

Environmental Licensing Programme
Office of Environmental Sustainability
EPA Headquarters
PO Box 3000
Johnstown Castle Estate
County Wexford
Y35 W8Z1

11th December 2019

Reg. No.: P0037-04

Reference: Request for Further Information - Regulation 10(2)(b)(ii) of the EPA (Industrial Emissions) (Licensing) Regulations 2013, in respect of a licence review from College Proteins Unlimited Company for an installation located at College Proteins Unlimited Company, College Road, Nobber, County Meath, Meath, A82XT61

Dear Sir or Madam,

I am writing in response to the request for further information, issued by the EPA on the 30th October 2019, in relation to College Proteins Unlimited company, for the application for a licence review received by the EPA on 30 August 2018, reference P0037-04. Please find response as follows;

1. The submitted newspaper notice, from correspondence dated 06 September 2019, incorrectly references activity class number 7.7.2 rather than 7.7.1. In accordance with regulation 7(b), update the notice to remove the incorrect number reference and re-publish in the newspaper. Once complete, submit a copy of the notice to the Agency [Regulation (9)(4)(a)].

Response

Please find attached Appendix 1, updated newspaper date as per above detail, from the Meath Chronicle dated the 23rd November 2019.

2. The submitted revised site plan, from correspondence dated 06 September 2019, contains an incomplete boundary line to the immediate left of the drawing title block and new additional lines to the left and right of Aeration Tanks 1 & 2 and close to the site entrance, making it unclear of the area within the red line boundary. Resubmit a complete and appropriate scaled drawing to clearly show the red line boundary of the installation activities [Regulation (9)(4)(d)].

Response

Please find attached Appendix 2, a revised site plan as per above, drawing reference number 1581-EPA-002 B.

- It is noted on the Companies Registration Office website that the company name is listed as College Proteins Unlimited Company which is different to the current licence name of College Proteins Limited. Provide a current Companies Registration Office Certificate showing the correct company name and registration number [Regulation (9)(2)(a)].

Response

Please find attached Appendix 3, updated companies registration office certificate. Please note the company certificate of incorporation on re-registration as an unlimited company was already uploaded in the original application review file on EDEN under “certification of Incorporation” on the 30th August 2018. College Proteins Unlimited Company.

- Attachment 7-7-2 Storm Water Monitoring states that baseline monitoring for new proposed storm water emission point SW8 commenced in May 2018. Provide details and results of all storm water monitoring completed to-date [Regulation (9)(3)(c)].

Response

Please find below results of all storm water monitoring completed to date in relation to SW8. Trigger levels for emission limit values (ELV's) will be agreed with the EPA on grant of the proposed licence. Table 1 and 2 details baseline monitoring which has been carried out at the facility.

Table 1 Baseline monitoring recorded at SW8 May – Dec 2018

SW 8 Baseline Monitoring Results May - Dec 2018													
Parameters	24/05/2018	30/05/2018	05/06/2018	14/06/2018	22/06/2018	29/06/2018	04/07/2018	17/07/2018	31/08/2018	26/09/2018	30/10/2018	21/11/2018	19/12/2018
B.O.D mg/l-O2	1.51	1.47	1.51	1.49	1.53	1.55	1.51	1.47	1.30	1.25	1.36	1.41	1.45
Total Ammonia as N mg/l	1.11	1.03	0.96	0.77	0.86	0.92	0.96	0.91	0.12	0.12	0.15	0.20	0.10
Ortho-Phosphate mg/l-P	0.10	0.16	0.12	0.12	0.14	0.10	0.09	0.08	0.03	0.08	0.09	0.05	0.04
pH	7.00	7.02	7.18	7.25	7.19	7.05	7.16	7.22	7.23	7.35	7.38	7.40	7.45

Table 2 Baseline monitoring recorded at Jan – Oct 2019

SW8 Baseline Monitoring Results Jan - Oct 2019											
Parameters	23/01/2019	19/02/2019	21/03/2019	18/04/2019	23/05/2019	21/06/2019	23/07/2019	22/08/2019	20/09/2019	24/10/2019	
B.O.D mg/l-O2	1.09	0.56	0.68	0.95	0.78	1.15	0.96	1.04	0.71	0.87	
Total Ammonia as N mg/l	0.35	0.45	0.82	0.74	0.65	0.84	0.84	0.76	0.43	0.74	
Ortho-Phosphate mg/l-P	0.06	0.04	0.04	0.06	0.07	0.05	0.04	0.05	0.01	0.04	
pH	7.32	7.35	7.34	7.48	7.31	7.46	7.56	7.59	7.48	7.50	

- Attachment 7-7-2 Storm Water Monitoring states that the sampling point for new proposed storm water emission point SW8 will be located prior to the storm water attenuation area but in Drawing 1581-EP-002 it appears that the sampling point will be at the point of storm water discharge into the water course. Confirm whether the location of the monitoring point for SW8 is prior or post the attenuation area [Regulation (9)(2)(j)].

Response

We can confirm that monitoring point for SW8 is post attenuation area. Attachment 7-7-2 has been updated to confirm this detail.

Drawing 1581- EPA-005D has been updated and is contained within Appendix 4 of this report.

- Discharge from emission point SW1 is identified in Attachment 7.2 as a wastewater and is described as a “surface water from non-process and storage areas, concrete hardstanding”. Confirm whether or not the discharge is by nature a storm water discharge i.e. rainwater run-off from roof and non-process areas and not from areas used for the outdoor storage of waste or run-off from process areas with potential to be contaminated. Also, clarify if there is any treatment or abatement, including silt traps and oil interceptors, in place for the discharge from SW1 [Regulation (9)(2)(i)].

Response

The discharge from emission point SW1 is storm water and surface water runoff and not waste water. The discharge is by nature a storm water discharge i.e. rainwater run-off from roof and non-process areas

SW1 is currently monitored on site as per existing conditions of the licence P0037-03 and is compliant.

Table 3 Existing Licence P0037-03 monitoring requirements re SW1

Schedule 4(i) Surface Water Discharge Monitoring

Emission Point Reference No.: SW1 (Ditch on College Road)

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Monthly	pH electrode/meter
BOD	Monthly	Standard Method
Total ammonia	Monthly	Standard Method
Visual Inspection	Daily	Not Applicable

A silt trap and interceptor will be installed prior to the connection of the drainage from the proposed biodiesel manufacturing plant at the proposed attenuation area in the car park, which will be discharged through SW1, Drawing Number 1581-EPA-005D, clearly shows this detail (Appendix 4).

If any contamination is detected on testing and the required specification for discharging to surface water as per the proposed EPA licence is not met, the shut off valve located on the surface line after SW1` can be closed and water diverted to the existing on-site wastewater treatment plant for treatment via the firewater retention lagoon.

7. Attachment 7-7-2 notes that the proposed storm water discharge, from the new storm water emission point SW8, will also contain some surface water from the proposed biodiesel manufacturing area. Clarify if these manufacturing areas will generate water run-off from areas used for the outdoor storage of waste or run-off from process areas with potential to be contaminated [Regulation (9)(2)(i)].

Response

Drawing Number 1581-EPA-005 D (Appendix 4) has been updated to reflect as built drainage on site. Potentially contaminating substances will be stored in designated areas that are isolated from surface water drains. All waste containers will be stored within a secondary containment system (e.g. a bund for static tanks or a drip tray for mobile stores and drums). The bunds will be capable of storing 110% of tank capacity, plus a minimum 30 mm rainwater allowance where the bund is uncovered.

The proposed storm water from this area of the site will collect clean roof runoff and yard runoff and therefore expected to be uncontaminated.

Regardless in accordance with best practice standards this water will be discharged via silt trap and an interceptor to the receiving surface water body at SW8. Bunds from the tank farm following testing may be pumped to sump 007. Chemical and methanol loading areas are bunded and drained directly to a sump which can be pumped to sump 007 and in turn the WWTP. The loading area for the final product is also draining to sump 007. Any potential runoff from the process and manufacturing areas will not be discharged directly to surface or storm drainage and will be collected in the foul drainage and stored in sump 007 which will be pumped directly to the WWTP.

Drainage to the left of the proposed biodiesel manufacturing area will pass through a silt trap and oil interceptor before discharge at SW1.

8. Confirm whether or not the new land drain created to bring storm water discharge from emission point SW8 will be piped to the unnamed stream that joins the Moynagh River [Regulation (9)(2)(i)].

Response

Drawing 1581- EPA-005D (Appendix 4) and Drawing 1581-EPA-004D (Appendix 5) have been updated to reflect as built drainage on site. The new land drain created to bring storm water discharge from emission point SW8 will be piped some distance as per the Drawing 1581-EPA-004D. The flow will be controlled and discharged from the site via attenuation to ensure greenfield runoff rates are maintained.

9. Confirm that the design of the WWTP is suitable for the treatment of process water from the biodiesel production including wastewater from the Methanol Water Rectification System [Regulation (9)(2)(i)].

Response

Appendix 7 contains expert opinion from MEHS with regards the design of the WWTP. In conclusion recommendations have been made as follows;

“The wastewater from the rendering plant and the biodiesel facility will mix in the balance tank at a ratio of 17 to 1, ensuring the biodiesel effluent is well mixed into the wastewater. The wastewater is then pumped to the DAF for treatment and we would recommend that the concentration of Methanol and Fatty acid methyl esters (FAME) are determined on a daily basis. We would expect a reduction of 60% on the Fatty acid methyl esters (FAME) but minimal on the Methanol.

The biodegradation of Methanol and FAME will be conducted by a variety of bacteria commonly present in industrial wastewater such as;

- Arthrobacter,
- Acinetobacter,
- Bacillus,
- Paracoccus,
- Pseudomonas,
- Paenibacillus and
- Cytophaga

We would propose that the final effluent is tested daily for Methanol and FAME. Organic concentration of the Methanol and FAME may be required due to the low levels in the final effluent. We would recommend the testing is conducted for 3 weeks following completion of the commissioning of the bio-diesel facility”.

College Proteins will implement the above recommendations on commissioning of the bio-diesel facility.

The Fatty Acid Methyl Ester would be removed in the DAF through coagulation / flocculation and the dilution of the biodiesel effluent with the rendering effluent (1 to 17 dilution, is equivalent to 94% reduction). The efficiency of the DAF would remove the Fatty Acid Methyl Esters; therefore a 60% reduction would be a conservative one based on other operations of a similar nature.

10. Confirm that the final treated effluent from the WWTP, including the treated waste waters from the biodiesel production facility, is suitable for land spreading [Regulation (9)(2)(k)].

Response

Appendix 7 contains expert opinion from MEHS with regards the final treated effluent and in conclusion the final effluent produced from the existing rendering plant is max 100 m³/day and proposed effluent of this from the proposed Bio-diesel plant will be at maximum 4 m³/day. Any residual Methanol and fatty acid methyl esters will be extremely small. Treating the combined effluent in the DAF prior to biological treatment will further reduce the concentration. The biological treatment of the effluent with a 42-day retention time will ensure that all Methanol and Fatty Acid Methyl Esters are reduced to levels not detectable. The Methanol and Fatty Acid Methyl Esters are naturally occurring compounds which are biodegradable. The final effluent will be tested for Methanol and Fatty acid methyl esters (FAME) using a concentration method such as activated carbon and GCMS as the concentrations will be low.

Landspreading shall, as a minimum, be carried out in accordance with S.I No. 65 of 2018 European Union (Good Agricultural Practice for Protection of Waters) (Amendment) Regulations 2018.

11. Condition 5.17 of existing licence P0037-03 required an increase in the height of the boiler stacks to 26.5m above ground level but Attachment 7.4.1 of the licence application states the boiler stacks for A6-E7 and A7-E8 are at 19.8m. Confirm if the boiler stacks were raised and if not, clarify the reason Condition 5.17 was not implemented [Regulation (9)(2)(i)].

Response

Existing boiler stacks at A6-E7 and A7-E8 are 19.8m above ground level. These were not raised to 26.5m above ground level. Appendix 6 Air Quality Impact Assessment (AQIA) addresses this and advises that increasing the height of stacks serving boilers A6-E7 and A7-E8 is predicted to only slightly reduce the worst-case impacts at the nearest sensitive receptors therefore we would respectfully request this condition be amended as part of the licence review application process and as per the details contained within Attachment 7.4.1 submitted.

12. Emissions to Atmosphere Attachment 7.4.1, states the maximum daily total volumetric air flow for emission point A2-E4 as 840,000m³ whereas current licence P0037-03 permits a maximum daily air flow of 1,440,000m³. Confirm if 840,000m³ is the correct proposed maximum daily total volumetric air flow proposed from emission point A2-E4 [Regulation (9)(2)(i)].

Response

A2-E4 relates to Biofilter 1 of the existing licence P0037-03. We can confirm that 1,440,000m³ is the correct proposed maximum daily total volumetric air flow proposed from emission point A2-E4. We have revised Emissions to Atmosphere Attachment 7.4.1, to correct this typo.

13. Emissions to Atmosphere Attachment 7.4.1, Section on Waste Gas – Abatement /Treatment Control (pg. 12) and Section on Waste Gas Emissions (pg. 15) does not contain any details on the following emission points; A6-E7, A7-E8, A8-E9, A9-E10, A10-E11, A11-E12, A12-E13, A13-E14. Update Attachment 7.4.1 with details of the associated emission points as required within the relevant tables [Regulation (9)(2)(i)].

Response

Attachment 7.4.1 has been revised to include details of the associated emissions points required in Question 13 of this further information request.

14. Provide the thermal input capacity (MWth) for all existing and new combustion plant identified on pg. 7 of Emissions to Atmosphere Attachment 7.4.1 and confirm whether or not the Medium Combustion Plant Regulations (S.I. No. 595 of 2017) apply to each item [Regulation (9)(2)(i)].

Response

Attachment 7.4.1 has been revised to include details of the input capacity (MWth) for both existing and new combustion plants as requested.

Medium Combustion Plant Regulations (S.I. No. 595 of 2017) will not apply to existing or new proposed Emissions Point codes A9-E10 Biodiesel Steam Boiler, A10-E11 Biodiesel Thermal oil Boiler and A13-E14 Co-generation plant. Under Scope 4 (3 iv) of these regulations these combustion plants do not fall under the scope of the regulations as they are;

(iv) combustion plants in which the gaseous products of combustion are used for direct heating, drying or any other treatment of objects or materials;

15. Emissions to Atmosphere Attachment 7.4.1 identifies low sulphur fuel or tallow or bio heating oil (BHO) as secondary fuel types in the thermal oxidiser and boiler 1 and 2. Outside of tallow and BHO, confirm what other low sulphur fuels are proposed as a secondary fuel and provide a technical data sheet or equivalent analyses results for the BHO which includes details on sulphur content [Regulation (9)(2)(i)].

Response

Appendix 9 contains a technical data sheet for the BHO which includes details on sulphur content from another biodiesel plant as College Proteins are not in production phase yet. College Proteins will supply to the EPA a BHO certificate on commencement of production at the facility.

Appendix 11 contains a specification for a low sulphur heavy fuel oil which also may be used at the facility in the future.

Any other low sulphur fuels to be used as secondary fuels will be agreed with the Agency in advance of using. Secondary fuels are detailed in Attachment 7.4.1.

16. In accordance with the Agency's guidance document AG4, provide an air dispersion model, to assess the impacts of all existing and new combustion plant (>1MWth) and the thermal oxidiser, as identified on pg. 7 of Emissions to Atmosphere Attachment 7.4.1, against the relevant air quality standards for NO_x and CO when operating on natural gas and NO_x, CO, SO₂ and particulates (PM₁₀ & PM_{2.5}) when operating on tallow or BHO. Provide an air dispersion model also of the methanol emission from the gas scrubbing plant and compare to an appropriate air quality guideline [Regulation (9)(2)(k)].

Response

Please find attached Appendix 6 Air Quality Impact Assessment Report (AQIA). To fulfil the requirements of the EPA as detailed in question 16 the following are the scenarios contained within the assessment;

1. Scenario 1 – which considers the impacts from the combustion plant and the thermal oxidiser when all combustion plant is using natural gas;
2. Scenario 2 – considers the impacts when the thermal oxidiser and boilers No. 1 and 2 are fueled by tallow. This Scenario includes the emissions from the biodiesel plant and the cogeneration plant when fueled by natural gas (as Scenario 1);
3. Scenario 3 - assumes that the thermal oxidiser is fueled by BHO and where all other combustion plant is fueled by natural gas; and
4. Scenario 4 – this considers the impacts of methanol from the biodiesel plant methanol scrubber.

It must be noted whilst reviewing this model that four scenarios have been considered for the assessment and it is unlikely that Scenario 2 or 3 which includes the use of tallow and Bio Heating Oil (BHO) will be used but are requested for approval. The scenarios modelled assume the highest permitted exhaust gas flows and assume continuous operation (24 hours/ 365 days) over the year.

In summary the AQIA indicate that no EC air quality standard or Environment Assessment Levels (EAL) is predicted to be exceeded at any sensitive receptor considered within the study area. The predicted process contributions of NO_x and SO₂ comply with EC Limit Values for sensitive ecology. All pollutants are predicted to comply with EC and Irish annual mean and short-term limit values intended to protect human health. Annual mean concentrations of Ammonia and Methanol are predicted to be insignificant at all sensitive human receptors in terms of the assessment framework.

17. Attachment 7-4-2, on Minor and Potential Emissions, does not contain any detail on potential emissions. Confirm if by-passes/abort stacks and pressure relief valves are present and if yes, update the table for Potential Emissions in Attachment 7-4-2 with details [Regulation (9)(2)(i)].

Response

Attachment 7-4-2, on Minor and Potential Emissions has been updated to include all potential emissions to atmosphere.

18. The application form states that Chapter V of the IED is not applicable but pg. 8 of Attachment 7.4.1 indicates that Article 58 of Chapter V is applicable.

a. Confirm whether or not Chapter V is applicable through the following activity and consumption threshold listed in Part 1 and Part 2 of Annex VII [Regulation (9)(2)(i)]:

12. Vegetable oil and animal fat extraction and vegetable oil refining activities
Any activity to extract vegetable oil from seeds and other vegetable matter, the processing of dry residues to produce animal feed, the purification of fats and vegetable oils derived from seeds, vegetable matter and/or animal matter.

> 10 tonnes/year solvent consumption for vegetable oil and animal fat extraction and vegetable oil refining activities.

Response

Attachment 7.4.1 has been revised to update Page 8 and remove “methanol from the scrubber on the biodiesel plant, A12-E13” from the Table Emissions Points with Solvent Emissions only. This was contained in error, following review of Appendix 10 Methanol Safety Data Sheet and Regulation (EC) No. 1272/2008 we can confirm that methanol does not contain” Emissions of volatile organic compounds referred to in Article 58 (Substances or mixtures which, because of their content of volatile organic compounds classified as carcinogens, mutagens, or toxic to reproduction under Regulation (EC) No. 1272/2008, are assigned or need to carry the hazard statements H340, H350, H350i, H360D or H360F) of the Industrial Emissions Directive”.

We can confirm that Chapter V is not applicable through the following activity and consumption threshold listed in Part 1 and Part 2 of Annex VII; *12. Vegetable oil and animal fat extraction and vegetable oil refining activities. Any activity to extract vegetable oil from seeds and other vegetable matter, the processing of dry residues to produce animal feed, the purification of fats and vegetable oils derived from seeds, vegetable matter and/or animal matter.*

Methanol is not used for extraction or in the purification of fats and vegetable oils from seeds, vegetable matter and/or animal matter in the process. Methanol is required in the process to create biodiesel.

a. Provide a safety data sheet for the methanol to be used on site, which is compliant with Annex I of REACH Regulation No. 453/2010 and which clearly shows the hazard statements associated with the product [Regulation (9)(2)(f)].

Response

Appendix 10 Contains Safety Data sheets provided by proposed suppliers for methanol which is compliant with Annex I of REACH Regulation No. 453/2010 and which clearly shows the hazard statements associated with the chemical.

19. The submitted EIAR refers to a number of Appendices and Volume 3 but there are no Appendices or Volume 3 contained in either of the 4 documents submitted (Attachments 6-3-6 A, 6-3-6 B, 6-3-6 C & 6-3-6 D). Please submit any missing Appendices not contained in the overall application and Volume 3 of the EIAR [Regulation (9)(2)(d)].

Please find attached Appendix 8 which contains Volume 3 EIAR Appendices which were not submitted as part of the overall licence review application process

Should the Agency have any queries in relation to the above or any of the enclosed appendices and revised attachments please do not hesitate to contact the undersigned.

Yours faithfully,



Mercedes Kavanagh
Enviroguide Consulting
(For and Behalf of College Proteins Unlimited Company)

Enclosures

List of Appendices

- Appendix 1 – Newspaper Notice (Question 1)
- Appendix 2 – Revised site plan, Drawing Number 1581-EPA-002 B. (Question 2)
- Appendix 3 – Updated Company Registration Certificate (Question 3)
- Appendix 4 - Drawing 1581-EPA-005D (Question 5, 6, 7 and 8)
- Appendix 5 – Drawing IS81-EPA -004D (Question 8)
- Appendix 6 – Air Quality Impact Assessment (Question 16 and Question 11)
- Appendix 7 - Expert Opinion from MEHS (Question 9 and Question 10)
- Appendix 8 - Volume 3 EIAR Appendices (Question 19)

Appendix 9 - Technical data sheet for BHO which includes details on sulphur content (Question 15)

Enclosures Continued

Appendix 10– Safety Data Sheet for Methanol (Question 18 (b))

Appendix 11 - Specification for Low Sulphur Heavy Fuel Oil (Question 15)

List of EPA Attachments Revised

Attachment 7.4.1 – Air Main and Fugitive – Revised (Question 12, 13, 14 and 18 (a))

Attachment 7.4.2 – Air Minor Potential – Revised (Question 17)

Attachment 7.7.2 – Storm Water Monitoring (Question 5)

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