Attachment X

Guidance Note On The Ensiling Of Fish And Fish Offal

SCOTTISH ENVIRONMENT PROTECTION AGENCY

Guidance Note On The Ensiling Of Fish And Fish Offal

SEPA liaised closely with the Government and the fish farming industry during outbreaks of infectious salmon anaemia (ISA) in the 1990's. The discussions centred on measures to prevent the spread of the virus which is notifiable under the Diseases Of Fish Act 1937 and is a List 1 disease under the EC Fish Health regime requiring eradication measures to be undertaken when an outbreak is confirmed. SEPA strived to work with all concerned to find practical solutions to the various problems arising from this crisis.

One of the issues which interfaces with SEPA's regulatory function is the processing of dead fish (morts) and factory offal by maceration and preservation in formic acid, a process known as ensiling. There are two important benefits associated with this process,

- firstly, it is effective in disabling the ISA virus,
- secondly, it prevents foul and offensive odour which may arise at fish farm premises from alternative methods of storing morts for periodic transfer for final disposal.

The ensiling process has been widely adopted in Norway where the ISA virus has been endemic for over 14 years. There are no down-stream processing facilities within the UK and the fish silage arising in Scotland is at present being exported to Norway to undergo a rendering process or alternatively transported within the UK for incineration. The rendering process separates the silage into a protein concentrate and an oil extract which then go forward as raw materials for processes to produce agricultural feed-stuffs, cosmetics and other products. The joint Government/Industry Working Party on Infectious Salmon Anaemia recognised the ensiling of fish waste as best practice in reducing the risk of spread of the disease from this material.

Ensiling plants may be constructed at fish farm shore bases where plants tend to be small units of around 1000 litres or at processing factories where installations tend to be medium sized, capable of retaining volumes of 5-30 m^3 of ensiled liquor. There have in the past also been bulk storage installations (e.g. at Inverness harbour) where quantities in excess of 400m^3 may be held awaiting export by ship.

There is no effluent discharge arising from the operation of these plants and SEPA's legislative remit under The Pollution Prevention and Control (Scotland) Regulations 2000 (PPC Regs) can be summarised as follows:

The PPC Regs set out, in Schedule 1, the activities for which an authorisation is required. Part B of Section 6.8 of Schedule 1 describes activities relating to the treatment and processing of animal or vegetable matter which are subject to control, and includes:

(c) The ensiling or storage of dead fish or fish offal in plant capable of retaining volumes-

(i) of less than or equal to 10m^3 of ensiled liquor;

(ii) in excess of 10m^3 and less than or equal to 50m^3 of ensiled liquor; or

(iii) in excess of 50m^3 of ensiled liquor.

However, Schedule 1 Part 2 paragraph 2 provides that, as long as it is not *an activity which may give rise to an offensive smell noticeable outside the site where the activity is carried out, an activity shall not be taken to be a Part B activity if it cannot result in the release into the air of any substance listed in paragraph 12*.

Paragraph 12 lists the following substances:

oxides of sulphur and other sulphur compounds;
oxides of nitrogen and other nitrogen compounds;
oxides of carbon;
organic compounds and partial oxidation products;
metals, metalloids and their compounds;
asbestos (suspended particulate matter and fibres), glass fibres and mineral fibres;
halogens and their compounds;
phosphorus and its compounds;
particulate matter.

The process of ensiling fish does not give rise to the release of any substance mentioned in Paragraph 12. The properly managed ensiling of fish on a small scale should not give rise to offensive odours outside the site and therefore may be considered excluded from control under the PPC Regs. Where larger volumes of ensiled liquor are stored and there is potential for odours to arise that may be detectable outside the site due to the scale of storage or poor management then the process will require to be authorised as a Part B activity under the PPC Regs.

For the sake of clarity, SEPA will presume that small ensiling plants with less than 10m^3 capacity sited on fish farm shore bases or on cage rafts are excluded from control by virtue of paragraph 2 of Schedule 1 Part 2, unless there is evidence that the activity at a particular site is consistently giving rise to offensive odours outside the site. Larger scale ensilers in excess of 10m^3 capacity and those maintained at processing plants will be presumed likely to give rise to offensive odour outside the site due to the volumes of liquor stored, and these should be authorised under the PPC Regs.

Ensiling of Fish and Waste Management

Waste produced at a fish farm is agricultural waste and therefore it is controlled waste subject to regulation by SEPA. This waste also falls within the definition of animal by-products and must be dealt with in accordance with the Animal By-Products (Scotland) Regulations 2003.

The ensiled fish will be industrial waste but, as it is controlled by the Animal By-Products (Scotland) Regulations 2003, the treatment and keeping of such waste is exempt from the domestic waste management licensing regime in terms of paragraph 23 of schedule 3 to the Waste Management Licensing Regulations 1994. However, final disposal of any waste left once the rendering process is complete would still require to be undertaken at an appropriately licensed site. At present, disposal of this waste, where the rendering takes place in Norway, is a matter for the Norwegian authorities but the licence requirement should be borne in mind if a rendering plant is commissioned in the UK to accept ensiled fish. In certain cases ensiled waste is disposed of directly without rendering. It is essential that such waste be disposed of at sites appropriately licensed under the Waste Management Licensing Regulations 1994 and in a manner that complies with the requirements of the Animal By-Products Regulations (Scotland) 2003.

The export of the waste to a non EC country will have to comply with the Transfrontier Shipment of Waste Regulations 1993 which implement the EC Regulation on the Shipment of Wastes (Reg. 259/93). The export of ensiled fish has been fully cleared by the Norwegian authorities who have confirmed that they view it as “green” waste for the purposes of these regulations. They have however recently requested additional information from the transiting company as to the origin of the waste.