

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Greenergy Biofuels Limited

Biodiesel West Riverside Immingham Dock
West Riverside
Immingham Dock
Immingham
North East Lincolnshire
DN40 2QU

Variation application number

EPR/BP3036ZJ/V006

Permit number

EPR/BP3036ZJ

Biodiesel West Riverside Immingham Dock

Permit number EPR/BP3036ZJ

Introductory note

This introductory note does not form a part of the notice

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Changes introduced by this variation notice/statutory review

This variation has been issued to update some of the conditions following a statutory review of the permits in the industry sector for the production of large volume organic chemicals. The opportunity has also been taken to consolidate the original permit and subsequent variations.

The Industrial Emissions Directive (IED) came into force on 7th January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) conclusions as described in the Commission Implementing Decision. The BAT conclusions for production of large volume organic chemicals were published on 07 December 2017 in the Official Journal of the European Union (L323) following a European Union wide review of BAT, implementing decision 2017/2117/EU of 21 November 2017.

Where appropriate, we also considered other relevant BAT Conclusions published prior to this date but not previously included in a permit review for the Installation:-

Common waste water and waste gas treatment/management systems in the chemical sector. Published 09 June 2016

The BAT Conclusions for this installation which apply from 7th December 2021 are:
Production of Large Volume Organic Chemicals: 2, 8, 10, 12, 14, 16, 17, 18 & 19.

Common waste water and waste gas treatment/management systems in the chemical sector:
1-5, 7-16, 19-21

The schedules specify the changes made to the permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. Only the variations specified in schedule 1 are subject to a right of appeal.

Brief Description of the process

The installation carries out the manufacture of biodiesel by transesterification of vegetable oil and waste vegetable oil. The operation of the processes has been designed to minimise emissions to the environment, to allow recycling back into the process as far as possible and to produce by products that are easy to handle and have value.

The relevant listed activities are:

- Section 4.1 Part A(1)(a)(ii): Producing organic chemicals containing oxygen; and
- Section 5.4 Part A(1)(a)(i): Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving biological treatment

The manufacturing process is capable of producing 200,000 tonnes of biodiesel and 30,000 tonnes of glycerine per annum

The Humber Estuary Special Area of Conservation, Special Protection Area & Site of Special Scientific Interest are within 18m of the installation. The Humber Estuary Ramsar is within 4,500m of the installation.

Greenergy Biofuels Immingham Limited have an Environmental Management System (EMS) certified to ISO 14001.

The main activities on site are:

- Materials receipt and storage
- Neutralisation and de-gumming of used cooking oil raw materials
- Intermediate storage
- Esterification of Free Fatty Acid by products from the process by a reaction with methanol and a sulphuric acid catalyst. Transesterification by the reaction of the neutralised and de-gummed used cooking oils with methanol and a sodium methylate catalyst which includes a side stream of recovered by products from the esterification process.
- Vegetable oil pre-treatment and preparation of vegetable oil.
- Esterification of vegetable and waste vegetable oils by reaction with methanol and a sulphuric acid catalyst.
- Washing to remove impurities from the methyl ester using water and citric acid.
- Methanol separation and recovery.
- Glycerine purification and concentration by removing methanol and water from produced glycerine by distillation.
- Quality testing and storage in tanks.
- Operation of kerosene fired boiler to raise process steam.
- Operation of Effluent Treatment Plant

The core activities are the neutralising and de-gumming and the transesterification of the used cooking oils and the esterification of Free Fatty Acids (FFA) which are described in more detail below.

Neutralising and De-gumming.

This is the pre-processing of the feedstock prior to transesterification. The feed stock is de-gummed by the removal of phosphatides by reaction with additional phosphoric acid, then reaction with sodium hydroxide before centrifugation. The de-gummed material then has the excess FFA removed via vacuum distillation (deodorisers) to below the 1% by concentration required for the transesterification process, before being sent to intermediate storage.

Esterification reduces the fatty acid content of a mixed feed of dried waste vegetable oil, fatty acid recycling from the glycerine purification unit and pre-treated (de-gummed and neutralised vegetable oils). Adding neutralised vegetable oils to the waste vegetable oil and the recycled fatty acids reduces the acidity of the mixed vegetable oil feed going into the esterification reactor down to below five percent.

Methanol and a sulphuric acid catalyst are added to this mixed feed and the esterification process produces methyl ester and water. The reaction mixture leaving the esterification reactor is then sent to a separation tank to separate the esterification phase (vegetable oil, methyl ester, methanol, residual fatty acid, glycerine and water) from the methanol phase (methanol, water, glycerine, sulphuric acid and traces of methanol, hydrochloric acid and sodium chloride).

The product from the esterification phase is fed to a continuous transesterification reactor. The product from the methanol phase, which contains a great part of the residual sulphuric acid is part recycled to the esterification reactor and part sent to the glycerine treatment unit.

Transesterification is carried out using three reactors in series. These reactors form a continuous process operating at temperatures of 55°C and pressures of 0.4 – 0.45 Barg. Heat is supplied if necessary to keep the reactor mixture at the required temperature. A mixture of vegetable oils and waste vegetable oils is continuously fed at approximately 50°C to the first reactor where excess methanol maximises the transesterification yield and limits a side reaction of soap formation. Separated glycerine from this process is discharged from the bottom of the reactor to a glycerine treatment unit, the outgoing light phase from the first reactor is transferred to a second reactor where more methanol and sodium methylate catalyst are added.

Again the outgoing light phase from the second reactor is transferred to a third reactor where methanol and sodium methylate catalyst are added for a third time. The reaction mixture leaving the third reactor contains methylester (biodiesel) with excess methanol, glycerine and fatty acids. This is transferred for methylester separation.

Overall the process is operated at relatively low temperatures and pressures and is designed to handle multiple vegetable oil feedstocks.

Package Boiler

To provide process steam to the plant in a more cost effective manner a package boiler is installed. Steam is utilised to raise the temperature of the process fluid and to create a vacuum within the vacuum distillation columns. The thermal input of the boiler is 9MW and is fired on kerosene. A hotwell receives recovered condensate from the system and top up water from the ABP supply which is softened and treated to suit. This permit review is also being used to add a second 9MW boiler of the same design as the first that will supply steam for the site process when required.

Effluent treatment

The installation has been designed with separate process and surface water drainage systems, with process water discharging to an effluent treatment system and surface water to the effluent outfall pipe via the effluent treatment system. The production process is designed to minimise the volume of the wastewater generated.

Chemical Oxygen Demand (COD) of the refinery effluent is measured in the collection sumps, it is then pumped to an interceptor (Fat Strippa) which is used to remove oils and fats from the effluent. The oils and fats are removed and recovered onsite.

The separated water is then pumped forward to a location dependent on the COD result. If the result indicated that the COD is less than 35,000 mg/l then the effluent is processed through the effluent treatment plant for final discharge to the River Humber via W1 outfall. If the COD is greater than 35,000 mg/l then it will be collected in a storage tank, from where it will be exported to an offsite waste treatment facility.

The first two tanks in the ETP neutralise the effluent using 28% hydrochloric acid and 20% caustic solution. The effluent undergoes a thickening process using coagulant, this enables the dissolved air flotation (DAF) unit to remove the thickened material (any fats, oils and greases) by scraping the top surface.

The clear liquid from the DAF unit is transferred to a 750m3 bio-reactor where the micro-organisms digest the effluent. This process is enhanced by the addition of air from three electrically driven blowers. Two automatic, membrane banks are connected to the bioreactor that separate biomass from the treated effluent water. The biomass is recirculated back to the bioreactor and the treated effluent is discharged to drain.

Sludge from the DAF is transferred to a 30m3 sludge tank prior to removal from site by a licensed disposal company where it is sent for composting.

Continuous monitoring of the effluent is controlled at the DAF depending on the COD load. The treated water is discharge to surface water via discharge point W1.

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

Status log of the permit		
Description	Date	Comments
Application received (Greenery Biofuels Limited) EPR/JP3435SU/A001	Duly made 31/12/04	Application Installation
Additional information received	02/06/05	
Additional information received	01/08/05	
Permit Determined JP3435SU	01/08/05	Permit issued to Greenery Biofuels Limited

Status log of the permit		
Description	Date	Comments
Application GP3232MH (Full transfer of JP3435SU) received	01/12/06	Application to transfer the permit to PX Biodiesel Immingham Limited
Transfer determined	08/01/07	Permit issued to PX Biodiesel Immingham Limited (EPR/GP3232MH)
Variation Application EPR/BP3036ZJ/V0062 (XP3038XJ)	Duly made 24/12/07	
Additional information received	16/04/08	
Variation determined EPR/BP3036ZJ/V0062	20/06/08	
Variation Application EPR/BP3036ZJ/V0063	19/03/09	
Variation determined EPR/BP3036ZJ/V0063	05/05/09	
Variation Application EPR/BP3036ZJ/V0064	31/03/09	
Application update for variation EPR/BP3036ZJ/V0064	16/08/10	
Variation determined EPR/BP3036ZJ/V0064	14/09/10	Varied permit issued
Variation Application EPR/BP3036ZJ/V0065	19/12/11	Application to vary and remove emission point A5.
Variation determined EPR/BP3036ZJ/V0065	02/02/12	Varied permit issued.
Application EPR/BP3036ZJ/T001 (full transfer of permit EPR/3232MH)	Duly made 15/02/13	Application to transfer the permit in full to Greenergy Biofuels Limited.
Transfer determined EPR/BP3036ZJ/T001	04/03/13	Full transfer of permit complete
Agency variation determined EPR/BP3036ZJ/V002	03/09/13	Agency variation to implement the changes introduced by IED
Administrative variation application EPR/BP3036ZJ/V003 (PAS/Billing Reference. TP3334VN)	Duly Made 11/04/14	To accommodate the site becoming a Multi-Operator Installation as a result of new activities under control of Gaia Heat Ltd now being undertaken as part of the installation at the site
Variation determined EPR/BP3036ZJ/V003	12/05/14	Variation notice issued
Variation application EPR/BP3036ZJ/V004	10/08/18	
Application EPR/BP3036ZJ/V004 returned	04/09/18	
Variation application EPR/BP3036ZJ/V005	Duly made 25/05/19	Variation to add an 8MWth package boiler.
Variation determined EPR/BP3036ZJ	19/11/19	Varied and consolidated permit issued.

Status log of the permit		
Description	Date	Comments
Regulation 61 Notice dated 04/05/18 (Notice requiring information for statutory review of permit)	Responses Received 10/08/18, 06/05/20, 09/06/20 & 23/12/21	Technical standards detailed in response to the information notice.
EPR/BP3036ZJ/V006 (variation and consolidation)	Environment Agency Initiated Variation	Statutory review of permit occasioned by LVOC BAT Conclusions published 07 December 2017
Variation determined EPR/BP3036ZJ (Billing ref: CP3638QX)	07/03/22	Varied and consolidated permit issued

Other Part A installation permits relating to this installation		
Operator	Permit number	Date of issue
Gaia Heat (Coelus) Limited	EPR/RP3130EG	12/05/14

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

Permit number

EPR/BP3036ZJ

Issued to

Greenergy Biofuels Limited (“the operator”)

whose registered office is

**198 High Holborn
London
WC1V 7BD**

company registration number 05082298

to operate part of a regulated facility at

**Biodiesel West Riverside Immingham Dock
West Riverside
Immingham Dock
Immingham
North East Lincolnshire
DN40 2QU**

to the extent set out in the schedules.

The notice shall take effect from 07/03/2022

Name	Date
Daniel Timney	07/03/2022

Authorised on behalf of the Environment Agency

Schedule 1

Only the following conditions have been varied by the consolidated permit EPR/BP3036ZJ as a result of an Environment Agency initiated variation.

The following conditions were varied as a result of an Environment Agency initiated variation:

- Condition 1.4.1 has been amended to reflect the requirements of the LVOC permit review
- Condition 2.3.1 has been split to become condition 2.3.1 & 2.3.2 to reflect the requirements of the LVOC permit review
- Condition 2.3.3 has been amended to remove reference to table S2.2
- Condition 3.2.2 (a) has been amended to reflect the requirements of the LVOC permit review
- Condition 3.5.1 (a) has been amended to remove reference to table S3.3 (as a result of the removal of table S2.2)
- Condition 3.5.1 (b) has been amended to update the process monitoring table reference (to S3.3)
- Condition 4.3.1 has been amended to reflect the requirements of the LVOC permit review
- Table S1.2 as referred to in condition 2.3.1 has been amended to include reference to the LVOC permit review
- Table S1.3 as referred to in condition 2.4.1 has been amended to remove reference to 'complete' Improvement Condition 5 and include IC6, IC7 and IC8.
- Table S3.1 as referred to in condition 3.1.1 has been amended to include emission points A2 & A4 and update ELVs and monitoring requirements as required by the LVOC permit review
- Table S4.1 as referred to in condition 4.2.3 has been amended to include all relevant emission points
- Table S3.2 has been amended to:
 - revise the monitoring method for BOD from a standard method to one which requires the BOD concentration be calculated using the COD concentration and the established BOD:COD ratio, and
 - increase the temperature limit from 35°C to 37°C
- Reporting Forms (Air1, Water1, Energy Usage & Efficiency and Waste Disposal & Recovery) in Table S4.4 as referred to in condition 4.2.3 have been amended to reflect the requirements of the LVOC permit review
- Schedule 5 Notification as referred to in 4.3.2 has been amended to reflect the requirements of the LVOC permit review
- Schedule 6 Interpretation as referred to in condition 4.4.1 has been amended to reflect the requirements of the LVOC permit review
- Schedule 7 Site plan as referred to in condition 2.2.1 is updated with a new site plan and an emission point plan

The following conditions are added as a result of an Environment Agency initiated variation:

- Condition 1.4.2 has been added to reflect the requirements of the LVOC permit review
- Condition 2.3.4 has been added to reflect the requirements of the LVOC permit review
- Condition 3.1.3 has been added to reflect the requirements of the LVOC permit review

The following conditions are deleted as a result of an Environment Agency initiated variation:

- Condition 2.5 has been removed as there are no longer any pre-operational conditions in the permit
- Table S3.2 as referred to in condition 3.1.1 has been removed, emission points A2 & A4 have been included into table S3.1

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/BP3036ZJ

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BP3036ZJ/V006 authorising,

Greenergy Biofuels Limited (“the operator”),

whose registered office is

198 High Holborn

London

WC1V 7BD

company registration number 05082298

to operate part of an installation at

Biodiesel West Riverside Immingham Dock

West Riverside

Immingham Dock

Immingham

North East Lincolnshire

DN40 2QU

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

Name	Date
Daniel Timney	07/03/2022

Authorised on behalf of the Environment Agency

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.

1.5 Multiple operator installations

- 1.5.1 Where the operator notifies the Environment Agency under condition 4.3.1 (a) or 4.3.1 (c), the operator shall also notify without delay the other operator of the installation of the same information.

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 red on the site plan at schedule 7 to this permit, which is within the area edged in green on the site plan that represents the extent of the installation covered by this permit and that of the other operator of the installation.

2.3 Operating techniques

- 2.3.1 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 the Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency 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 the Environment Agency.
- 2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 Waste shall only be accepted if:
- (a) it is of a type and quantity listed in schedule 2 table(s) S2.2; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.5 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.
- 2.3.6 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 the Environment Agency.
- 2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

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 and S3.2.
- 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 the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency 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 the Environment Agency.
- 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 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 the Environment Agency, 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 the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency 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 the Environment Agency.

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 the Environment Agency, 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 the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency 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 the Environment Agency.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, 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;
 - (b) process monitoring specified in table S3.3;
- 3.5.2 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.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 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 and S3.3 unless otherwise agreed in writing by the Environment Agency.

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 the Environment Agency, 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 the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) 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 the Environment Agency, 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 the Environment Agency, 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.

4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter, if during that quarter the total amount accepted exceeds 100 tonnes of non-hazardous waste or 10 tonnes of hazardous waste.

4.3 Notifications

4.3.1 In the event:

- (a) 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 the Environment Agency,
 - (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) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;

- (c) 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.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

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

4.3.4 The Environment Agency 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.

4.3.5 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) the Environment Agency 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.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency 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 "without delay", 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	4.1 A(1)(a)(ii)	Manufacture of Methyl Ester (Biodiesel).	Receipt of raw materials to storage and dispatch of finished product incorporating the associated activities below.
AR2	5.4 A(1)(a)(i)	Biodiesel Effluent Treatment	Balance tank to effluent discharge
Directly Associated Activity			
AR3	Storage, handling of raw materials.	Storage of solid and liquid materials in bulk storage tanks, drums, IBCs, bags and other containers.	Receipt of and storage of raw materials to transfer to batch feedstock preparation or other process areas.
AR4	Storage and handling of intermediates, finished products, waste and other materials.	Storage of finished product in tanks. Process waste segregation and storage.	Storage of finished products, storage of waste in designated areas and loading for transit off site.
AR5	Control of abatement systems for emissions to air.	Abatement of releases to air.	Extraction and collection of waste gases and treatment condensers.
AR6	Effluent treatment	Treatment of process effluent and surface water run-off from process areas.	From effluent tank to point of entry to Simon Storage discharge pipe.
AR7	Steam Supply	Two 8MW _{th} package boilers with softened reverse osmosis water treatment plant.	Fuel oil shall contain less than 0.1% sulphur by weight. The boilers shall not operate at the same time as the biomass boilers located in the Gaia Biomass Plant (Permit ref: EPR/RP3130EG)
AR8	Process heating	Package boiler	Distillate oil shall contain less than 0.1% sulphur by weight
AR9	Cooling and chilling system	Cooling water supply, treatment and re-circulation	Cooling tower

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to questions B2.1, B2.2 and B2.3 given in sections B2.1, B2.2 and B2.3 of the application document	31/01/04
Standard variation request	The response to questions C2.1 to C2.12 of the application document	24/12/07
Additional information	The updated response to questions C2.1 to C2.12 of the application document	16/04/08
Additional information	The updated response to questions C2.1 to C2.12 of the application document	16/08/10

Table S1.2 Operating techniques		
Description	Parts	Date Received
Variation application EPR/BP3036ZJ/V006	The response to questions in Section 3, 4, 5 and 6 Part C3 of the application form. Supporting documents: GBL 2, 3 v.1, 4, 5, 6, 7 & 8.	Duly made 25/09/19
Response to Schedule 5 Notice request dated 22/07/19	Response to questions 1 & 2	19/08/19
Additional information	Email from Greenergy Biofuels Limited and attached Technical Note 1	02/10/19
Variation EPR/BP3036ZJ/V006 Regulation 61 Notice – request for further information dated 04/05/18	Technical standards in relation to Best available techniques as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for Production of Large Volume Organic Chemicals BAT Conclusions Numbers 2, 3, 4, 5, 6, 8, 10, 12, 14, 15, 16, 17, 18 & 19. Common waste water and waste gas treatment/management systems in the chemical sector BAT Conclusions 2-5, 7-16, 19-21 & 23	Received 10/08/18
Variation EPR/BP3036ZJ/V006 Response to Request for Information dated 09/04/20	Response to Questions CWW BAT 14, 19 (Rev 1) & 23 (Rev 1), Site Condition Report.	Received 06/05/20
Variation EPR/BP3036ZJ/V006 Response to Request for Information dated 09/04/20	Response to Questions Surface Water Risk Assessment, CWW BAT 2 (Rev 1), 4, 4 (Rev 1), 11 & 12 (Rev 1).	Received 09/06/20

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC5	<p>The Operator shall undertake an assessment of the options (including a cost benefit analysis) for reducing process contributions of oxides of nitrogen at the nearby Humber Estuary SAC, SPA and Ramsar from the two on-site package boilers. The assessment shall include, but not limited to, consideration of the effect on oxides of nitrogen process contributions through increasing the exhaust stack height of the boilers and through application of further abatement techniques.</p> <p>The Operator shall submit a report to the Environment Agency for approval detailing the findings of the assessment and proposals (including timescales) for the implementation of any improvements identified.</p> <p>The Operator shall implement the proposed improvements in accordance with the scope and timescales agreed with the Environment Agency.</p>	Completed
IC6	The operator shall submit a report to the Environment Agency for approval which provides evidence of compliance with the MCERTS self-monitoring of effluent flow scheme for emission point W1 as required by table S3.2.	3 months from permit issue date.
IC7	The operator shall ensure that any residues from the treatment of waste to produce biodiesel have stopped being waste and have satisfied all the conditions within Article 6 of the Waste Framework Directive if these residues are sold or transferred as non-wastes. This includes, but is not limited to, glycerine/glycerol. The operator may self-assess using the available guidance and/or consult with the Environment Agency's Definition of Waste (DoW) Service. The operator shall submit a written report to the Environment Agency to confirm the waste status.	18 months from permit issue date or prior to any increase in waste acceptance, whichever is sooner
IC8	<p>Submit a written report to the Environment Agency for technical assessment and approval. The report must contain a review (and the raw data the review is based on) of emissions from emission points A7 & A8 and must be representative of any seasonal effects, unless justification is provided as to why this is unnecessary.</p> <p>If the emission levels from A7 & A8 can be proven to be 'sufficiently stable', then the minimum monitoring frequency can be reduced to Annually as stated in BAT Conclusions LVOC BAT 2, footnote 2.</p>	8 months from permit issue date.

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Distillate Fuel Oil (Thermal oil heater and package boilers)	Sulphur Content less than 0.1% by weight

Table S2.2 Permitted waste types	
Maximum quantity	230,000 tonnes
Waste code	Description
02 02 99	Waste from the preparation and processing of meat, fish and other food of animal origin not otherwise specified (Rendered animal fat – Tallow)
20 01 25	Edible oil and fat

Schedule 3 – Emissions and monitoring

Table S3.1 Process Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location. Emission Plot Plan (GIBP-20-024) dated 28/07/18	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on emission point plan in Schedule 7]	Phase 1 sub cooler	Methanol	500 g/h	As per method	Annually [Note 2]	BS EN 13649
		Total Volatile Organic Compounds (Total VOCs) [Note 3]	2 kg/hr	Hourly average [Note 1]	Annually [Note 2]	EN 12619
A2 [Point A2 on emission point plan in Schedule 7]	Phase 1 thermal oil heater (0.9MW)	-	No limit set	-	-	-
A3 [Point A3 on emission point plan in Schedule 7]	Phase 2 sub cooler	Methanol	500 g/h	As per method	Annually [Note 2]	BS EN 13649
		Total Volatile Organic Compounds (Total VOCs) [Note 3]	2 kg/hr	Hourly average [Note 1]	Annually [Note 2]	EN 12619
A4 [Point A4 on emission point plan in Schedule 7]	Phase 2 thermal oil heater (0.9MW)	-	No limit set	-	-	-
A5 [Point A5 on emission point plan in Schedule 7]	Package boiler 1 (8MW)	Oxides of Nitrogen (as NO ₂)	200 mg/Nm ³ [Note 5]	Hourly average	Annually [Note 4,5]	BS EN 14792
		Carbon Monoxide	No limit set	Hourly average	Annually [Note 4,5]	BS EN 15058
A6 [Point A6 on emission point plan in Schedule 7]	Package boiler 2 (8MW)	Oxides of Nitrogen (as NO ₂)	200 mg/Nm ³ [Note 5]	Hourly average	Annually [Note 4,5]	BS EN 14792
		Carbon Monoxide	No limit set	Hourly average	Annually [Note 4,5]	BS EN 15058
A7 [Point A7 on emission point plan in Schedule 7]	Refinery 1 Vacuum System	Total Volatile Organic Compounds (Total VOCs) [Note 3]	No limit set	Hourly average [Note 1]	Monthly / Annually [Note 6]	EN 12619

A8 [Point A8 on emission point plan in Schedule 7]	Refinery 2 Vacuum System	Total Volatile Organic Carbons (Total VOCs) [Note 3]	No limit set	Hourly average [Note 1]	Monthly / Annually [Note 6]	EN 12619
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Note 1: The VOC monitoring should be three sets of samples of one hour duration each.

Note 2: The annual monitoring frequency reflects stability in the emission levels, with flow rates below 0.5 m/s. Monthly monitoring is required if emissions increase.

Note 3: Monitoring results should be expressed in both mg/m³ and kg/hour. The term “Volatile Organic Compounds” includes all organic compounds released to air in the gas phase.

Note 4: The duration of the monitoring should be a minimum of an hour.

Note 5: These limits and monitoring frequencies are from the Medium Combustion Plant Directive and are applicable from the 1st January 2025.

Note 6: Frequency to be reviewed upon completion of Improvement Condition 8.

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
W1 (Point W1 as shown on emission point plan in Schedule 7) Direct emission to the River Humber (NGR: TA19681655)	Effluent Treatment Plant	Flow	353 m ³ /day	24 hour total	Continuous	MCERTS self-monitoring of effluent flow scheme
	Effluent Treatment Plant	Total suspended solids	60 mg/l	Flow weighted yearly average of 24 hour flow proportional composite	Daily	BS EN 872
	Effluent Treatment Plant	Temperature	37°C	Flow weighted yearly average of 24 hour flow proportional composite	Continuous	Calibrated instrument
	Effluent Treatment Plant	pH	9 max 5 min	Flow weighted yearly average of 24 hour flow proportional composite	Continuous	ISO 10523
	Effluent Treatment Plant	COD	200 mg/l	Flow weighted yearly average of 24 hour flow proportional composite	Daily	BS ISO 15705

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
	Effluent Treatment Plant	BOD	100 mg/l	Flow weighted yearly average of 24 hour flow proportional composite	Monthly	Calculated using the measured COD concentration and the established COD:BOD ratio
	Effluent Treatment Plant	Methanol	No limit set	Flow weighted yearly average of 24 hour flow proportional composite	Monthly	BS EN 14110
	Effluent Treatment Plant	Fatty acids	No limit set	Flow weighted yearly average of 24 hour flow proportional composite	Monthly	BS EN 14104
	Effluent Treatment Plant	Triglycerides	No limit set	Flow weighted yearly average of 24 hour flow proportional composite	Monthly	BS EN 14105
	Effluent Treatment Plant	Visible oil or grease	No significant trace present	Instantaneous	Daily	Visual examination

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Heat exchanger 163E8	Cooling water outlet temperature	Continuous		-10°C or lower daily average

Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1.	A1, A3, A5, A6, A7 & A8	Every 12 months	1 January
Emissions to water Parameters as required by condition 3.5.1	W1	Every 3 months	1 January, 1 April, 1 July, 1 October

Parameter	Units
Production of Methyl ester (Biodiesel)	Tonnes
Production of glycerol	Tonnes
Production of fatty acid	Tonnes
Production of gums	Tonnes

Parameter	Frequency of assessment	Units
Potable water use	Annually	m ³ /tonne biodiesel
Raw water use	Annually	m ³ /tonne biodiesel
Energy usage	Annually	MJ/tonne biodiesel

Media/parameter	Reporting format	Date of form
Emissions to Air	Form Air1 or other form as agreed in writing by the Environment Agency	Permit issue date
Emissions to Water and Land (other than sewer)	Form Water1 or other form as agreed in writing by the Environment Agency	Permit issue date
Water usage	Form Waterusage1 or other form as agreed in writing by the Environment Agency	Permit issue date
Energy usage and efficiency	Form Energy1 or other form as agreed in writing by the Environment Agency	Permit issue date
Other environmental performance indicators	Form Performance1 or other form as agreed in writing by the Environment Agency	Permit issue date
Waste disposal and recovery	Form Waste1 or other form as agreed in writing by the Environment Agency	Permit issue date

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 malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
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 limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
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) Notification requirements for the breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

(d) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
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.	
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Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“annually” means once every year.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by the Environment Agency 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.

“BAT-AELs” means BAT-associated emission levels, i.e. the emission levels associated with the best available techniques for emissions to air and/or water, as set out in

“Common waste water and waste gas treatment/management systems in the chemical sector BAT Conclusions or CWW” means Commission Implementing Decision (EU) 2016/902 of 30 May 2016 establishing Best Available Techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for Common Waste Water And Waste Gas Treatment/ Management Systems in the Chemical Sector as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016

“disposal”. Means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“EWC code” means the code number from the European Waste Catalogue.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016

“Large Volume Organic Chemicals BAT Conclusions or LVOC” means The Commission Implementing Decision (EU) 2017/2117 of 21 November 2017 establishing Best Available Techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the Production of Large Volume Organic Chemicals as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“Medium Combustion Plant” or “MCP” means a combustion plant with a rated thermal input equal to or greater than 1 MW but less than 50 MW.

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from gas engines or gas turbines, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 15% dry for liquid and gaseous fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

“year” means calendar year ending 31 December.

Schedule 7 – Site Plan

Figure 1 - Site plan

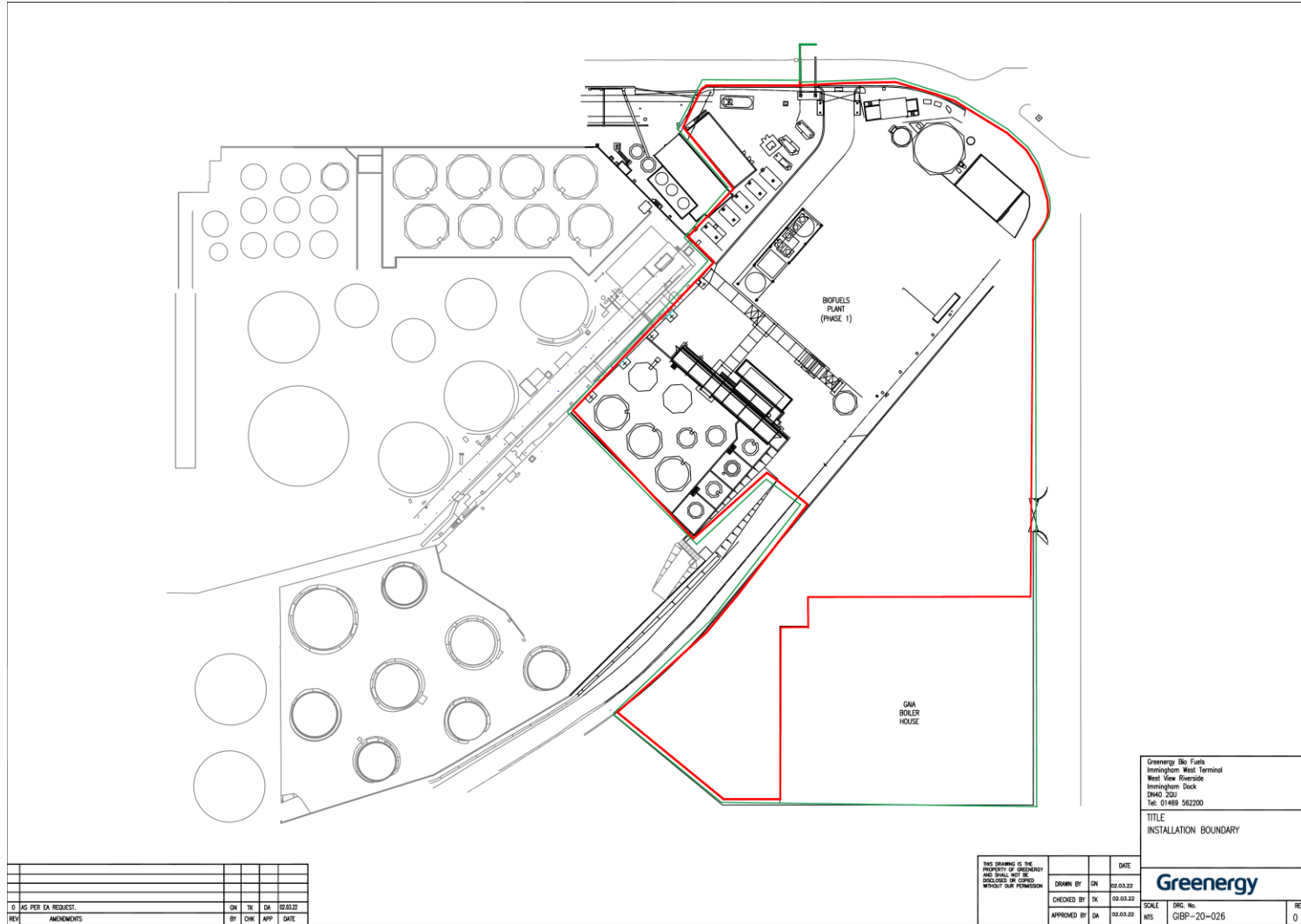
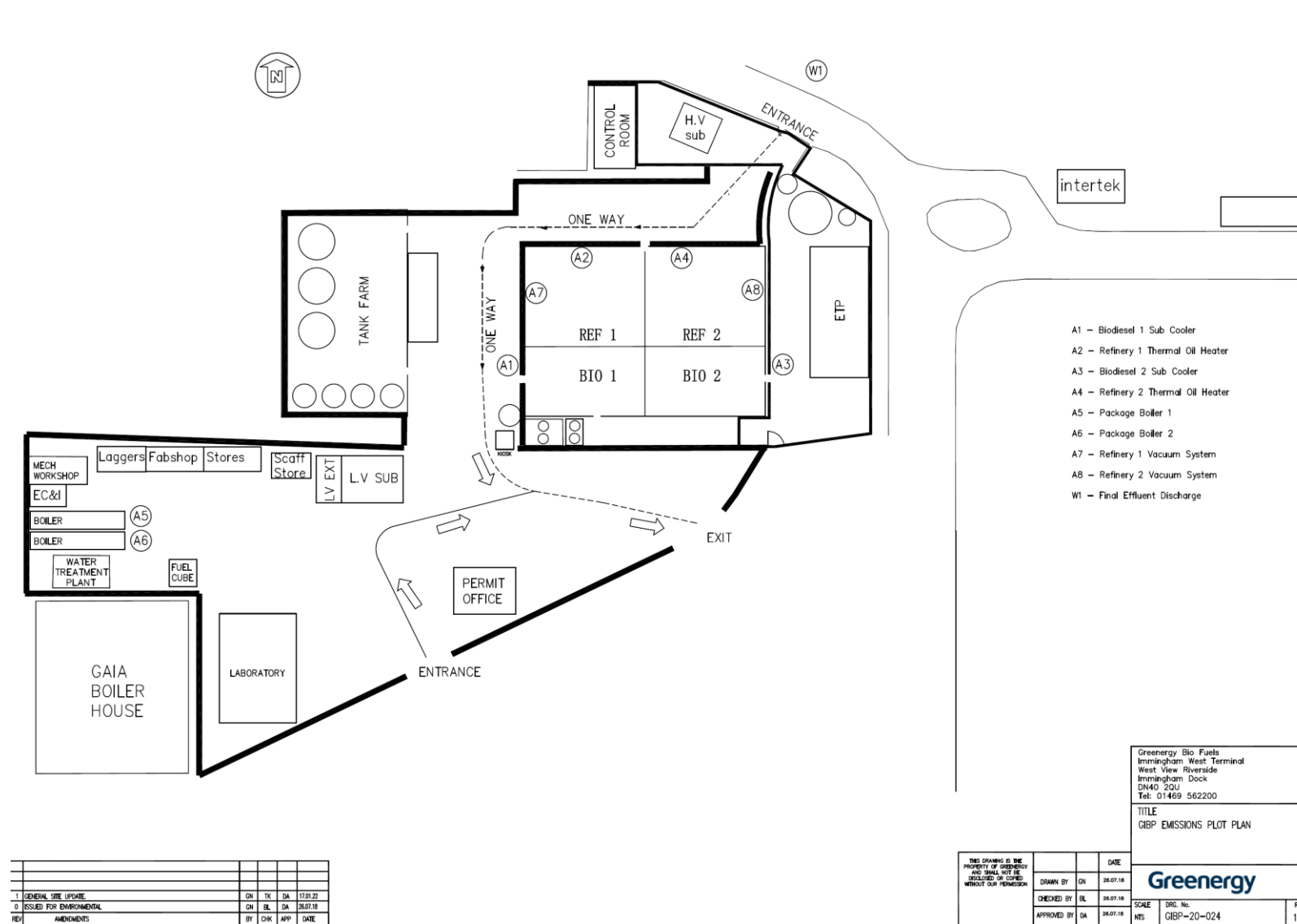


Figure 2 - Emission Point Plan



END OF PERMIT

Permit number
 EPR/BP3036ZJ

Permit Number: BP3036ZJ

Operator: Greenergy Biofuels Limited

**Facility: Biodiesel West Riverside
Immingham Dock**

Form Number: Air1 07/03/22

Reporting of emissions to air for the period from DD/MM/YYYY to DD/MM/YYYY

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Annual reporting							
A1	Methanol	500 g/h	As per method				
	Total volatile organic compounds (Total VOCs)	2 kg/hr	Hourly average				
A3	Methanol	500 g/h	As per method				
	Total volatile organic compounds (Total VOCs)	2 kg/hr	Hourly average				
A5	Oxides of Nitrogen (as NO ₂)	200 mg/Nm ³	Hourly average				
	Carbon Monoxide	No limit set	Hourly average				
A6	Oxides of Nitrogen (as NO ₂)	200 mg/Nm ³	Hourly average				
	Carbon Monoxide	No limit set	Hourly average				
A7	Total volatile organic compounds (Total VOCs)	No limit set	Hourly average				

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
A8	Total volatile organic compounds (Total VOCs)	No limit set	Hourly average				

1. The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
2. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
3. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
4. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.
5. The annual monitoring frequency reflects stability in the emission levels, with flow rates below 0.5 m/s. Monthly monitoring is required if emissions increase.

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: BP3036ZJ

Operator: Greenergy Biofuels Limited

**Facility: Biodiesel West Riverside
Immingham Dock**

Form Number: Water1 07/03/22

Reporting of emissions to water (other than to sewer) and land for the period from DD/MM/YYYY to DD/MM/YYYY

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Quarterly reporting							
W1	Flow	353 m ³ /day	24 hour total		MCERTS self-monitoring of effluent flow scheme		
	Total suspended solids	60 mg/l	Flow weighted yearly average of 24 hour flow proportional composite		BS EN 872		
	Temperature	35°C	Flow weighted yearly average of 24 hour flow proportional composite		Calibrated instrument		
	pH	9 max 5 min	Flow weighted yearly average of 24 hour flow proportional composite		ISO 10523		
	COD	200 mg/l	Flow weighted yearly average of 24 hour		BS ISO 15705		

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
			flow proportional composite				
	BOD	100 mg/l	Flow weighted yearly average of 24 hour flow proportional composite		BS EN 5815		
	Methanol	No limit set	Flow weighted yearly average of 24 hour flow proportional composite		BS EN 14110		
	Fatty acids	No limit set	Flow weighted yearly average of 24 hour flow proportional composite		BS EN 14104		
	Triglycerides	No limit set	Flow weighted yearly average of 24 hour flow proportional composite		BS EN 14105		
	Visible oil or grease	No significant trace present	Instantaneous	Visual examination	Visual examination		

1. The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
2. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
3. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
4. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: BP3036ZJ

Operator: Greenergy Biofuels Limited

**Facility: Biodiesel West Riverside
Immingham Dock**

Form Number: WaterUsage1 07/03/22

Reporting of Water Usage for the year YYYY

Water Source	Usage (m ³ /year)	Specific Usage (m ³ /unit output)	Trends in Mains Water Usage		
			Year	Total Water Usage	Specific Usage (m ³ /unit output)
Mains water					
Site borehole					
River abstraction					
Other (specify)					
TOTAL WATER USAGE					

Operator's comments:

Signed

Date.....

(authorised to sign as representative of Operator)

Permit Number: BP3036ZJ

Operator: Greenergy Biofuels Limited

**Facility: Biodiesel West Riverside
Immingham Dock**

Form Number: Energy1 07/03/22

Reporting of Energy Usage and Energy Efficiency for the year YYYY

Energy Source	Quantity Used	Primary Energy Usage (MWh)	CO2 produced (tonnes)
Electricity*	MWh		
Natural gas	t		
Diesel	t		
Other (Specify)	t		
Total	--		

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments:

Signed

Date.....

(authorised to sign as representative of Operator)

Permit Number: BP3036ZJ

Operator: Greenergy Biofuels Limited

**Facility: Biodiesel West Riverside
Immingham Dock**

Form Number: Waste1 07/03/22

Reporting of Waste Disposal and Recovery for the year YYYY

Waste Description	Disposal		Recovery		Trends in Waste Disposal and Recovery		
	D code	Tonnes	R code	Tonnes	Year	Total Waste (tonnes))	Waste per unit output
Hazardous Wastes							
Total Hazardous Waste	----		----				
Non-Hazardous Waste							
Total Non-hazardous Waste	----		----				
TOTAL WASTE	----		----				

Operator's comments:

Signed

Date..... (authorised to sign as representative of Operator)