

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Volac International Limited

Volac Felinfach
The Old Creamery
Felinfach
Lampeter
Ceredigion
SA48 8AG

Permit number
EPR/BV4177IS

Volac Felinfach

Permit number EPR/BV4177IS

Introductory note

This introductory note does not form a part of the Permit

A non-technical description of the Permitted Installation is given in the Application, but the main features of the Permitted Installation are as follows. The installation produces about 55,000 t/yr of animal feed and human food ingredients from whey, a by-product of cheese production. Incoming whey is pasteurised, then the components are separated and concentrated using membrane technology prior to evaporation in a multi-effect evaporator. Recovered materials are crystallised and/or dried to produce solids which, in the case of animal feeds are blended with other purchased ingredients to generate finished products.

Associated activities, as detailed in Table S1.1 include the storage of raw materials and partly processed products in stainless steel silos, product packaging, refrigeration plant, storage and handling of LNG and heat and steam generation.

There are seventeen release points to air as detailed in Table S3.1. All process effluents are routed to a common sump and thence to an off site effluent treatment plant outside the installation boundary, with final consented discharge of the treated effluent into Cardigan Bay. Uncontaminated surface water discharges to land and via a new emission point, to an unnamed watercourse as detailed in Table 3.2.

Packaging waste is segregated into recyclable and landfill, and is stored in separate skips pending collection by licensed contractors. Hazardous waste (waste oil) is stored in a bunded tank prior to off site recovery.

The nearest human receptors are within 50m of the installation boundary. There are three European sites within 10 km of which the nearest is Afon Teifi/River Teifi SAC. The site participates in a Climate Change Agreement.

Aspects of the operation of the installation which are not regulated by conditions of the Permit are subject to the condition implied by Regulation 12(10) of the PPC Regulations i.e. the Operator shall use the best available techniques for preventing or, where that is not practicable, reducing emissions from the Permitted Installation.

Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

In some sections of the Permit conditions require the Operator to use Best Available Techniques (BAT), in each of the aspects of the management of the Permitted Installation, to prevent and where that is not practicable to reduce emissions. The conditions do not explain what is BAT, in determining BAT, the Operator should pay particular attention to relevant sections of the IPPC Sector guidance, appropriate Horizontal guidance and other relevant guidance.

The Industrial Emissions Directive (IED) 2010/75/EU applies to existing installations (which were subject to the Integrated Pollution Prevention and Control directive provisions) as of 7th January 2014. Permit conditions were added on 21/03/14 which are relevant to the site following the introduction of IED.

The status log of the permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	Date	Comments
Application received BV4177IS	Duly made 22/07/04	
Additional information received	Request dated 08/03/05	Response dated 29/03/05
Additional information received	Request dated 20/04/05	Response dated 04/05/05
Request to extend determination	Request dated 16/11/04	Request accepted 17/11/04
Permit determined BV4177IS	27/06/05	Original permit issued to Volac International Limited
Application EPR/BV4177IS/V002	Duly made 18/12/06	Application to vary the permit.
Additional information received	Request dated 12/04/07	Response dated 19/04/07
Additional information received	Request dated 10/05/07	Response dated 06/07/07
Request to extend determination	Request dated 29/06/07	Request accepted 01/07/07
Variation determined EPR/BV4177IS/V002	31/08/07	Varied permit issued.
Application EPR/BV4177IS/V003	Duly made 29/10/07	Application to vary the permit.
Additional information received	07/12/07	
Request to extend determination	Request dated 15/01/08	Request accepted 21/01/08
Additional information received	22/01/08	
Additional information received	25/01/08	
Variation determined EPR/BV4177IS/V003	31/01/08	Varied permit issued.
Application EPR/BV4177IS/V004	Duly made 03/01/12	Application to vary the permit.
Additional information received	07/02/12	Details of storage arrangements for Liquefied Natural Gas; management of explosion hazards; energy efficiency.
Variation determined EPR/BV4177IS/V004	21/03/12	Varied permit issued.

Status log of the permit

Description	Date	Comments
Application EPR/BV4177IS/V005	Duly made 09/12/13	
Application EPR/BV4177IS/V005 Issued	21/03/14	
Application EPR/BV4177IS/V006	Duly made 26/01/15	
Application EPR/BV4177IS/V006	23/03/15	Application withdrawn by applicant.
Application EPR/BV4177IS PAN-000093	Duly made 17/09/15	
Request to extend determination deadline	06/01/16	NRW request to extend deadline
Additional information received	01/02/16	Additional information received in relation to request on 26/01/16.
Additional information received	08/02/16	Draft fire prevention plan received.
Additional information received	10/02/16	Additional information received in relation to emission points requested 02/02/16.
Additional information received	25/02/16	Information received via email about total capacity of new plant.
Additional information received	29/02/16	Information received via email in relation to site drainage.
Additional information received	09/03/16	Information received via email about CHP plant stack.
Additional information received	09/03/16	Revised drainage plans received.
Additional information received	11/03/16	Information received via email in relation to site drainage arrangements.
Variation determined EPR/BV4177IS/V007	17/03/16	Varied permit issued.

Other existing Licences/Authorisations/Registrations relating to the site

Holder	Permit number	Date of issue
Consortium Agreement relating to the Felinfach Effluent Treatment Plant	IS01	2004
Sensient Flavors Limited & Volac International Limited (Felinfach Effluent Treatment Plant)	EPR/BP3135EB	04/07/14

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

EPR/BV4177IS

The Natural Resources Body for Wales (“Natural Resources Wales”) authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010

Volac International Limited (“the operator”),

whose registered office is

**50 Fishers Lane
Orwell
Royston
Hertfordshire
SG8 5QX**

company registration number **2576295**

to operate an installation at

**Volac Felinfach
Felinfach
Lampeter
Ceredigion
SA48 8AG**

to the extent authorised by and subject to the conditions of this permit.

Name	Date
	17 March 2016

Eirian Macdonald

Authorised on behalf of Natural Resources Wales

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy efficiency

1.2.1 The operator shall:

- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
- (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 The operator shall:

- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
- (b) maintain records of raw materials and water used in the activities;
- (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

1.4.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

- (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

2.3.1 (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by Natural Resources Wales.

- (b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

2.3.2 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.3 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

- (a) the nature of the process producing the waste;
- (b) the composition of the waste;
- (c) the handling requirements of the waste;
- (d) the hazardous property associated with the waste, if applicable; and
- (e) the waste code of the waste.

2.3.4 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by Natural Resources Wales.

2.5 Pre-operational conditions

- 2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4 have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Monitoring

- 3.3.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1, S3.2 and S3.3;
- 3.3.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.3.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.3.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by Natural Resources Wales.

- 3.3.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2, S3.3 unless otherwise agreed in writing by Natural Resources Wales.

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

- 3.3.2 The operator shall:

- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
- (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

- 3.4.2 The operator shall:

- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.6 Pests

- 3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

- 3.6.2 The operator shall:

- (a) if notified by Natural Resources Wales, submit to Natural Resources Wales for approval within the period specified, a pests management plan which identifies and minimises risks of pollution, hazard or annoyance from pests;
- (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by Natural resources Wales

4 Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by Natural Resources Wales, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by Natural Resources Wales.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
 - (b) the annual production/treatment data set out in schedule 4 table S4.2; and
 - (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by Natural Resources Wales, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
 - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to Natural Resources Wales, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

4.3.1 Where Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.

4.3.2 Natural Resources Wales shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

4.3.3 (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—

- (i) inform Natural Resources Wales,
- (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
- (iii) take the measures necessary to prevent further possible incidents or accidents;

(b) in the event of a breach of any permit condition the operator must immediately—

- (i) inform Natural Resources Wales, and
- (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;

(c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.4 Any information provided under condition 4.3.3 [(a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit,] shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.5 In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

- 4.3.6 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
- (a) Natural Resources Wales shall be notified at least 14 days before making the change; and
 - (b) the notification shall contain a description of the proposed change in operation.
- 4.3.7 Natural Resources Wales shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.8 Where the operator has entered into a climate change agreement with the Government, Natural Resources Wales shall be notified within one month of:
- (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR1	Section 6.8 Part A(1)(d)(i): Production of food products from animal raw materials.	Products as defined in Section B1.4.1 of the Application. Raw materials used as specified in Section B2.4 of the Application.	From receipt of raw materials to despatch of finished product.
AR13	Section 1.1 Part B(a)(ii)	The combustion of wood in a combined heat and power (CHP) plant.	20 MW thermal input plant generating electricity and heat. Non waste wood only.
Directly Associated Activity			
AR2	Directly Associated Activity.	Raw material storage	From receipt of raw materials to input to process. Excludes the storage of heavy fuel oil.
AR3	Directly Associated Activity.	Intermediate storage of partly processed materials.	From receipt of materials to return to process.
AR4	Directly Associated Activity	Intermediate storage of recovered nitric acid	From receipt of recovered nitric acid to return to process or disposal to sewer.
AR5	Directly Associated Activity.	Storage and handling of kerosene.	From receipt of kerosene to despatch to boilers. For use as standby fuel for LNG systems.
AR6	Directly Associated Activity.	Storage and handling of solid and liquid wastes.	Production of waste to despatch from the Permitted Installation.
AR7	Directly Associated Activity.	Finished products storage and packaging.	From receipt of finished goods to despatch from the Permitted Installation.
AR8	Directly Associated Activity.	Heat generation plant.	Installed capacity less than 20 MW thermal input.
AR9	Directly Associated Activity	Steam generation.	Two steam-raising boilers (9.622 MW and 9.025 MW output) to supply steam to the product processing areas. Powered by LNG/kerosene.

AR10	Directly Associated Activity	Storage and handling of Liquefied Natural Gas.	From receipt of Liquefied Natural Gas to delivery to boilers, including tanker reception facilities, storage tanks, a re-gasification process and site gas distribution pipework. Storage limited to 49 tonnes at any one time.
AR11	Directly Associated Activity.	Ammonia refrigeration plant.	The whole refrigeration system including storage and handling of ammonia.
AR12	Directly Associated Activity	Storage of wood.	Storage prior to being used as fuel in CHP plant. Non waste wood only.
AR14	Directly Associated Activity	Chipping of wood.	Chipping of wood in a building prior to be used as fuel for the CHP plant. Non waste wood only.
AR15	Directly Associated Activity	Storage of bottom ash and fly ash.	Production of waste to despatch from the Permitted Installation.
AR16	Directly Associated Activity	Water heating circuit.	10 MW thermal output steam boiler providing heat and hot water
AR17	Directly Associated Activity	Storage of gas oil.	From receipt of gas oil to use in water heating circuit.

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	The response to questions 2.1 and 2.2 given in pages 10-38 of the application.	22/07/04
Variation Application	The response to questions 1.2, 2.1 to 2.12 (inclusive), 3.1 and 4.1 to 4.3 (inclusive) in part c of the Application Form.	20/12/06
Variation Application	The response to questions 1.2, 2.1 to 2.12 (inclusive), 3.1 and 4.1 to 4.3 (inclusive) in part C of the Application Form, and further information.	29/10/07, 07/12/07, 22/01/08, 25/01/08
Variation Application	The response to question 2b in Part C2 of the Application Form, questions 3a, 4a, 6a, 6b, 6d and 6e in part C3 of the Application Form.	03/01/12
Response to Schedule 5 Notice dated 30/01/12	The response to questions 1 and 2	07/02/12

Table S1.2 Operating techniques

Description	Parts	Date Received
Response to Schedule 5 Notice dated 07/02/12.	The response to question 1.	07/02/12
JER5909 received with variation application	Section 2 (detailed Project Description), Section 3 (Operations) and Section 4 (Management).	14/09/15
Fire Prevention Plan	All.	On completion of IP17
Email from applicant	2 - emission points and fuel use	29/02/16
Email from operator	Confirmation of thermal capacities of all combustion plant on site.	08/03/16
Stacks – additional detail	All.	09/03/16
Drainage Plans drawings P2013-03 09 and P2013-33 011	All.	09/03/16
Email from applicant	All – information relating to drainage arrangements	11/03/16

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IP1-IP8	Improvement conditions required by EPR/BV4177IS issued 27/06/05.	Completed
IP9	Improvement condition required by EPR/BV4177IS/PP3481MY issued 31/08/07.	Completed
IP10-IP12	Improvement conditions required by EPR/BV4177IS/V004 issued 21/03/12.	Completed
IP13	The Operator shall provide a written report to Natural Resources Wales detailing proposals to ensure protection of land at the installation (and adjacent controlled waters) in the event of any failure of primary containment of silos AL and AM. The report shall contain a timetable for any proposed works deemed necessary to secure BAT.	New deadline 30/06/16
IP14-IP15	Improvement conditions required by EPR/BV4177IS/V004 issued 21/03/12.	Completed
IP16	The Operator shall submit a written report to Natural Resources Wales on the commissioning of the combined heat and power (CHP) biomass plant. The report shall summarise the environmental performance of the plant as installed against the design parameters set out in the Application. The report shall also include a review of the performance of the facility against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions.	Within three months of the completion of commissioning
IP17	The Operator shall submit the final version of the Fire Prevention Plan provided as a draft on 08/02/16, to Natural Resources Wales for approval.	Within one month of the completion of commissioning

Table S1.4 Pre-operational measures

Reference	Requirement	Date
1	Pre operational measure required by EPR/BV4177IS/V004 issued 21/03/12.	Completed
PO1	Prior to the commencement of commissioning of the combined heat and power (CHP) biomass plant the operator shall provide a written commissioning plan, including timescales for completion, for approval by Natural Resources Wales. The commissioning plan shall include the expected emissions to the environment during the different stages of commissioning, the expected durations of commissioning activities and the actions to be taken to protect the environment and report to Natural Resources Wales in the event that actual emissions exceed expected emissions. Commissioning shall be carried out in accordance with the commissioning plan as approved.	-
PO2	Prior to commencing operations at the CHP plant the Operator shall submit to Natural Resources Wales for approval a protocol for the sampling and testing of fly ash and bottom ash for the purposes of assessing its hazard status. Sampling and testing shall be carried out in accordance with the protocol as approved.	-

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels

Raw materials and fuel description	Specification
None specified	None specified.

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 described in section B2.2.1 of the Application. Point A1 on drawing IPPC_01_03 20/11/13.	Feeds dryer.	None	-	-	-	-
A2 described in section B2.2.1 of the Application. Point A2 on drawing IPPC_01_03 20/11/13.	Feeds dryer.	None	-	-	-	-
A3a 2.5MW thermal oil heater. Point A3a on drawing IPPC_01_03 20/11/13.	2.5MW thermal input, thermal oil heater powered by LNG serving drying process.	None	-	-	-	-
A3b 2.5MW thermal oil heater. Point A3b on drawing IPPC_01_03 20/11/13.	2.5MW thermal input, thermal oil heater powered by LNG serving drying process.	None	-	-	-	-
A4 described in section B2.2.1 of the Application. Point A4 on drawing IPPC_01_03 20/11/13.	Food dryer.	None	-	-	-	-

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A5 described in section B2.2.1 of the Application. Point A5 on drawing IPPC_01_03 20/11/13.	Gas oil boiler.	None	-	-	-	-
A6 described in section B2.2.44 of the Application. Point A6 on drawing IPPC_01_03 20/11/13.	2 x steam raising boilers (9.622 MW and 9.025 MW output) powered by LNG.	None	No limit set	-	-	-
A7 described in section B2.2.44 of the Application. Point A7 on drawing IPPC_01_03 20/11/13.	Wet scrubber on nitric acid tank vent (Tank VN).	None	No limit set	-	-	-
A8 described in section C2.1 and C2.2 of the Variation Application WP3833XL. Point A8 on drawing IPPC_01_03 20/11/13.	Dryer.	None.	No limit set	-	-	-
A9 described in section C2.1 and C2.2 of the Variation Application WP3833XL. Point A9 on drawing IPPC_01_03 20/11/13.	Dryer.	None	No limit set	-	-	-

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A10 described in the response to Part C2 question 2b of the application form. Point A10 on drawing IPPC_01_03 20/11/13.	Lactose milling, via a bag filter.	None	No limit set	-	-	-
A11 described in the response to Part C2 question 2b of the application form. Point A11 on drawing IPPC_01_03 20/11/13.	Lactose powder handling, via a bag filter	None	No limit set	-	-	-
A12 described in the response to Part C2 question 2b of the application form. Point A12 on drawing IPPC_01_03 20/11/13.	Vent on the wet scrubber installed on tank AK.	None	No limit set	-	-	-
A13 described in the response to Part C2 question 2b of the application form. Point A13 on drawing IPPC_01_03 20/11/13.	Safety valve in the ammonia circuit of the refrigeration plant	None	No limit set	-	-	-
A14.1 Vent pipe located on tank LNG1. Point A14 on drawing IPPC_01_03 20/11/13.	Pressure relief valves on liquefied natural gas storage tank.	None	No limit set	-	-	-
A14.2 Vent stack connected to pressure relief valves on vaporisers serving tank LNG1. Point A14 on drawing IPPC_01_03 20/11/13.	Pressure relief valves on liquefied natural gas storage tank.	None	No limit set	-	-	-

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A15 37m Stack. Point A15 on drawing JER5909-PER-003.	20 MWth Combined heat and power (CHP) Biomass Plant and 10 MWe steam boiler in hot water heating system.	Sulphur Dioxide (SO ₂)	30 mg.Nm ⁻³	Periodic	Annual	EN 14791
		Nitrogen Oxides (NO _x)	250 mg.Nm ⁻³	Periodic	Annual	EN 14792
		Carbon Monoxide (CO)	150 mg.Nm ⁻³	Hourly average	Continuous measurement	EN 14181 ¹
		Carbon Monoxide (CO)	150 mg.Nm ⁻³	Periodic	Annual	EN 15058
		Total particulate matter (PM)	10 mg.Nm ⁻³	Periodic	Quarterly ²	EN 13284-1

Note 1: CEMs which meet the MCERTS requirements should also follow the principles of EN 14181 (i.e. QAL2/AST and QAL3) but a reduced number of parallel measurements may be acceptable (subject to NRW approval).

Note 2: Monitoring to be undertaken quarterly in the first year of operation of the CHP plant. Subject to agreement with NRW the frequency may be reduced after this time.

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
L1 Soakaway located on the right of the northern boundary of the site area as shown on site plan Discharge Points IPPC_01_03 received as part of variation application EPR/BV4177I S/V005.	Uncontaminated surface water from area of hard standing around the LNG vaporisers.	None	-	-	-	-
L2 Soakaway located to the left of the LNG compound area as shown on site plan Discharge Points IPPC_01_03 received as part of variation application EPR/BV4177I S/V005.	Uncontaminated surface water via oil interceptor from LNG offloading area.	None	-	-	-	-
L3 Soakaway located centrally on the northern boundary of the site as shown on site plan Discharge Points IPPC_01_03 received as part of variation application EPR/BV4177I S/V005.	Uncontaminated surface water from car park area.	None	-	-	-	-

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
L4 Soakaway located to the left of the LNG compound area as shown on site plan Discharge Points IPPC_01_03 received as part of variation application EPR/BV4177I S/V005.	Uncontaminated surface water via oil interceptor from car park and road area.	None	-	-	-	-
W1 Discharge to unnamed watercourse, tributary of the River Aeron. Discharge point shown on drawing P2015-033 09 received as part of variation application EPR/BV4177I S/V007.	Uncontaminated surface water from storage areas, roof water, roads and concreted areas of land added in application EPR/BV4177IS/V007.	None	Discharge to be free of any visible solids, oil or grease	Periodic	Monthly	Visual

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 Private sewer to Felinfach Effluent Treatment Plant. Shown on drawing IPPC 01/03 submitted with Application.	The Installation, via the effluent handling plant	Biological Oxygen Demand	10,000 mg/l		Monthly	5 day BOD determined in the presence of allylthiourea.

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
		Chemical Oxygen demand	22,162 mg/l		Monthly	ISO 6060: 1989, Water Quality – Determination of chemical oxygen demand
		Copper	1.0 mg/l		Monthly	BS EN ISO 11885:1998, BS 6068-2.60:1998
		Lead	1.0 mg/l		Monthly	BS EN ISO 11885:1998, BS 6068-2.60:1998
		Nitrogen, total oxidised as N	50 mg/l		Monthly	BS EN ISO 13995:1996
		Phosphate as P	150 mg/l		Monthly	BS6068: Section 2.28 1997. Determination of phosphorus – ammonium molybdate spectrometric method
		Suspended Solids	3,324 mg/l		Monthly	ISO 11929:1997 EN872 Determination of suspended solids.
		Flow	-	Hourly average	Continuous	Volumetric method

Schedule 4 - Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Biological Oxygen Demand (mg/l)	S1	Annual	1 April
Chemical Oxygen Demand (mg/l)	S1	Annual	1 April
Copper (mg/l)	S1	Annual	1 April
Lead (mg/l)	S1	Annual	1 April
Nitrogen, Total Oxidised as N (mg/l)	S1	Annual	1 April
Phosphate as P (mg/l)	S1	Annual	1 April
Suspended solids (mg/l)	S1	Annual	1 April
Effluent Flow	S1	Annual	1 April
Sulphur Dioxide	A15	Annual	1 April
Nitrogen Oxides	A15	Annual	1 April
Carbon Monoxide	A15	Annual	1 April
Total particulate matter	A15	Annual	1 April
Visual monitoring of discharge to watercourse	W1	Annual	1 April

Table S4.2 Annual production/treatment	
Parameter	Units
Production of feeds and foods	Tonnes

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Energy use	Annual	kWh/tonne
Potable water use	Annual	m ³ /tonne
Non potable water use	Annual	m ³ /tonne
Waste disposal	Annual	t/tonne

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Sewer	Form sewer 1 or other form as agreed in writing by Natural Resources Wales	01/04/05
Water usage	Form water usage 1 or other form as agreed in writing by Natural Resources Wales	01/04/05
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	28/08/07
Air	Form air 1 or other form as agreed in writing by Natural Resources Wales	17/03/16

Table S4.4 Reporting forms

Media/parameter	Reporting format	Date of form
Water and Land	Form water 1 or other form as agreed in writing by Natural Resources Wales	17/03/16
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	17/03/16

Schedule 5 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment	
To be notified Immediately	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a permit condition	
To be notified immediately	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) In the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment:	
To be notified immediately	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 - Interpretation

“*authorised officer*” means any person authorised by Natural Resources Wales under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“*biomass*” means:

- a) vegetable matter from agriculture and forestry;
- b) vegetable waste from the food processing industry, if the heat generated is recovered;
- c) fibrous vegetable waste from virgin pulp production and from production of paper from pulp, if it is co-incinerated at the place of production and the heat generated is recovered;
- d) cork waste;
- e) wood waste with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coating, and which includes in particular such wood waste originating from construction and demolition waste.

“*Industrial Emissions Directive*” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

Pests” means *Birds, Vermin and Insects*.

BS EN 14181 is applicable to large combustion plant (LCP) and waste incineration installations (WID) under the international Industrial Emissions Directive standard (IED). For other processes that are not classified as being WID or LCP, the monitoring standards for Continuous Emission Monitoring Systems (CEMS) should follow the principles of BS EN 14181 (i.e. QAL1, QAL2/AST & QAL3); however these procedures may be modified with written agreement from NRW. Further guidance on BS EN 14181, and its application, is contained in Environment Agency Technical Guidance Note M2 – Monitoring of stack emissions to air.

Schedule 7 - Site plan



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