

College Proteins

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Environmental Protection
Agency
05 SEP 2008

Jonathan Derham,
Environmental Protection Agency,
Office of Climate Change, Licensing & Resource Use,
Johnstown Castle Estate,
Co. Wexford.

3rd September 2008

Dear Jonathan,

I refer to your correspondence Ref. P0037-03/gc29NH.doc (Please find a copy attached) regarding a proposal to process sludge's at College Proteins, Nobber, Co. Meath, IPPC Licence reg. No.P0037-03. College Proteins wish to apply to process sludge's at our site, from the following categories:

02 01 Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing:
02 01 01 sludge's from washing and cleaning
02 02 Wastes from the preparation and processing of meat, fish and other foods of animal origin:
02 02 01 sludge's from washing and cleaning
02 02 04 sludge's from on-site effluent treatment
02 03 Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation:

02 03 01	sludge's from washing, cleaning, peeling, centrifuging and separation
02 03 05	sludge's from on-site effluent treatment
02 04 Wastes from sugar processing:	
02 04 03	sludge's from on-site effluent treatment
02 05 Wastes from the dairy products industry:	
02 05 02	sludge's from on-site effluent treatment
02 06 Wastes from the baking and confectionery industry:	
02 06 03	sludge's from on-site effluent treatment
02 07 Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa):	
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials
02 07 05	sludge's from on-site effluent treatment

The reason College Proteins wish to process the alternative material is to cover all areas of waste from our existing customers. College proteins request a decision by the agency as to whether the proposal can be considered under a technical amendment or if a review of the licence is required.

Please find attached a risk assessment of sludge's on the environment, process and staff at College Proteins.

Yours sincerely

Lisa Clarke

Lisa Clarke

Environmental Research Assistant.

RISK ASSESSMENT OF SLUDGE.

College Proteins recognizes both its legal and moral obligation to undertake a suitable and sufficient programme of risk assessment of any significant hazard, to determine the degree of risk, and thereafter, to put in place any necessary adequate measures to control the risks. College Proteins shall endeavor to comply with the aforementioned duty by implementing the following, so far as is reasonably practicable:

1.0 General Management

1. Provide training for employees whom are in contact or work directly with the sludge and ensure that they have sufficient time to conduct the responsibilities required in this role and that their training is regularly updated through a refresher course.
2. Adopt a programme for annually reviewing risk assessments of all activities.
3. Undertake a written risk assessment, identifying the hazard, the possible consequences and the preventative and protective measures required for control.
4. The Operations Managers will monitor the validity of risk assessment control measures and review / update as appropriate to ensure College Proteins conforms to current safety legislation.
5. All employees must read and understand the risk assessment control measures, which are contained within all formats of this document. Any employee who has a difficulty with this should contact his / her Health and safety Officer or the Operations Manager.
6. All new employees will receive proper instruction and information on the purpose and use of risk control measures to enable them to perform their duties in accordance with the prescribed methods.
7. Employees who have concerns over particular risks should advise their Safety Representative at their earliest convenience and ensure that they provide sufficient information of the hazard.

2.0 College proteins accident management plan.

2.1 Spillage on Site.

In the event of a spill occurring which has the potential to have a significant environmental effect, the Production Manager on site/on call must be informed and must ensure that personnel are not in any danger from the spill. If required, the necessary emergency services should be requested (Find a copy of these details in Appendix 1 of this Risk Assessment)

Consult the relevant Material Safety Data Sheets to determine if protective equipment can be worn when dealing with the spill.

Where possible prevent the spill from entering any storm water drains or road gullies using the spill kit and absorbent padding and booms kept in the fire compound.

Cordon off the area and keep personnel and vehicles away from the area

In the case of a spillage from a vehicle move the vehicle to a place where the spill can be more easily dealt with.

In the event of a spillage effecting neighboring property the relevant people should be informed by the Environmental Officer.

The Environmental Officer shall inform the local authority, and EPA. A report on the occurrence must be entered into the Emergency Response Report Log.

General guidelines for emergency response are posted in the following areas:

Reception

Canteen

Plant Manager's Office

Engineering Workshop

Laboratory

Control room

2.2 PROCEDURE TO CONTAIN SPILLS

This procedure covers all spills with the potential to adversely affect the environment. It is the responsibility of the Plant Manager, the Environmental Officer and the Foremen to ensure that they are correctly implemented.

Definition: A spill can be considered to be any liquid spillage over 5 litres in the case of non-hazardous liquids and 1 litre in the case of hazardous liquids (e.g. acids).

In the event of a spill: -

The Plant Manager and the Environmental Officer should be contacted.

Where possible, prevent the spill from entering any foul or storm water drains. Determine the category of the spill from the Chemical Spill Handling List and ascertain whether the spill is a Category 1, 2 or 3.

Category 1: Hazardous, e.g. acids, biocides

Category 2: Non-hazardous but presents an environmental risk, e.g. oil,

Category 3: Non-hazardous and no environmental risk, e.g. sludge

There is a 'spill kit' located in the fitters workshop beside the raw material building and a second one is located in a storage bin in the raw material yard.

We deem the raw material we are proposing to handle as category 3.

2.3 In the case of a spill:-

Put on the appropriate protective equipment gloves, goggles.

Drains should be sealed.

Absorb spill-using material from spill kits.

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Wash contaminated area with floor washer or similar, disposing of washings to the nearest foul drain.

2.4 Transport spillage of the proposed raw material.

In the event of a transport spillage of the proposed raw material the following procedure will take place:

- The driver stops the lorry.
- The transport manager is informed of the spillage.
- The raw material intake officer and a helper with spillage equipment to clean the spill will proceed to the scene.
- The team will use the company pick up to collect any spillage material.
- Once the clean up team has arrived the driver takes the most direct route to plant.
- An investigation will be carried out to ascertain what happened and preventative controls would be installed to prevent a repeat.

2.5 Prevention of spillage:

The material will be transported in sealed vehicles which reduce the risk of potential odours or leakage problems on route. In addition, College Proteins Ltd. have provided a checklist at each collection point to report the condition of College Protein trailers, skips, outside haulier's trailers and skips collecting material. College Proteins also have an airlock building at the intake area which prevents the escape of odours during unloading of the material. Provisions to reduce the risk of odours or spillages in place at the plant are as follows:

- All barrel lorries are fitted with steel lids.
- Trailers are fitted with waterproof rollover covers and splash plates.
- Penalties are imposed on hauliers who cause spillage or odours. A record is kept of breaches and the penalty is an immediate fine.
- All containers, skips and vehicles used in the transportation of raw material are washed thoroughly each time and sprayed with a disinfectant. The Environmental Manager at the plant checks vehicles exiting the premises at random for odour and appearance.

- A monthly report is filed which includes a checklist for each container transporting raw material to the site. This can be made available to authorised personnel

2.6 Conclusion

We believe that the transport of the proposed sludge's will have no effect on the existing environment, transport, process or staff at College proteins.

2.7 Reporting

Any incident with the potential for environmental contamination of surface water or ground water, or posing an environmental threat to air or land, requires a response to the Local Authority (Meath county council), EPA (Environmental Protection Agency) and the Eastern Regional Fisheries board.

During Business Hours

Inform the EPA inspector for the site immediately by phone or alternatively phone Office of Environmental Enforcement, EPA, McCumiskey House, Richview, Dublin 14 – Telephone 01 2680100 .Fax details to the Office of Environmental Enforcement, EPA., McCumiskey House, Richview Dublin 14 addressed to the Enforcement Section 01 2680199.

Inform The Eastern Regional Fisheries Board, 15a Main Street, Blackrock, Co. Dublin - by phone on 01-2787022.

Inform the local authority (Meath County Council), county hall, Navan, Co. Meath.- by phone on 046-9097000.

Outside Business hours

Fax details to the Office of Environmental Enforcement, EPA, McCumiskey House, Richview, Dublin 14 – Fax No. 01 2680199

Telephone and leave a message on the answering service at the Office of Environmental Enforcement, EPA., McCumiskey House, Richview, Dublin 14 using a touch-tone telephone –

Telephone 01 2680100

At the start of the next business day, inform their Licensing and Control Officer by telephone.

Fax details to The Eastern Regional Fisheries Board, 15a Main Street, Blackrock, Co. Dublin- on 01-22787025.

Telephone and leave a message on the answering service at The Eastern Regional Fisheries Board, 15a Main Street, Blackrock, Co. Dublin - by phone on 01-2787022

Fax details to the local authority (Meath County Council), county hall, Navan, Co. Meath- on 046-9097001.

Telephone and leave a message on the answering service at the local authority (Meath County Council), county hall, Navan, Co. Meath - by phone on 046-9097000.

Information to give:

When available, the notification at the minimum should contain:

- Name of company
- Contact person and telephone number
- Location of the incident
- Date and time of the Incident and its duration
- Details of the occurrence
- Materials emitted
- Environmental significance of the incident
- Weather conditions, i.e. rain, wind
- Vulnerable receptors
- Whether emergency services were contacted

- What other bodies were contacted including Local Authority and Regional Fisheries boards
- The steps taken to minimise the emissions and avoid recurrence

The template to be faxed is available in the laboratory for use, also (please find a copy attached in appendix 2).

3.0 Operations

3.1 Permitted activities

In pursuance of the powers conferred on it by the Environmental protection Agency Act, 1992, College proteins, college road, Nobber, County Meath under section 8391) of the said Act to carry on the following activities

- The rendering of animal by products
- The recovery or disposal of waste in a facility, within the meaning of the Waste Management Act, 1996, which facility is connected or associated with another activity specified in this Schedule in respect of which a license or revised license under part IV is in force or in respect of which a license under the said part is or will be required.

3.2 Waste acceptance

The IPPC license states that the quantity of animal by-products accepted for processing at the site shall not exceed 125,000 tonnes per annum.

3.3 Current waste acceptance.

02 Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing.

02 01 Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing:
02 01 02 animal-tissue waste
02 02 Wastes from the preparation and processing of meat, fish and other foods of animal origin:
02 02 02 animal-tissue waste
02 02 03 materials unsuitable for consumption or processing
02 03 Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation:
02 03 04 materials unsuitable for consumption or processing
02 05 Wastes from the dairy products industry:
02 05 01 materials unsuitable for consumption or processing
02 06 Wastes from the baking and confectionery industry:
02 06 01 materials unsuitable for consumption or processing
02 07 Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, Tea and cocoa):
02 07 02 wastes from spirits distillation
02 07 04 materials unsuitable for consumption or processing

3.4 Proposed waste acceptance

02 Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing.

02 01 Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing:
02 01 01 sludge's from washing and cleaning
02 02 Wastes from the preparation and processing of meat, fish and other foods of animal origin:
02 02 01 sludge's from washing and cleaning
02 02 04 sludge's from on-site effluent treatment
02 03 Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation:
02 03 01 sludge's from washing, cleaning, peeling, centrifuging and separation
02 03 05 sludge's from on-site effluent treatment
02 04 Wastes from sugar processing:
02 04 03 sludge's from on-site effluent treatment
02 05 Wastes from the dairy products industry:
02 05 02 sludge's from on-site effluent treatment
02 06 Wastes from the baking and confectionery industry:
02 06 03 sludge's from on-site effluent treatment
02 07 Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, Tea and cocoa):
02 07 01 wastes from washing, cleaning and mechanical reduction of raw materials
02 07 05 sludge's from on-site effluent treatment

3.5 The site

The activities shall not extend beyond the site.

4.0 Emissions & monitoring

4.1 Emissions to air, water or land

There shall be no point source emissions to air, water or land.

4.2 Fugitive emissions of substances

Fugitive emissions of substances shall not cause pollution or breach the limits of the license. The operator shall not be taken to have breached this rule if appropriate measures, including those specified above in the accident management plan are taken. Also all waste shall be stored and treated on an impermeable surface with sealed drainage system to the onsite waste water treatment plant. The raw materials shall be transported to the site in sealed stainless steel containers with roll on covers so escape of potential odours is minimized.

5.0 Effects of the sludge on the process

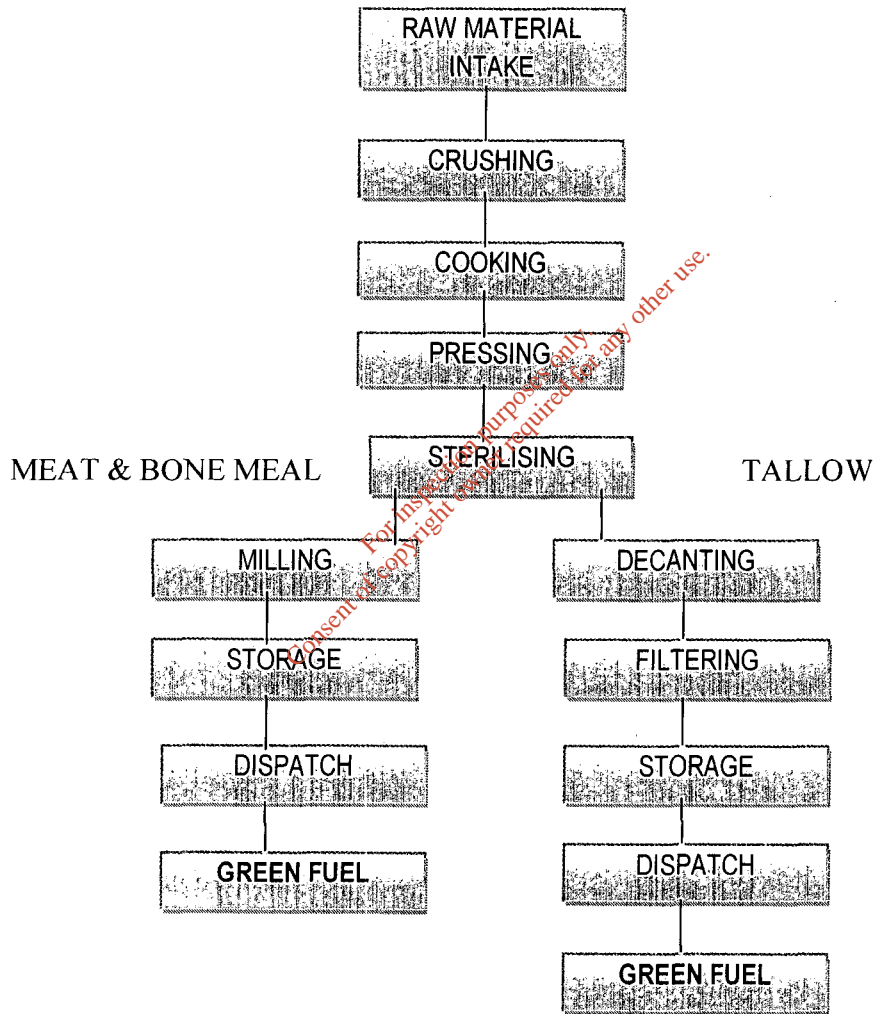
5.1 Production Process

Drawing below shows College Proteins production flow process in operation within the plant and follows the flow of material from intake to dispatch.

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Diagrammatically this is as follows in fig. 5.1.1

The Production Process



This production process is designed to comply with all relevant legislation. At present, it is one of the most advanced in Europe and is continually examined to improve compliance with regulations and overall efficiency.

5.2 Raw Material Intake

There are two hoppers 150 m³ each in the raw material building in College Proteins, where the sludge will be delivered to. The raw material is then transferred to our cooking system by a piston pump.

There is 230 tonne of liquid storage space in the raw material building 150 tonne blood tank, 50 tonne blood tank and a 30 tonne intermediate tank.

5.3 Cooking Process

College Proteins operate a continuous cooking system. The cookers are heated by steam pressure generated by the boiler and are the most efficient cooking systems available. The raw material added to the cooker must be a mix of wet and dry matter. The liquid from the blood tank is pumped to the intermediate tank where they are added to the cooker via a timer valve with dryer material. The mix of liquids and solids must be approximately the same always to efficiently cook the material. The materials are passed through the cooker where the moisture is removed as vapour. Inside each cooker the raw material is heated using indirect steam at 150 psi to 550 square meters of heat surface in cooker 1 and 265 square meters of heat surface in cooker 2. This ensures plenty of contact surfaces for the raw material for cooking. The material resides inside the cooker for between 2.5 and 3 hours and reaches temperatures in excess of 120°C before discharge.

The cookers controlled by a computer system each machine is on load cells with three temperature probes to record the temperature and a flow recorder to show the feed rate. The feed rate is controlled using an inverter on the feed pump together with the load cells and temperature read outs.

During the process approximately 60% of the raw material is lost through evaporation. This vapour contains the primary fumes which are treated using a Thermal Exhaust Air Purification (TEAP) system. This system takes the vapours, cleans them and allows the excess heat to be recovered and recycled. This excess heat, produced as a bi-product of the system, is used for steam production to assist all other processes within the plant e.g. Cooking, Sterilisation of Tallow & Meal, etc. The residual steam is used for the cooking or other processes and residual vapours are then condensed by three separate air-cooled condensers and the condensate is sent to the waste water treatment plant for treatment. There would be no increase in air emissions from the TEAP units or no extra condensate being sent to the waste water treatment plant as the liquid would be sent through the process slowly. There is 230 tonnes of liquid storage space in the raw material building

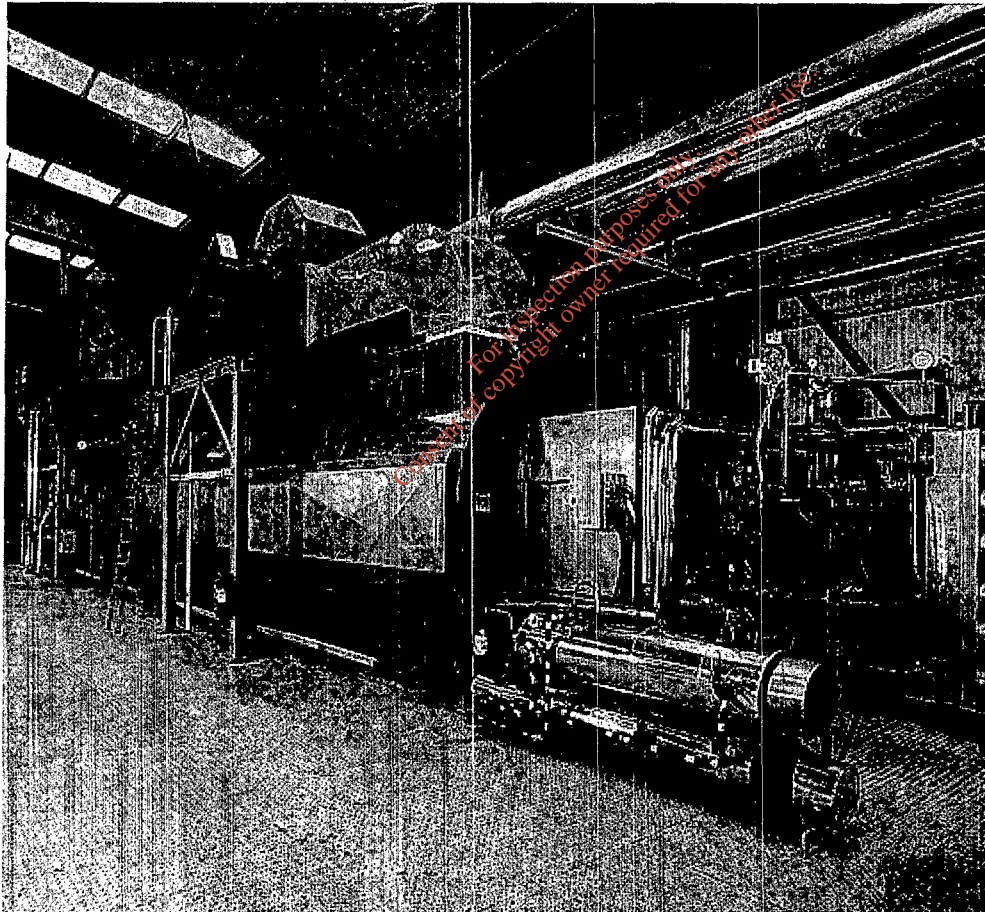


Fig. 5.3.1 TEAP unit

The finished product, called greaves is made up of fat and solids 14% and 28% approximately. The greaves are passed through a drain hopper where the free oil is allowed to separate from the solids. The material is then passed through further metal detector and then through a roller crusher where the particle size is further reduced to less than 20 mm.



Fig. 5.3.2 Cooker No. 1.

5.4 Pressing Process

Material is then passed by screw conveyor to one of three Presses .The Presses compress the greaves to remove the remaining oil. The resulting dried cake is passed to the Meal sterilizer. The Tallow oil flows to settling scraper tanks from which heavy solids are returned to the

presses. The oil is then pumped via storage tanks to the decanters where any remaining solids are removed. The sludge will have no effect on the pressing process.

5.5 Tallow Filtration Process

Tallow is pumped from the Decanter to a holding tank. From there the tallow is then pumped to a Rotary Vacuum Filter. At this filter the Tallow is drawn through the drum of the filter. Any insoluble particles in the Tallow are collected on the surface of the coating and scraped off. The clean Tallow is pumped to the storage tank and onto the Sterilisation process. The sludge will have no effect on the filtration process.



Fig. 5.5.1 Tallow Filter

5.6 Tallow Sterilization

Tallow is sterilized using indirect steam at a pressure in excess to 3 bar and 133°C for 20 mins.

All of the variables are recorded and printed on the production computer system as well as the PLC system which logs all the data. The sludge will have no effect on the tallow sterilization process.

5.7 Meal Sterilizing

Meal is sterilized using indirect steam at a pressure in excess to 3 bar and 133°C for 20 mins.

All of the variables are recorded and printed on the production computer system as well as the PLC system which logs all the data. The sludge will have no effect on the meal sterilization process.

5.8 Milling Process

When the sterilizing process has been successfully completed, the dried cake is passed through an air cooler. It is then passed to a holding bin where it is held for milling.

As part of the College Proteins energy policy the milling process is usually carried out at night. The dried cake is milled and passed to a storage silo where it is stored before being loaded on to trailer/container for dispatch. The sludge will have no effect on the milling process.

5.9 Conclusion

We believe that the processing of the proposed sludge's will have no effect on the existing environment, process or staff at College proteins.

6.0 Odour

Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency. The operators will use appropriate measures, to prevent or where that is not practicable, to minimise, the odour. The odour from the proposed raw material is minimal in comparison to the odour from animal by products if it is not controlled.

6.1 Odour abatement equipment.

All odour abatement equipment including biofilters which can be seen in Fig.6.1.2, TEAP units and the waste water treatment plant will be well equipped and able to manage any potential odour which may arise from the processing of sludge. Because the TEAP units will be able to remove the vapours from the cookers there will be no extra demands put on the Biofilters or the waste water treatment plant. College proteins also have an airlock building as shown in Fig. 6.1.1.



Fig. 6.1.1 Airlock building.

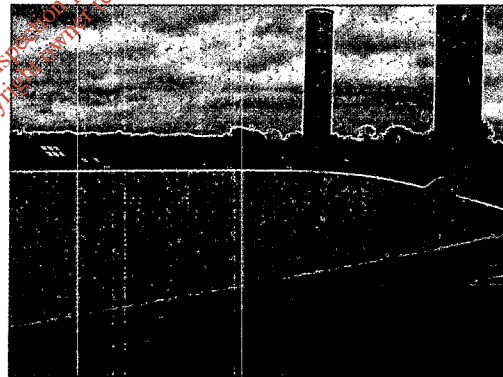


Fig 6.1.2 Biofilter

7.0 Noise and vibration

Emissions from the activities shall be free from noise and vibration at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency.

8.0 Pests

Scavenging animals, scavenging birds and other pests shall not cause nuisance. The building does not allow any birds or animals into it as all doors are kept closed at all times. College proteins implements a pest control system which is installed by ECO labs. It involves a number of poison bait points around the site to prevent rats causing a nuisance.

9.0 General Conclusion

In conclusion the intake of non hazardous sludge's from agriculture, horticulture, aquaculture, forestry, hunting, fishing, food preparation and processing will have no impact on the environment, process or staff at college proteins.

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Appendix 1

EMERGENCY CONTACT NUMBERS

In the event of an accident:

PHONE:

Dr. Martin White, Nobber..... 52109

Dr. Cummins, Drumconrath 041 54132

Fire Brigade or Ambulance 999/112

Garda No. (Nobber) 52182

When they answer tell them:

“This is College Proteins, College Road, Nobber.

The Phone Number is 046-52466”

Then give them your Name and the nature of the Problem

Advise Management

(If after hours) Phone Joe Cushnahan DC 016

(If Office is closed there is a phone in the Factory)

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Appendix 2

Incident report sheet

Date: **Time:** **Duration of the incident:**

Contact Person: Peter Olwell (Environmental Officer)

Location of the incident:

Details of the occurrence:

Materials emitted:

Environmental significance of the incident:

Weather conditions:

Vulnerable receptors:

Names of emergency services contacted

Other bodies contacted e.g. EPA:

Steps taken to minimise Emissions & avoid recurrence:

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L.F. ✓
J.C.
J.G.
J.N.



Ms Louise Farrell
Environmental & Resource Manager
College Proteins Limited
College Road
Nobber
County Meath

COLLEGE PROTEINS
3 1 AUG 2007
RECEIVED

Environmental Protection Agency
Regional Inspectorate, McCumiskey House
Richview, Clonskeagh Road, Dublin 14, Ireland
An Ghníomhaireacht um Chaomhnú Comhshac
Cigireacht Réigiúnach, Teach Mhíic Chumascaigi
Dea-Radharc, Bóthar Cluain Sceach
Baile Átha Cliath 14, Éire
T: +353 1 268 0100
F: +353 1 268 0199
E: info@epa.ie
W: www.epa.ie
LoCall: 1890 33 55 99

29/08/2007

Our Ref: P0037-03/gc29NH.doc

Dear Ms Farrell

I refer to your correspondence of the 16th July 2007 regarding a proposal to process sludges at College Proteins, Nobber, Co. Meath, IPPC Licence Reg. No. P0037-03 and our meeting at the Agency Regional Inspectorate in Richview on the 21st of August 2007.

I am to advise you that your proposal as submitted is not to the satisfaction of the Agency. The proposal to process sludges at College Proteins cannot be accommodated under Condition 1.2 of the current IPPC licence for the facility. Consideration of this proposal would be required either by way of a technical amendment or review application of the existing IPPC licence.

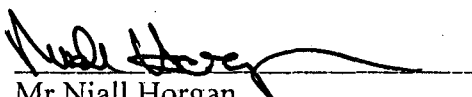
I therefore advise you to write to the EPA's Office of Climate Change, Licensing & Resource Use at PO Box 3000, Johnstown Castle Estate, Co. Wexford to request a decision as to whether the proposal can be considered under a technical amendment or if a review of the licence is required.

Please provide the following in your letter to the Office of Climate Change, Licensing & Resource Use:

- Details of the requested change(s).
- Reasons for the change(s) requested.
- Details of any increase or changes in emissions resulting from the change(s).
- An assessment of the likely impacts of any increase/changes in emissions.
- Please also enclose a copy of this letter for their reference.

Please quote the above reference in any future correspondence to the OEE in relation to this matter. If you have any further queries please contact Mr Niall Horgan at 01-2680100.

Yours sincerely


Mr Niall Horgan
Inspector
Office of Environmental Enforcement

