous monitoring events. This is likely caused by lower traffic volume possibly due to the new by-pass opening, as indicated by the lower $L_{A10\ 15\ mins}$ value. The $L_{A90\ 15\ mins}$ was 46dB, the same as in 2008, but 5dB higher than that recorded in 2006. This is likely to be due to the extra activity at the security hut on site during the 2008 and 2010. Air extract units were audible at this location.

NM5

Day time
The $L_{Aeq\ 15\ mins}$ for this location during the day time was 58dB, in comparison to 55dB in 2008 and 60dB in 2006. The predominant noise source was traffic on the N24 while some activity within the site (waste items in a chute and reverse beeping) was also audible. The levels recorded here are above the EPA limit of 55dB(A), however this will not have an impact to the nearby sensitive receptors. The background $L_{A90\ 15\ mins}$ levels (51dB) remain the same as 2006 and 2008, as shown on Table 3.

Night time
The $L_{Aeq\ 15\ mins}$ value recorded at NM5 during the night time monitoring event was 44dB, which is the same level recorded during 2006 but lower than 2008. This is likely to be influenced by traffic volumes on the N24 and other main roads, as during 2008 the noise level was recorded at an earlier monitoring time compared with 2010 and 2006. This is consistent with the increase in $L_{A10\ 15\ mins}$ levels from 43dB and 46dB in 2006 and 2010 respectively to 53dB in 2008. The $L_{A90\ 15\ mins}$ levels remain similar at 40dB, 43dB and 40dB for 2010, 2008 and 2006 respectively.

NM6

Day time
The $L_{Aeq\ 15\ mins}$ recorded was 58dB, which is slightly lower than the 60dB recorded in 2008. Noise levels recorded in 2006 were significantly higher due to construction activities at the effluent treatment plant. Noise levels recorded during the 2010 and 2008 monitoring events are thought to be indicative of current operations at the WWTP, including aeration tanks.

The noise levels recorded at this location are not thought to significantly impact the noise environments at the nearest noise sensitive receptors due to the distance of the receptors from the noise sources.

NM7

Day time
The $L_{Aeq\ 15\ mins}$ recorded at NM7 was 58dB, a 5-6dB decrease from the 2006 and 2008 monitoring events. $L_{A90\ 15\ mins}$ levels (55dB) remain the same as 2006 but 9dB lower than the 2008 monitoring event. This is thought to be thought to be due to the use of the tractor and agitator, continuously audible for during the 2008 monitoring event. Noise levels recorded during the 2010 are thought to be indicative of current operations at the WWTP, including aeration tanks.

Due to the busy industrial environment in the area and the distance to the nearby sensitive receptors, the noise levels are not expected to significantly impact the noise environment at the nearest receptors.

Night time
At NM7 the $L_{Aeq\ 15\ mins}$ level recorded at night time was 57dB, in comparison to the 60dB and 56 dB recorded at the same location in 2008 and 2006 respectively. The WWTP aerators were the predominant noise source at this point and were continuous throughout the monitoring period. Due to the distance of the receptors from this location, there is not expected to be any significant impact on the noise environment at the nearest sensitive receptors.

NM8 (NSL)

Day time
At NM8 the $L_{Aeq\ 15\ mins}$ level recorded at day time was 49 dB, which is well below the IPPC licence day time limit of 55dB(A). The site activities were not audible at the NSL during the monitoring period. The main noise influence at this location during the monitoring period was distant traffic from nearby national roads and traffic from the adjacent local road.

Night time
The $L_{Aeq\ 15\ mins}$ level recorded at night time was 44 dB, which is in compliance with the IPPC licence night time limit of 45dB(A). The site activities were not audible during the monitoring period. The main noise influence at the NSL during the monitoring period was distant traffic from nearby national roads.

5.0 Frequency Analysis

Third octave band, real time frequency analysis was carried out at all noise monitoring locations in order to determine the nature of the noise being produced. Tones were subjectively audible during the day time periods at NM6, NM7, NM1 and NM2 and night time periods at NM7 and NM1. Tonal noise subjectively audible in NM6 and NM7 originates from the motors on the WWTP aeration tanks while at NM1 (beside the WWTP aerators) there is also influence from an extraction fan from the adjacent DM facility. Subjective tonal noise in NM2 during day time originates from the chiller units.

The subjective tones noted are not expected to impact the noise environment at the nearest noise sensitive receptors, as no tones were audible during the day time and night time monitoring periods at the NSL (NM8).

Tones were objectively identified in accordance with the standard ISO 1996-2:2007. The standard states that "for a prominent, discrete tone to be identified as present, the time-average sound pressure level in the on-third octave band of interest is required to exceed the time-average sound pressure levels of both adjacent one-third-octave bands by some constant level difference". The ISO 1996-2:2007 standard gives the level differences as follows:

- 15dB in the low-frequency on-third-octave bands (25Hz to 125 Hz),
- 8dB in the middle-frequency bands (160Hz to 400Hz),
- and 5dB in high-frequency bands (500Hz to 10,000Hz).

Tones were objectively detected by the noise meter at 315Hz at NM2 during the day time monitoring period and at 2,000Hz at NM7 during the night time monitoring period, in

accordance with the ISO 1996-2:2007 (Appendix D). However, this is not expected to impact the noise environment at the nearest noise sensitive receptors due to the distance of the receptors from these locations. Furthermore, no tones were objectively identified during day or night time monitoring periods at the NSL (NM8). Therefore, DP&B is in compliance with condition 8.2 of IPPC Licence P0175-01. *"There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise sensitive location"*.

The frequency spectra are contained in Appendix A.

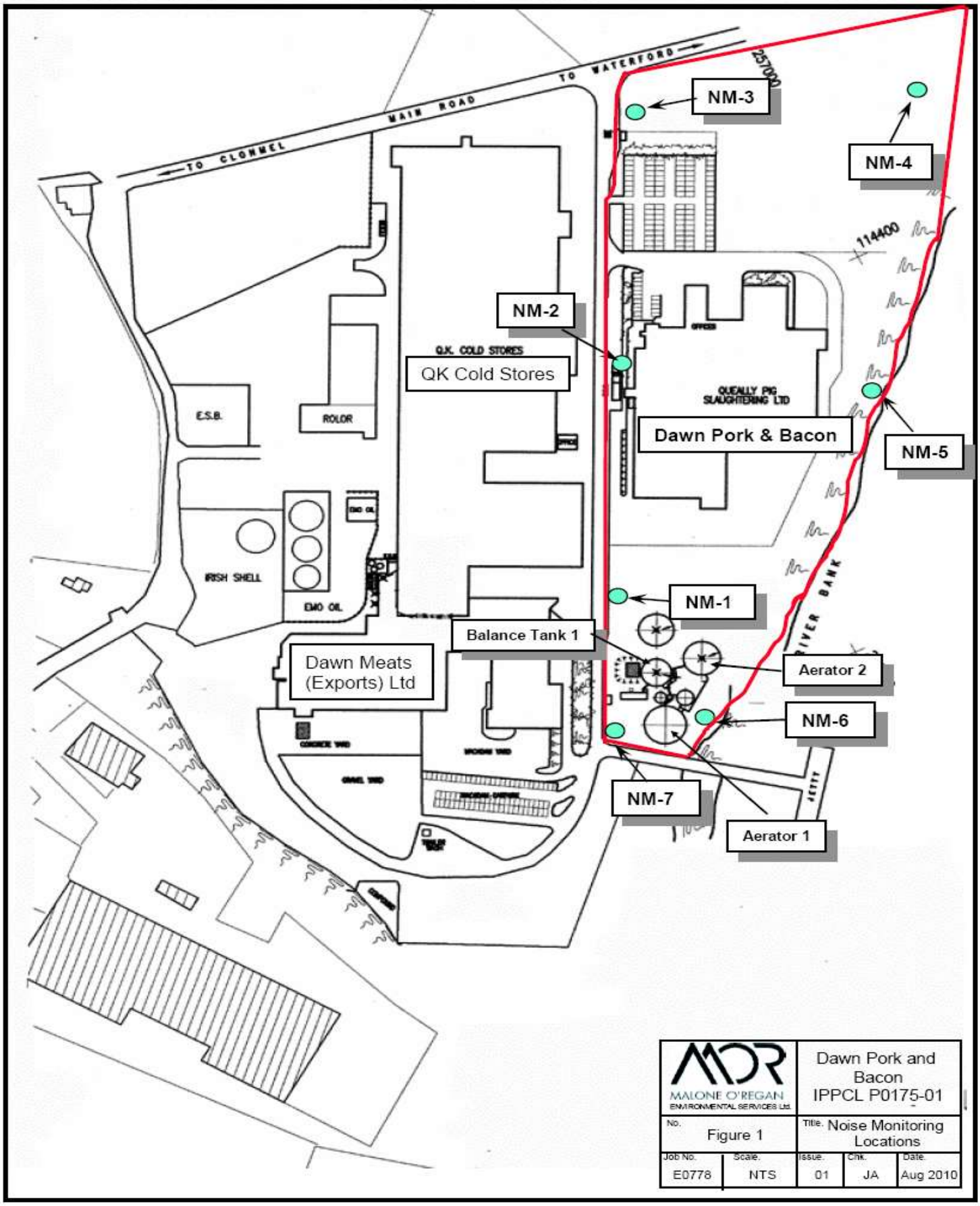
6.0 Conclusions

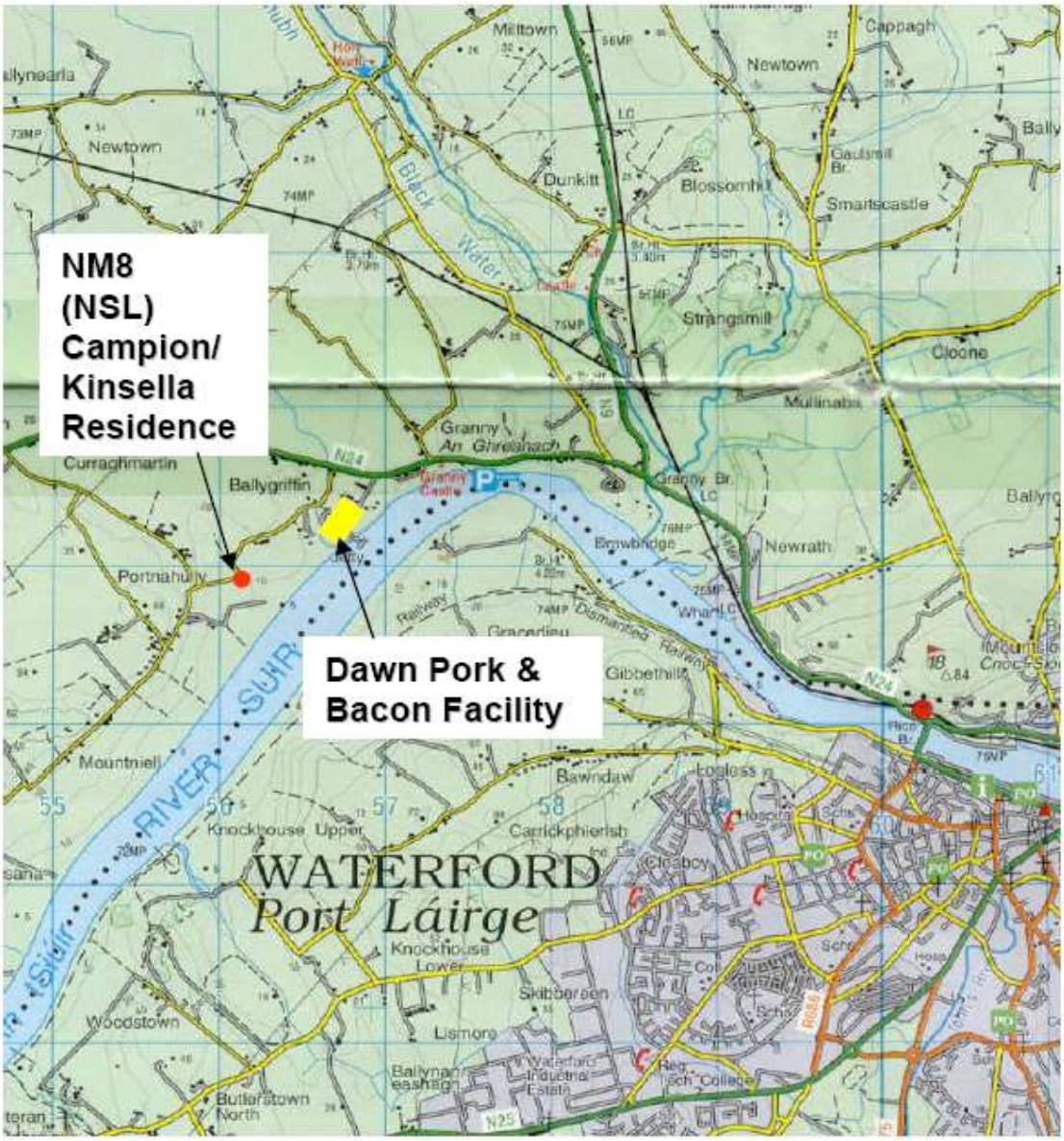
Tonal noise was detected during the first visit of May 2010 at the nearby sensitive receptor (Campion-Kinsella residence). This was linked to the WWTP and therefore DP&B carried out a maintenance check and rectified the problem. A second visit was then conducted and tones were not observed either objectively or subjectively at the receptor.

Noise monitoring results for NSL during day and night time periods were below the day and night time licence limit. Other than the tonal issue which was rectified, overall the noise levels were similar to those recorded during previous surveys.

Therefore it can be concluded that DP&B are in compliance with Condition 8.1 and 8.2 of their IPPC licence P0175-01 and that there are no significant impacts on noise sensitive receptors as a result of operations at the site.

FIGURES


TO CLONMEL
MAIN ROAD
TO WATERFORD
257000
114400
NM-3
NM-4
NM-2
NM-5
NM-1
NM-6
NM-7
Q.K. COLD STORES
QK Cold Stores
QUEALLY PIG SLAUGHTERING LTD
Dawn Pork & Bacon
E.S.B.
ROLOR
IRISH SHELL
EMO OIL
Balance Tank 1
Dawn Meats (Exports) Ltd
Aerator 2
Aerator 1
RIVER BANK
JETTY
MALONE O'REGAN ENVIRONMENTAL SERVICES Ltd.
Dawn Pork and Bacon IPPCL P0175-01
No. Figure 1
Title. Noise Monitoring Locations
Job No. E0778
Scale. NTS
Issue. 01
Chk. JA
Date. Aug 2010



MALONE O'REGAN
ENVIRONMENTAL SERVICES LTD.
2B Richview Office Park,
Clonskeagh,
DUBLIN 14.
Tel: +353 1 260 2655
Fax: +353 1 260 2660
Email: enviro@morce.ie

Client	Dawn Pork and Bacon Ltd.		Drawing				
Job	Noise Monitoring		Location of Noise Sensitive Receptor				
Job Number	Drawing Number	Status	Sht. Size	Scale	Date	Drawn	
E0778	Figure 2	Final	A4	NTS	Aug10	JA	

Appendix A

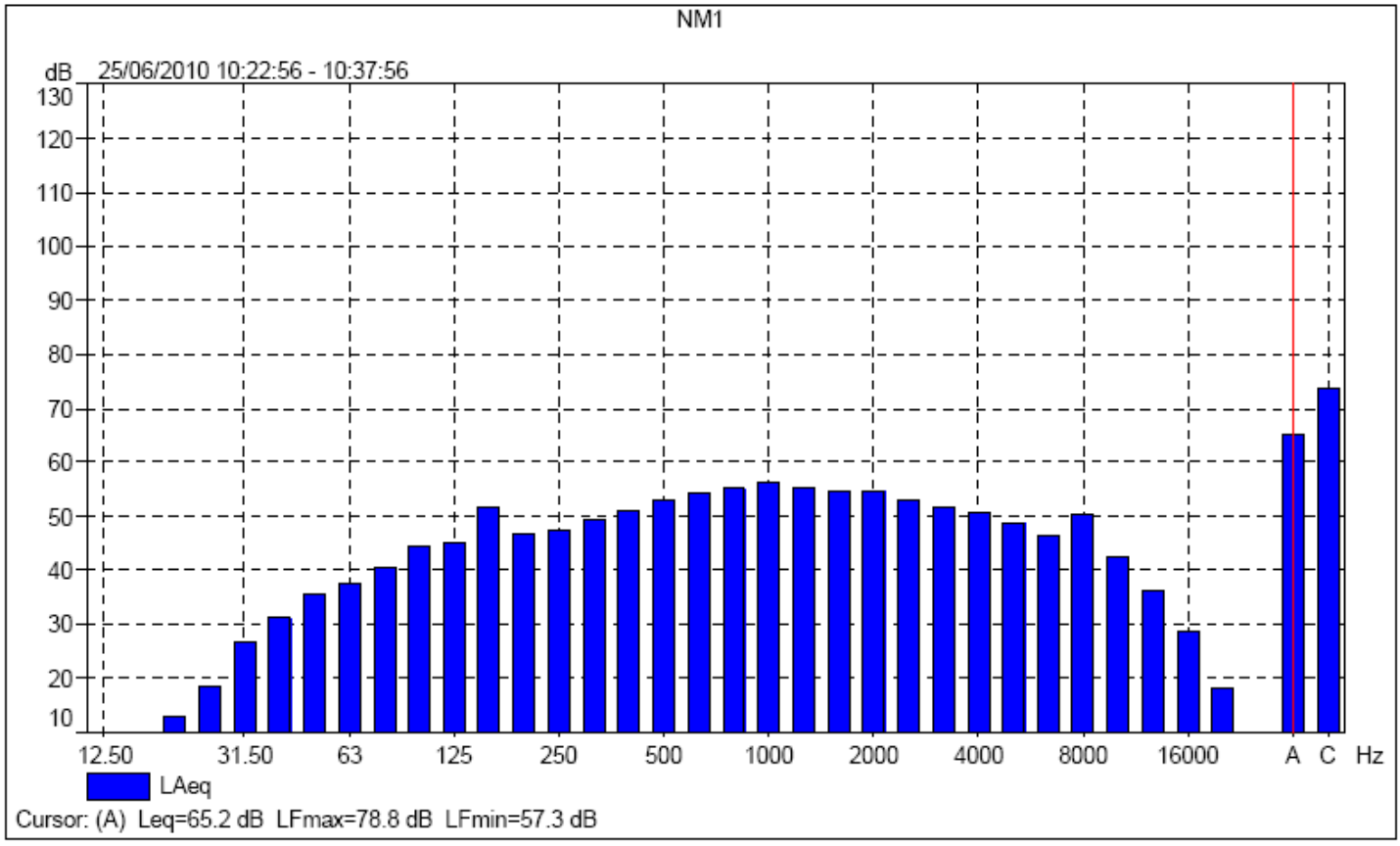
NM1

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		06/25/2010 10:22:56
End Time:		06/25/2010 10:37:56
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.26

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		06/25/2010 09:34:24
Calibration Type:		External reference
Sensitivity:		48.22 mV/Pa



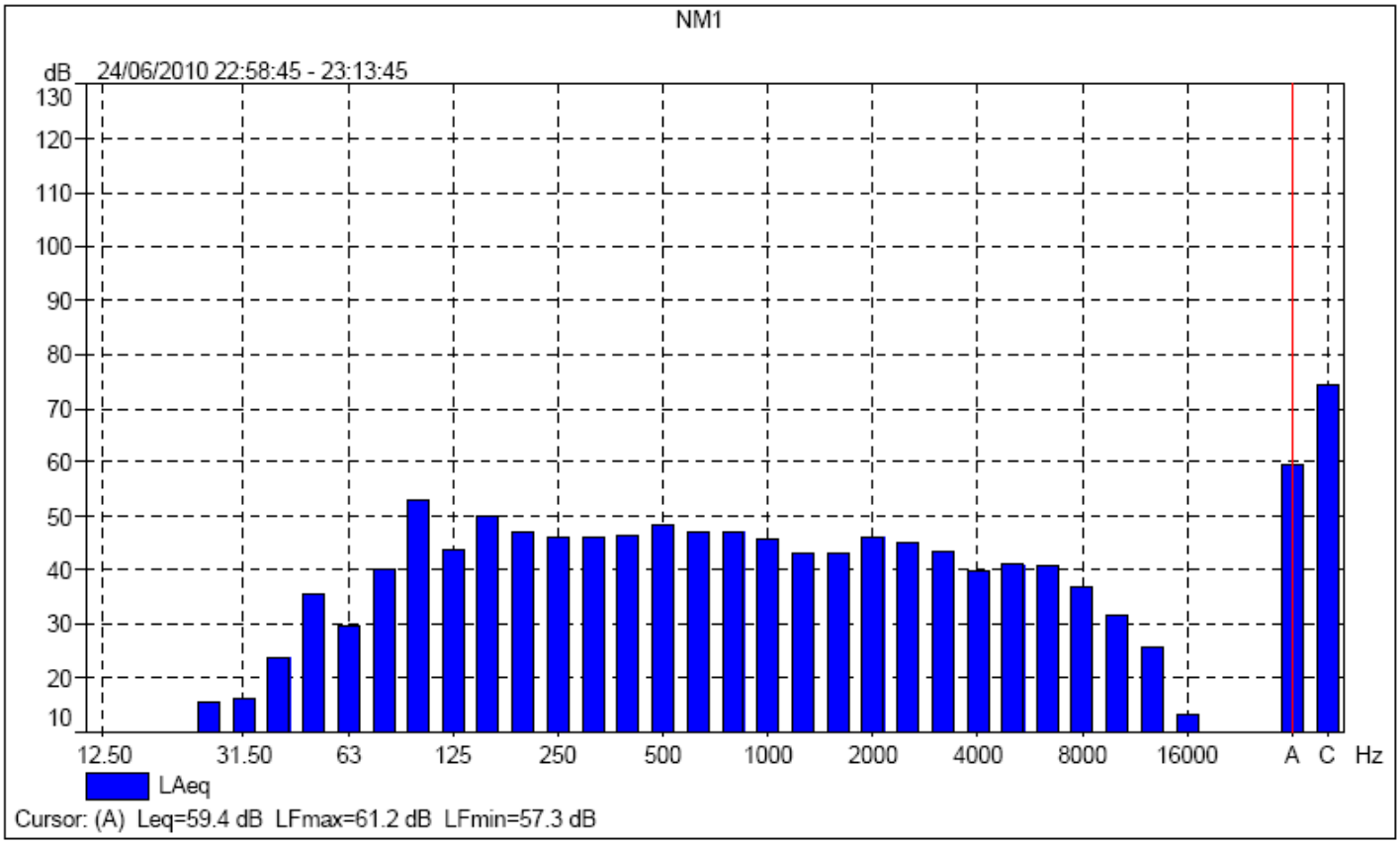
NM1

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		06/24/2010 22:58:45
End Time:		06/24/2010 23:13:45
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.29

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		06/24/2010 21:57:34
Calibration Type:		External reference
Sensitivity:		48.05 mV/Pa



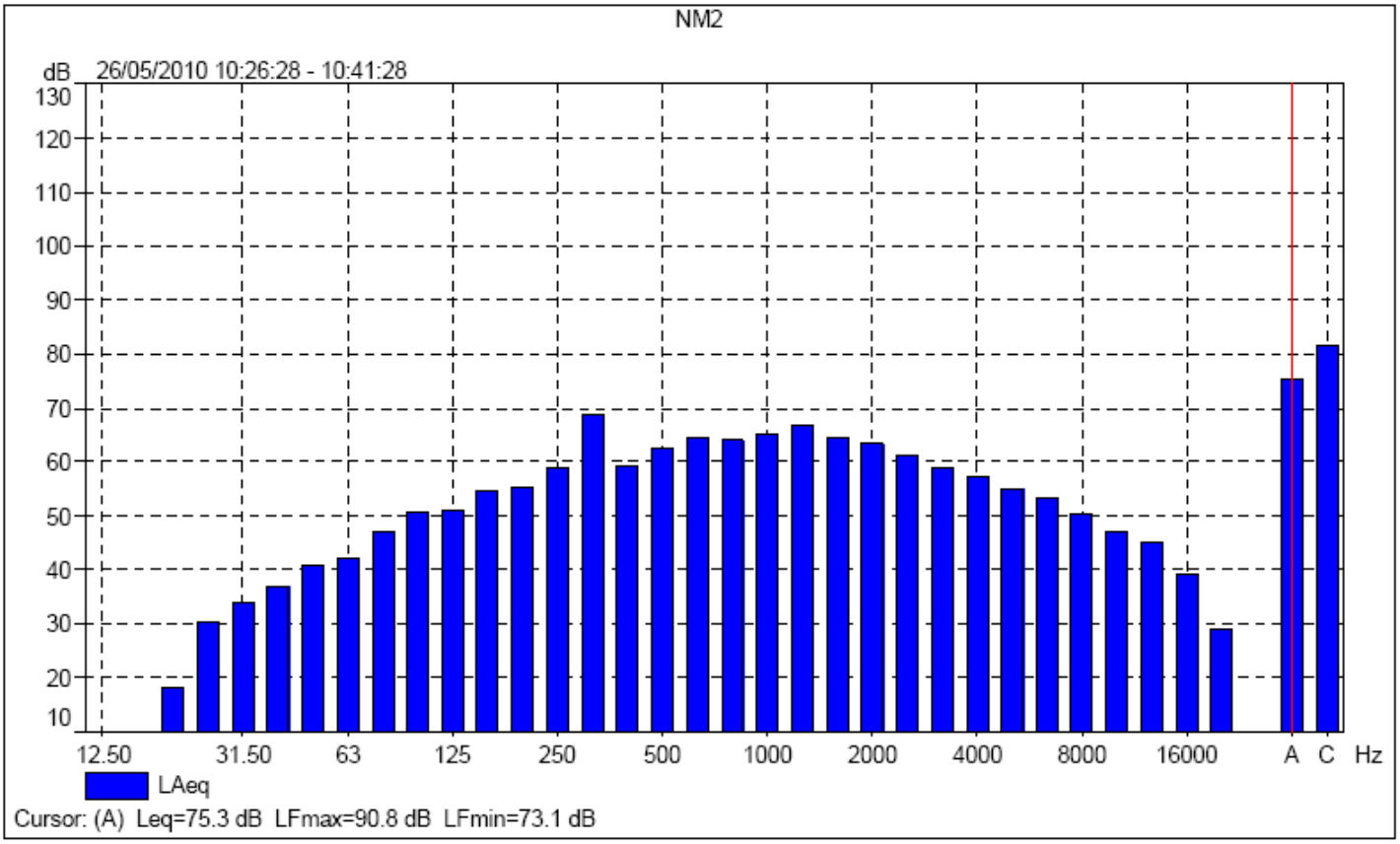
NM2

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		05/26/2010 10:26:28
End Time:		05/26/2010 10:41:28
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.36

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		05/26/2010 09:50:27
Calibration Type:		External reference
Sensitivity:		47.69 mV/Pa



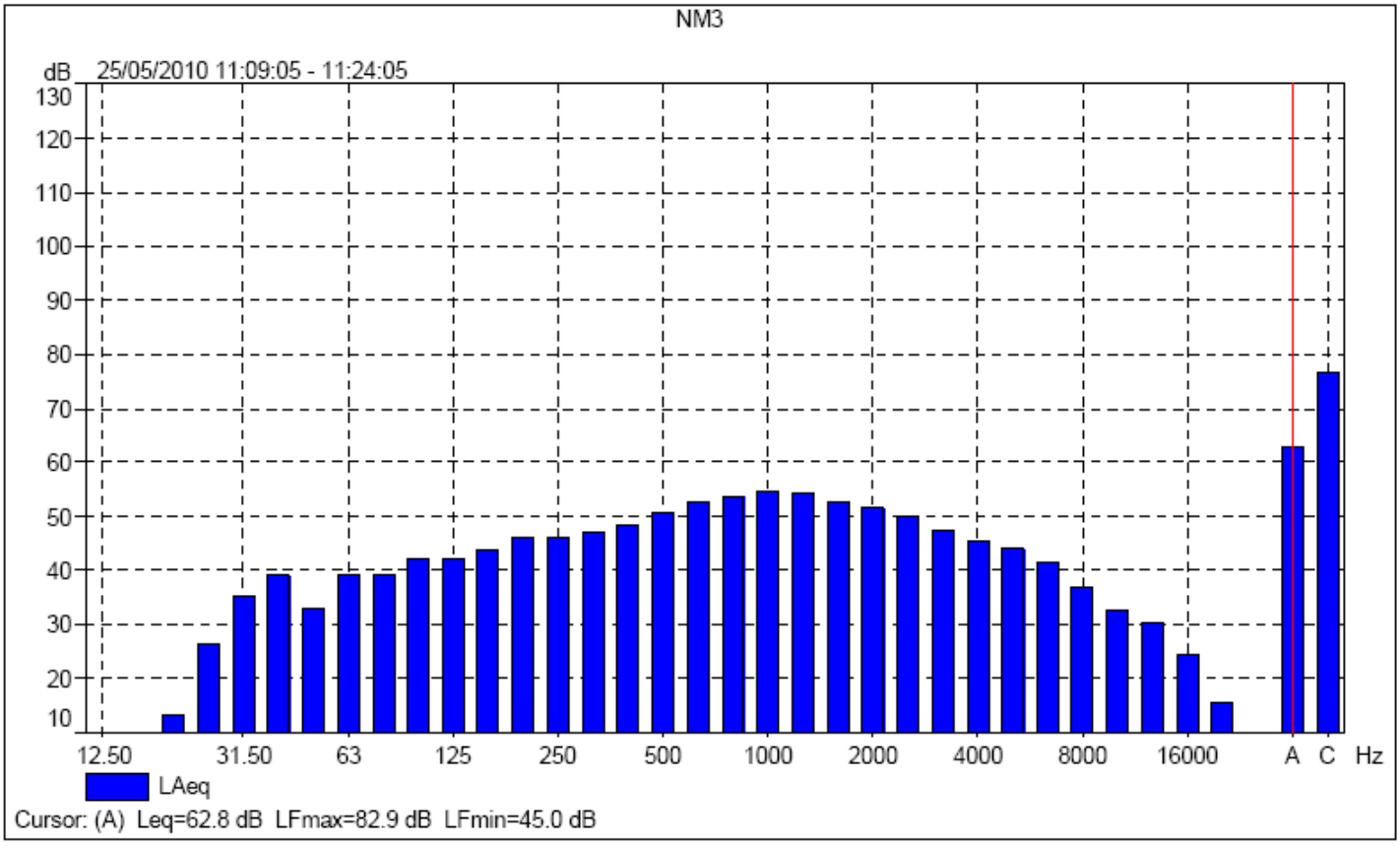
NM3

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		05/25/2010 11:09:05
End Time:		05/25/2010 11:24:05
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.30

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		05/25/2010 09:21:02
Calibration Type:		External reference
Sensitivity:		48.03 mV/Pa



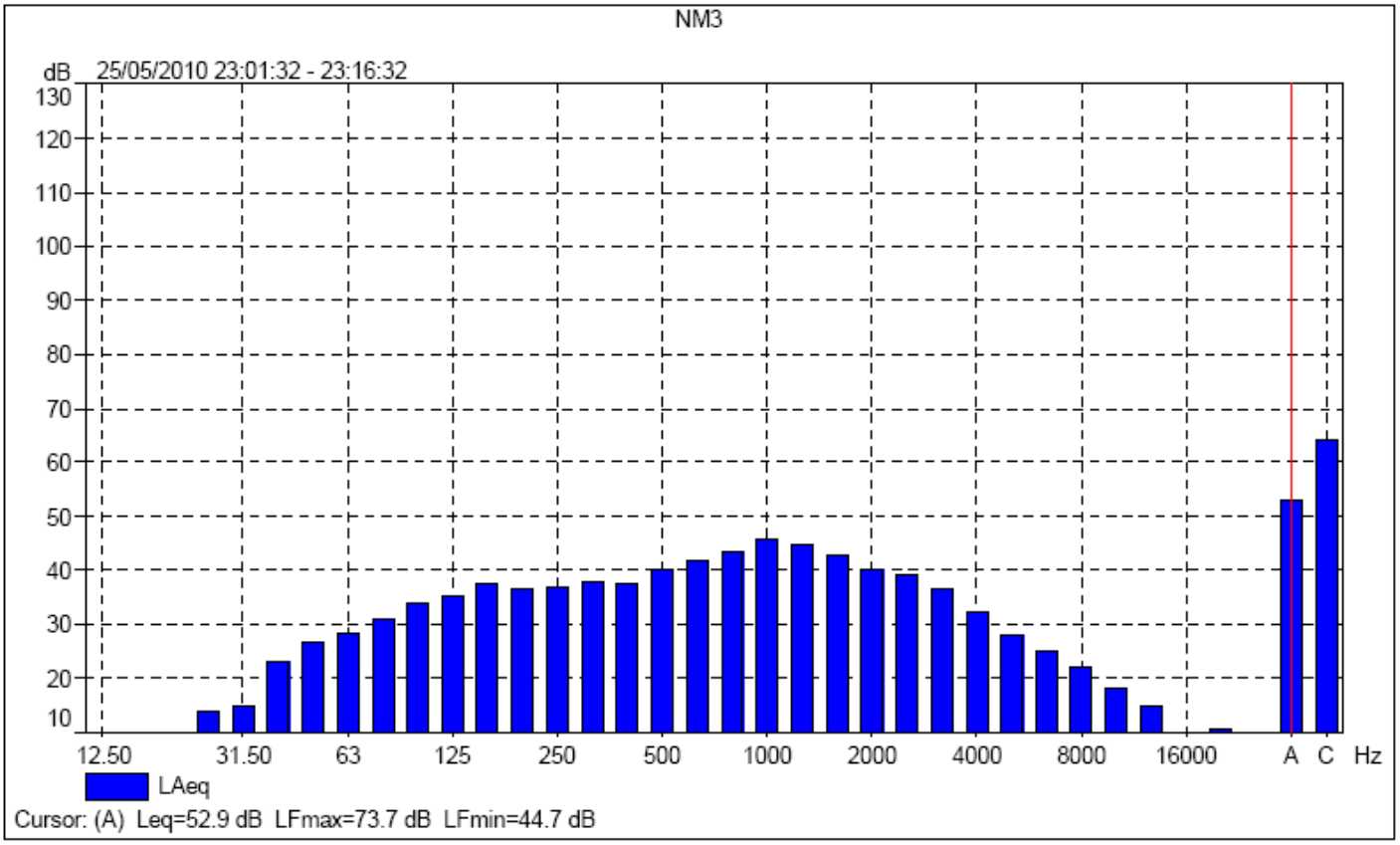
NM3

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		05/25/2010 23:01:32
End Time:		05/25/2010 23:16:32
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.34

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		05/25/2010 21:50:45
Calibration Type:		External reference
Sensitivity:		47.79 mV/Pa



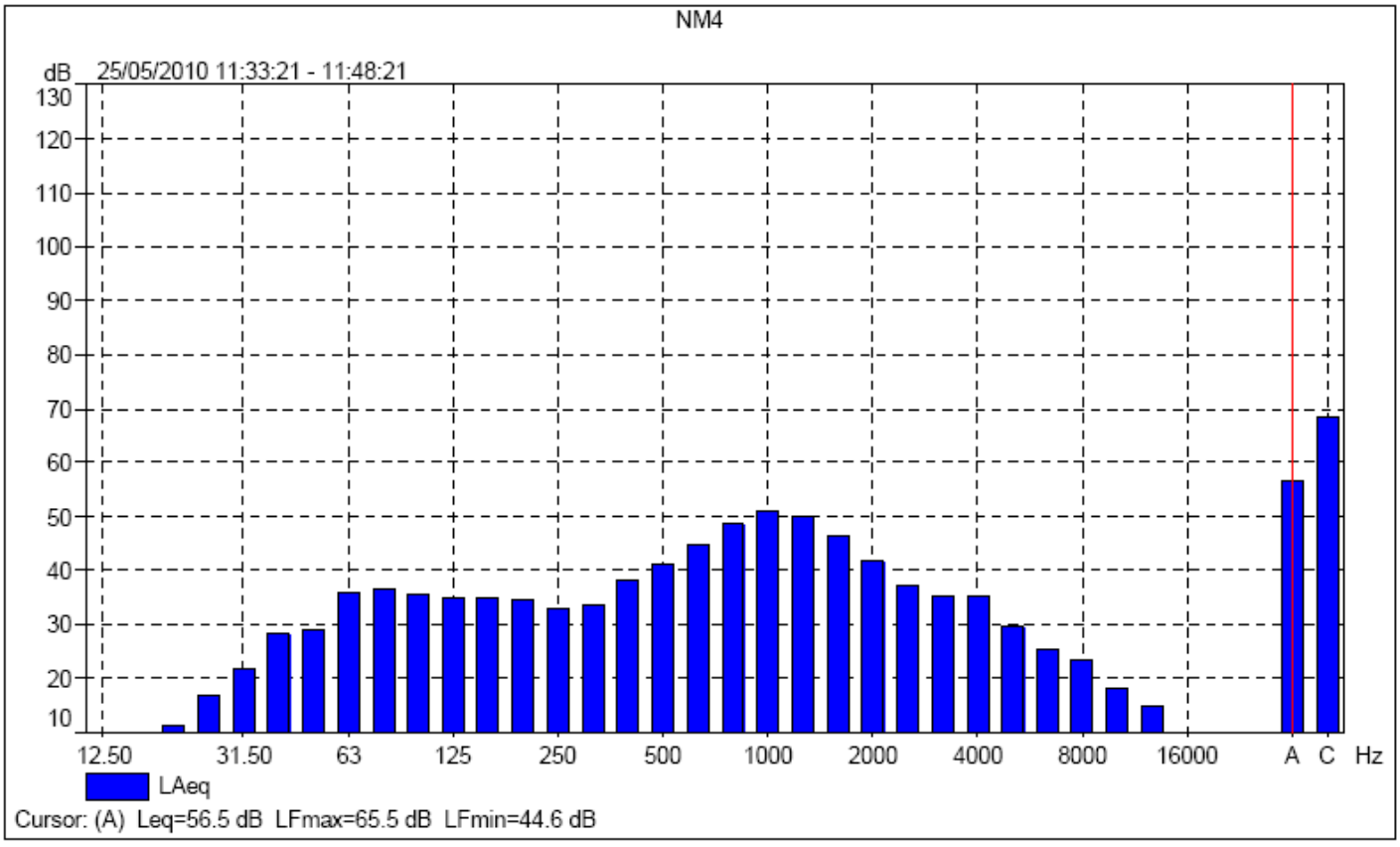
NM4

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		05/25/2010 11:33:21
End Time:		05/25/2010 11:48:21
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.30

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		05/25/2010 09:21:02
Calibration Type:		External reference
Sensitivity:		48.03 mV/Pa



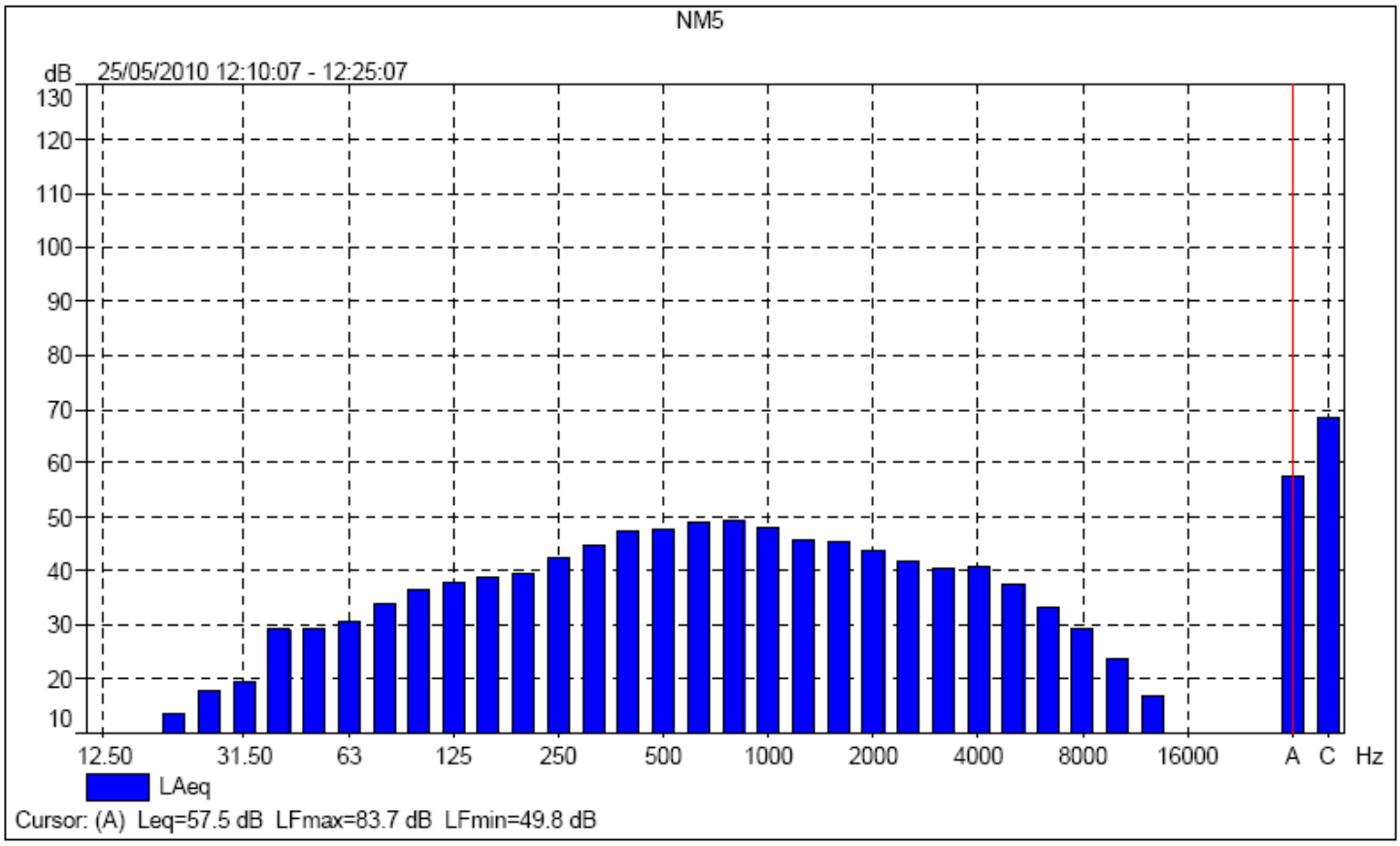
NM5

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		05/25/2010 12:10:07
End Time:		05/25/2010 12:25:07
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.30

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		05/25/2010 09:21:02
Calibration Type:		External reference
Sensitivity:		48.03 mV/Pa



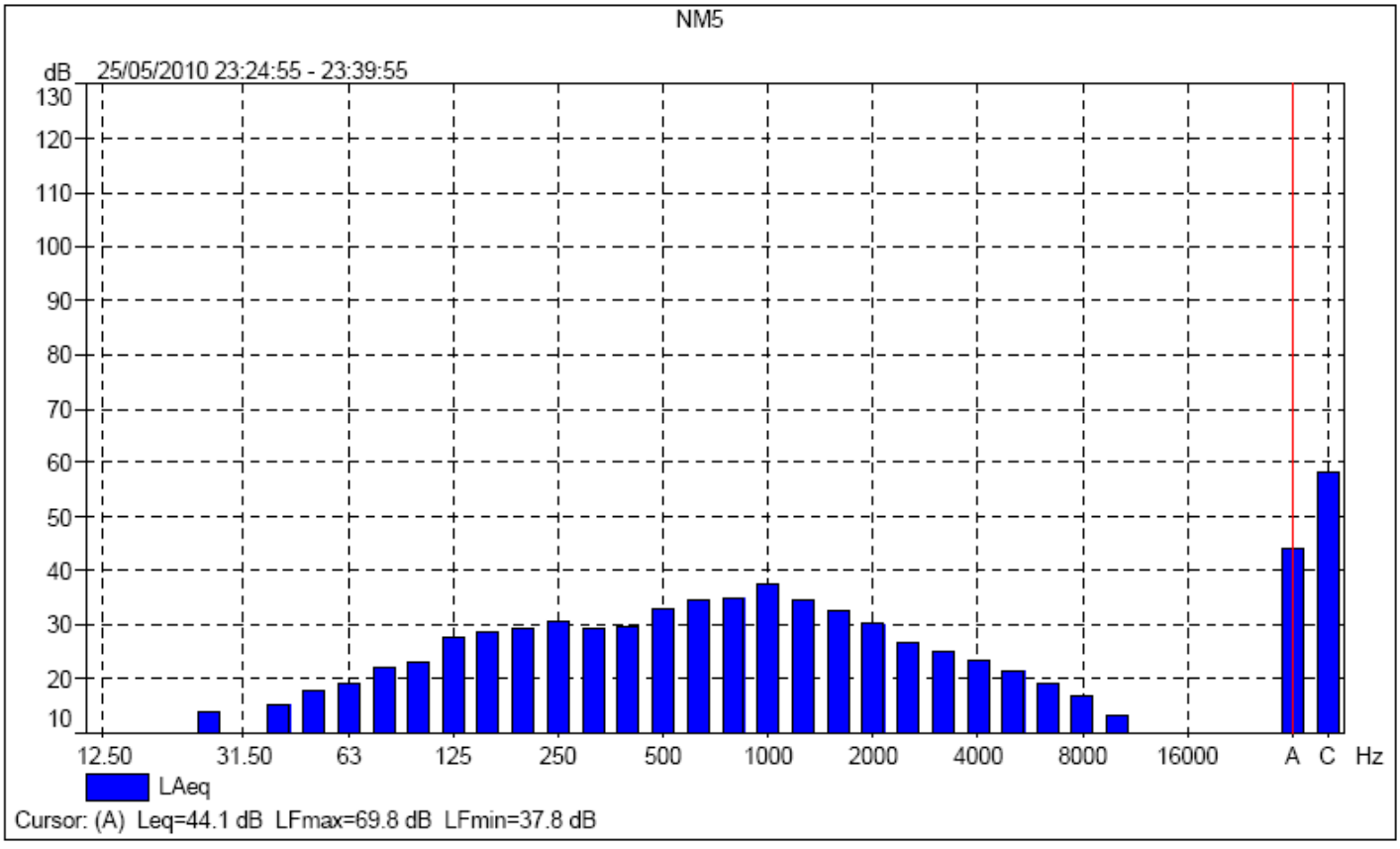
NM5

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		05/25/2010 23:24:55
End Time:		05/25/2010 23:39:55
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.34

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		05/25/2010 21:50:45
Calibration Type:		External reference
Sensitivity:		47.79 mV/Pa



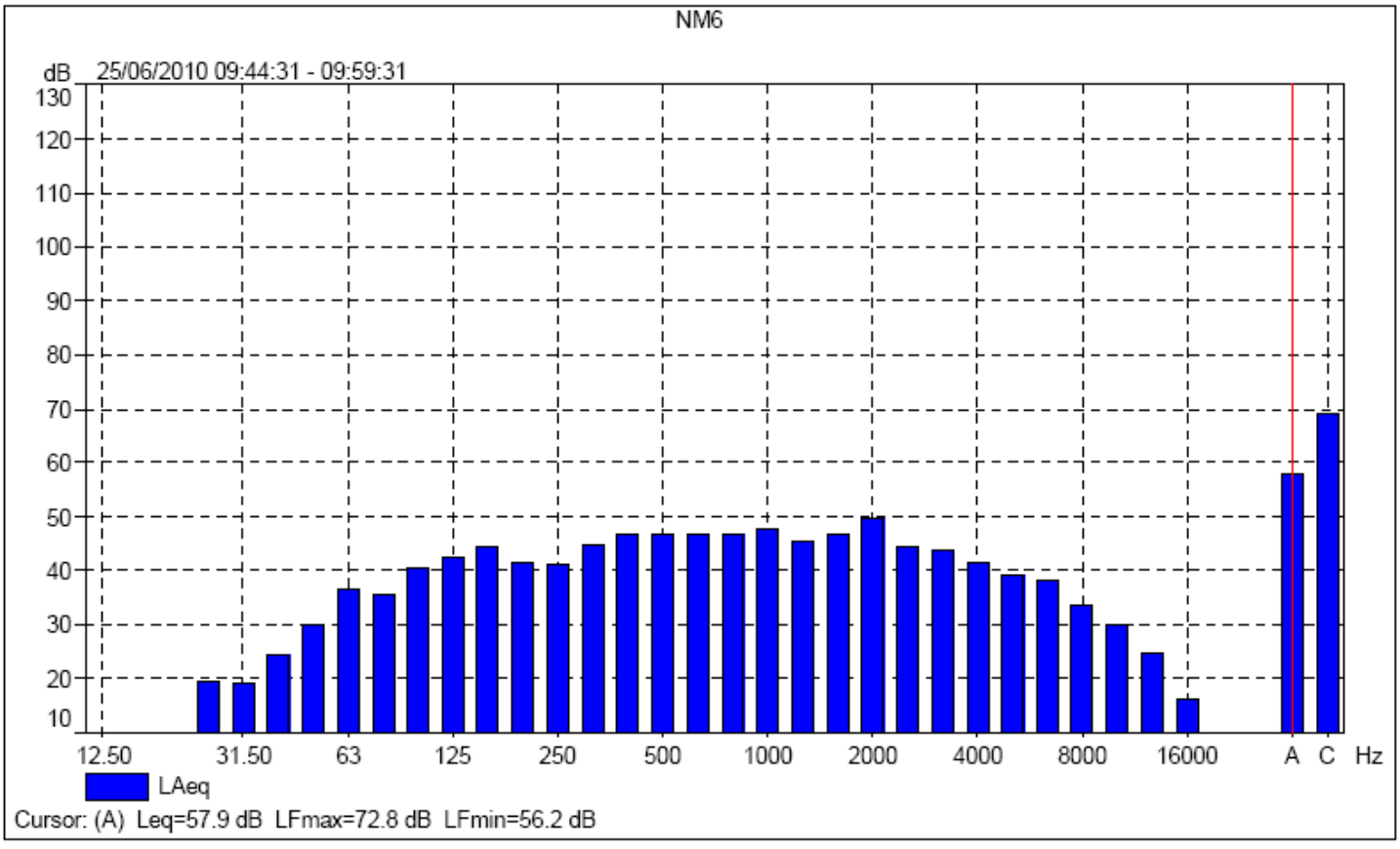
NM6

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		06/25/2010 09:44:31
End Time:		06/25/2010 09:59:31
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.26

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		06/25/2010 09:34:24
Calibration Type:		External reference
Sensitivity:		48.22 mV/Pa



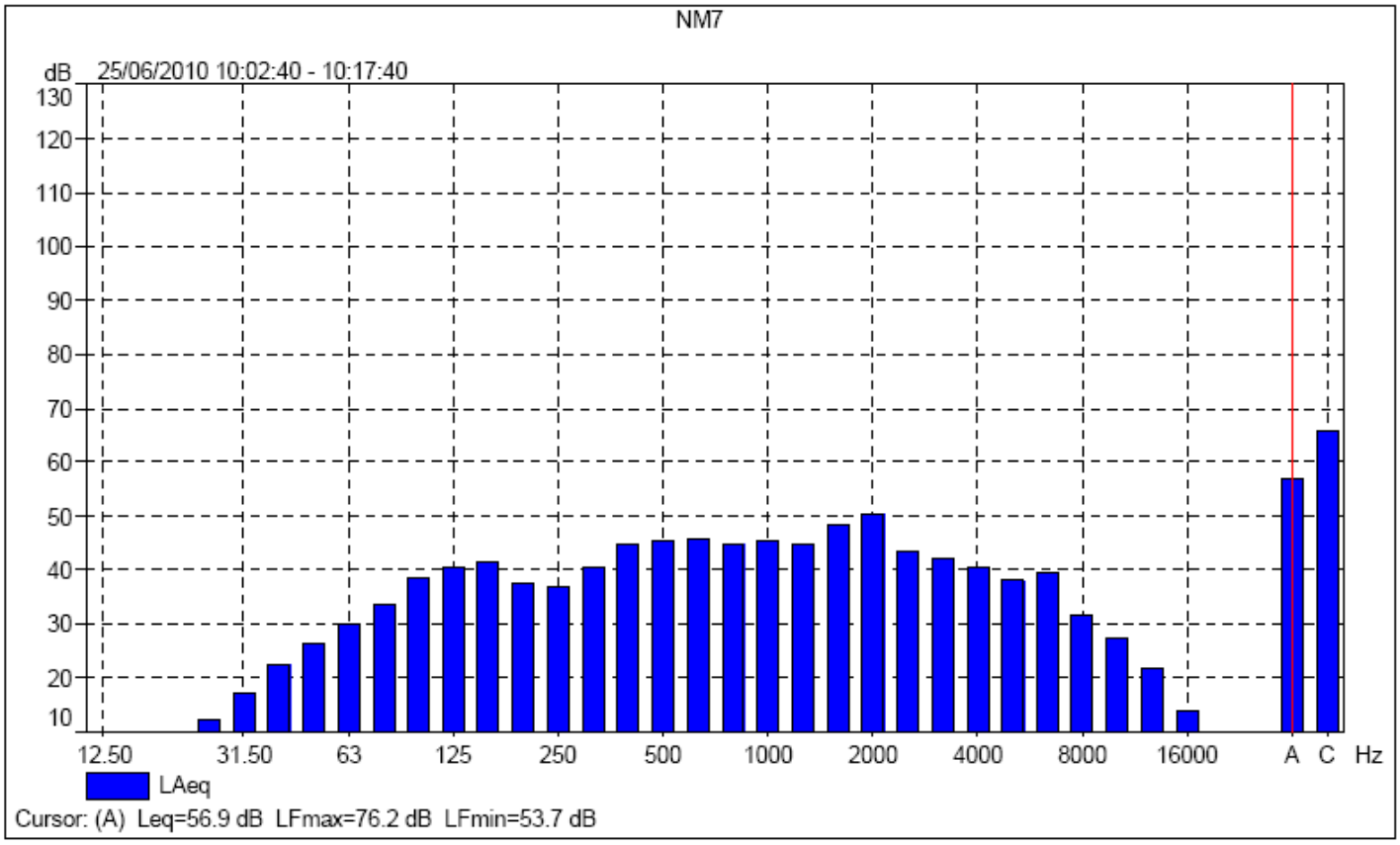
NM7

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		06/25/2010 10:02:40
End Time:		06/25/2010 10:17:40
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.26

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		06/25/2010 09:34:24
Calibration Type:		External reference
Sensitivity:		48.22 mV/Pa



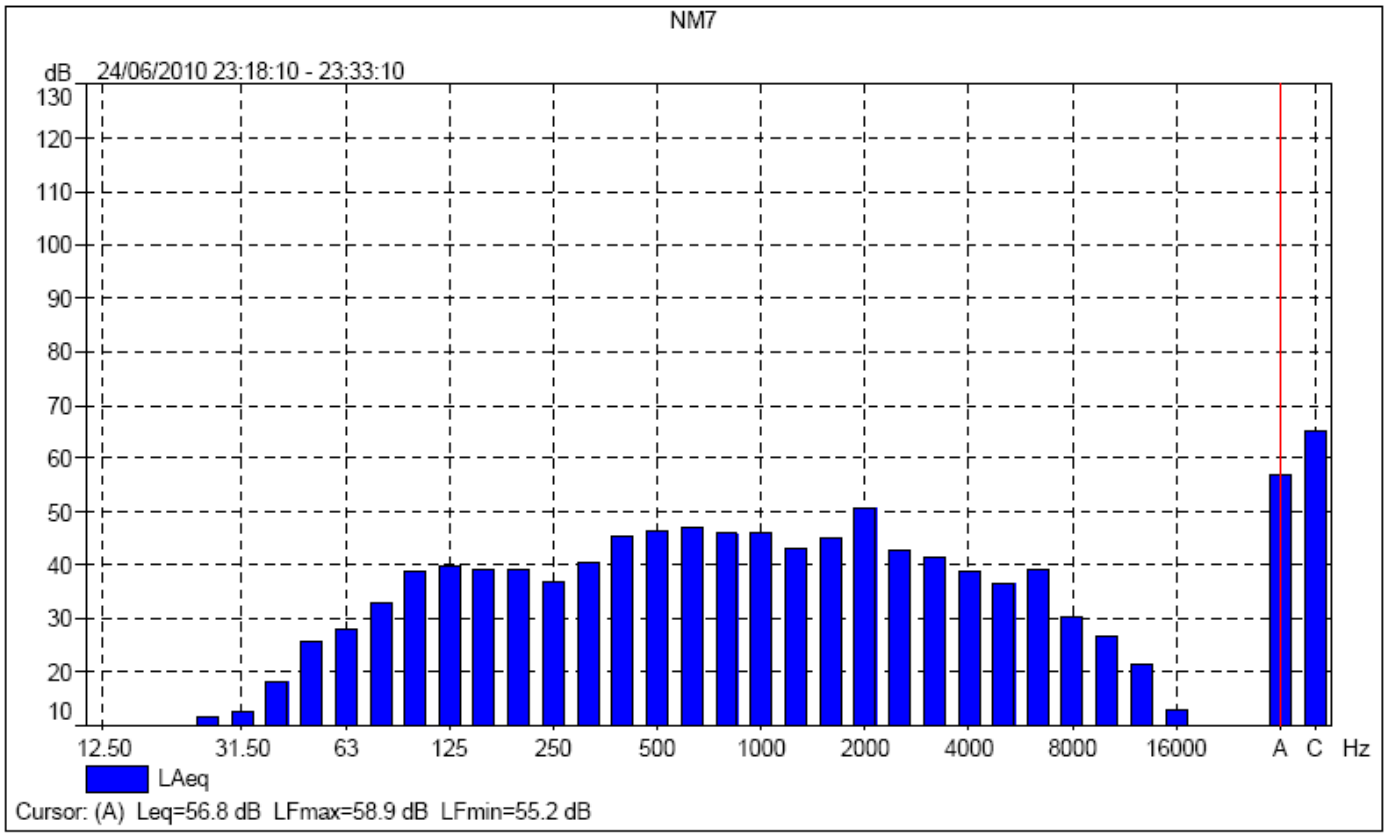
NM7

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		06/24/2010 23:18:10
End Time:		06/24/2010 23:33:10
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.29

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		06/24/2010 21:57:34
Calibration Type:		External reference
Sensitivity:		48.05 mV/Pa



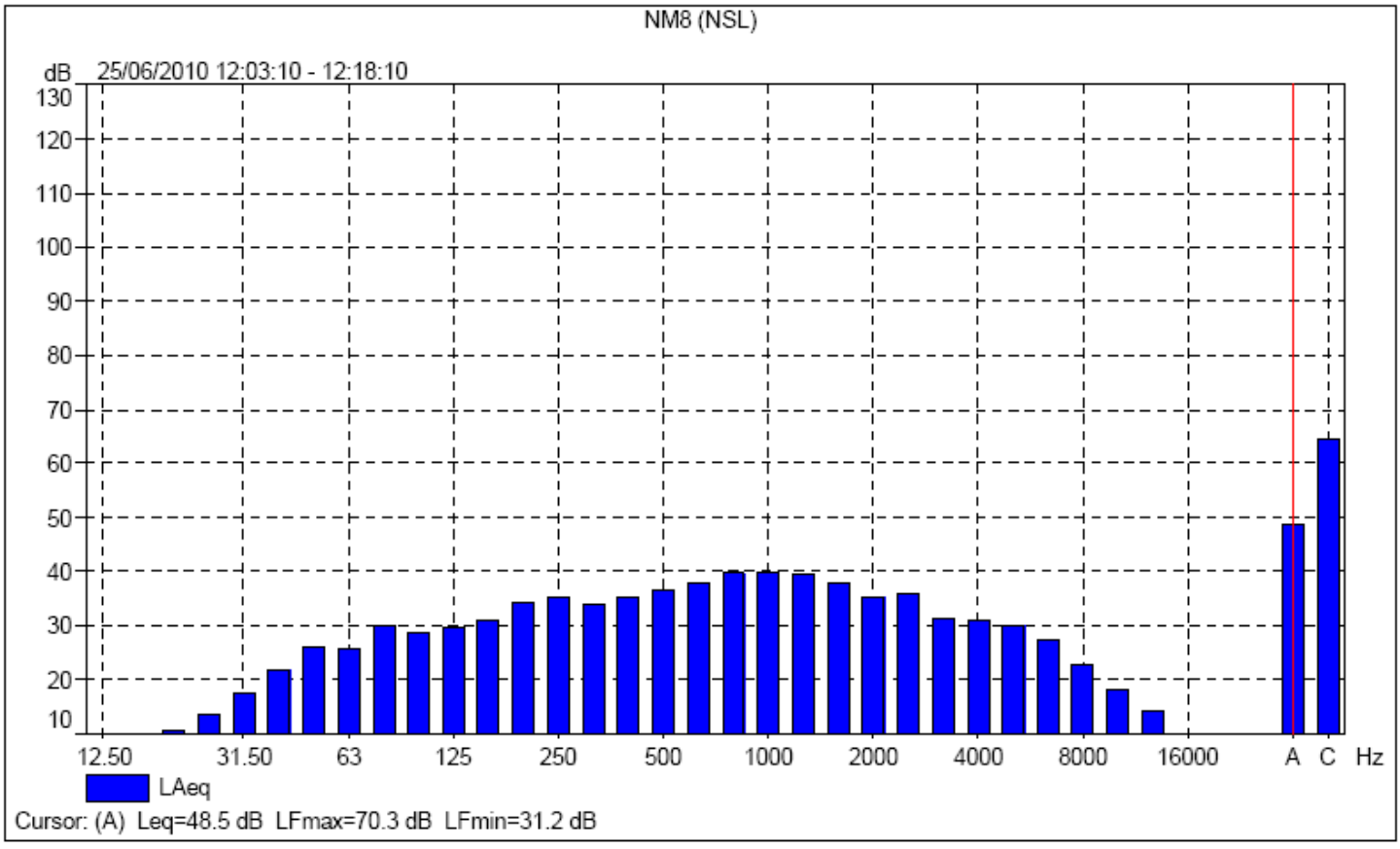
NM8 (NSL)

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		06/25/2010 12:03:10
End Time:		06/25/2010 12:18:10
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.26

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		06/25/2010 09:34:24
Calibration Type:		External reference
Sensitivity:		48.22 mV/Pa



NM8 (NSL)

Instrument:		2250
Application:		BZ7224 Version 1.4.1
Start Time:		06/24/2010 22:09:56
End Time:		06/24/2010 22:24:56
Elapsed Time:		00:15:00
Bandwidth:		1/3-octave
Max Input Level:		141.29

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	A

Instrument Serial Number:		2506486
Microphone Serial Number:		2523655
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Free-field

Calibration Time:		06/24/2010 21:57:34
Calibration Type:		External reference
Sensitivity:		48.05 mV/Pa