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Mr. Bill Lloyd  
Pencefn Feeds Ltd  
Pencefn Drysgol  
Dewi Road  
Tregaron  
Ceredigion  
SY25 6JW

Company number: 04536928

**Dyddiad/Date:** 20 March 2019

Dear Mr. Lloyd,

**Environmental Permitting Regulations 2016  
Regulation of the Anaerobic Digestion Plant at Pencefn Feeds, Tregaron and  
land spreading of resultant digestate**

Firstly, thank you for your time last Thursday taking me around the AD plant at Pencefn Feeds and I apologise in advance for the length of this letter which needs to cover the following:

- current operation of the AD Plant
- applying for an environmental permit
- Application of digestate to land; and
- Quality Protocol for anaerobic digestate

**There are several ACTIONS listed within this letter which you will need to complete. Please call me on 0300 065 4022 to discuss each ACTION and agree timescales for completion once you have had the opportunity to read through the letter.**

**Current Operation of the AD Plant**

Considering the December 2016 pollution incident, I was surprised during our meeting when you confirmed that the facility was currently operating (under reduced capacity)

and had been doing so for approximately 1 year under the conditions of a T24 – ‘Anaerobic digestion at premises used for agriculture and burning of resultant biogas. (Agricultural)’ exemption. Looking at our public register you have a T24 – ‘Anaerobic digestion at premises used for agriculture and burning of resultant biogas. (Agricultural)’ exemption registered at the property (Exemption registration WME016384), which expires on 03/10/2019. You also confirmed that agricultural slurry from a neighbouring farm was being imported to use as a feedstock along with bio-crops grown on site. Slurry was being imported as apart from a small number of sheep there is no livestock being kept at the farm seeing most of the land is now used for growing bio-crops and trees.

Looking at our records after my visit the fact that the site is operational is a contradiction to the email that you sent to my colleague Kim Jones on 5 March 2018, where you stated the following when asked if the AD Plant was operating and whether slurry was being brought onto the farm: ***‘The AD at Pencefn is NOT operating, it’s very disappointing to hear you receiving allegations that the AD is operating’***. I am not aware of us receiving any further correspondence to say that the AD Plant was now operational.

**We have concerns that you have started back operating the AD Plant without providing any evidence to Natural Resources Wales that you have properly rectified the problems which led to the December 2016 pollution incident and that the operation fits within the parameters of the T24 waste exemption.**

**ACTION 1: Relating to your compliance with the T24 – ‘Anaerobic digestion at premises used for agriculture and burning of resultant biogas. (Agricultural)’ exemption can you provide in writing answers to the following questions?**

- The waste types used as a feedstock in the AD Plant and their EWC Codes?
- Where any agricultural slurry being used in the system be sourced if not at Pencefn Drysgol (you stated that there are now no cattle kept at the farm itself)?
- Are any non-waste materials to be used as a feedstock in the facility (such as bio-crops grown specifically for the process)?
- The quantity of waste to be stored or treated at any one time (including the total of any slurry imported onto the farm from elsewhere, the volume of waste within the digester and the digestate being stored after coming out of the digester)?
- The length of time the waste material is kept within the digester?
- The net rated thermal input of the AD plant biogas burner (or the combined net rated thermal input if there is more than one burner associated with the AD plant)?

- **Under what authorisation the resultant Digestate (which is also waste) will be spread to land?**
- **Where the resultant digestate will be spread to land and in what quantities (e.g. at Pencefn Drysgol and/or other properties)**

The Waste Framework Directive (WFD) is the European Directive which underpins the Environmental Permitting Regulations and within it Article 13 states that Member States shall take the necessary measures to ensure that waste management is carried out without endangering human health, without harming the environment and, in particular:

- a. without risk to water, air, soil, plants or animals;
- b. without causing a nuisance through noise or odours; and
- c. without adversely affecting the countryside or places of special interest.

Even though it is not referenced directly within the T24 exemption Article 13 of the WFD is relevant and must be observed. Considering the pollution incident that occurred previously with the AD plant at Pencefn Drysgol we need to be especially sure that appropriate measures have been put in place to prevent the same from happening again. The previous incident breached parts (a) and (c) of Article 13 and you must put in measures to ensure that a similar incident doesn't occur again.

**ACTION 2:** We require written confirmation from an appropriately qualified person, such as a chartered engineer that the system at Pencefn Drysgol meets the appropriate construction standards for an Anaerobic Digester of this type and will not pose a risk of leakage, like what previously occurred. Special reference must be made to the replacement of the defective pipe and the new pipe's compliance with appropriate industry standards for an Anaerobic Digester of this type.

**As you can appreciate there is high public interest in this facility and for the sake of the local environment and especially the designated Afon Teifi we need to be confident that a similar problem will not occur. We require this information as a matter of priority to allow the AD Plant to continue operating under the T24 exemption. Failure to supply the required information will result in the exemption being de-registered.**

### **Applying for an Environmental Permit**

It was explained that you wish to apply for an environmental permit for the operation and we spoke about different options including bespoke and standard rule set permits. Based on our discussions it appears that you are within the scope of the standard rules set SR2018 No13 – '*Anaerobic digestion facility including use of the resultant biogas*'. It appears that you would be able to apply for this permit at the site. I have summarised our discussions below and also provided additional relevant information.

## Waste Types & Quantities:

We looked at the waste types allowed under the SR2018 No13 permit and you stated that the waste types you were thinking of digesting were listed. I also highlighted that anaerobic digestion of waste or waste containing mixtures cannot exceed 100 tonnes per day; the maximum throughput of animal wastes shall be no more than 10 tonnes per day (you stated that this type of material would not be accepted); and the total quantity of waste or a combination of waste and non-waste including solids and liquids accepted at the site shall not exceed 100 tonnes in any one day.

You also confirmed that the aggregated rated thermal output of all appliances used to burn biogas was less than 5 megawatts.

## Site Boundary:

The permitted site boundary should include any operational area of the AD plant plus all associated infrastructure such as the bunds, areas used for the containment of spills and the auxiliary flare.

## Secondary Containment, Impermeable Surfaces and Sealed Drainage Systems:

**We have concerns regarding the bunded secondary containment areas.** You will need to prove to us via a suitably qualified person, such as a chartered engineer that any bund or containment wall is for example – sufficiently robust, water tight, large enough, in the correct location etc. using the latest applicable industry standards.

The SR2018 No13 permit stipulates that *‘All storage and process tanks shall be located on an impermeable surface (a hydraulic permeability of not greater than  $1 \times 10^{-9}$  m/s) with sealed construction joints within a bunded area. The bunded area shall have a capacity at least 110% of the largest vessel or 25% of the total tankage volume, whichever is the greater. Bunds shall be regularly inspected to ensure that bunds filled by rainwater are regularly emptied. Connections and fill points should be within the bunded area and no pipework should penetrate the bund wall. Underground tanks shall have secondary containment and appropriate leak detection. No less than 95% of the bund capacity shall be maintained at all times.’* So, this permit condition controls the size and permeability of the bund.

We discussed whether the floor of the bunded area had to be surfaced with concrete or whether a special grade of bitumen would be sufficient. The permit states the following:

*“impermeable surface” means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface, and should be read in conjunction with the term “sealed drainage system”.*

*“sealed drainage system” in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:*

*(a) no liquid will run off the surface otherwise than via the system;*

*(b) except where they may lawfully be discharged to foul sewer, all liquids entering the*

*system are collected in a sealed sump.*

In summary the floors of the bunded areas don't need to be surfaced with concrete but you will need to prove to us that they are impermeable to a hydraulic permeability of not greater than  $1 \times 10^{-9}$  m/s and we would again want this in writing from a suitably qualified person such as a chartered engineer.

### **Technical competence:**

It was explained that both you and your brother Jim Lloyd are close to completing WAMITAB competency awards.

Bill Lloyd – MROC5: Level 4 Medium Risk Operator Competence for Anaerobic Digestion. This award is sufficient for the Anaerobic Digestion Facility including use of the resultant biogas standard rules permit.

Jim Lloyd – MROC10a: Level 4 Medium Risk Operator Competence for Non-Hazardous Sludge and Land Spreading. This award does not cover the Anaerobic Digestion process but does cover the Mobile Plant for land spreading (land treatment resulting in benefit) standard rules permit, which you (or a contractor) will need to spread the digestate produced by the AD Plant to land (see Application of digest to land section).

You will need to supply evidence of your WAMITAB award with the permit application.

### **Application Forms:**

The application forms can be found at the following [link](#). You need to complete form A, B1 and F1 (ignore the first section of F1).

Your pre-application reference number is: **PPN-00310** and should be quoted the application.

### **Charges:**

Our charging scheme for 2018/19 can be found at the following [link](#).

There is an error on the charging guidance as the SR2018 no13 has been omitted, please use the fees for the SR2012 No 11 permit. According to our charging guidelines the application charge for 2018/19 is £1,948 with an annual subsistence fee of £3,413. There is potential that come 1 April these fees will be reviewed for the new financial year and could increase.

You will also have to pay fees if you wished to surrender, vary or transfer the permit at a future date.

### **Environmental Management System:**

You will need to develop an Environmental Management System (EMS) 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.

Natural Resources Wales have developed EMS toolkits which can be used to help you develop one for your site, please follow this [link](#).

You can put your own EMS together providing it is sufficient for the requirements of the permit.

### **Other Management Systems:**

Odour management plan – I have checked our guidance and an odour management plan is required with a standard rules Anaerobic Digestion facility permit unless otherwise agreed, in writing, by Natural Resources Wales. As a standard rules permit holder you would not need to submit the odour management plan, but we would look at it during inspections or if an odour problem arises.

### **Waste Returns:**

Within a month after the end of each financial quarter you will need to submit waste returns to Natural Resources Wales detailing the weight of waste received at site and the weight of waste taken from site. You will be provided with the relevant reporting form.

### **Compliance/CCS:**

You will be inspected by an NRW compliance officer who will produce Compliance Assessment Reports following each visit which will be at least annually. Permit Non-compliances will be recorded if identified and can affect the amount of subsistence payable.

### **Public Register:**

All application and supporting documents will be placed on the public register. You need to inform us of any confidentiality issues to be excluded from the public register as part of the application and include evidence to support the claim.

### **Planning Permission:**

As explained we no longer need planning permission to be in place before we issue a permit and do not require to see evidence of planning with the application for a standard rules permit. **This does not however mean that planning permission will not be needed to construct and operate the system.** You can still be non-compliant with planning legislation even if the site has been issued with an Environmental Permit.

**I will be updating Ceredigion County Council planning authority to make them aware that the site is currently operational.**

### **Making changes to the permit:**

Any changes to the operation, technical competent person or the controlling company may affect the permit (e.g. the need to transfer or vary the permit, update the EMS

etc.) and should be discussed with your compliance officer.

### **Surrender:**

As already mentioned in the charges section there is a fee to surrender a permit. You also need to keep evidence to show that your operations have not led to the contamination of the site where the AD Plant is located (photographs, site condition reports etc.).

**ACTION 3:** Apply for a relevant Environmental Permit to operate the facility. If you decide to apply for the SR2018 No13 – ‘*Anaerobic digestion facility including use of the resultant biogas*’ permit you will be required to submit the following to apply (refer to the sections above):

- The correct application forms A, B1 and F1.
- The correct application fees.
- A scale site plan with the area to be covered by the permit outlined.
- Confirmation that you have enrolled on or have achieved the relevant technical competence award.

This will get you through the permit application process but before operating you will need:

- To have developed an Environmental Management System (EMS) for the site.
- To have completed all the necessary infrastructure improvements (impermeable surfaces, secondary containment, replacement pipe work) and provided us with the required certification, such as engineer sign-off.
- To have obtained the relevant planning permission.
- To have developed an odour management plan.

### **Application of digest to land**

As explained on site the digest which comes out of the digester is still classified as ‘controlled waste’ and will need some form of authorisation to be spread to land.

I have checked our public register and you currently have a U10 – ‘spreading waste to benefit agricultural land’ to land exemption (registration NRW-WME016384) which expires on 03/10/2019. This exemption allows up to 50 tonnes per acre of digestate produced only from the limited range of waste and conditions allowed under [T24](#) and [T25](#) exemptions only (EWC 19 06 04) to be spread to agricultural land provided the



place where waste that is stored or land which is to be spread is at least 10 metres from a watercourse and 50 metres from a spring, well or borehole.

To spread waste not produced under the T24 exemption you are going to need to apply for a mobile plant environmental permit or employ a contractor who holds such a permit. The most relevant permit to cover the spreading of digest produced under the SR2018 No13 AD plant permit is the Standard rules SR2010 No4 – '*Mobile plant for land spreading (land treatment resulting in benefit to agriculture or ecological improvement)*'. You will not be able to spread digest produced under the SR2018 No13 permit to land under the T24 exemption.

The majority of the information I have detailed above regarding the permit for the AD plant stands for the mobile plant permit. The main difference is that you don't pay an ongoing subsistence fee for the mobile plant permit instead you apply for each deployment of waste. In a deployment application (which lasts one year) you will need to detail the nutrient properties of the digest and the requirements of the land to be spread upon. You will need to show the agricultural benefit of applying the digest to the identified fields, for example increasing the phosphate level to the crop requirement. The deployment fee varies depending on the risk of the waste material being spread and the sensitivity of the receiving fields. We can discuss mobile plant permits at a later date.

You should also be aware that in November 2018 the Welsh Government announced new agricultural regulations which are due to be released in Spring 2019 and become law in January 2020. These regulations will limit the amount of Nitrogen allowed to be spread on agricultural land and have closed periods where no fertilisers (organic and inorganic) are allowed to be applied. This is likely to affect the spreading of the digestate and you must ensure that you have sufficient land and storage capacity to be compliant with these regulations once they become law.

**ACTION 4: Once you have decided how to proceed with the AD Plant you need to ensure that you have the correct authorisation to apply the resultant digestate to land. We can discuss further once a decision regarding the AD Plant authorisation has been made.**

### **Quality Protocol: Anaerobic Digestate**

As discussed there is a way of removing the digestate produced by the AD Plant from the waste stream, so it is not considered controlled waste and subject to waste management controls. The AD quality protocol sets out the criteria to produce quality digestate from anaerobic digestion of source-segregated biodegradable waste (bio-waste). Quality digestate from anaerobic digestion includes the whole digestate, in addition to any subsequently separated fibre or liquor fractions. If these criteria are met, quality outputs from anaerobic digestion will normally be regarded as having been fully recovered and to have ceased to be waste. The quality protocol identifies the point at which waste, having been fully recovered, may be regarded as a non-waste product that can be used in specified markets, without the need for waste management controls. Further details on the quality protocol for Anaerobic digestate can be found at the following [link](#).



Again, apologies for the length of this letter but as you can appreciate there is a lot to cover here and it is important that you get this right. Please give me a call on 0300 065 4022 so we can agree timescales for each ACTION and I can answer any queries which you may have.

Yours sincerely



**Jeremy Goddard**

**Uwch Swyddog Amgylchedd / Senior Environment Officer**

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