

Annual Environmental Report

January-December 2009

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

IPPC Licence Registration Number: PO 175-01

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1.0 INTRODUCTION

This is the tenth 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 its 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 group's activities by slaughtering and processing own pigs, thus maximising the group's 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 through 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.

1.1 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 through 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. Prior to the mixing sump there are composite samplers that take flow proportional samples of both influent streams. The Dawn Pork and Bacon influent comprises of all the wastewater from the slaughtering and processing facility, skip area and WWTP.

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.

1.1.1 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 11.00p.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 The Global Standard for food safety.

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 2009 are as follows:

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

These environmental aspects will be discussed later in this report.

1.2 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.



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.

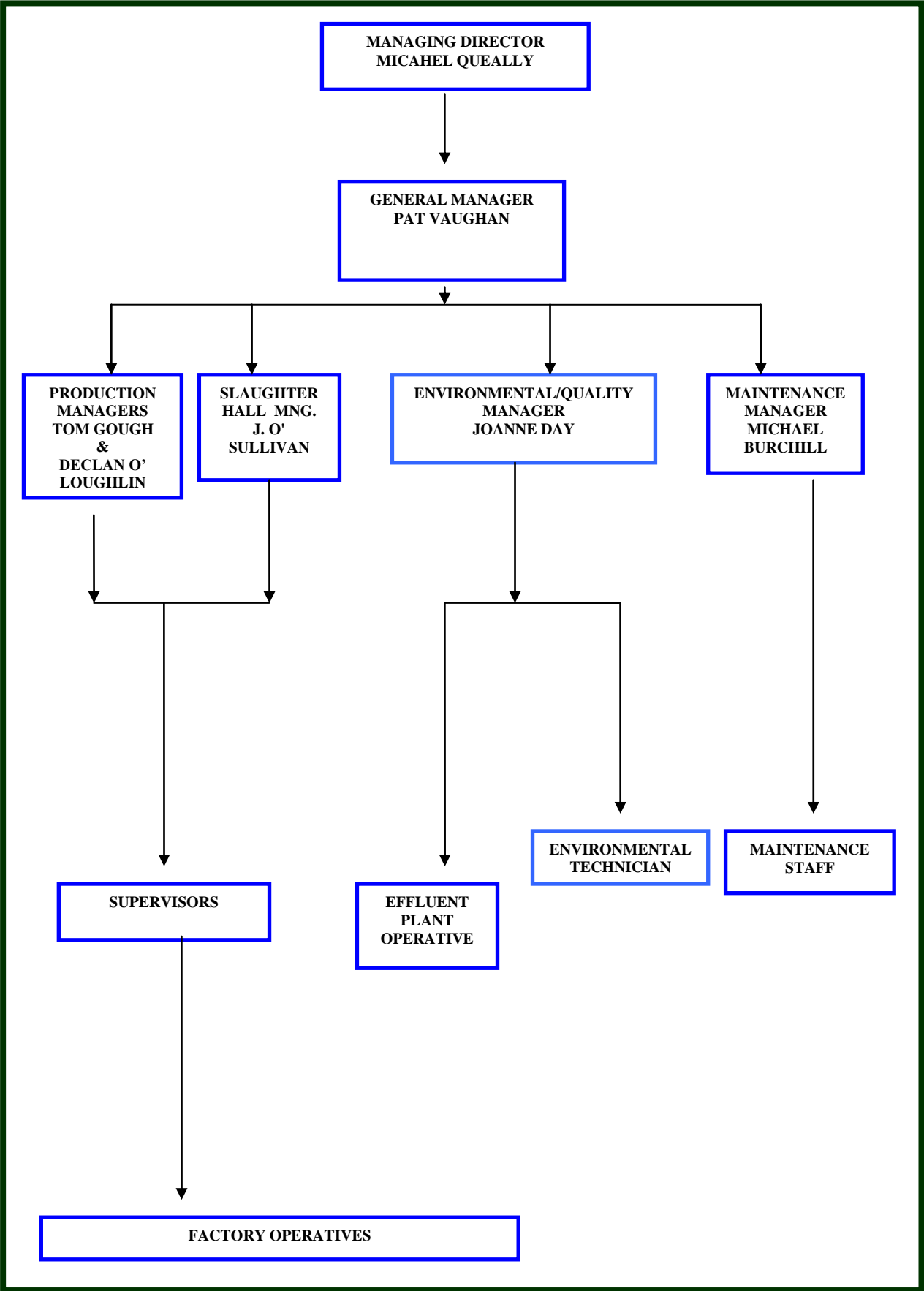
'Sound Environmental practices make for sound business practices'

Signed Pat Vaughan

Pat Vaughan
General Manager

Date 24/10/08

1.4 EMS Organisation Chart



2.0 SUMMARY INFORMATION – 2009

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 - 2009

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 2009 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
<u>Parameter</u>	<u>Emission limit value 2009</u>
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, dehairing 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 conducted at intervals throughout the year. In 2009, Dawn Pork and Bacon performed well in the proficiency testing.

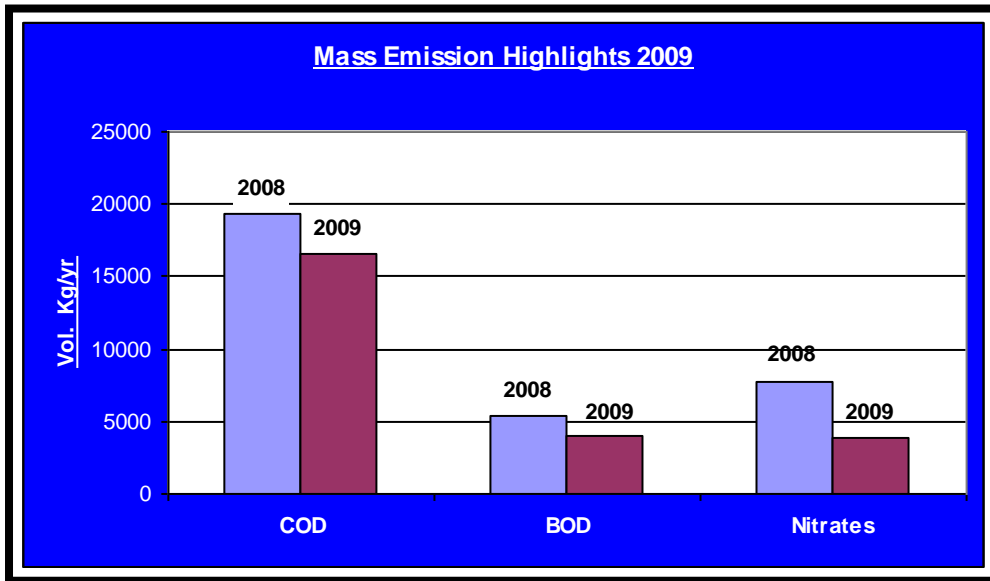
All internal lab procedures are reviewed and approved by the Environmental Manager. Chemical Oxygen Demand (COD), Suspended Solids, Ammonia and Nitrates are analysed daily in-house by a trained laboratory technician. Total Phosphate is analysed weekly in-house by a trained laboratory technician. Biochemical 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 2009

<u>Parameter</u>	<u>2009 Mass emission (Kg/year)</u>	<u>Licensed Mass emissions (Kg/year)</u>
Volume Discharged (m ³)	401,865	657,000
COD	16,605	65,700
Suspended solids	3,136	39,420
Nitrates	3,874	13,140
BOD	4,059	26,280
Total Phosphorus	357	1,314
Orthophosphate	125	657
Detergents	92	3,285
Oils, Fats and Grease	429	9,855
Ammonia	476	6,570

Table 2 shows 2009 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 the WWTP and enters the River Suir.

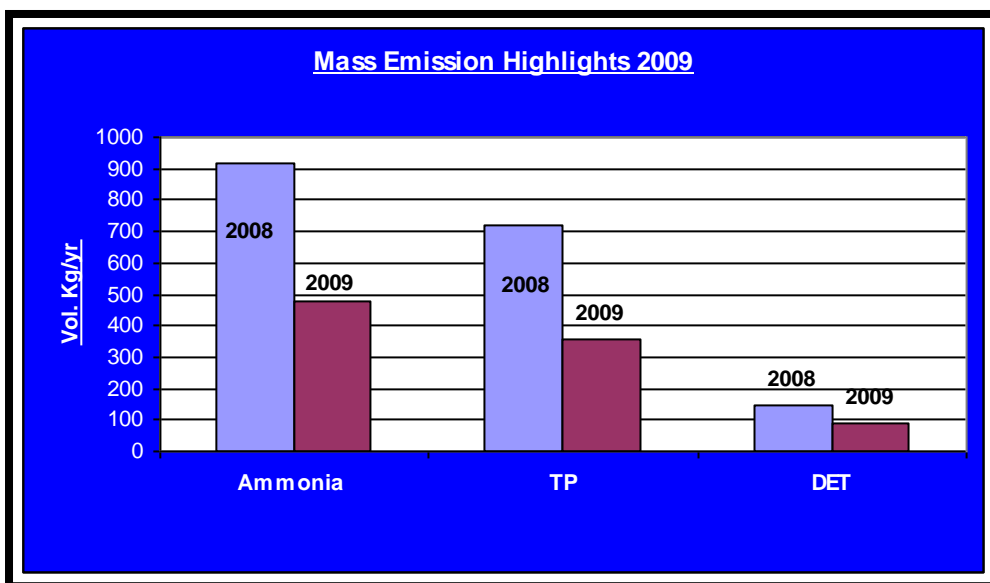
Chart 1 : Highlights of mass emissions to water 2009 BOD, COD, Nitrates



As seen from the charts 1 and 2 in 2009 parameters such as Ammonia, Total Phosphates, COD, BOD, DET and Nitrates decreased in mass emissions between 2008 and 2009. This can be attributed to less production in 2009 than 2008, also an increase in control measures and operating practices in the WWTP. In 2010, production is expected to increase over 2009, however Dawn Pork and Bacon aim to continually improve the quality of effluent discharged to the River Suir.

Quality control of monitoring data is implemented through standard solution analysis, daily review of results and proficiency testing.

Chart 2 : Highlights of mass emissions to water 2009 Ammonia, TP, DET



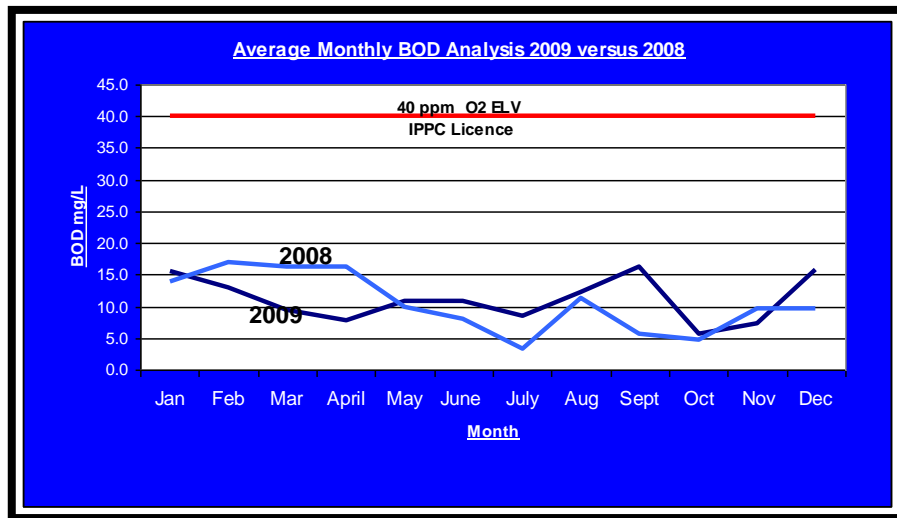
The following paragraphs outline some of the operational control measures in place to aid in the mass emission decrease from EW1:

- Daily monitoring of the F:M and sludge age.
- pH and temperature monitoring.
- Monitoring and control of RAS and MLSS
- Regular maintenance and calibration of lab and WWTP equipment
- Chemical dosing in the WWTP to decrease the phosphate concentration.
- Monitoring of DO levels in the Aeration basins
- Control of odours using a bio filtration unit and covered balance tanks.
- The on-site Dissolved Air Floatation unit (DAF), allows removal of most OFG before influent enters the WWTP.

The following graphs, detail the comparison between 2008 and 2009 monthly emissions data from EW1. COD, BOD, Suspended Solids, Total Nitrogen, Total Phosphate, Orthophosphate, OFG, pH, Temperature, and Detergents are analysed in the following graphs.

The monthly average figures for each parameter for 2008 and 2009 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. There were no non-compliances recorded during 2009 for the final effluent.

Graph 1 BOD in Final Effluent 2009 versus 2008

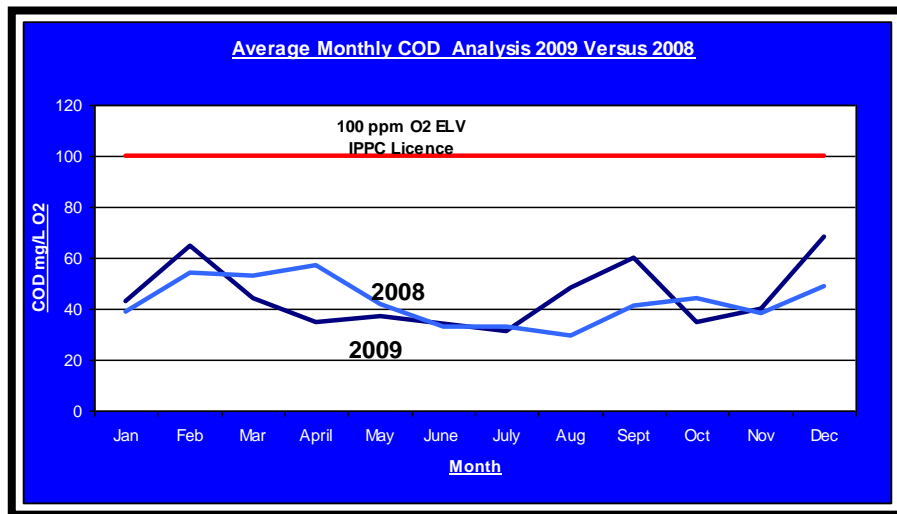


As seen from graph 1 and 2 , monthly BOD and COD concentrations in final effluent remained similar in 2009 when compared to 2008.. Both sets of data are well within the ELV set in IPPC Licence PO 175-01 Schedule 1(iii) Monitoring of Emissions to Water and represented in table 1 on page 5 of this report.

In the second half of 2009 production increased. The dioxin crisis happened in December 2008 and production only began to recover in October 2009. For the period in between these months Dawn Pork and Bacon operated to four days production per week.

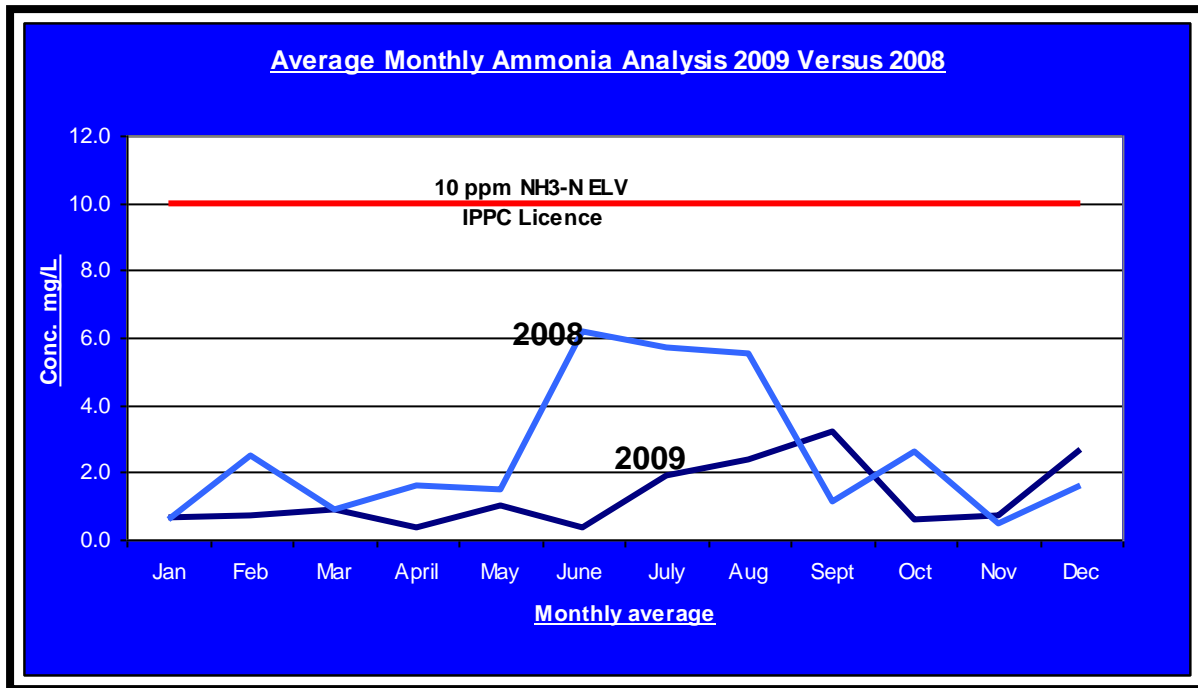
Consequently loading into the WWTP will decrease with decreased production and loading will increase with increased production.

Graph 2: COD in Final Effluent 2008 versus 2009



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 2008 versus 2009



Graph 3 shows the trend in ammonia concentration in final effluent in 2008 and 2009. It can be seen from graph 3 that ammonia levels remained within ELV at all times. There was a decrease in ammonia levels in 2009

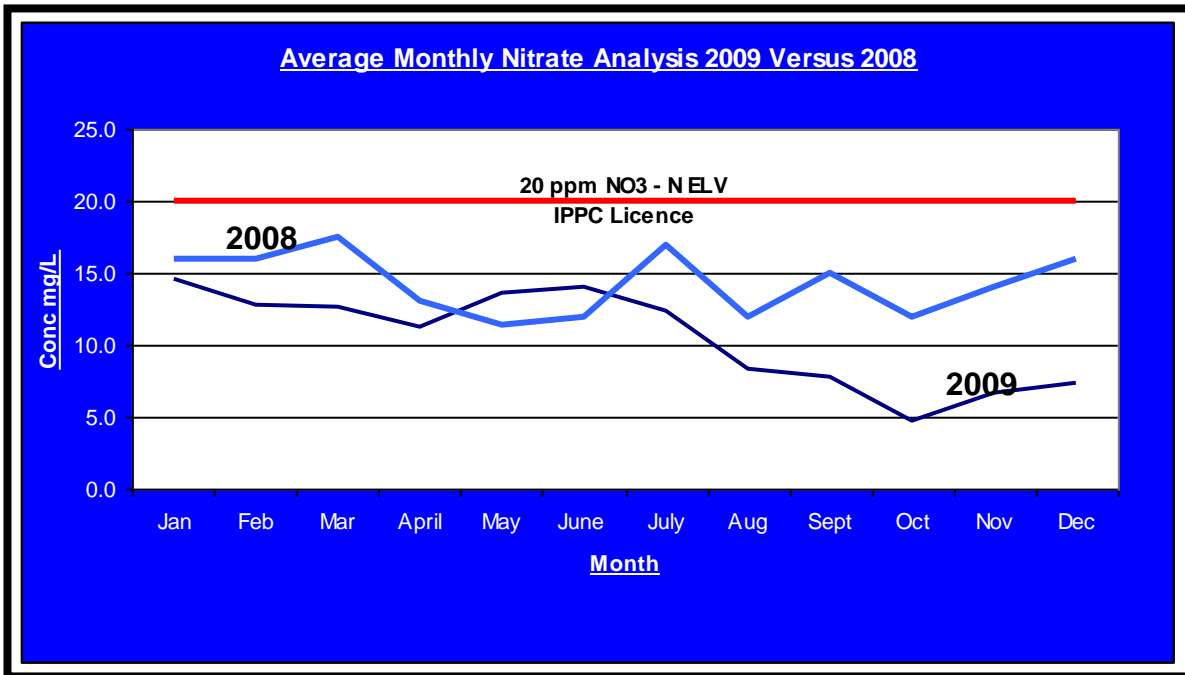
In general terms all effluent emission decrease in 2009 can be attributed to

1. Operational control
2. Decreased production.

Seasonal temperature changes will have an 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 an effect on the nitrification process.

Influent from Dawn Meats (Exports) Ltd. also increased in 2009. Dawn Meats (Exports) Ltd increased production from 3 days per week in 2008 to 4 days per week in 2009. A new deboning facility also opened in Dawn Meats in 2009.

Graph 4: Nitrate in Final Effluent 2008 versus 2009

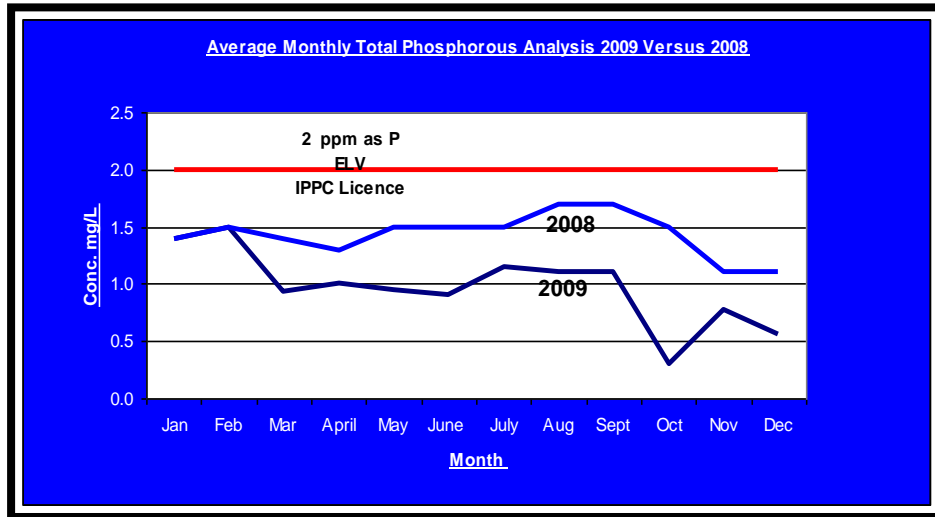


As seen from graph 4 above nitrates in 2009 decreased. Denitrification takes place in the Anoxic zone and it leads to the production of Nitrogen gas. For denitrification to occur nitrate and organic matter need to be present. This process occurs in the absence of oxygen so bacteria in the anoxic zone use nitrate (NO_3) as the oxygen source.

The decrease in final effluent nitrate in 2009 can be attributed to efficient operation of the Anoxic zone:

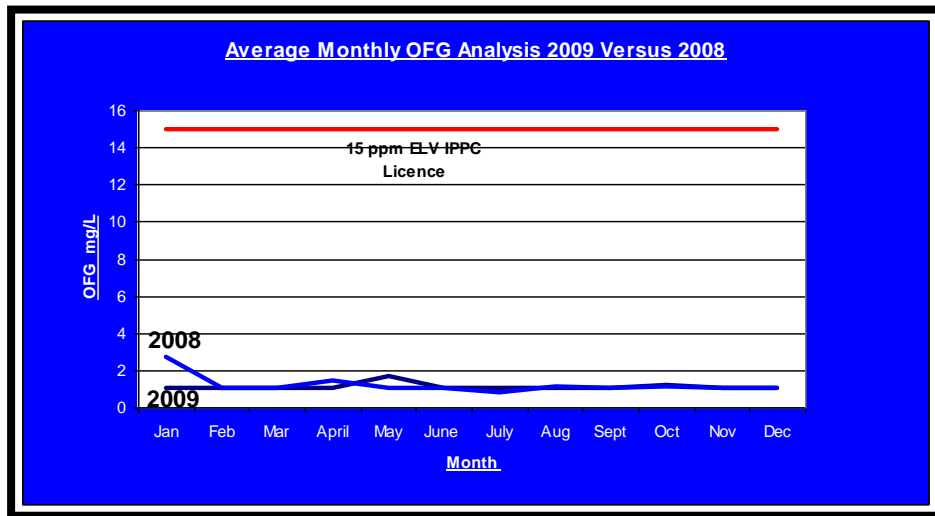
- pH control between 6.5-7.5, a pH meter is installed at the outlet from the anoxic zone.
- A rich source of BOD i.e. approx 2.9kg of BOD per kg of Nitrate removed, BOD is monitored weekly, using a composite sample.

Graph 5: Total Phosphate in Final Effluent 2009 versus 2008



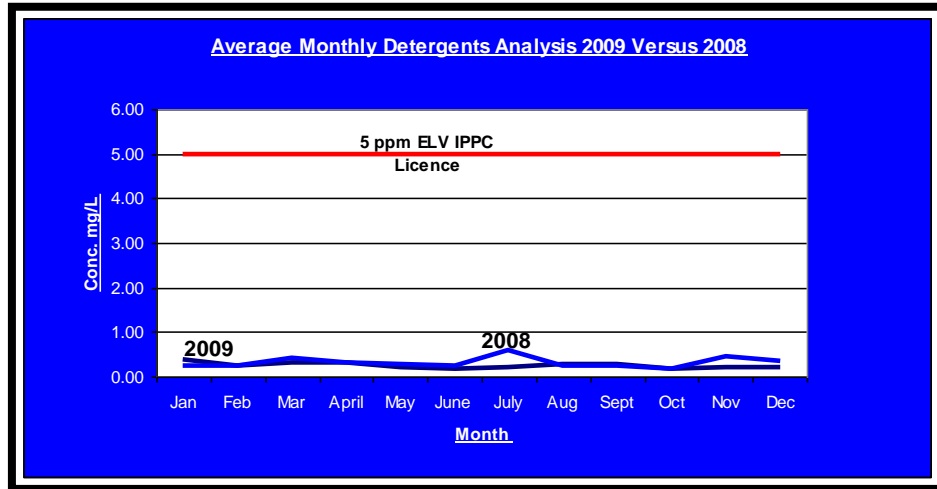
On analysis of graph 5, it can be deduced that the ELV for Total phosphate is 2mg/L P. The monthly average figure for 2008 was generally 1.5mg/L P (+/- 0.5 mg/L P). The monthly average for 2009 was 1.07 mg/L P. Therefore, TP on a average monthly basis has decrease by 29% in 2009. This is a direct result 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.

Graph 6: OFG in Final Effluent 2009 versus 2008



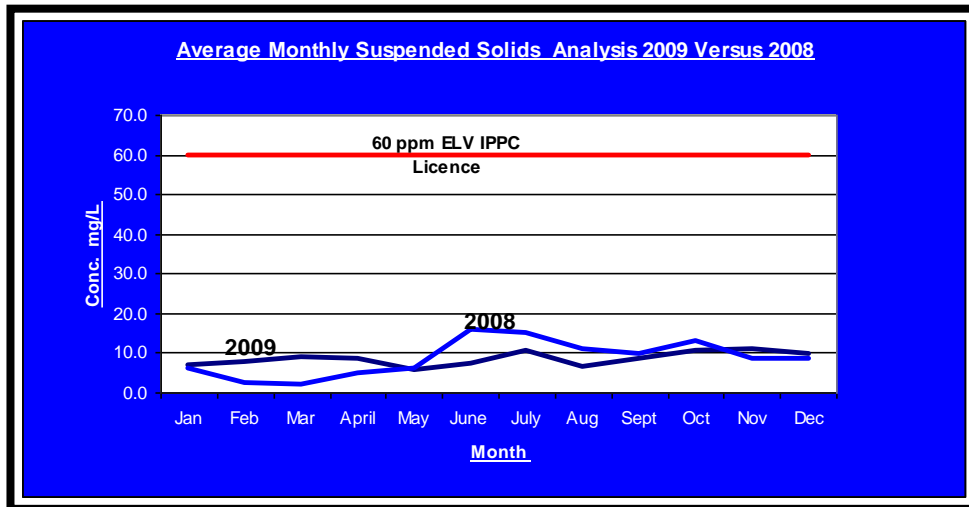
OFG in 2009 and 2008 are both within ELV. From graph 6, the ELV for OFG is 15 Mg/L and with an average of 1 mg/L throughout 2008 and 2009 the DAF unit at Dawn Pork and Bacon has proven very efficient.

Graph 7: Detergents in Final Effluent 2009 versus 2008



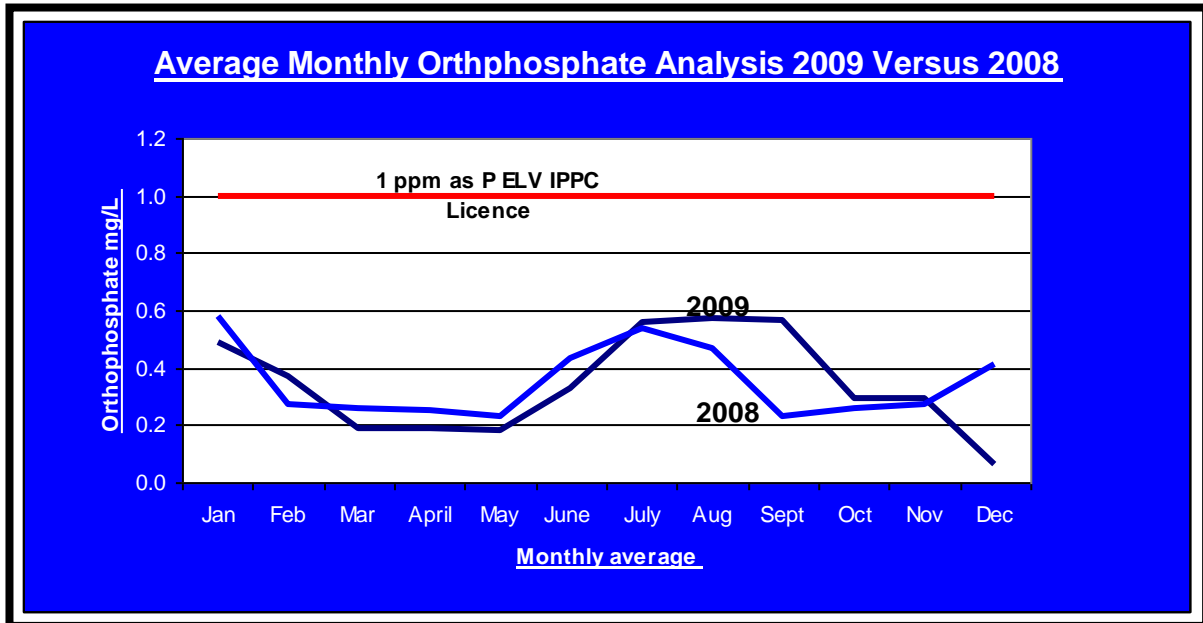
Upon review of graph 7, it can be said that detergents in EW1 effluent are of similar concentrations in both 2008 and 2009. With a monthly average concentration of <1 mg/L detergents are within the ELV of 5 mg/L.

Graph 8: Suspended Solids in Final Effluent 2009 versus 2008



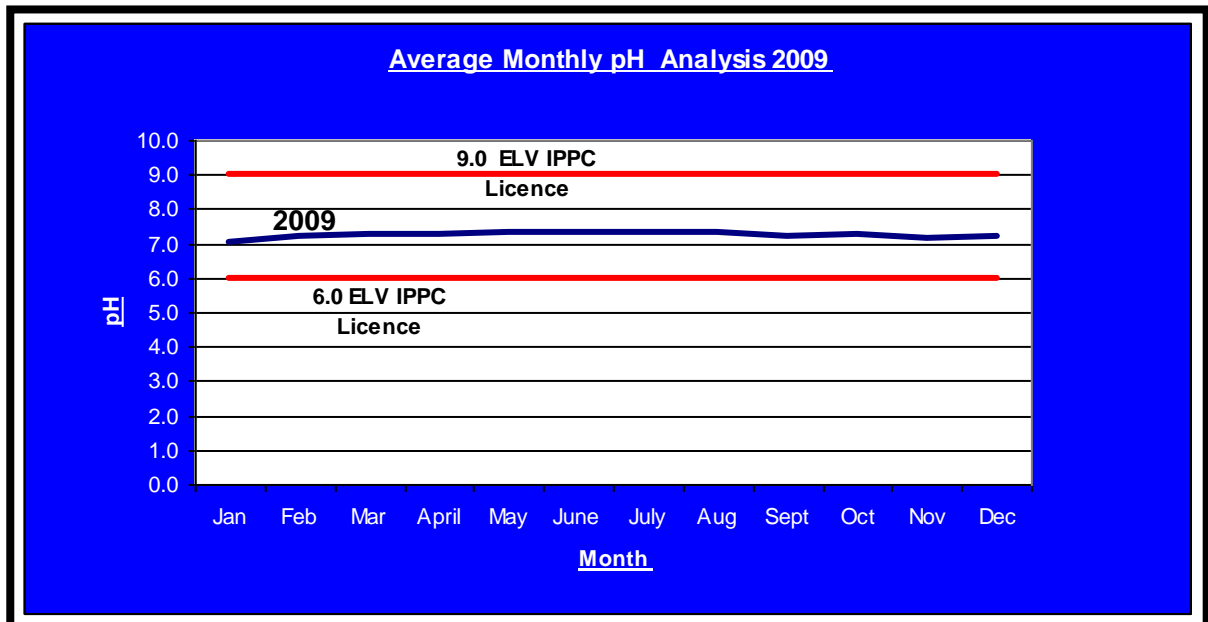
Graph 8 represents the suspended solids emitted to the River Suir from EW1 during 2008 and 2009.

Graph 9: Orthophosphate in Final Effluent 2009 versus 2008



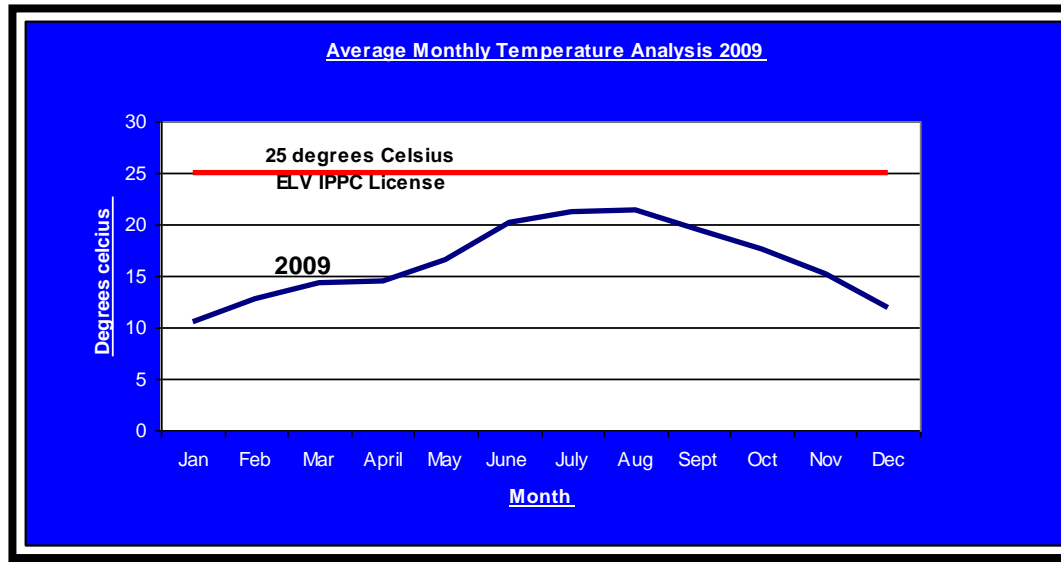
Phosphorus occurs in natural water and wastewaters almost solely as phosphate. Phosphates may enter water from agricultural run-off, biological and industrial wastes. A certain amount of phosphate is essential for most plants and animals, but too much phosphate in water can contribute to eutrophication,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

Graph 10: pH in Final Effluent 2009



Monitoring pH has a vital role to play in the maintenance of a good quality effluent. The pH must remain within ELV so the effluent does not disrupt the natural aquatic environment to which it is discharged.

Graph 11: Temperature in Final Effluent 2009



As with the pH of the final effluent the temperature is also important. The temperature must be maintained with ELV so the effluent does not interrupt the natural balance in the aquatic system to which it is being discharged

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 2009, 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
<u>Parameter</u>	<u>Monitoring frequency 2009</u>
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 2008 and 2009.

Table 4: 2008 and 2009 Average Surface Water Monitoring Results

Parameter	COD	Total ammonia	Suspended solids	Chloride	FOG	Visual inspection
2008	18.9	0.50	<2	40	<1	No Visible contamination
2009	13.0	0.38	8.5	32	<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 2009 a weekly odour audit was conducted to ensure that no environmental nuisance arose. There were no complaints from employees or the public during 2009 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 2009 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 2009.

2.2.4 Data for waste arising 2009

Table 5 outlines the quantity of waste generated during 2009. The data is reported in tonnes/annum.

Table 6: Quantity of waste arising in 2009

<u>EWC Code</u>	<u>Hazardous/ non hazardous</u>	<u>Description of waste</u>	<u>Quantity tonnes / annum</u>	<u>Method of disposal /recovery</u>	<u>Location of Disposal recovery</u>
0202	Non-Hazardous	Cat 2	1,426.00	Processing	Off – Site (Ireland)
20202	Non - Hazardous	Blood (Cat 3)	1,336.00	Processing	Off – Site (N.Ireland)
20202	Non- Hazardous	Offal (Cat 3)	2,372.00	Processing	Off – Site (Ireland)
20202	Non- Hazardous	Lungs and Liver (cat 3)	685.00	Pet food	Off – Site (Ireland)
200101	Non- Hazardous	Pallets	893 pallets	Recovery (R0)	Off – Site (Ireland)
200101	Non- Hazardous	Packaging and office waste	117.014	Recycling / landfill (R0) (D1)	Off – Site (Ireland and abroad)
020204	Non- Hazardous	Sludge from effluent plant	4,593.330	Land spreading (R10)	Off – Site (Ireland)
080318	Non-Hazardous	Electronic waste printer cartridges and cellular equipment	0.03	Recycling	Off –site (abroad)
130208	Hazardous	Oil	0.360	Recovery by distillation (R13)	Off – Site (Ireland)
160506	Hazardous	Lab waste	0.06	Incinerated (D10)	Off – Site (abroad)
180101	Hazardous	Blades and sharps	0.137	Incinerated (D10)	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 2009 Dawn Pork and Bacon final effluent samples were collected and analysed by the EPA. The samples were grab samples. All analysis results were within ELV and agreed with Dawn Pork and Bacon analysis of final effluent on same dates.

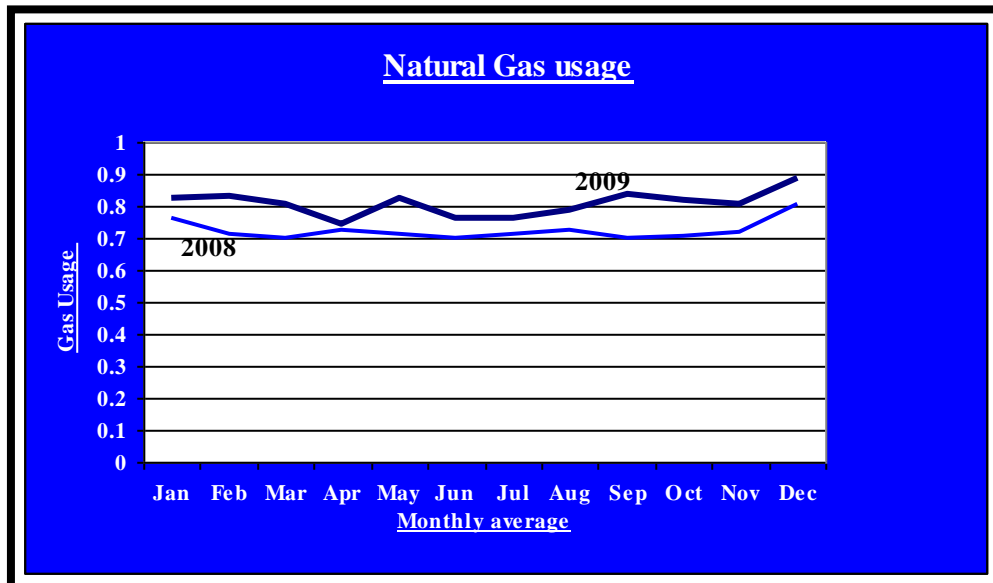
The site audit conducted by the EPA on the 23.06.09, highlighted no non-conformances. The auditor did make some recommendations, especially in relation to internal lab procedure. All of these recommendations have been applied by Dawn Pork and Bacon, details of which have been communicated to the EPA.

2.4 Energy and Water consumption

Table 7: Energy Consumption 2009

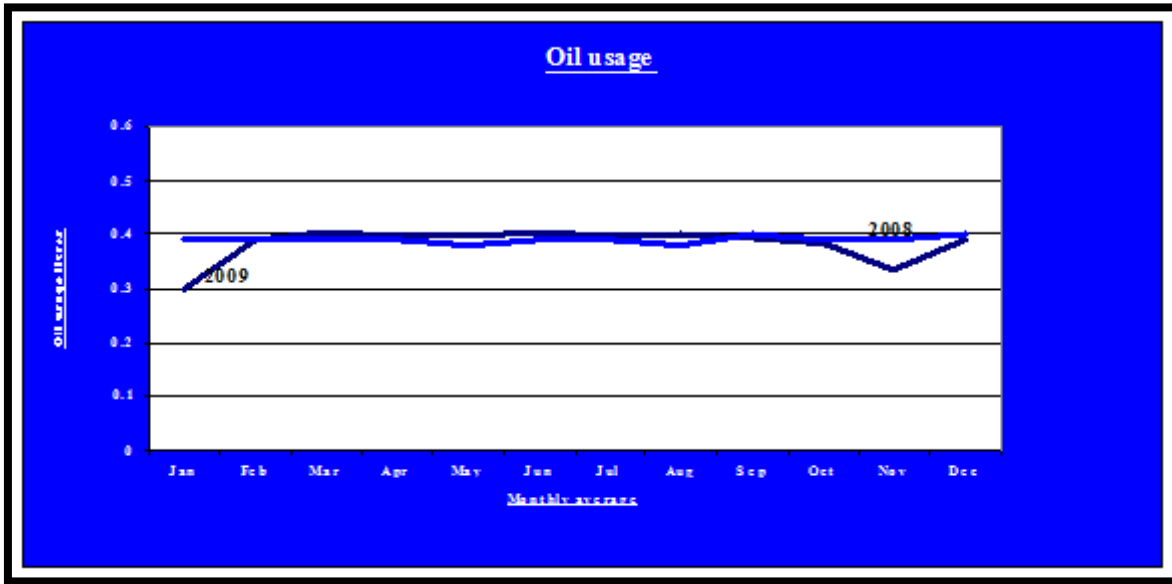
<u>Energy Type</u>	<u>Total used 2009</u>
Natural Gas	296,887 M ³
Electricity	5,119,980 KWh
Oil	142,493 Litres

Graph 12: Natural gas consumption 2009 and 2008 per pig processed in m³



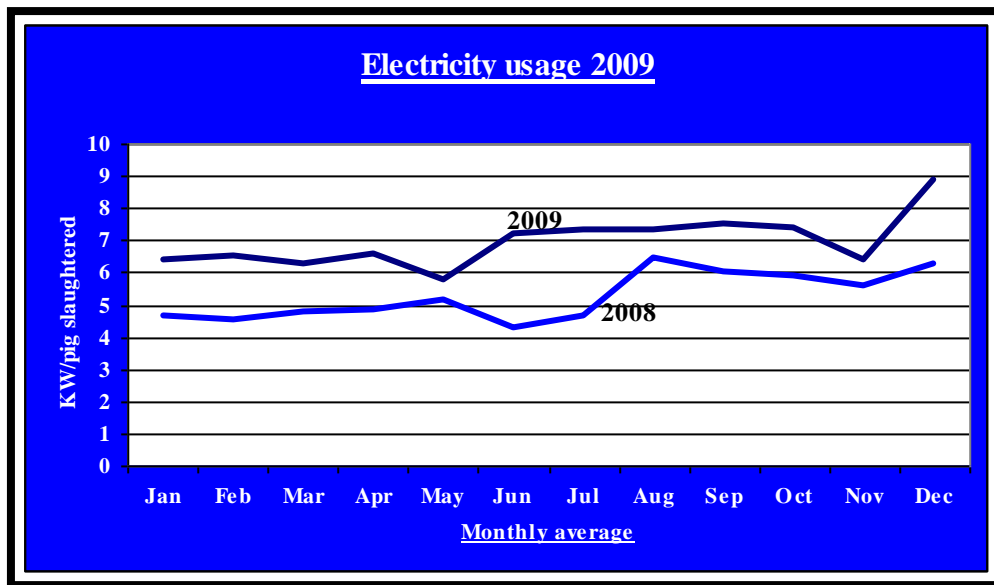
A slight increase in gas usage per pig slaughter was observed in 2009, however the overall usage of gas decreased over 2008.

Graph 13: Oil consumption 2009 and 2008 per pig processed



A slight increase in oil and electricity usage per pig slaughter was observed in 2009, however the overall usage of oil and electricity decreased over 2008.

Graph 14: Electricity consumption 2009 versus 2008



Graph 15: Water consumption 2009 versus 2008 per pig processed

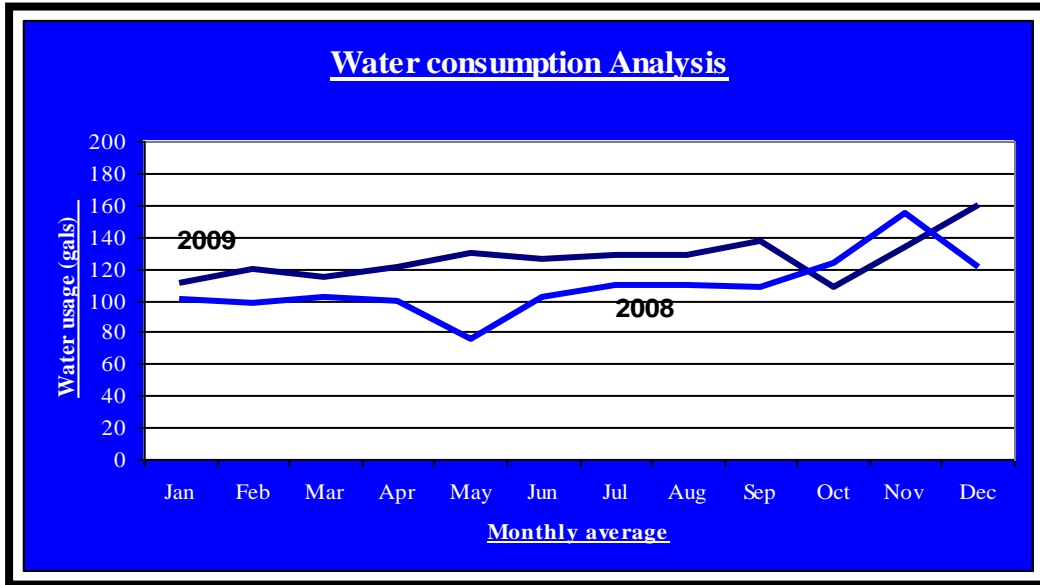


Table 8: Water Consumption 2009

<u>Water Source</u>	<u>Total 2009</u>
Water	46,630,380 Gals

The well water used to supply the factory is pumped at a rate of up to 800m³/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 2009.

Chart 3 : Total Water Usage

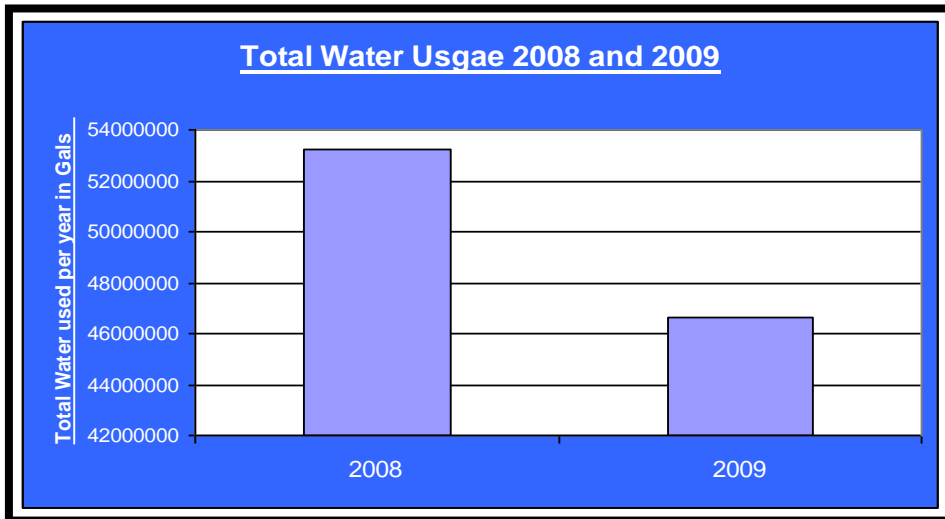


Chart 4 : Total Oil Usage

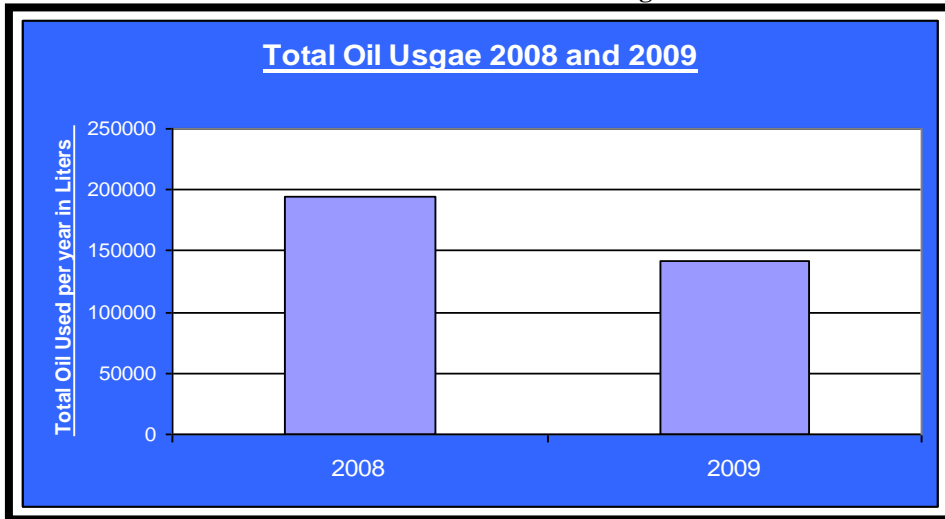
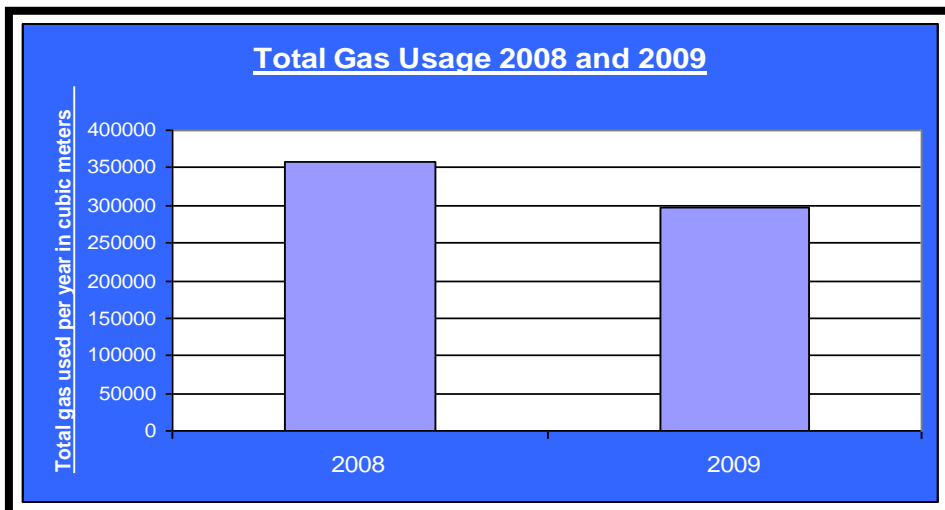


Chart 5 : Total Gas Usage



As seen from charts 4-6 above, Energy usage overall in 2009 has decreased, mainly due to decreased production. It is hoped that in 2010, the new energy management system installed will significantly increase energy efficiency see EMP 10

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 2009 are as follows:

- Effluent discharge
- Energy consumption
- Waste Management

Therefore these aspects have been managed in the Dawn Pork and Bacon EMP and schedule of objectives and targets for 2009.

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

- Boiler efficiency
- Every two years to conduct an Environmental noise survey.
- 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 2009 also.

As part of continual environmental improvement at Dawn Pork and Bacon, environmental training for employees and contractors is also managed in the 2009 EMP and schedule of objectives and targets.

The following pages detail the objectives and targets 2009, the EMP 2009 and the proposed objectives and targets and EMP for 2010.

Dawn Pork and Bacon
Environmental Objectives and Targets
2009 and 2010

DAWN PORK AND BACON ENVIRONMENTAL OBJECTIVES AND TARGETS 2009



Issued by: *AM Danaher*
Anne-Marie Danaher

DATE: 21.12.09

Approved by Joanne Day
REV: 01
REF: DERC 17 *Joanne Day*

DATE: 21.12.09

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	Dec 09	Complete	AMD	DERC 45
	EMP 02	Waste water effluent inspection	Dec 09	Complete	AMD	Records
	EMP 03	Complete groundwater analysis	Mar -09	Complete	AMD/Martina	Report
	EMP 04	Equipment calibration	Dec 09	Complete	AMD/J Day	Record
	EMP 05	Bund Integrity testing	May 09	Complete	AMD/Charlie Coakley	Report
Energy conservation		Reduce energy usage by 5% in 2009 over 2008 figures per 1000 pigs				
	EMP 10	Install occupancy detectors	On-going	On-going	Supervisors AMD/MB	Visual
	EMP 12	Insulate heat exchangers	May- 09	Complete	Supervisors AMD/MB	Records
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 09	Review of waste contractors	Mar 09	Complete	AMD/Joanne Day	Documented questionnaire/document change note
	EMP 06	Waste sludge analysis	June 09/Dec 09	Complete	AMD/Joanne Day/Ray Hayes	Report

DAWN PORK AND BACON ENVIRONMENTAL OBJECTIVES AND TARGETS 2009



Issued by: *A. Danaher*
 Anne-Marie Danaher

DATE: 21.12.09

Approved by *Joanne Day*
 REV: 01
 REF: DERC 17

DATE: 21.12.09

OBJECTIVE	EMP	Target	Completion date	Status	Responsibility	Indicator
Odour Management		Implement control measures for odour management				
	EMP 07	Daily odour audit	Dec 09	Complete	AMD/J. Day	Daily 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 9	Review of waste contractors includes the transport they use	Mar 09	Complete	AMD/Joanne Day	Documented questionnaire/ document change note
	EMP11	Haulage company transport review	June 09	Complete	AMD/J. Day	Documented report
	EMP 08	Boiler efficiency testing	June 09	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 13	Train employees and contractors on procedures	June 09	Complete	AMD/Joanne Day	DERC 31 environment department training matrix.

DAWN PORK AND BACON ENVIRONMENTAL OBJECTIVES AND TARGETS 2010



Issued by: Anne-Marie Danaher

DATE: 22.01.10

Approved by Joanne Day

DATE: 22.01.10

REV: 03

REF: DERC 17

Joanne Day

OBJECTIVE	EMP	Target	Completion date	Status	Responsibility	Indicator
Pollution Prevention		Comply with condition 6.2, 9.2.1, 9.1.4, 9.3. schedule 1(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	Mar -10	pending	AMD/Sarah	Report
	EMP 04	Equipment calibration	On-going	On-going	AMD/J Day	Record
	EMP 05	Noise Monitoring Survey	June 10	Pending	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 chiiil temperature management	July 2010	On-going	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 09	Review of waste contractors	May 10	Pending	AMD/Joanne Day	Documented questionnaire/ document change note
	EMP 06	Waste sludge analysis	June 10/Dec 10	Pending	AMD/Joanne Day/Ray Hayes	Report

DAWN PORK AND BACON ENVIRONMENTAL OBJECTIVES AND TARGETS 2010



Issued by: Anne-Marie Danaher

DATE: 22.01.10

Approved by Joanne Day

DATE: 22.01.10

REV: 02
REF: DERC 17

Joanne Day

PAGE 2 OF 2

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	Daily 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 9	Review of waste contractors	July 2010	On-going	AMD/Joanne Day	Documented questionnaire/document change note
	EMP11	Financial Investment	Feb 2010	Pending	AMD/J. Day	Documented report
	EMP 08	Boiler efficiency testing	Sept 10	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 12	Train employees and contractors on procedures	DEC 10	pending	AMD/Joanne Day	DERC 31 environment department training matrix.

Dawn Pork and Bacon

EMP

2010

ISSUED BY: Ange-Marie Dunaher
APPROVED BY: Joanne Day

DATE: 03.02.10
DATE: 03.02.10

REF: EMP 01
REV: 03
PAGE 1 OF 1



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 or 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 2010

ISSUED BY: DATE:
Anne-Marie Danaher 03.02.10
AM Danaher

APPROVED BY: DATE:
Joanne Day 03.02.10
Joanne Day

REF: EMP 02

REV: 03

PAGE: 1 OF 4



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

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 DEFINITIONS

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.

ISSUED BY: DATE:
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APPROVED BY: DATE:
Joanne Day 03.02.10
Joanne Day

REF: EMP 02

REV: 03

PAGE: 2 OF 4



DAWN PORK AND BACON

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 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.

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 advised

5.2 Sample analysis

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

<u>Frequency</u>	<u>Parameter</u>
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

ISSUED BY: DATE:
Anne-Marie Danaher 03.02.10
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APPROVED BY: DATE:
Joanne Day 03.02.10
Joanne Day

REF: EMP 02
REV: 03
PAGE: 3 OF 4



DAWN PORK AND BACON

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

- 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 The procedures used by external laboratories will be reviewed and kept on file at the Dawn Pork and Bacon site.
- 5.2.4 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 Manger 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 Dawn Pork and Bacon Environmental Management Programme, project number 22 and Dawn Pork and Bacon Objectives and targets Objective number 17
- 6.2 ISO 14001:2004 condition 4.4.6 Operational control
- 6.3 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.
- 6.4 IPPC licence PO 175-01 condition 4 notification
- 6.5 Dawn Pork and Bacon site Environmental Procedure DESP 04 Notification of Environmental Incidents.
- 6.6 Local Government (Water Pollution) Act, 1977 and Local Government (Water Pollution) (Amendment) Act, 1990

ISSUED BY: Anne-Marie Danaher
AMDanaher

DATE: 03.02.10

APPROVED BY: Joanne Day
Joanne Day

DATE: 03.02.10

REF: EMP 02

REV: 03

PAGE: 4 OF 4



DAWN PORK AND BACON

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

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

7.0 RECORDS

- 7.1 DERC 05 Daily effluent plant report
- 7.2 DERC33 Environmental non-compliance/corrective action
- 7.3 DERC 29 Surface water inspection monitoring
- 7.4 DERC 45 Surface water discharge
- 7.5 DERC 57 Dawn Pork and Bacon final effluent emission limit
- 7.6 DERC 61 Surface water discharge frequency monitoring
- 7.7 DERC69 Frequency matrix for environmental analysis
- 7.8 DRC 84 Environmental Lab Training Matrix.

8.0 TIMEFRAME

- 8.1 Ongoing 2010

ISSUED BY: DATE:
Anne-Marie Danaher 03.02.10
A Danaher

APPROVED BY: DATE:
Joanne Day 03.02.10
Joanne Day

REF: EMP 03
REV 03
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.

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

1.3 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 March 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 Operational Control:

6.2 External Lab report

7.0 TIMEFRAME

7.1 March 2010

ISSUED BY: DATE:
Anne-Marie Danaher 03.02.10
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APPROVED BY: DATE:
Joanne Day 03.02.10
Joanne Day

REF: EMP 04

REV 02

PAGE 1 of 1



DAWN PORK AND BACON

SUBJECT: EMP 04 CALIBRATION OF ON-SITE EQUIPMENT (Project Method)

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 2010

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 2010

ISSUED BY: Anne-Marie Danaher
AM Danaher

DATE: 20.01.10

REF: EMP 05

REV: 04

APPROVED BY: Joanne Day
Joanne Day

DATE: 20.01.10

PAGE: 1 of 2



DAWN PORK AND BACON

SUBJECT: EMP 05 Noise Monitoring Survey (project method)

1.0 PURPOSE

The purpose of this project is;

- 1.1 To ensure that a review of noise sources is carried out in accordance with Condition 8.3 of IPPC Licence P0175-01.
- 1.2 To achieve Dawn Pork and Bacon Environmental Objective and Target on noise reduction for 2010.

2.0 SCOPE

2.1 This procedure applies to the listed existing noise sources and in the future any new noise sources identified as a result of complaints, installations of new equipment etc.

- 2.1.1 N1 Aerator holding tank
- 2.1.2 N2 Aerator No 1.
- 2.1.3 N3 Aerator No 2.
- 2.1.4 N4 Standby Generator
- 2.1.5 N5 Plant Room Louvre
- 2.1.6 N6 Cooling tower

2.2 Noise is measured at the following locations;

- 2.2.1 Southern Boundary
- 2.2.2 South Eastern Boundary
- 2.2.3 Northern Boundary

2.3 Noise sensitive locations identified through complaints.

3.0 RESPONSIBILITIES

- 3.1 Environmental Manager must arrange for external consultant to come on-site and conduct noise survey.
- 3.2 The Environmental Technician must be available to assist the external consultant on day of survey, if required.
- 3.3 All correspondents with external consultant must be discussed with the Environmental Manager.
- 3.4 A copy of the survey is retained by the Environmental Manager.

ISSUED BY: Anne-Marie Danaher
ADanaher

DATE: 20.01.10

APPROVED BY: Joanne Day
Joanne Day

DATE: 20.01.10

REF: EMP 05

REV: 04

PAGE: 2 of 2



DAWN PORK AND BACON

SUBJECT: EMP 05 Noise Monitoring Survey (project method)

4.0 Method to complete project and achieve environmental objective

- 4.1 A programme for the noise survey is prepared and submitted to the EPA for approval.
- 4.2 The survey of noise sources and ambient noise monitoring is completed by an external consultant.
- 4.3 The following limits apply to at the site boundaries; Daytime: 55dB(A) and night-time: 45dB (A).
- 4.4 Non-conformances to site boundary limits are identified in the survey, taking into account background noise levels.
- 4.5 Non-conformances are recorded on a corrective action record form.
- 4.6 If non-conformances are attributed to an operation or piece of equipment on site, corrective action is taken. Investigations are conducted into the cause of the problem and measures are taken to prevent re-occurrence.

5.0 REFERENCES

- 5.1 IPPC Licence PO 175-01 condition 8.3
- 5.2 ISO 14001 Operation control condition 4.4.6
- 5.3 Dawn Pork and Bacon Objectives and Targets 2010 DERC 17
- 5.4 Dawn Pork and Bacon Register of Environmental Aspects and Impacts DERC 04

6.0 RECORDS

- 6.1 DERC 33 Non-conformance and corrective action form.
- 6.2 DERC 01 Complaints/near misses/Incidents

7.0 Timeframe

- 7.1 To be complete by June 2010

ISSUED BY: DATE:
Anne-Marie Danaher 03.02.10
AMDanaher

APPROVED By: DATE:
Joanne Day 03.02.10
Joanne Day

REF: EMP 06

REV: 04

PAGE 1 OF 1



DAWN PORK AND BACON

SUBJECT: EMP 06 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 RESPONSIBILITY

- 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 external Laboratory must be INAB accredited if possible.
- 5.3 The results of the analysis are reported to the EPA in the AER.
- 5.4 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 2010

ISSUED BY: DATE:
Anne-Marie Danaher 19.03.10
AM Danaher
APPROVED BY: DATE:
Joanne Day 19.03.10
Joanne Day

REF: EMP 07

REV: 03

PAGE: 1 OF 2



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

DAWN PORK AND BACON

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 for 2010.

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 is 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

ISSUED BY: DATE:
Anne-Marie Danaher 19.03.10
amdanaher
APPROVED BY: DATE:
Joanne Day 19.03.10
Joanne Day

REF: EMP 07

REV: 03

PAGE: 2 OF 2



DAWN PORK AND BACON

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

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 2010

ISSUED BY: Anne-Marie Danaher
adannaher

DATE: 19.03.10

APPROVED BY: Joanne Day
Joanne Day

DATE: 19.03.10

REF: EMP 08

REV 03

PAGE 1 of 1



DAWN PORK AND BACON

SUBJECT: EMP 08 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 2010

ISSUED BY: DATE:
Anne-Marie Danaher 19.03.10
AM Danaher

APPROVED BY: DATE:
Joanne Day 19.03.10
Joanne Day

REF: EMP 09
REV 01
PAGE 1 of 1



SUBJECT: EMP 09 Waste contractor questionnaire review (Project Method) DAWN PORK AND BACON

1.0 PURPOSE:

- 1.1 To achieve Dawn Pork and Bacon Environmental objectives and targets for 2010..
- 1.2 To inform waste contractors of Dawn Pork and Bacon's commitment to environmental protection
- 1.3 To identify the waste contractors that are not environmentally conscious in their daily operations

2.0 SCOPE

- 2.1 This procedure applies to all waste contractor services utilised by Dawn Pork and Bacon, including Animal by-product waste contractors

3.0 RESPONSIBILITY

3.1 Environmental Technician

- 3.1.1 Maintains a record of EPA and DAFF approved waste contractors
- 3.1.2 Review waste contractor practices.

3.2 Environmental Manager

- 3.2.1 Maintains communications with waste contractors should any issues arise. .

4.0 Project Method

- 4.1 Review the waste contractor questionnaire.
- 4.2 Send the waste contractor questionnaire to all waste contractors used by Dawn Pork and Bacon.
- 4.3 Review the results/comments of the completed waste contractor questionnaire.
- 4.4 Communicate result/comments to Environmental Manager
- 4.5 Revise the Approved suppliers database as necessary.

5.0 REFERENCES

- 5.1 IPPC Licence P0175-01 Schedule 2 and condition 7
- 5.2 DERC 17 Dawn Pork and Bacon Environmental Objectives and Targets
- 5.3 DERC 04 Dawn Pork and Bacon Register of Environmental aspects
- 5.4 ISO 14001:2004 Condition 4.4.6 Operational Control

6.0 RECORDS

- 6.1 On-site waste records

7.0 TIMEFRAME

- 7.1 July 2010

ISSUED BY: ANNE-MARIE DANAHER

ADanaher

DATE: 05.01.10

APPROVED BY: JOANNE DAY

Joanne Day

DATE: 05.01.10

REF: EMP 10

REV : 00

PAGE 1 of 1



DAWN PORK AND BACON

SUBJECT: EMP 10 Energy Management – Installation of SCADA system for chill temperature

1.0 PURPOSE

- .1 To promote and continually improve the energy efficiency 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 chill units.

3.0 RESPONSIBILITY

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

4.0 PROJECT SUMMARY

- 4.1 A new SCADA (Supervisory Control and Data Acquisition) System will be installed in 2010.
- 4.2 The system will collect data from a remote location and transmits it to a central location. Within Dawn Pork and Bacon this will allow the temperature of chill units and fan speeds to be monitored and adjusted to achieve maximum energy efficiency.
- 4.3 The system will allow temperatures to be monitored in real time.

5.0 REFERENCES

N/A

6.0 TIMEFRAME

- 6.1 July 2010

ISSUED BY: ANNE-MARIE DANAHER
ADanaher

DATE: 05.01.10

APPROVED BY: JOANNE DAY
Joanne Day

DATE: 05.01.10

REF: EMP 11

REV : 00

PAGE 1 of 1



DAWN PORK AND BACON

SUBJECT: EMP 11 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 A new spectrophotometer will be purchased in 2010, at a cost of €3,000.

4.2 The Environmental Manager and other Senior Management have approved this expenditure.

4.3 The Environmental Technician and Environmental Manager will review all procedures to ensure collaboration with new spectrophotometer.

5.0 REFERENCES

N/A

6.0 TIMEFRAME

6.1 February 2010

ISSUED BY: Anne-Marie Danaher
aDanaher

DATE: 19.03.10

APPROVED BY: Joanne Day
Joanne Day

DATE: 19.03.10

REF: EMP 12

REV 01

PAGE 1 of 1



DAWN PORK AND BACON

SUBJECT: EMP 13 ENVIRONMTNAL AWARNESS

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 2010

APPENDIX 1

PRTR emissions data



Environmental Protection Agency

[PRTR# : P0175 | Facility Name : Queally Pig Slaughtering Limited | Filename : P0175_2009.xls | Return Year : 2009]

AER Returns Worksheet

Version 1.1.10

REFERENCE YEAR	2009
-----------------------	------

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/Environmental 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?	No
Have you been granted an exemption ?	No
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

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

POLLUTANT		RELEASES TO WATERS	
No. Admin. U	Name	T (Total) kg/Year	A (Accidental) kg/Year
		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

POLLUTANT		RELEASES TO WATERS	
No. Admin. U	Name	T (Total) kg/Year	A (Accidental) kg/Year
		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)

POLLUTANT		RELEASES TO WATERS	
Pollutant No	Name	T (Total) kg/Year	A (Accidental) kg/Year
238	Ammonia (as N)	476.0	476.0
303	BOD	4099.0	4099.0
304	CO ₂	10005.0	10005.0
305	Detergents (as SODAS)	92.0	92.0
314	Fats, Oils and Greases	429.0	429.0
327	Nitrate (as N)	3874.0	3874.0
332	Ortho-chlorophenols (OPC)	365.0	365.0
340	Suspended Solids	3136.0	3136.0

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

5. ON-SITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	EAC 2008 - Name and Designation Facility EAC 2008 - Name and Licence No. of Treatment EAC 2008 - Address of National Competent	EAC 2008 - Address of Host Facility EAC 2008 - Address of National Competent	Name and Licence / Permit No. and Address of Final Receiver Designator (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination In Final Receiver / Designator (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	02 02 04	No	4563.33	Sludge from the effluent treatment plant	R10	M	Weighted	Offsite in Ireland	Agri Life Ltd, WCP/KK/0317/06 Greenstar Six Cross Roads Bulfinchtown, Co. Waterford, Ireland	Toum, Cappoquin, Co. Waterford, Ireland		
Within the Country	20 01 01	No	117.014	Packaging waste from production	R5	M	Weighted	Offsite in Ireland	LIS, WCP/KK/054/02 Waste Licence W0116-02			
To Other Countries	16 05 06	Yes	0.06	Laboratory Waste	D10	M	Weighted	Abroad	Viedla Ltd, WCP/KK/09/05/01 Waste Licence W0050-02	Conn, Fermoy, Co. Cork, Ireland	SAVA GmbH and Co. KG A91000508, Osterhewse 1 25541 BRUNSBUTLE ---Germany ---Solvent Resource Management LIS, TP3346F, Weiland Road, Knottsgate, West Yorkshire, WF11 8DZ, United Kingdom	Osterhewse 1, 25541 BRUNSBUTLE ---Germany
To Other Countries	11 01 13	Yes	0.36	Waste Oil	R9	M	Weighted	Abroad	Safety Kleen Ltd, W00-81 WCP/KK/052A/07	Unit 5, Ailton Road, Tallaght Dublin 24, Ireland	Westland Road, Knottsgate West Yorkshire, WF11 8DZ, United Kingdom	
To Other Countries	02 02 99	No	0.137	Skates and sheeps from production	D10	M	Weighted	Abroad	SRCL Ltd, WCP-DC-09- 1178-01 W0054-02 APC	Kylemore Road, Dublin 10, Ireland		
Within the Country	02 02 02	No	1336.0	Animal Tissue Blood	R3	M	Weighted	Offsite in Ireland	Technologies, PPC/AB/CBC 01607	Estimate, Craggan, Co. Armagh, United Kingdom		
Within the Country	02 02 02	No	1426.0	Animal Tissue Category 2	R3	M	Weighted	Offsite in Ireland	Dublin By-Products Ltd, P0041-02	Dumblint, Co. Wicklow, Ireland		
Within the Country	02 02 02	No	2372.0	Animal Tissue Offal	R3	M	Weighted	Offsite in Ireland	Western Proteins, P0048-02	Ballyhanna, Co. Mayo, Ireland		
Within the Country	02 02 02	No	695.0	Animal Tissue Lungs and Liver	R3	M	Weighted	Offsite in Ireland	Premier Proteins, P0037	Cahir, Co. Tipperary, Ireland		
Within the Country	08 03 18	No	0.03	Ink Cartridges	R13	M	Weighted	Offsite in Ireland	Redbeem PLC, CP D94521	Industrial Park, Ashbourne Co. Meath, Ireland		

Sheet 1 of 10 - See the attached workbook for the continuation of this data from other the returns sheets.

APPENDIX 2

Boiler Efficiency Testing

GasFix Ireland Ltd

DPB

Four Piers, Cregg, Carrick on Suir, Co Tipperary.

Tel: 051 641118 Fax: 051 641122 Mobile: 086 256 1732 087 2280083 email: gasfix@iol.ie

Service Record / Commissioning / Fault Report

Client	Dawn Pork & Bacon
	OFFICE BOILER HOUSE
Address	Grannagh,
	Waterford

Contact Name	
Tel No.	27917
Purchase Order No.	
Date	17-12-09

Service	X	Commissioning	
		Call Out	

Burner Make:	Riello	
Model:	G10	
Serial No.	O1433030059	
Spec No.		
Fuel	Light Oil	Output Kw

Boiler Make:	Buderus No.1	
Model:	G215	
Serial No.	O51784460033220948	
Input Kw	Output Kw	

Isolate power supply to appliance

	Checked	NA
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 Analysis

	High	Low
Flue temperature	102.2	
O2 content %	5.5	
Gross efficiency %	89.2	
Net efficiency %	94.2	
Excess air %	35.5	
CO2 content %	11.84	
CO content ppm	30	
Ambient temp		
Draught Mbar		
Gas inlet pressure Mb		
Burner pressure Mb		
Oil pressure bar	1.2	
Nozzle Size/Degrees	150 2.25/60	
Smoke No.	0	

Parts used:

Remarks:

Service at Avenue / Boiler. Cleaned oil filter at Tank. All OK

Time Sheet

Date	Travelling Time	Arrive	Depart	Total	Office Use
17-12-09	1 Hrs	9.55	10.35	Hrs	
	Hrs			Hrs	
	Hrs			Hrs	

Engineer Signature: Paul O'Connell

Client Signature: Alan Wall

Subject to terms and conditions. Copies may be inspected at our office. All queries must be made within 5 days.

GasFix Ireland Ltd

DPB

Four Piers, Cregg, Carrick on Suir, Co Tipperary.

Tel: 051 641118 Fax: 051 641122 Mobile: 086 256 1732 087 2280083 email: gasfix@iol.ie

Service Record / Commissioning / Fault Report

Client	Dawn Pork & Bacon		Contact Name	
Address	Grannagh, Waterford		Tel No.	
Service	X	Commissioning	Purchase Order No.	29901
		Call Out	Date	12/12/07

Burner Make:	Riello
Model:	RS190
Serial No.	O234000009
Spec No.	835TI
Fuel	NGO
Output Kw	

Boiler Make:	Buderus	No.3
Model:		
Serial No.		
Input Kw		Output Kw

Isolate power supply to appliance

	Checked	N/A
Clean burner head	/	
Check spark probe	/	
Check flame probe	/	
Check photo/UV cell		X
Check/Change nozzles		X
Clean fan		X
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 Analysis

	High	Low
Flue temperature	122.5	122.5
O2 content %	7.9	11.3
Gross efficiency %	87.9	84.8
Net efficiency %	91.5	88.5
Excess air %	22.0	26.0
CO2 content %	9.60	9.44
CO content ppm	0	0
Ambient temp	11.5	11.5
Draught Mbar	/	/
Gas inlet pressure Mb	15.0	15.0
Burner pressure Mb	11	6
Oil pressure bar		
Nozzle Size/Degrees		
Smoke No.		

Parts used:

Remarks:

Softing valve need to be changed

Time Sheet

Date	Travelling Time	Arrive	Depart	Total	Office Use
12.11.07	1 Hrs	9.05	11.00	2 Hrs	/
	Hrs			Hrs	
	Hrs			Hrs	

Engineer Signature: *[Signature]* Client Signature: *[Signature]*

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GasFix Ireland Ltd

DPB

Four Piers, Cregg, Carrick on Suir, Co Tipperary.

Tel: 051 641118 Fax: 051 641122 Mobile: 086 256 1732 087 2280083 ernal: gasfix@iol.ie

Service Record / Commissioning / Fault Report

Client	Dawn Pork & Bacon
Address	Grannagh, Waterford
Service	X

Contact Name	
Tel No.	
Purchase Order No.	27901
Date	12-12-09

Burner Make:	Riello
Model:	RS190
Serial No.	O22620000529
Spec No.	835TI
Fuel	NGO
Output Kw	

Boiler Make:	Buderus	No.2
Model:	Logano	
Serial No.		
Input Kw		Output Kw

Isolate power supply to appliance

	Checked	N/A
Clean burner head	✓	
Check spark probe	✓	
Check flame probe	✓	
Check photo/UV cell		x
Check/Change nozzles		x
Clean fan		x
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 Analysis

	High	Low
Flue temperature	162	112.01
O2 content %	2.2	1.7
Gross efficiency %	83.5	82.2
Net efficiency %	71.5	72.6
Excess air %	77.6	112.00
CO2 content %	9.67	8.09
CO content ppm	0	6
Ambient temp	10.4	10.6
Draught Mbar		
Gas inlet pressure Mb	1.50	1.50
Burner pressure Mb	11.01	5.09
Oil pressure bar		
Nozzle Size/Degrees		
Smoke No.		

Parts used:

Remarks:

Safety Valves need to be replaced

Time Sheet

Date	Travelling Time	Arrive	Depart	Total	Office Use
12-12-09	Hrs	9.00	10.00	Hrs	
	Hrs			Hrs	
	Hrs			Hrs	

Engineer Signature: *[Signature]* Client Signature: *[Signature]*

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APPENDIX 3
Groundwater Analysis

Received: 02.03.09. SC

microchem

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Email: info@microchem.ie
<http://www.microchem.ie>

Analysis Report

Dawn Pork and Bacon
Ms Martina Bodiova
Grannagh
Co. Waterford

Sample No: 090012041
PO Number: 25769
Batch Number: Well Water 25.02.09
Sample Type: Water
Description: Water
Date Received: 25-Feb-2009
Date Started: 25-Feb-2009
Analysis End Date: 02-Mar-2009

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: Rita Sheehan, Senior Analyst Micro Food

Date Authorised: 02-Mar-2009

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Certainty of measurement has been calculated for all NAB accredited tests and is available upon request.



Report Generated On: 2-Mar-09 11:31

1st section of the report

Received: 29.02.09 S.C

microchem

LABORATORIES

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Fax: +353 (0) 58 42855

Email: info@microchem.ie
http://www.microchem.ie

Analysis Report
Dawn Pork and Bacon
Ms Martina Bodiova
Grannagh
Co. Waterford

Sample No: 29002082
PO Number: 25754
Batch Number: Well Water, 11/02/09

Sample Type: EU Directive (Audit List)
Description:
Date Received: 11-Feb-2009

Analysis End Date: 24-Feb-2009

TEST	RESULT	Parametric Value
* Colour - SOP 2.1014	<10 Hazen	Acceptable
* Conductivity - SOP 2.1015	844 μ S/cm Temp. 19.8°C	2,500 μ S/cm @ 20.0°C
* Fluoride - Poin Test	ND=0.1mg/L	0.8 mg/l
* Nitrate (as N) - SOP 2.1179	8.40 mg/L	50.0 mg/l
* Odour - APHA 20th Edition	Odourless	Acceptable
* Sodium (as Na) - AAS	22.8mg/L	200 mg/l
* Total Organic Carbon - USP 31	0.89ppm	
* Turbidity - APHA 20th Edition	0.21NTU	
Ammonium -NH4 - SOP 2.1179	ND=0.02 mg/L	0.30 mg/l
Chloride - SOP 2.1179	41 mg/L	250.0 mg/l
Nitrite (as N) - SOP 2.1179	ND=0.02 mg/L	0.50 mg/l
pH - SOP 2.1025	7.11	Acceptable
Sulphate - SOP 2.1179	34 mg/L	250.0 mg/l

The above results comply with the Directive.

Note: Results for water potability analysis were checked against European Communities (Drinking Water) (No.2) Regulations 2007

Signed: Mary Cosgrave, Team Leader Chemistry Water

Date Authorised: 24-Feb-2009

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Report Generated On: 24-Feb-09 16:16



2nd section of the report

Received: 11-05-09 S.C

Analysis Report

Dawn Pork and Bacon
 Ms Martina Bodlova
 Grannagh
 Co. Waterford

microchem

LABORATORIES

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 Co Waterford
 Ireland
 Tel : +353 (0) 58 48300
 Fax: +353 (0) 58 42855

Email: info@microchem.ie
 http://www.microchem.ie

Sample No: 29002081
 PO Number: 25754
 Batch Number: Well Water, 11/02/09
 Sample Type: EU Directive (Audit List)
 Description:
 Date Received: 11-Feb-2009

Analysis End Date: 11-May-2009

TEST	RESULT	Parametric Value
* 1,2-dichloroethane - Subcontracted	<1.0 µg/L	3.0 µg/L
* Acrylamide - Subcontracted	<0.02 µg/L	0.1 µg/L
* Aluminium - Subcontracted	<20.0 µg/L	200.0 µg/L
* Antimony - Subcontracted Laboratory Method	<0.12 µg/L	5.0 µg/L
* Arsenic - Subcontracted Laboratory Method	<0.370 µg/L	10.0 µg/L
* Benzene - Subcontracted Laboratory Method	<0.06 µg/L	1.0 µg/L
* Benzo(a)pyrene - Subcontracted Laboratory Method	<0.001 µg/L	0.010 µg/L
* Boron - Subcontracted	<100 µg/L	1.0 mg/L
* Bromide - Subcontracted	<0.6 µg/L	10.0 µg/L
* Cadmium - Subcontracted	<0.5 µg/L	5.0 µg/L
* Chromium - Sub-contracted	<5.0 µg/L	50.0 µg/L
* Copper - Sub-contracted	<0.020 mg/L	2.0 mg/L
* Cyanide - Sub-contracted	<0.7 µg/L	50.0 µg/L
* Epichlorohydrin - Subcontracted	<0.1 µg/L	0.1 µg/L
* Iron - Sub-contracted	<20.0 µg/L	200.0 µg/L
* Lead - Subcontracted	<2.5 µg/L	25.0 µg/L
* Manganese (as Mn) - Sub-contracted	<5.0 µg/L	50.0 µg/L
* Mercury (as Hg) - Subcontracted Laboratory Method	<0.015 µg/L	1.0 µg/L
* Nickel - Subcontracted	<2.0 µg/L	20.0 µg/L
* 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 Chlordane-Beta <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 Dieldrin <0.001 µg/L Dieldrin <0.002 µg/L EndosulfanA_(alpha-Endosulfan) <0.003 µg/L EndosulfanB_(beta-Endosulfan) <0.003 µg/L Etoxin <0.003 µg/L Fenvalerate <0.003 µg/L	Pesticide Limit = 0.10 µg/L 0.03 µg/L

* Pesticides (Sub) - Organochlorine Pesticides (Water)

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
 Iodrin <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

0.03 µg/L
 0.03 µg/L

* Pesticides (Sub) - Organophosphorus Pesticides (Water)

Azinphos_methyl <0.004 µg/L
 Carbophenothion <0.012 µg/L
 Chlorfenvinphos <0.005 µg/L
 Chlorpyrifos_Ethyl <0.010 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
 Pirimphos_methyl <0.009 µg/L
 Propetamphos <0.007 µg/L
 Triamphos <0.003 µg/L
 Benzo(a)pyrene <0.001 µg/L

* Polycyclic Aromatic Hydrocarbons (Sub) - Polycyclic Aromatic Hydrocarbons (Water)

Benzo(b)fluoranthene <0.001 µg/L
 Benzo(ghi)perylene <0.001 µg/L
 Benzo(k)fluoranthene <0.001 µg/L
 Fluoranthene <0.002 µg/L
 Indeno(1,2,3-cd)pyrene <0.002 µg/L
 Total_PAHs_6_Constituents 0 µg/L
 0.6000 µg/L
 OK
 Tetrachloroethane <0.120 µg/L
 Trichloroethane <0.160 µg/L
 0 µg/L
 <1.0 µg/L

Total pesticide limit: 0.5 µg/L
 0.10 µg/L - sum of concentrations of each specified parameter

Selenium - Subcontracted Laboratory Method

- * Taste - Sub-contracted
- * Tetrachloroethene and Trichloroethene - Subcontracted
- * Total Trihalomethanes - Subcontracted
- * Vinyl Chloride - Subcontracted

10.0 µg/L
 Acceptable
 10.0 µg/L
 100.0 µg/L
 0.50 µg/L

Signed: Mary Cosgrave, Team Leader Chemistry Water

Date Authorised: 11-May-2009

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APPENDIX 4
Bund Integrity Testing



Environmental Efficiency
Consulting Engineers

Parnell House,
19 Quinsboro Road,
Bray Co. Wicklow,
Ireland.

JE

**Inspection and Integrity
Testing of Bunded Areas
and Underground Pipelines**

for

**Dawn Pork and Bacon
Grannagh, Co. Waterford**

Document Number 1153-06 v3.00

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QF 1. v2 Document Lead Sheet

Document Title	Inspection & Integrity Testing of Bunded Areas
Project No.	1153
Document No.	1153-06
Client	Dawn Pork and Bacon
Address	Grannagh, Co. Waterford

Issue	Status	Date	Author	Signed for and on behalf of	
				Environmental Efficiency	Client
1.01	Approved	08/09/2009	SR	<i>RS Sutcliffe</i>	
2.01	Approved	14/10/2009	SR	<i>ARICOM</i>	
3.00	Approved	13/11/2009	SR	<i>ARICOM</i>	

Where it is a requirement that this report be issued to a regulatory or other authority, then the client should sign the appropriate place in the above table and, unless specifically agreed in writing to the contrary, forward copies to the appropriate authority (e.g. EPA).

EEC Project Manager:

Bob Sutcliffe, CEng, MIMechE

EEC Document Author:

Stephen Ryan, BA, MSc Env

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Summary of results

Office of Environmental Enforcement
PO Box 3000
Johnstown Castle Estate
Co Wexford

Registered No: 175

Company Name: Dawn Pork and Bacon

Reporting Period: 3 years

Report Name: Inspection and Integrity Testing of Bunded Areas,
Sumps and Underground Pipelines

Were all results compliant with the terms of the IPC licence?

Yes

No

✓

Were any complaints received during this reporting period?

Yes

No

✓

2. Initial Assessment

On the 19th June 2009, an initial assessment of the bunds and pipelines at Dawn Pork and Bacon in Grannagh, Co. Waterford was undertaken. There were four bunds, three pipelines and two sumps to be tested. They are as follows:

- Boiler Tank Bund
- Blood Storage Tank Bund
- Phosclear Chemical Bund (x2)
- Boning Hall Line
- Main Slaughter Line
- Common Line to Effluent
- Sludge sump
- Beltpress Water Sump

3. Summary of Results

The following are the results of integrity testing and visual inspection of banded areas and pipelines on site.

Table 3-1: Summary of Results for Dawn Pork and Bacon, Grannagh

Bund	Test Date	Status	Comment
Boiler Oil Tank Bund	19/09/09	PASSED	-----
Blood Storage Tank Bund	27/07/09	PASSED	Underwent Visual Inspection
Phosclear Chemical Bund 1	19/09/09	PASSED	
Phosclear Chemical Bund 2	19/09/09	PASSED	
Pipeline	Test Date	Status	Comment
Boning Hall Line	19/09/09	PASSED	See Section 6
Main Slaughter Line	19/09/09	PASSED	See Section 6
Common Line to Effluent	19/09/09	PASSED	-----
Sump	Test Date	Status	Comment
Sludge Sump	19/09/09	PASSED	
Beltpress Water Sump	19/09/09	PASSED	

4. Integrity Test Procedures

4.1 Bund Integrity Test

The bund integrity/water tightness test was performed according to the procedure defined in the Environmental Agency (of England and Wales) R&D Technical Report P16 (See Appendix 1 for details). Initial water levels were taken and these were continuously monitored during the test. Any drop in water level would indicate a bund failure and a non-compliance with the IPC licence. Although the test is described as a 6 hour test, if failure was noticed at an earlier stage then the test would be stopped immediately.

5. Results & Compliance

5.1 Bunds

Table 5-1: Details of bunded areas tested on site

Bund	Bund Effective Capacity(m ³)	Max. Volume Stored (m ³)	Test Water Assessment (cm)*	Comment
Boiler Oil Tank Bund	63	50	14.1	Integrity test undertaken Adequately sized
Blood Storage Tank Bund	27	22.5	NA	Passed visual inspection Adequately sized
Phosclear Chemical Bund	Unknown	Unknown	14	Integrity test undertaken Adequately sized
Phosclear Chemical Bund	Unknown	Unknown	12	Integrity test undertaken Adequately sized

*Measurement from the top of the tank to the water level in the tank.

5.1.1 Boiler Oil Tank Bund

This bund contains a 50,000 L tank for the factory's main boiler. The bund is a mass concrete structure with red brick surrounding. The dimensions of the bund are 12m × 3.5m × 1.5m giving a total effective bund capacity of 63,000L. In order to comply with the condition 9.3.1 outlined above, the bund should be able to hold 110% of the total tank volume which would be 55,000L. Therefore the bund is sufficiently sized to contain the tank.

Table 5-2 Boiler Oil Tank Bund, Dawn Pork and Bacon, Grannagh

Bund Name		Boiler Oil Tank Bund	
Date Tested		19/09/09	
Capacity Test			
Parameter	Result		Pass/Fail
Capacity	63 m ³		PASS
Max. Volume Stored (m ³)	55 m ³		
Visual Inspection			
Comments			NA
Water Retention Test			
Initial depth to water level from the top of the tank (cm)	Final depth to water level from the top of the tank (cm)		Pass/Fail
14.1	14.1		PASS
Comments			

5.1.2 Blood Storage Tank Bund

A visual inspection was carried out on this bund because of the presence of electrical equipment in the bund. The capacity of the bund is approximately 27m³. The bund is in very good structural condition.

Table 5-3 Blood Storage Tank Bund at Dawn Pork and Bacon, Grannagh

Bund Name		Blood Storage Tank Bund	
Date Tested		27/07/09	
Capacity Test			
Parameter	Result		Pass/Fail
Effective Capacity	27m ³		PASS
Max. Volume Stored (m ³)	27m ³		
Visual Inspection			
Comments	Bund is in good structural condition. The bunds have passed the test but it is recommended that the block walls are coated with a sealant up to level of lowest wall.		PASS

5.1.3 Phosclear Chemical Bund 1

There were two additional phosclear chemical bunds that needed to undergo an integrity test. These bunds were filled with water and underwent a full water retention test. The results of this testing are displayed in the tables below:

Table 5-4 Phosclear Chemical Bund 1 at Dawn Pork and Bacon, Grannagh

Bund Name		Phosclear Chemical Bund 1	
Date Tested		19/09/09	
Capacity Test			
Parameter	Result		Pass/Fail
Effective Capacity	2.25m ³		PASS
Max. Volume Stored (m ³)	2m ³		
Visual Inspection			
Comments	Bund is in good structural condition.		PASS
Water Retention Test			
Initial depth to water level from the top of the tank (cm)	Final depth to water level from the top of the tank (cm)		Pass/Fail
14	14		PASS
Comments			

Table 5-5 Phosclear Chemical Bund 2 at Dawn Pork and Bacon, Grannagh

Bund Name		Phosclear Chemical Bund 1	
Date Tested		19/09/09	
Capacity Test			
Parameter	Result		Pass/Fail
Effective Capacity	2.25m ³		PASS
Max. Volume Stored (m ³)	2m ³		
Visual Inspection			
Comments	Bund is in good structural condition.		PASS
Water Retention Test			
Initial depth to water level from the top of the tank (cm)	Final depth to water level from the top of the tank (cm)		Pass/Fail
12	12		PASS
Comments			

6. Pipeline Testing

The integrity testing for the underground pipeline was carried out on the 19th September 2009.

6.1 Background

From the initial site visit and review of the site drainage map, a considerable network of process waste pipelines exists on site. It would not be practical or possible to conduct integrity tests individually on all of the pipelines at the site and so it was decided that the boning hall line, the main slaughter line and the common line to the effluent plant will be tested. On the day of the site visit it was decided that only the common line to effluent would be tested as it was not possible to test the boning hall line and slaughter line.

6.2 Testing Procedure

Testing was to follow the procedures below:

- Pipe blockers and sand bags would have to be inserted in the end of the pipeline just before entering the effluent plant.
- Effluent would then back up into the pipelines until its level was found to have risen significantly at certain manholes on the line.
- The inflow to the pipelines would then have to be stopped and the effluent level allowed to settle and then measured at different stages along the line.
- The water level would be allowed to settle for one hour to allow for soakage.
- After an hour the level would be measured again, and if it had fallen would be filled back to original level.
- Over 30 minutes, it would be measured to see if there is a drop in the water level. If there is a drop, there would be a known quantity of water added to bring it up to its original level.
- The amount of water added during the test would be recorded and the pipeline would have deemed to have passed the test if the amount of water added over the thirty minutes is less than 0.15l/m^2 of wetted internal surface.

6.3 Results and Findings

Table 6-1 Results of Pipeline Testing at Dawn Pork and Bacon, Grannagh

Point to Point Location	Integrity Test	Comment
Common Line to Effluent	Passed	Initial measurement from manhole to water level was 278 cm. This level did not change throughout the survey.

6.3.1 Common Line to Effluent (incl. boning hall and slaughter line)

Once the water had settled in the pipeline, a reading was taken. Over a half hour period this was monitored and at the end of the half hour another reading was taken. It was noted that there was no drop in the level over the monitoring period and therefore the pipeline passed the test and is in full compliance with the conditions set out in the company's IPC licence.

7. Testing of the Sumps

There were two sumps on site which required testing. A summary of the results can be seen in Table 3-1 below:

Table 7-1 Results of Sumps Tested at Dawn Pork and Bacon, Grannagh

Sump	Initial distance to water level (cm)	Final distance to water level (cm)	Pass/Fail
Sludge Sump	240	240	PASS
Beltpress Water Sump	74	74	PASS

7.1 Sludge Sump

There was sludge already present in the sump and this level was measured and then allowed to remain in the sump with no inflow being allowed during the testing period. After 6 hours, the level in the sump was measured again and it was noted that there had been no drop in the level. Therefore the sump passed the integrity test.

7.2 Beltpress Water Sump

There was water already present in the sump and this level was measured and then allowed to remain in the sump with no inflow being allowed during the testing period. After 6 hours, the level in the sump was measured again and it was noted that there had been no drop in the level. Therefore the sump passed the integrity test and is fully compliant with Condition 9.3.1, Condition 9.3.2 and Condition 9.3.5

8. Conclusion

Of all bunds and pipelines that had to be tested, all passed the visual inspection or water retention test. Therefore, Dawn Pork and Bacon are fully compliant with the condition 9.3.1, 9.3.2 and 9.3.5 of their IPPC licence.

Appendix 1 Bund Test Procedure

The procedure used is defined in the Environmental Agency (of England and Wales) R&D Technical Report P16. This procedure is specifically designed for the testing of bunds or sumps intended for oil storage tanks for sites defined as being highly sensitive. This is a six hour test over which there should be no loss of water.

The Environmental Agency protocol is as follows:

1. The company is expected to carry out any remedial work recommended e.g. this may include concreting bund/sump base, plugging holes.
2. The company is to clear out the bund of all foreign material including rainwater
3. The procedure is to be carried out on a cool, dry day.
4. The company is to supply manual labour to facilitate the water retention test. This will include filling the bunds to required level. For large bunds, or poor water supply, filling may be started the day before the test.
5. EEC will inspect the water level after 6 hours. Any drop in level will signify failure.
6. The company is responsible for disposal of the test water. EEC will qualitatively check for the presence of contaminants in the water if applicable