HUNTINGDONSHIRE DISTRICT COUNCIL

ENVIRONMENTAL PROTECTION ACT 1990, PART I
THE ENVIRONMENTAL PROTECTION (PRESCRIBED PROCESSES AND SUBSTANCES) REGULATIONS 1991
THE ENVIRONMENTAL PROTECTION (APPLICATIONS, APPEALS AND REGISTERS) REGULATIONS 1991

AUTHORISATION 3/94

NAME & ADDRESS OF OPERATOR:

UNITRITION INTERNATIONAL LIMITED
47 Key Street
Ipswich
Suffolk

ADDRESS OF AUTHORISED PROCESS:

UNITRITION INTERNATIONAL LIMITED
Station Road
Tilbrook
Huntingdon
Cambs
PE18 6JY

(as marked in red ink
at the attached
drawing 3/94/A)

Huntingdonshire District Council hereby authorises Unitrition International Limited to operate a prescribed process as described below and in accordance with the conditions which follow:

Description of Process

The animal feed compounding process is prescribed for Local Authority air Pollution Control under section 6.9 of Schedule 1 to the Environmental Protection (Prescribed Processes and Substances) Regulations 1991 (as amended). It consists of the upgrading of straw for use in animal feedstuffs by chopping, grinding and treating with sodium hydroxide before pelletising at high pressure to produce a finished product. The plant and equipment used in the process is set out in diagrammatic form at the attached drawing reference number 3/94/B. This forms a single line continuous process controlled by level and infra red detectors under the control of a micro processor.

Cereal straw is brought to the plant by lorry, weighed and then unloaded mechanically and stacked in the mill yard before being introduced to the process. Sodium hydroxide is delivered by bulk tanker and is pumped into a 70 tonnes capacity tank which is bunded and fitted with both visual and audible level alarms.

The bales of cereal straw weighing approximately 0.5 tonnes are fed to two drag link conveyors. Each of these feed a tub grinder situated in an enclosed room to contain fugitive dust emissions. The grinders chop the baled straw down to individual lengths.

The chopped straw is transported from one tub grinder by screw conveyor to a storage conveyor. From the second tub grinder the straw is removed pneumatically via a cyclone which has a rotary seal to give a slightly negative pressure and then by auger to the same storage conveyor. The cyclone discharges cleaned air directly to the external air through an exhaust duct discharging above the roof. The cyclone is fitted with a detector device which stops all feed through the cyclone and sets off an audible alarm when a blockage occurs. The speed of the storage conveyor is controlled by the micro processor dependant upon progress throughout the process.

The chopped straw is transported from the storage conveyor and fed into an air stream. Warm air can be injected to dry the straw if required. The hot air is supplied from a diesel burner and the products of combustion remain within the process. The straw is then fed pneumatically through a hammer mill where it is ground to a grist. The material progresses to a cyclone fitted with a rotary seal and a detection device which stops all feed through the cyclone and sets off an alarm when the cyclone blocks.

The straw exists from the bottom of the cyclone via a rotary seal and passes into a 2 metre paddle continuous process mixer where sodium hydroxide and water are added. The air stream from the cyclone passes to a second cyclone, also fitted with a rotary seal and blockage detection equipment. The cyclone feeds the grist into a screw conveyor which leads from the mixer and the cleaned air passes directly to the external air through an exhaust duct discharging above the roof.

On leaving the mixer the material is transported by screw conveyor to two cubing presses where it is formed into pellets. The pellets are fed to a band weigher and then to a cooler. The band weigher is fitted with a mechanical extract ventilation system which removes steam from the product and discharges it directly to the external air.

The cooler is essentially a large oblong box with a moving floor. As the product moves through the cooler, air is pulled through the floor to cool the product. This air also has the effect of removing fines which pass to a further cyclone where the cleaned air passes to the external air and the fines pass via a rotary seal back into the screw conveyor before the cubing presses. This cyclone is also fitted with blockage detection devices.

From the cooler the product is fed through screw conveyors and bucket elevators to one of four bulk silos of 125 tonnes individual capacity. Between the cooler and silos the product passes through fine screens. The fines are returned to the system together with those arising from the cooler.

The plant operates 24 hours per day. Production is organised on a 8 hour, 3 shift system for 5 days Monday to Friday. Maintenance is performed at weekends or during weekday shutdowns and extra shifts are worked when required.

Conditions

The requirements of the following conditions shall come into effect on the date indicated in each condition. Where no date is indicated the condition shall have immediate effect.

Emission Limits and Controls

1. All emissions to air from the process, other than steam or water vapour, shall be colourless and free from persistent mist.

2. All emissions to air from the process shall be free from persistent fume and free from droplets.

3. The emission of offensive smells from the premises shall not be so extensive as to be prejudicial to the health of or a nuisance to the inhabitants of the neighbourhood, subject to the defence of Best Practicable Means.

4. Fugitive emissions of dust from the process shall not be so extensive as to be prejudicial to the health of or a nuisance to the

inhabitants of the neighbourhood, subject to the defence of Best Practical Means.

5. Emissions from combustion appliances associated with the process shall, in normal operation be free from visible smoke and in any case shall not exceed the equivalent of Ringelmann Shade 1 as described in British Standard BS 2742:1969. Emissions during start up from cold or on fuel change-over may exceed Ringelmann Shade 1 for up to 45 minutes but shall not exceed Ringelmann Shade 2.

6. With effect from 1 October 1996 the concentration of total particulate matter in emissions to air from any contained source within the process shall not exceed 150mg/m^3, expressed at reference conditions 273k, 101.3 kPa and without correction for water vapour.

7. The introduction of dilution air to achieve the above emission concentration limits shall not be permitted and exhaust flow rates shall be consistent with the efficient capture of emissions.

Emission Monitoring

8. Visual and olfactory assessments for dust, smoke and odour emissions from the premises shall be made daily.

9. The results of the monitoring required by condition 8 above shall be recorded in a log book (hereinafter referred to as "the log").

10. With effect from 1 October 1996 emissions from each dust arrestment plant exhaust stack shall be continuously monitored for particulate matter where the individual exhaust flow rate exceeds 50m^3/min or at least once per year in accordance with British Standard BS 3405:1983 where the individual exhaust flow is less than 50m^3/min.

11. Each particulate matter monitor shall be connected to visual and audible alarms which shall be activated when the emission concentration limit is reached.

12. All continuous monitoring instruments shall be checked daily and calibrated in accordance with the manufacturer's recommendations, at least once a year.

13. In any case where the emission measurement of particulate matter exceeds the concentration limit specified at para 6 above, the results shall be entered in the log and shall be notified to the Local Authority.

Materials Handling

14. Stocks of dusty or potentially dusty materials shall be stored in such a manner as to minimise wind whipping.

15. Adequate provision shall be made for the containment of liquid and solid spillages. All spillages shall be cleared as soon as possible, and in the case of solid materials, dry sweeping shall not be permitted where this may lead to the generation of dust to external air.

16. Bulk storage silos and tanks containing raw materials shall be fitted with high level alarms.

17. The transfer of raw materials within the process shall be achieved by mechanical handling devices and these shall, other than in the case of straw entering the process, be fully enclosed.

18. With effect from 1 October 1996 the materials outloading area shall be provided with protection against wind entrainment of particulate matter.

General

19. Proper use of equipment, proper supervision of process operations and adequate preventative maintenance shall be employed on all plant and the equipment concerned with the control of emissions to air. Essential spares and consumables shall be held or arrangements shall be in place to effect essential maintenance without undue delay.

20. Any malfunction or breakdown leading to abnormal emissions above that permitted by this authorisation shall be remedied promptly and process operations shall be suspended until such time.

21. All malfunctions or breakdowns which cause abnormal emissions shall be recorded in the log and the Local Authority is to be informed immediately if there is likely to be an effect on the local community.

22. Staff at all levels shall receive the necessary formal training and instruction in their duties relating to control of the process and emissions to air.

23. Good housekeeping shall be practised at all times.

24. Any records required to be kept by the above conditions shall be maintained at the workplace for a minimum of 4 years and made available for examination by the Local Authority.

25. A programme for upgrading to the standard required by this authorisation shall be submitted to the local authority within 6 months of the date of issue of this authorisation.

13 **April 1994** .....

DIRECTOR OF HOUSING AND ENVIRONMENTAL HEALTH

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GENERAL NOTES

1. Implied Conditions

It should be noted that Section 7(4) of the Act provides that, in relation to any aspect of the process not regulated by the conditions in this authorisation the best available techniques not entailing excessive cost shall be used:

(i) for preventing the release of substances prescribed for air into the air, or where that is not practicable by such means, for reducing the release into the air of such substances to a minimum and for rendering harmless any such substances which are so released, and

(ii) for rendering harmless any other substances which might cause harm if released into the air.

2. Review

The Local Authority will undertake a review of the conditions in this authorisation at least every 4 years or where complaint is attributable to the process an immediate review shall be undertaken.

3. Variation

The Local Authority will ensure that the authorisation remains up to date in line with the objectives set out in section 7(2) of the act and may issue a variation notice following amendment to the Secretary of State's Guidance Note or following receipt of any direction from the Secretary of State.

4. Appeal

The operator can appeal in writing to the Secretary of State for the Environment against the conditions included in an authorisation or any refusal to vary the authorisation within six months of the date of the decision against which the appeal is made. Appeals will not put notices into abeyance, except in the case of revocation notices.

5. Transfer of Authorisation

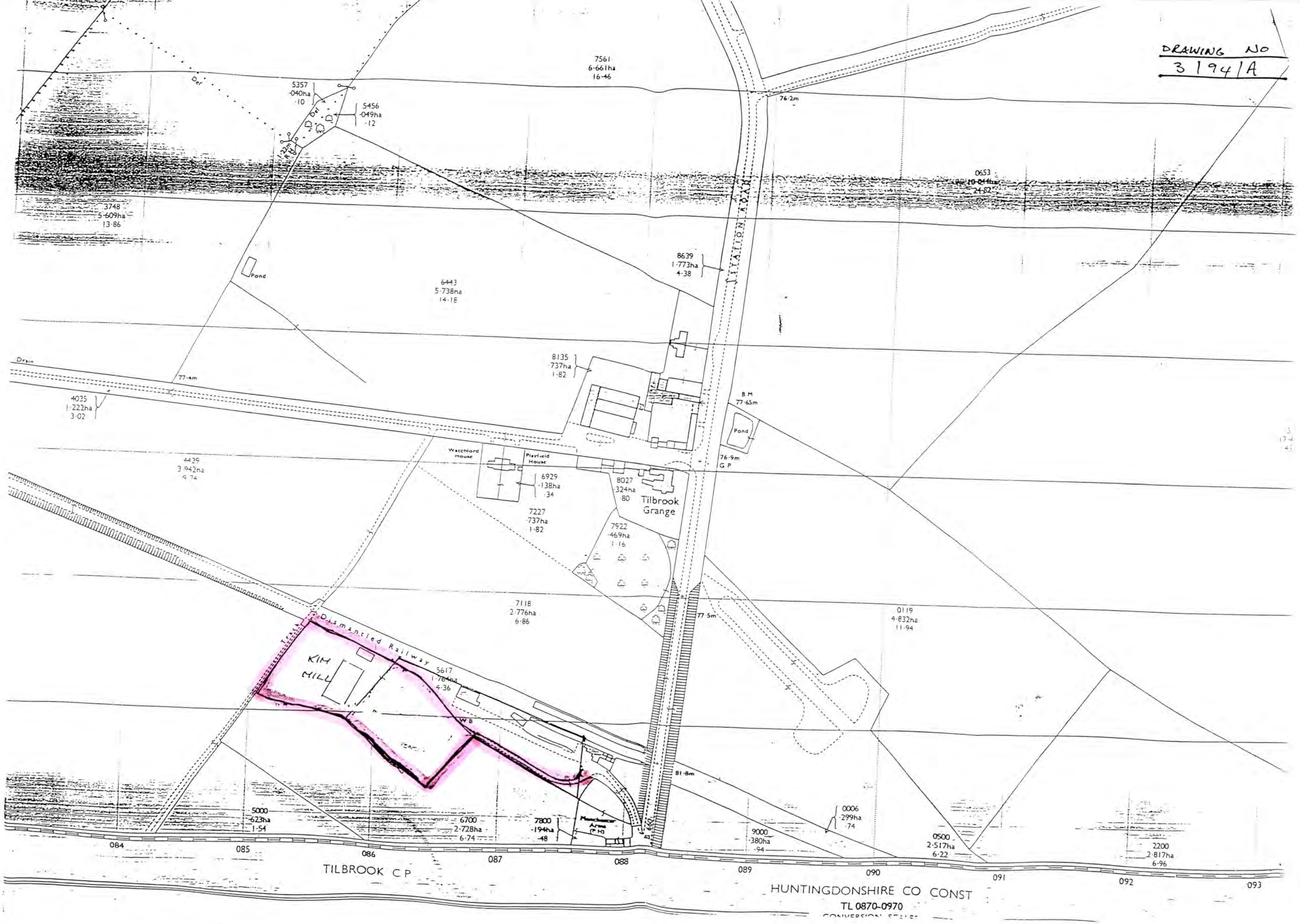
The holder of the authorisation may transfer it to a person who proposes to carry out the process in the holder's place. The person to whom the authorisation is transferred must notify the Local Authority within 21 days of the date of transfer and anyone who fails to do so is guilty of an offence.

6. Other Legal Requirements

This Authorisation is issued solely for the purpose of Part I of the Environmental Protection Act 1990 and the Operator must ensure that he complies with all other statutory requirements.

7. Annual Subsistence Charge

The Secretary of State has drawn up a charging scheme under Section 8 of the Environmental Protection Act 1990, Part I. Under this scheme Local Authorities are required to levy an annual subsistence charge related to the authorisation. The Local Authority will invoice for the amount due which is subject to annual review by the Department of the Environment.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Drawing No. 3/94/B