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Sarah Raymond
Environment Agency
Quadrant 2,
99 Parkway Avenue
Sheffield,
S9 4WF

27th January 2026

Our Ref: SOL_25_P007_ENG

Dear Sarah,

RE: ENGIE RENEWABLE GASES UK LTD, HOME FARM GRANGE AD FACILITY – EPR/NP3829LW/A001

Further to your letter dated 12th January 2026, please find below a response to each of your questions in turn.

Application Fee

The additional sum of £1 has been paid on 27th January with the reference PSCAPPINSTENGIE002.

1. *Site Plans*
   a) *Provide a site drainage plan that meets the requirements of guidance Develop a management system: environmental permits*
   b) *Provide an emission point plan that includes all emissions to air and water*
   c) *Provide the national grid reference for each emission point.*

Please find updated site plans provided within *Annex A* of this letter. This includes a Drainage Plan, Emission Point Plan and associated spreadsheet containing National Grid References for each emission point and an updated Site Layout which includes the storage location of compressed gas from the Carbon Capture System (CCS) (in accordance with question 3d). These site plans supersede the previously submitted plans included within the original application.

2. *Site Condition Report*
   a) *Provide a copy of your material safety data sheets for the raw materials used on site.*
   b) *Update your site condition report to include a stage 1-3 assessment in line with guidance Communication from the Commission — European Commission Guidance concerning baseline reports under Article 22(2) of Directive 2010/75/EU on industrial emissions (europa.eu).*

Please find an updated Site Condition Report in *Annex B* of this letter. The updated SCR includes MSDS' as an Annex and a Stage 1 – 3 assessment for the relevant hazardous substances on site.

3. Carbon Capture plant

For us to include this Directly Associated Activity as part of your application we will require the following information:

a) A non-technical summary of how the carbon capture plant will operate

b) Provide a systematic review of the proposed operating techniques against the post combustion carbon capture BAT guidance available at Post-combustion carbon dioxide capture: best available techniques (BAT) - GOV.UK (www.gov.uk), or any subsequent sector specific carbon capture guidance.

Details of the Carbon Capture Plant including a Non-technical Summary and BAT assessment are provided in *Annex C* of this letter. The technical specification of the plant is also included in this annex.

Concentrated or compressed CO2 may be required to be vented routinely or in an emergency. Therefore, there is the potential for acute incident related off-site human health impacts and chronic air quality related human health impacts

c) Provide an assessment of the impact of venting, that includes the following:

i. A description of the different potential venting scenarios including that the whole inventory is vented;

ii. Information that shows how modelling has been or is intended to be used to inform the process design and management of the risks associated with venting of CO2;

iii. Confirmation that the design is in line with industry best practice such as that from the Energy Institute, or equivalent;

iv. A description of the operating techniques that will be used to minimise the risks;

v. A vent management plan setting out how the risks from venting of CO2 will be managed. (If the design is not finalised, the vent management plan can be developed prior to start of operations and a pre-operational condition will be set.)

Modelling of the potential CO_2 venting is being undertaken and will be provided to the EA within 3 – 4 weeks of this letter. This modelling will demonstrate that the potential for offsite human health impacts during a range of potential venting scenarios will not be significant.

It is proposed to provide a Vent Management Plan as part of a pre-operational condition.

On review of your application, we cannot locate an explanation of how you will store and transfer compressed gas produced from the carbon capture process or how you will manage any accident risk.

d) Provide an updated site plan that include the storage location of the compressed gas produced as part of the carbon capture process.

An updated site plan has been included in *Annex A* of this letter, which includes the compressed gas storage location at Location 21.

e) *Provide an explanation of how you will safely store and transfer compressed gas.*

Compressed gas from the carbon capture process will be will be liquified and stored within 2 x purpose built storage tanks prior to transfer offsite via dedicated road tanker. The cryogenic storage tanks are horizontal, can store 2 – 3 days worth of CO_2 assuming uninterruptable operation and are made with carbon steel and insulation. They will be located externally within 10 meters of the CO_2 liquefaction plant within a non-ATEX zone and are fully automated with accurate volume control.

f) *Update your accident management plan and environmental risk assessment to include the carbon capture plant.*

An updated Accident Management Plan has been provided in *Annex D* of this letter and an updated Environmental Risk Assessment has been provided in *Annex E* of this letter. Both now reference the carbon capture plant.

g) *If you cannot provide the above information, confirm that the carbon capture plant directly associated activity will be removed from your application, you will need to remove all reference to the carbon capture plant from your application and apply at a later date.*

Carbon capture will not be removed from the application.

4. *Flaring of biogas*
Update your application to clearly explain how you will manage the re-circulation of biogas when the biogas upgrading plant is offline to meet BAT. If this includes the use of dual fuel combustion plant, ensure that you update any relevant modelling and assessments.

Gas management will ensure that upon the biogas upgrading plant being offline, initial storage of the biogas will be undertaken within the gas dome. Contingency storage allows up to 3.22 hours prior to potential flare use. Existing sites under Engie operation which operate under similar conditions and have similar contingency storage, have recorded flare usage onsite as minimal, less than 1% of operational hours. To clarify, PRVs are not utilised for routine venting, and flaring of the biogas is only undertaken in emergencies. The contingency storage onsite ensures that flaring is kept to a minimum.

5. *Management of diffuse odour sources in line with BAT and appropriate measures*
a) *Update your application to explain how you will manage the delivery of solid feedstock to the concrete apron to meet the requirements of BAT14, BAT34 and Biological waste treatment: appropriate measures for permitted facilities)*

Delivery of feedstocks to the concrete apron is required due to operational logistics. Unloading of the vehicles directly into the feedstock reception building is not possible due to the restricted height of the eaves. As such, initial unloading onto the external concrete apron and then immediate pushing into the building. It is proposed that that this process takes no longer than 30 minutes, minimising the time spent externally prior to enclosure within the building.

It is recognised that this presents a diffuse odour emission source and as such has been included within the site Odour Impact Assessment (provided within the OMP). The OIA concludes that there will be no significant impact at the nearest sensitive receptors from operation of the AD facility.

The OMP has been updated in line with Question 6 below and is provided in *Annex F* of this letter.

b) Update your application to clearly identify where the displacement of air during the filling of tanks is being undertaken and explain how you will manage/abate the displacement of air during the filling of tanks to meet the requirements of BAT14, BAT34 and Biological waste treatment: appropriate measures for permitted facilities)

Filling of tankers is located to the east of the lagoon, which is marked on the Site Layout Plan (019-9006-PLA-DWG-006-GA) as Location 30. The Odour Impact Assessment (OIA) provided within the OMP has included assessment of air displacement during tanker filling operations. Between 3 loads per day during winter and 23 loads per day over spring / late summer has been used as a conservative assumption in the assessment. The OIA concludes that there will be no significant impact at the nearest sensitive receptors from operation of the AD facility, including from diffuse emission during tank filling. Nevertheless, it is proposed that during tanker filling displaced air will be vented via a carbon filter as appropriate abatement.

The OMP has been updated in line with Question 6 below and is provided in *Annex F* of this letter.

c) Update your application to clearly identify where the vents surrounding the digestate lagoon are located and explain how you will manage/abate the venting of the lagoon to meet the requirements of BAT14, BAT34 and Biological waste treatment: appropriate measures for permitted facilities)

The vents from the lagoon are identified on Figure 4 in the Odour Impact Assessment. There are a total of 11 vents which are included within the Odour Impact Assessment. The OIA concludes that there will be no significant impact at the nearest sensitive receptors from operation of the AD facility, including from diffuse emission through the lagoon vents.

However, it is noted that appropriate measures states '*You must cover new lagoons with an engineered, impermeable, rigid or flexible cover. They must have gas collection and extraction to abatement or a gas recovery system*.' As such it is now proposed that each vent is fitted with a carbon filter as appropriate abatement.

d) Ensure that all emission points to air are included in your emission point plan

The updated emission point plan and associated national grid references are provided in Annex A of this letter.

6. Odour control unit and Odour Management Plan (OMP)
Update and resubmit your OMP to:

a) Provide a clear explanation of the abatement plant that will be implemented on site
b) Includes any solutions identified in question 5
c) Ensure that it meets the requirements of section 6 of guidance Odour management: comply with your environmental permit.

An updated OMP has been provided in *Annex F* of this letter, which incorporates all the relevant requirements of the updated Odour Guidance. It is noted that this guidance was published (3rd December) following submission of the permit application (28th November) and an updated OMP template has been requested from the EA odour team to ensure that all updates have been captured. The Odour team have advised that the new OMP template is not available until the end of January and instead provided the May 2021 template.

The proposed abatement plant will meet the relevant odour emission limit of <1,000 OU/m^3 as modelled in the OIA. The plant, designed by Centriair, is the current equipment proposed, however contract has not yet been finalised and may be subject to change during the permit determination process. Should this happen, immediate update will be made to EA, any new equipment proposed would maintain the emission limit values and efficiencies stipulated by the existing OMP and OIA.

7. Application forms

Update and resubmit your application forms to ensure that you include the relevant document and section that includes the response to the application form question.

Updated references are provided in the updated application forms in *Annex G* of this letter.

8. Emissions to air

a) Provide a copy of 'SOL_25_P007_ENG Annex O' the combustion plant list spreadsheet

This has been provided in *Annex H* of this letter.

b) Provide a copy of 'SOL_25_P007_ENG Annex H'

SOL_25_P007_ENG Annex H referred to the Air Quality Assessment for the site. This has been updated since permit submission and is provided in *Annex I* of this letter.

c) Provide a copy of your modelling files

The Air Quality Assessment modelling files are provided in *Annex I* of this letter. Since submission of the permit application, the AQA was updated and has been included in this annex with the relevant modelling files.

d) Should further abatement be provided in response to the above questions, or sources linked to the current abatement. Update your 'Air Quality Assessment S73' to reflect this

The existing air quality assessment is considered to present a worst case scenario, for example, without taking into account the newly proposed carbon filter abatement on the lagoon vents. As such, it has not been updated at this time, as there are no new emission points proposed.

e) Should you remove the carbon capture element from your application you will need to update your 'Air Quality Assessment S73' to include the emission point from the biogas upgrading plant.

Carbon capture has not been removed from the application. Potential venting scenarios will be modelled as proposed and outlined in the Technical Note provided by Enzygo in response to Question 3c.

9. LDAR

Provide a copy of your LDAR plan

A LDAR plan is provided in *Annex J* of this letter. At this design stage, some of the detail required in the appropriate measures guidance is not available. It is proposed that a full detailed LDAR plan, including all detail required by the appropriate measures guidance, is provided to the EA upon detailed design finalisation, and that this be a pre-operational condition of the permit.

Since submission of the permit application, the CIRIA 736 Containment Report has been updated, with an increase in the secondary containment bund wall height to 2.25m. We have provided the updated report within *Annex K* of this letter.

Should you have any further questions in relation to the above please do not hesitate to contact me.

Yours sincerely,



Emily Hingston

Annex A – Updated Site Plans

Annex B – Updated Site Condition Report

Annex C – Carbon Capture System

Annex D – Updated Accident Management Plan

Annex E – Updated Environmental Risk Assessment

Annex F – Updated Odour Management Plan

Annex G – Updated Application Forms

Annex H – MCPD Spreadsheet

Annex I – Updated Air Quality Assessment and Modelling Files

Annex J – Leak Detection and Repair (LDAR) Plan

Annex K – Updated CIRIA 736 Containment Report