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**PROCESSING OF ANIMAL BY-PRODUCTS TO PRODUCE
TALLOW AND MEAT AND BONE MEAL BY HEATING AND
CENTRIFUGAL EXTRACTION**

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WASTE STREAMS

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1. IDENTIFIED WASTE STREAMS

1.1 Three waste streams have been identified

- Waste water from the process
- Wash down waters
- Metal items – worming bolas’ and ingested items in animal carcasses not previously removed in the knackery process

2. WASTE WATER

2.1 Waste water comes from two sources, being “spun out” in the three-phase centrifuge and also from air from the meat and bone meal drier which is condensed. The water from both sources is collected and stored with a small amount being drawn off for use in the boiler.

2.2 It is not possible to reduce the waste water stream – up to 50% of animal carcasses is water. The meat and bone meal needs to be dried for a specified period to comply with the requirements of the Animal By-Products Regulations, thus water from condensing the drying air cannot be reduced either. The quantity of waste water generated is directly related to the quantity (weight) of inputted raw material which will vary.

2.3 No separate environmental appraisal of this waste stream has been undertaken. As identified elsewhere in the Permit application documents, potential environmental harm is limited due to the nature of the waste stream, which is biodegradable, and unlikely as the waste stream is collected, contained and removed off-site for authorised disposal. Measures are in place to prevent discharges to the environment.

3. WASH DOWN WATERS

- 3.1 The processing plant, including the raw material reception and despatch areas, will be regularly washed down, at the end of each operating shift (daily) and as need be in the event of spillage. This operation is necessary to comply with ABP regulations, to reduce the potential for growth of pathogens, to minimise odours and in the interest of health and safety of those working in the Installation.
- 3.2 The wash down waters are collected in the drainage system which includes traps to collect residual solids and spillages which are returned for re-processing. The wash down waters are passed via a bunded sump to waste storage tanks outside of the Installation building, but within the Installation, and thereafter despatched off-site by tanker.
- 3.3 No separate environmental appraisal of this waste stream has been undertaken. As identified elsewhere, potential environmental harm is limited due to the nature of the waste stream, which is biodegradable, and unlikely as the waste waters are collected, contained and removed off-site for authorised disposal. Measures are in place to prevent discharges to the environment.

4. EXTRANEIOUS ITEMS

- 4.1 Extraneous items are found in the stomachs of animals. This includes worming bolas which bovines swallow, and wire and nails inadvertently consumed. The observed quantity in the knackery is small.
- 4.2 This waste stream results from the raw material. During the knackery process metal items are removed, when found, but not all animal carcasses or animal by-products go through the knackery process or metal items found. However, it is not possible to reduce this waste stream.

- 4.3 A metal detector is situated within the series of macerators. Extracted items are placed in a dolav and returned to the knackery where the items are bulked up with other metal items and despatched for recycling.
- 4.4 No separate environmental appraisal has been undertaken of this waste stream. The nature of the waste is such that there is no potential risk to the environment unless it is purposely discarded (dumped). Measures are in place to collect and despatch the waste for recycling.