Intended for
Cambrian Pet Foods Limited

Date
September 2019

Project Number
1700001923

BAT TECHNICAL ASSESSMENT CAMBRIAN PET FOODS LIMITED

ENVIRONMENTAL PERMIT

APPLICATION

BAT TECHNICAL ASSESSMENT CAMBRIAN PET FOODS LIMITED

Project No.	**1700001923**
Issue No.	**03**
Date	**September 2019**
Made by	**Greg Roberts/ Karen Hardy**
Checked by	**Richard Wood**
Approved by	**Richard Wood**

Made by:

Checked/Approved by:

Version Control Log

Revision	Date	Made by	Checked by	Approved by	Description
1	24/01/2019	GR	RW	RW	First Release to Client
2	29/08/2019	KH	RW	RW	Update to reflect NRW comments
3	09/09/2019	KH	RW	RW	Third Release to Client

Ramboll
8 Village Way
Tongwynlais
Cardiff
CF15 7NE
United Kingdom
T +44 2920 543 550
www.ramboll.co.uk

CONTENTS

1.	**INTRODUCTION**	**1**
2.	**SUMMARY OF FINDINGS**	**1**
3.	**BAT ASSESSMENT**	**2**

1. INTRODUCTION

1.1 General

This document has been produced on behalf of Cambrian Pet Foods Limited, to provide an assessment of their manufacturing facility located at Twyi Valley Food Park, Station Road, Llangadog, Carmarthenshire, SA19 9LN, against the indicative best available techniques (BAT) relevant to the food and drink manufacture sector, in support of an application for an environmental permit.

The Installation currently operates under a Part B Environmental Permit administered by Carmarthenshire County Council. However, the current configuration of the Installation now provides a daily production capacity of approximately 180 tonnes, which is over the threshold of 75 tonnes per day of product with more than 10% meat content, as set by the Environmental Permitting Regulations.

By virtue of production increases to over 75 tonnes per day, the Facility is required to surrender its Part B permit and apply for a Part A(1) Environmental Permit to be administered by Natural Resources Wales (NRW) for the following activities:

• Section 6.8 Part A(1) (d) (iii) – Treatment of animal and vegetable matter and food industries with meat content of more than 10% greater than 75 tonnes per day; and

- Section 5.4 Part A(1) (a)(i) - Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving one or more of the following activities, and excluding activities covered by Council Directive 91/271/EEC concerning urban waste-water treatment(4) (i)biological treatment.

As an installation, the Facility is required to ensure that the best available techniques (BAT) for pollution prevention have been applied to its operations, and to provide an assessment against the BAT applicable to the Facility as part of the application. This assessment has identified the BAT relevant to the facility from NRW document *Sector Guidance Note EPR 6.10 Additional Guidance for the Food and Drink Sector* and *The Best Available Techniques Reference Document (BREF) for Food, Drink and Milk Industries*.

1.2 Proposed Development

At the time of Permit Application Cambrian is in the planning stages of a site improvement programme which will re-develop a large section of the current brown field site in Llangadog. The development will replace buildings, previously used by the former Creamery, with new facilities which are to include an additional steam boiler, a new drainage system and modern efficient equipment.

The proposed footprint of the new development will be approximately 4300sq meters. The proposed build will be a food grade internally clad, single span steel portal building, with food grade flooring, covings and internal drainage. In addition, refurbishment of an existing adjacent building will incorporate a laboratory, food testing, QA testing- with an open glass area to view the production facility (a customer visitor centre) with staff facilities including changing rooms and locker and wash rooms. The building will be built to the specification required to comply with British retail Food requirements.

The proposed developments will increase production capacity at the Facility to 80,000 tonnes per annum. Process effluent will be directed to the Effluent Treatment Plant, which has sufficient capacity to treat the increased effluent levels due to increased capacity.

Cambrian are committed to integrating BAT within the new development and see this as an opportunity to improve the overall efficiency of the process.

2. SUMMARY OF FINDINGS

Based on the information included in this document, the Applicant is considered to comply with the relevant Technical Guidance and indicative BAT, with the exception of the findings presented in Table 2.1, for which improvement actions have been provided

Table 2.1 Proposed Improvement Conditions

Finding	Improvement Condition	Proposed Date
Although the Facility is employing many energy efficiency measures, it recognises that further improvements could be made.	An energy efficiency survey will be undertaken.	6 months
A risk assessment of the Effluent Treatment Plant (ETP) has not been undertaken, and although procedures are in place, these have not been reviewed recently.	Undertake a risk assessment of environmentally critical equipment including the ETP. Review and update ETP operational procedures Review availability of competent persons to operate the ETP.	3 months
The Facility does not have measures in place to detect variation in effluent composition e.g. in-line TOC measurement	Measures to detect variation in effluent composition will be investigated after the Permit has been issued.	6 months
Although the Facility has a large tank for receiving fire-fighting run-off water, a review of the Facility's response to fire-fighting run-off water has not been undertaken.	Review the Facility's response to fire-fighting run-off water and develop a plan.	6 months
At the time of application Cambrian is in the planning stages of a site improvement programme which will re-develop a large section of the current brown field site in Llangadog.	Adopt BAT in proposed development at detailed design stage.	6 months

3. BAT ASSESSMENT

Table 3.1 Managing Activities: Accident Management

Indicative BAT	Technical assessment
1.1.1 Use automatic process controls backed-up by manual supervision, both to minimise the frequency of emergency situations and to maintain control during emergency situations. Instrumentation will include, where appropriate, microprocessor control, trips and process interlocks, coupled with independent level, temperature, flow and pressure metering and high or low Alarms.	The process is largely automated e.g. canning Retort / autoclave and steam tunnel, though manual supervision is in place throughout. The Effluent Treatment Plant (ETP) is manually supervised, though is estimated to be 90% automated. The ETP has alarms on the DAF (audible, high level) and DAF sludge silo (light when sludge 2/3 full). Retort / autoclaves are computer monitored and controlled. Two portable ammonia detectors are placed at reception number two and in the plate freezer room.
1.1.2 Use techniques and procedures to prevent overfilling of tanks - liquid or powder- (e.g. level measurement displayed locally and at the central control point, independent high-level Alarms, high-level cut-off, and batch metering).	The facility does not utilise many tanks. The main exception being an ammonia tank which holds two tonnes of ammonia. Most raw materials are transported in mobile containers e.g. Dolavs, IBCs and bags. The ETP has a Lubek tank and reception tank, both tanks are within secondary containment. The DAF and silos are also within secondary containment. A single 2,500 litre diesel tank is used to fill up some of the fork lift trucks. This is an internally bunded tank. The tank is manually dipped prior to a delivery to ensure the correct amount of diesel is delivered. Deliveries are supervised.
1.1.3 Use measures to detect variation in effluent composition e.g. in-line TOC measurement	In line TOC is not applied, neither in the process nor the ETP. However, effluent analysis, including COD, is undertaken daily. Measures to detect variation in effluent composition will be investigated after the Permit has been issued (see section 2).
1.1.4 Ensure that gross fat, oil and grease (FOG) does not block drains.	The facility does not allow raw material to enter the drain. Any meat and fish dropped on the floor is swept up and treated as 'floor' waste. A basket is in place within the drain outside the meat preparation area, which is emptied as required with any waste being frozen in the designated waste Dolav prior to collection. The drains are jet washed every three months to ensure they remain clear
1.1.5 Identify the major risks associated with the effluent treatment plant (ETP) and have procedures in place to minimise them.	Procedures are in place to manage the ETP and the facility will review and update these. Measures to minimise risks are in place e.g. the facility has a large Lubek which is able to hold effluent (1-2 days' worth of effluent) while the problem is rectified. The facility holds spare parts e.g. pumps, so that it can keep the ETP operational. An overflow pipe from the Lubek tank to the reception tank is

Indicative BAT	Technical assessment
	also in place. The Facility will undertake a risk assessment of the ETP and review its current procedures after the permit has been issued (see section 2).
1.1.6 Provide adequate effluent buffer storage so that you can stop spills reaching the ETP or controlled water, especially those spills with high organic strength.	The ETP utilises a large diversion tank, the Lubek tank, to hold effluent prior to treatment. This would provide adequate buffer in case of a spillage from anywhere on site, or fire water in the event of a fire, as surface water all drains to the ETP. This is estimated to hold 1-2 days worth of effluent (approximately 440 $m^{3)}$. If the ETP is unable to treat this effluent then the effluent in the Lubek tank could be tankered off site.
1.1.7 Protect against spillages and leaks of refrigerants, especially ammonia.	Refrigeration systems containing HFCs are routinely checked for leaks and regularly maintained. This is coordinated through the planned preventative maintenance programme. Leak detection is monitored through the use of two hand held monitors. The ammonia plant and plate freezing rooms is fitted with ammonia detection.

Table 3.2 Managing Activities; Energy Efficiency

Indicative BAT	
1.2.1 Recover heat from, for example, ovens, dryers, fryers, evaporators, pasteurisers and sterilisers, where a plate heat exchanger has a regeneration capacity up to 94%.	The facility recovers heat from the Retorts / autoclaves through heat exchangers.
1.2.2 For in-tunnel and tray ovens, fit heat exchangers to the exhaust flues to remove heat from exhaust gases and to heat inlet air. 1.2.3 Recover heat from condensed steam, for example, blanching and steam peeling.	Steam condensate from steam lines (chunk cooking) is reused and heat captured through a heat exchanger.
1.2.4 Use multi-effect evaporators in large scale evaporator applications.	N/A
1.2.5 Minimise water use and use recirculating water systems	Approximately 50% of the water from the Retort / Autoclaves is reclaimed and reused as process / cleaning water. The potential to further reuse water is restricted by storage capacity. Employees are made aware of the importance of saving water through the Environmental Awareness training course.

Indicative BAT	
	Use of cleaning water is minimised through the use of mobile chemical dosing units, ensuring the correct amount of water and chemical is used.
1.2.6 Ensure efficient operation of the refrigeration system – consider heat recovery from refrigeration system, reducing heat load, efficient operation on part load and fast closing doors/Alarms on chilled storage areas.	Doors to cold store / freezer are regularly maintained. Temperature alarms are fitted on the fridge and freezer. Freezer door closes automatically. The cold store fridge door is manual, though employees are made aware of importance of closing the door.
1.2.7 Use spent cooling water (which is raised in temperature) in order to recover the heat.	Cooling water is used at the end of the steam tunnel. Heat recovery is not utilised. This will be looked at in the Independent Energy Audit.
1.2.8 Optimise efficiency measures for combustion plant, e.g. air/feedwater pre-heating, and use of excess air.	The compressor is fitted with a heat exchanger and this 'waste' heat is used to warm the incoming water used for steam generation.

Table 2.3 Managing Activities: Efficient Use of Raw Materials and Water

Indicative BAT	
1.3.1 Identify and evaluate opportunities for the recycling or reuse of water, taking into consideration hygiene issues and practical constraints. An optimal scheme is likely to include a combination of: • sequential reuse (water stream used for two or more processes or operations before disposal) • counter-flow reuse, in which the water flows counter-current to the product so that the final product only comes into contact with clean water • recycling within a unit process or group of processes without treatment. Recirculating systems should be used to recycle water. (Once through cooling systems should not be used.)	Approximately 50% of condensate from the Retort / autoclaves is stored and reused as cleaning water (sequential reuse). The potential to further reuse water is restricted by storage capacity. Use of cleaning water is minimised through the use of mobile chemical dosing units, ensuring the correct amount of water and chemical is used.

Indicative BAT	
• the recycling of condensate as boiler feed water (where it is of suitable quality). Contaminated condensate should be used for lower grade cleaning activities e.g. yard washing recycling following treatment - this may include tertiary treatment such as membrane technology.	
1.3.2 Assess the potential environmental impact of raw materials and make substitutions where appropriate. Consider their degradation products when choosing cleaning materials. If caustic is used low mercury sodium hydroxide should be selected. Supercritical carbon dioxide is a suitable alternative to organic solvent usage for extraction of caffeine.	The use and types of cleaning chemicals was recently reviewed, and a new mobile dosing system has been installed. This project also looked to reduce the environmental impact and H&S risk of chemicals purchased.

Table 2.4 Managing Activities: Avoidance, Recovery and Disposal of Waste

Indicative BAT	
1.4.1 You should where appropriate, demonstrate that the chosen routes for recovery or disposal represent the best environmental option considering, but not limited to, the following: • all avenues for recycling back into the process or reworking for another process • composting • animal feed • other commercial uses, as tabulated in table 2 below • land spreading, but only under the following circumstances; you can demonstrate that it represents a genuine agricultural benefit or ecological improvement, you have identified all the pollutants likely to be present. These may be substances from the process, from the materials of which your plant is constructed (e.g. reaching the waste by corrosion/erosion mechanisms), from materials related to maintenance (e.g. detergent). You should consider all these possibilities, for both normal and	The site is committed to adopting the waste hierarchy by preventing, minimising and reusing waste where possible. For example, product is removed and reworked where packaging is found to be compromised e.g. the film lid is not properly sealed on a tray. In addition, an established recycling programme requires the segregation of cardboard, plastic and non-reusable pallets. All wastes are stored in secure well organised storage areas. Employees are encouraged to adopt the waste hierarchy and this is covered as part of the Environmental Awareness training that all employees are required to attend. Waste meat and fish is sent for rendering. The facility tries to reuse tertiary cardboard packaging received on new product.

Indicative BAT	
abnormal operation of the plant. You should validate your conclusions by chemical analysis of the waste; You have identified the ultimate fate of the substances in soil.	
1.4.2 Where appropriate you should schedule production to minimise product changeovers and clean downs.	Cleaning schedules are optimized through production planning which ensures product lines are ran as long as appropriate, reducing changeovers and the need for washdowns.
1.4.3 Consider whether your packing line efficiency can be improved.	The efficiency of the packing line is monitored by checking actual throughput against theoretical throughput. Any substantial deviation is investigated.

Table 2.5 Managing Activities: Process Control

Indicative BAT	
2.1.1 Where appropriate, assess your product loss against food and drink industry benchmarks	The company does not have access to any industry benchmarks for product loss. However, they do monitor product loss internally against which they set annual improvement targets / review operations for opportunities for improvement and / or the implementation of efficiency measures.
2.1.2 Set up effluent monitoring to provide baseline information on wastewater loadings (kgCOD and volume)	To be applied under operation of plant under Part A(1) permit (see section 2)
2.1.3 Investigate high loss areas. Using the baseline information you should set improvement targets - this could be a reduction in daily kgCOD or volume, or any other specific objective.	To be applied under operation of plant under Part A(1) permit (see section 2)
2.1.4 Continue monitoring and review your performance regularly.	To be applied under operation of plant under Part A(1) permit (see section 2)
2.1.5 Carry out any appropriate measurements 1. Temperature 2. Pressure 3. Level 4. Flow 5. Flow controls	In production temperature (Retorts), pressure (retorts, boiler and steam lines) and level (of material e.g. in hoppers) is monitored.

Table 2.6 Raw materials Preparation

Indicative BAT	Technical Assessment
2.2.1 When choosing a peeling technique or when replacing peeling plant, show that your selection has taken into account water efficiency, energy efficiency and product loss.	N/A - The company does not undertake any peeling activities.

Table 2.7 Operations: Heat Processing using Steam or Water

Indicative BAT	Technical Assessment
2.3.1 Where appropriate, reduce energy consumption by re-using heat contained in vapours by, for example: • vapour recompression or by using the vapour to pre-heat incoming feedstock or condensed vapour which is then used to raise steam in a boiler.	The facility recovers heat from the Retorts / autoclaves through heat exchangers. Waste heat from the ammonia plant is used to melt the surface of frozen blocks.
2.3.2 Where appropriate, install a condensate re-use system	Approximately 50% of the water from the Retort / Autoclaves (condensate) is reclaimed and reused as process / cleaning water.
2.3.3 Where appropriate, use recirculating systems to recycle water. (Once through cooling systems should not be used.)	Approximately 50% of the water from the Retort / Autoclaves is reclaimed and reused as process / cleaning water.
2.3.4 Where appropriate, use energy efficiency techniques including regenerative heat exchangers	The facility recovers heat from the Retorts / autoclaves through heat exchangers.
2.3.5 Consider the following energy efficiency measures: • use of exhaust air to pre-heat inlet air • use of direct flame heating by natural gas • two stage drying • pre-concentrating liquid foods using multiple effect evaporation.	The compressor is fitted with a heat exchanger and this 'waste' heat is used to warm the incoming water used for steam generation. Waste heat from the ammonia plant is used to melt the surface of frozen blocks. Direct flame heating is not used as the site uses steam and hot water for heating and cooking purposes. This will be considered as part of the energy audit. No drying of the product takes place (other than drying cans). Pre-concentrating liquid foods is not applicable.
2.3.6 Where appropriate, use low NOx burners.	The Cochran 10.2 thermal input (MWth) boiler was installed circa 1999. This is a gas-fired, low NOx boiler (as reported in the sites Part B Permit), as is the proposed 9MWth back-up boiler.

Indicative BAT	Technical Assessment
2.3.7 Where appropriate, ensure extraction to efficient abatement plant.	N/A there is no process which would give rise to the need for abatement plant.

Table 2.8 Operations: Cooling, Chilling, Freezing and Freeze Drying

Indicative BAT	Technical Assessment
2.4.1 Where appropriate, use recirculating systems to recycle water. (Once through cooling systems should not be used.)	Approximately 50% of condensate from the Retort / autoclaves is stored and reused as cleaning water (sequential reuse).
2.4.2 Where appropriate, use detailed drainage plans to ensure that ammonia leaks cannot be discharged to surface waters.	The facilities surface water drainage system is routed through the ETP. Any ammonia leak would first be received in the Lubek tank. Flow from the Lubek system has to be manually operated so water contaminated with ammonia would remain in the Lubek tank until it is tankered away off site.
2.4.3 Where appropriate, energy efficient techniques should be applied	The facility is in the process of commissioning an independent energy survey which will include recommend energy efficiency initiatives.

Table 2.9 Operations: Cleaning and Sanitisation

Indicative BAT	
2.5.1 Wherever possible raw materials and product should be kept out of the wastewater system.	The process lines are generally automated and conveyors are enclosed to minimise spillage / droppage. Manual operations are undertaken when raw materials are received at the plant e.g. breaking blocks, freezing activities etc. Employees working in these areas are trained and encouraged to reduce wastage from the process. Meat and fish that drops to the floor, is swept up and collected as floor waste, in 'Dolavs'. This is then frozen and quarantined. Cleaning schedules are optimized through production planning which ensuring product lines are run as long as possible, reducing changeovers and the need for washdowns. Dry-clean of equipment is undertaken prior to using a hose (this is covered as part of the employee environmental awareness training).
2.5.2 Equipment design: • when ordering new equipment consider ease of cleaning	New equipment is purchased on the basis of efficiency – this includes ease of cleaning. The process lines are generally automated and conveyors are enclosed to minimise spillage / droppage. Manual operations are undertaken when raw materials are received at the plant e.g.

Indicative BAT	
• wherever practicable, process lines and operations that cause excessive spillage of material onto the floor should be modified to eliminate or reduce the problem • dry clean-up procedures should remove as much residual material as possible from vessels and equipment before they are washed • drains should be equipped with catch pots • catchpots should be in place during cleaning (for example by installing lockable catchpots) • you should optimise water pressure at jets, nozzles and orifices trigger operated spray guns or hoses should have an automatic water supply shut off.	breaking blocks, freezing activities etc. Employees working in these areas are trained and encouraged to reduce wastage from the process. All hoses are fitted with triggers with automatic shut off. A basket is in place within the drain outside the meat preparation area, which is emptied as required and any contents frozen in the designated waste Dolav until collection.
2.5.3 Good housekeeping: • You should install trays to collect waste to prevent it falling to the floor • spilt material should be swept, shovelled or vacuumed rather than hosed down the drain • you should make sure that suitable dry clean-up equipment is always readily available • you should provide convenient, secure receptacles for the collected waste • cleaning schedules should be optimised • cleaning cycle durations should be matched to the vessel size you should schedule product manufacture to minimise numbers of product changes and subsequent cleaning between products Manual cleaning: • procedures should ensure that hoses are only used after dry clean-up	Meat and fish that drops to the floor, is swept up and collected as floor waste, in 'Dolavs'. This is then taken to the freezer where it is stored in a designated waste container for disposal. Cleaning schedules are optimized through production planning which ensures product lines are run as long as possible, reducing changeovers and the need for washdowns. Dry-clean of equipment is undertaken prior to using a hose (this is covered as part of the employee environmental awareness training).

Indicative BAT	
• trigger controls should be used on hand-held hoses and water lances to minimise the use of washdown water • high-pressure/low-volume systems should be used wherever practicable	
2.5.4 Cleaning chemicals usage: you should ensure that staff (and contract cleaners) are trained in the handling, making up and application of working solutions. In particular, the correct concentration of chemical agent should be used. Overuse of chemicals should be avoided, particularly where manual dosing is used.	The facility utilizes automated dosing units and manual dosing is no longer required. This ensures the optimum amount of cleaning chemical is used.
2.5.5 Cleaning-in-place (CIP): • dry product should be removed before the start of the wash cycle by gravity draining, pigging or air blowdown • pre-rinsing should be used to enable remaining product to be recovered for re-use or disposal • the use of turbidity detector to maximise product recovery • optimal CIP programme for the size of plant/vessel and type of soiling • optimising frequency and duration of rinses to reduce water use • automatic dosing of chemicals at correct concentrations • internal recycling of water and chemicals • recycle control on conductivity rather than time • continuous cleaning of recirculated solutions water-efficient spray devices	No CIP is installed as it is not appropriate for the process, difficult to install and could not ensure an effective clean.
2.5.6 Use dry clean-up techniques where practicable to reduce wastewater strength.	Dry clean-up techniques are utilised where appropriate. Employees are made aware of this via the Environmental Awareness training all employees are required to attend.
2.5.7 You should justify the use of organohalogen-based oxidising biocides over the alternatives (e.g. ozone and UV	The site does not use organohalogen-based oxidising biocides. The recycling of cleaning water is not used though the cleaning water itself has been recovered from the Retort condensate.

Indicative BAT	
light). Where possible the recycling of water and recovery of cleaning chemicals should be undertaken.	

Table 2.10 Emissions and Monitoring: Point Source Emissions to Air

Indicative BAT	
3.1.1 Meet the benchmark values for point source emissions to air listed in the tables below, unless the installation can justify alternative values and obtain the Regulators agreement: **Emissions to Air from a Contained Source** Parameter: Benchmark Particulates: 50 mg/m^3	The only point source emission from the facility are the gas-fired boilers, which are expected to have minimal particular emissions. Particulate emissions will be tested as part of an independent air emissions testing survey.
3.1.2 Use heat recovery systems 3.1.3 Recycle exhaust gas where practicable for pre heat purposes	The compressor is fitted with a heat exchanger and this 'waste' heat is used to warm the incoming water used for steam generation. Waste heat from the ammonia plant is used to melt the surface of the frozen blocks.
3.2.1 As a minimum, control all emissions to avoid a breach of water quality standards but where another technique can deliver better results at reasonable cost it will be considered BAT and should be used. Unless self-evident, you should provide calculations and/or modelling to demonstrate this as part of your application.	The H1 assessment has been used to demonstrate conformance to water quality standards.
3.2.2 Keep raw materials and product out of the wastewater system wherever possible. The following techniques should be used: • dry clean-up • installation of drain catchpots and screens • where gross FOG is found in wastewater, drainage systems should have grease traps and gratings to prevent sewer	The facility ensures raw materials are kept out of the wastewater system by: - using enclosed augers; - ensuring floor waste is collected rather than washed to drain; - the use of a basket in the drain outside the meat preparation area; - dry clean-up; - minimising product line changeovers (and therefore washdowns) by using planning techniques; and

Indicative BAT	
blockage. These must be frequently inspected, emptied and maintained • Where appropriate, use a balancing tank or pond (equalisation or balancing), with a hydraulic retention time of 6 – 12 hours, which can improve treatment in the following ways: • by allowing waste streams to be combined e.g. acid and alkali streams from the regeneration of deionisers; or high BOD and low BOD waste streams. This can reduce consumption of reagents by making the flow rate less variable. This can reduce the size of the treatment plant needed, as it only has to handle the average flow and not the peak flow.	- collecting product from production lines prior to commencing cleaning Retention time between the Lubek tank and reception tank is generally over six hours. The use of the Lubek tank allows flow through the ETP to be controlled.
3.2.3 Provide contingency measures to prevent accidental discharges from overloading or damaging the treatment plant. These will often include providing a diversion tank into which potentially damaging wastewater can be diverted. This should typically have a capacity of 2 – 3 hours at peak flow rate. The wastewater should be monitored upstream of the treatment plant to allow automatic diversion to the tank. The contents of the diversion tank may be gradually re-introduced into the wastewater stream, or removed for off-site disposal. If you do not provide a diversion tank, you must tell us what equivalent measures you use to protect your treatment plant.	The ETP has a large Lubek tank which receives effluent initially. Flow from this tank is controlled manually and the valve from this tank is closed when not manually activated. The tank can hold approximately 1-2 days worth of effluent, so accidental releases and fire-fighting run-off water can be contained pending removal by tanker. The Lubek tank can also be used to contain effluent when there is a fault with the ETP or it requires maintenance. Following the completion of the drainage survey, an assessment of how fire-fighting run off water will be managed will be undertaken (see section 2).

Table 2.11 Emissions and Monitoring: Fugitive Emissions

Indicative BAT	
3.3.1 Where appropriate, regularly inspect pipe joints, shaft seals and gaskets in the refrigeration plant using proprietary leak detection equipment.	Refrigeration plant is periodically inspected and maintained by a competent and certified contractor. These inspections include a leak test, which are carried out in line with statutory requirements for leak testing.

Indicative BAT	
3.3.2 Ensure that a system log book is kept which records: • quantity of refrigerant and oil added to or removed from the system(s) • leakage testing results • location and details of specific leakage incidents.	Refrigeration plant is periodically inspected and maintained by a competent and certified contractor. These inspections include a leak test, which are carried out in line with statutory requirements for leak testing.

Table 2.12 Emissions and Monitoring: Odour Monitoring

Indicative BAT	**Technical assessment**
3.4.1 Ensure that the effluent treatment plant is adequately sized and maintained, and check that site waste water drains do not become blocked. Where present, aeration tanks should be kept aerated and mixed at all times except where maintenance necessitates shut-down of the aeration system. Alternative operational arrangements should be implemented during shut-down to avoid odour nuisance.	Several parts of the ETP formerly used by the creamery are not utilized by Cambrian (namely an old pump pit, two enclosed beds, three towers and a centrifuge). These could be re-introduced into the systems if required or demand necessitates. The ETP is under supervision and maintained all day by a dedicated engineer. Drains are jet washed every three months.
3.4.2 Design and operate abatement plant to cope with maximum loadings and volumes.	N/A no odour abatement plant has been installed.
3.4.3 Design extraction from odorous activities to minimise air flows to the abatement plant	N/A no odour abatement plant has been installed.