GP Biotec Ltd

Great Porthamel, Talgarth,

LD3 0DL

GP – E08

Environmental Management and Monitoring

1.1Overview

This procedure provides an overview of all the necessary environmental monitoring procedures and controls to ensure compliance with the requirements of ISO14001 as well as the Site's Environmental Permit.

GP Biotec shall establish, implement, and maintain procedures to monitor and measure, on a regular basis, the key characteristics of its operations and activities that have significant impacts on the environment.

The monitoring shall include procedures for tracking of performance, applicable operational controls and conformity with the company's objectives and targets, as well as the calibration and maintenance of monitoring equipment. Monitoring and measurement will also include the following;

- Emissions to water, air or land;
- Emissions of substances not controlled by emission limits;
- Dust;
- Noise and vibration;
- Odour;
- Pests
- Weather
- Aspects with significant environmental impacts

This procedure also monitors and records the sites continual improvements for sites performance and advancements in cleaner technologies.

1.2 Emissions to water, air and land

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 of the sites environmental permit and the limits given in schedule 3 shall not be exceeded.

1.2.1 Air Emissions

A1 and A2 represent two CHP engines on Site, both of which are subject to annual emissions testing. Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme have MCERTS certification/accreditation. Schedule 3 of the Site's Environmental Permit details the emissions limits and monitoring requirements for both A1 and A2.

Point A3 on the Permit Site Plan is the emergency flare and is not subject to emissions testing unless the flare is operating in excess of 10% of the time, taken on an annual assessment period; in this instance annual monitoring is required.

Permanent means of access is provided to enable sampling/monitoring.

1.2.2 Surface Water

All surface water collected from the ABP waste reception areas is currently collected and transferred into the digesters. On commissioning of the two new digester tanks all uncontaminated surface water that collects in the bunded area will be released at point W1 on the Permit Site Plan to where the surface water enters the River Llynfi. The co-ordinates for the location are 315660, 235523.

The surface water collecting at point W1 will be monitored daily, before release there will be a visual check to ensure that the water is clear and not contaminated, along with a review of the Daily Site Checklist to ensure that no issues e.g. spillages etc have occurred. PH and Ammonium concentration test will be carried out on each collected water before its release. As agreed in the permit, these records will be kept and reported to the NRW as part of the annual performance report. A level sensor and valve is in place to prevent the accidental release of contaminated water.

1.2.3 Ground Water

No physical groundwater monitoring is required, this conclusion is based on an appraisal of the risk of contamination. Every 5 years, a brief appraisal is carried out supported by the site condition report to

fulfil condition 3.13 in the environmental permit. Template for appraisal could be found in N:\Site Management\Templates

1.2.4 Emissions to Sewer

There are no emissions to sewer arising from the process. There are no connections to any public or private foul water systems at the site.

1.2.5 Land

There are no emissions to land arising from the installation.

All PAS110 compliant digestate produced by the plant will be transferred by sealed pipework to the Great Porthamel Farm storage lagoon for use as a biofertiliser. The storage and use of digestate falls outside of the permitted installation and is not regulated or controlled by the Permit; however GP Biotec continues to be certified by the Biofertiliser Certification Scheme and therefore only PAS110 and Anaerobic Digestate Quality Protocol (ADQP) compliant digestate (which falls outside of the waste regulatory framework) leaves the Site for application to land. All application rates are based on soil analysis and cropping rotations.

1.3 Dust Management

Occupational and environmental dust is a potential issue at Site. The key dust generating activities are related to the vehicle movements during dry weather periods. The Site has a number of dust mitigation measures in place to manage dust related impacts.

Dust levels will be monitored by a visual assessment to be undertaken on a daily basis by a competent person and overseen by the Site Manager. It is the duty of all Site operatives to be vigilant and report any problems immediately to the competent person who will implement corrective action.

When the need arises, Site surfaces are regularly dampened and cleaned to suppress dust emissions;

The Site operatives are responsible for recording the details relating to the findings of the visual assessment in the Daily Checks.

Where visible aerial emissions of dusts, particulates and fibres persist beyond the site boundary, the Site Manager will ensure that immediate corrective action and the Environment Agency is notified accordingly.

1.4 Noise & Vibration Management

The location of the site, topography of the land and the fact that there are no nearby sensitive receptors (beyond the residential dwellings of the operator) in close proximity to the Site mean that noise is not considered to be a significant potential source of pollution to the environment. Delivery and vehicle operation hours are restricted to daytime only.

The main source of noise at the site will include:

- Delivery/collection vehicles
- CHP engines

The following procedures will help minimise noise emissions:

- All machinery on Site is enclosed or fitted with effective silencers
- All machinery is turned off when not in use
- Most machinery is operated / situated within a building (i.e. the CHP units)
- Operation of plant and machinery takes place during permitted hours only.

Considering the above there are no requirements to monitor noise and/or vibration at the Site. However, noise and/or vibration monitoring shall be carried out in the event of an internal or external complaint.

Noise monitoring shall only be carried out by a competent person (as defined by the Institute of Acoustics) to a scope that is determined by the nature of the complaint.

The Site has a simple indicative noise meter for the monitoring of equipment and plant noise. This equipment shall be used on an 'as required' basis. The site also has a noise management policy which is reviewed annually.

Any complaints relating to noise and vibration are investigated and recorded in the Complaint Response Form.

1.5 Odour Management

The site has a detailed Odour Management Plan which defines the methodology and means by which odour is controlled abated and minimised; as well as the procedure for responding to odour complaints.

A summary of the Odour Management Plan is provided below:

- The main potential sources of odour are identified in the plan, these include the ABP waste reception area during the unloading of waste (particularly abattoir gut content). This is mitigated by ensuring that all wastes are immediately transferred into the sealed storage tanks;
- All loads shall be inspected prior to acceptance. No malodourous wastes will be accepted onto site.
- Odour shall be monitored daily at points around the Site boundary and observations shall be noted on the Daily Check form.
- Odour Complaints are dealt with immediately and complainants must receive a response within 24 hours, but preferably well before this;
- Full investigations into odour complaints are carried out by the Environmental Manager, the investigations are guided by the Odour Complaint Response Form and Odour Monitoring Forms;

- All odour control equipment is maintained in accordance with manufacturer's instructions.

1.6 Pest Management

The site has several effective controls and management procedures to reduce the risk of attracting pest and vermin, including the following:

The facility design measures include:

- All waste is processed within sealed containers, with no external exposure occurring during any processing or storage phase;
- The waste is transported and treated within an enclosed system through utilisation of enclosed tank and pipe structures, alleviating any potential access routes for vermin;

Pest management procedures include:

- The ABP Waste Reception is washed down and disinfected daily and/or after loads are unloaded;
- Waste storage time is minimised by maintaining volumes at a manageable level;
- Odour control is in place to prevent the attraction of pests;
- Pest control contractor employed by:
    - to mitigate against the potential spread of contamination through migration of vermin, bait boxes are installed in and around the Site buildings;
    - 6 weekly inspections (or more frequent if required) to check bait boxes and rodent activity;
    - any action taken i.e. increased topping up of bait boxes and corresponding comments will be logged in the Pest Contractor Record file in the Site Office
- Control of litter:
    - Consideration will be taken to control paper and other materials likely to be windblown. Extra vigilance to be used during adverse windy weather conditions;
    - Fences will help contain litter and any litter found accumulating will be removed regularly, or by the end of each working day.

1.7 Quality Management

If a complaint is received by the Site about the quality or usability of the digestate products produced then an investigation is carried out by the Environmental Manager and a Digestate Quality Complaint Response Form (GPBIOTEC_NAS\Documents\Site Management\Templates\Digestate Quality Complaint Form) is completed as part of an investigation into the complaint.

- Name and contact details of the person who expressed concern or made a complaint;
- The specific subject of the concern or complaint;
- Date and time communicated to GP Biotec and name of the person to whom it was communicated to;
- Nature and date of any response to the person who expressed a concern or made the complaint; and
- Name of person who communicated the response.

1.8 Weather Monitoring

The following meteorological conditions will be recorded daily as part of the site's daily checks:

- Temperature;
- Prevailing wind direction; and
- General weather conditions.

All weather conditions are recorded via the website which links to the weather station situated in the Site Office. https://www.wunderground.com/dashboard/pws/ITALGART2

The weather station requires lithium batteries only and these must be changed approximately 6 monthly.

1.9 Waste Management

The amount of waste processed by site is measured and monitored through weighbridge records of waste received on site and quarterly reporting of these figures to NRW.

All waste generated on site from the site's activities is either reused on site or recycled through Thomas Waste Recycling Limited (contractual agreement for once weekly collection). The annual figures are reported to NRW as part of the annual performance report. The site also keeps a waste management register; N:\Site Management\ISO DOCS\Register

2.0 Environmental Monitoring Summary

Emissions	Purpose	Frequency	Location	Responsibility
Air	Monitoring of point source emissions listed in schedule 3 tables S3.1 of Sites environmental permit	Annual	A1 & A2 on Permitted Site Plan	Environmental Manager to organise with MCERTS accredited personnel, Site Manager to oversee
Surface Water	To prevent contaminated water being released via Site drainage	As required following Daily Checks	W1 on Permitted Site Plan	Site Operative & Site Manager
Ground Water	N/A			
Sewer	N/A			
Land	N/A			
Dust	Visual inspection to ensure dust is not an issue on-Site or off-Site	Daily	The Site	Site Operatives, Environmental Manager & Site Manager
Noise and Vibration	Only required in case of specific internal or external complaint	As required	Dependant on complaint	Environmental Manager & Site Manager
Odour	Monitoring required to ensure no odour emissions resulting from Site activities	Daily & as prompted by a formal complaint	See OMP for odour monitoring points on and off Site	Site Operatives, Environmental Manager & Site Manager
Pest Management	To minimise vermin activity on Site	Monthly	The Site	Pest Contractor

Weather	To monitor wind direction and temperature as part of OMP	Daily	External station located on separator, LCD monitor in Site Office	Site Office staff & Site Manager
Waste Management	Monitoring waste received on site to ensure there is adequate capacity to efficiently process waste. To recover and reuse waste where possible and only dispose of waste through waste recycling company i.e. Thomas waste and Oil Savage	Quarterly for waste received Weekly	Weighbridge	Environmental Manager/Site Manager

3.0 Management System

GP Biotec implements a site-specific Environmental Management System (EMS) to meet the requirement of the Site's Environmental Permit and the requirements of ISO14001. The management system is utilised as a practical tool for managing the activities and operations of site to ensure that no environmental harm is caused and to reduce and mitigate any potential risks.

The sites EMS is managed and maintained by appropriate personnel whose role and responsibilities at GP Biotec are associated with the activities of the Anaerobic Digestion Facility. The management team consists of Directors and Overall Site Management, Commercial Manager, Environmental Compliance and Support and HSE Management.

Annual internal and external reviews are undertaken as a minimum of the EMS documentation and more frequently where required.

3.1 Site Improvements /Developments

GP Biotec is fully committed to a process of continual improvement in relation to environmental performance and sustainability for the future.

GP Biotec has strong links with the University South Wales (USW), Marches Biogas and Industry bodies such as the Anaerobic Digestion & Bioresources association (ABDA) and The Association for Renewable Energy and Clean Technology (REA) to continually learn within the industry of advancements and new and improved technologies which allows GP Biotec to forward plan any potential improvements or expansions of site.

At the forefront of GP Biotec company ambitions is the environment and continuing to improve the sites performance and efficiencies for a sustainable future and benefitting the land with the return of nutrient rich digestate and reduce synthetic fertilizers.

During GP Biotec management review improvements and developments are discussed along with business opportunities for continued development for cleaner technologies. As part of the management review the following topics are covered:

- Site Process Performance and KPIs achieved
- Objectives, Targets, Reporting and Monitoring standards met
- Internal and external audits undertaken
- Business Risk Register and Areas for Improvements / Developments
- Equipment, Resources and Training Requirements
- Industry Updates and New Technologies

During the management review if a topic arises for new equipment, technologies or advancements which could be applicable to GP Biotec the initial discussions will be held and engagement will be undertaken with the appropriate parties. For example, if a supplier was to launch a new pump with improved efficiencies this would be investigated further by GP Biotec.

The main site development that GP Biotec are currently undertaking is to enhance the overall efficiency of the energy output from the process, a gas upgrading system will be added to the site's operations to allow the resultant biogas from the Anaerobic Digestion process to be upgraded to biomethane using a gas upgrading system. This will be in line with GP Biotec's commitment to adopting best available techniques for a more sustainable and enhanced operation.