



Eastern Regional Fisheries Board

Bord Iascaigh Réigiúnach an Oirthir



Fisheries Ireland

Our Natural Heritage

Marie Harris
Office of Climate, Licensing & Resource Use
Environmental Protection Agency
PO Box 3000
Johnstown Castle Estate
County Wexford

Environmental Protection Agency	
IPC Licensing	
Received	21 APR 2008
Initials	

14/04/2008

Re: Proposed determination on IPPC Licence Application by Kerry Foods, Coolatin, Shillelagh to waters at Shillelagh, Co. Wicklow Ref: P0804-01

Dear Ms. Harris,

With reference to the above application we note that the applicant proposes discharging treated effluent to the Derry River. The Slaney River and its tributaries are salmonid waters with good populations of salmon, brown trout and sea trout. The River Slaney is a designated River under the European Communities (Quality of Salmonid Waters) Regulations 1978, the entire main channel River and many tributaries (including the Derry River) are candidate Special Area for Conservation (SAC) under the European Habitats Directive. The Slaney River catchment supports several species listed in Annex II of the Directive including Salmon, River Lamprey, Brook Lamprey, Sea Lamprey, Fresh water Pearl Mussel and Otter. This watercourse is part of the South Eastern River Basin District Management System, a project in support of the catchment based national strategy to implement the Water Framework Directive. One of the objectives of the WFD is to achieve **Good Ecological Status** on all waters by 2015.

The Derry River is the most important salmon spawning / nursery tributary of the Slaney system with a salmon redd count of over 260 in late 2006 and of 362 in late 2007 (both upstream and downstream of Shillelagh, with salmon spawning occurring in the immediate vicinity of the discharge from Kerry Foods).

Of serious concern to the Board is the emission limit value set for Ammonia in this proposed determination. The Board have carried out an assimilative capacity calculation for the proposed discharge. In this assimilative capacity calculation we used a dry weather flow of 140.6 l/sec (this figure was estimated using the documented DWF from the Derry River at Clonegal and comparing the catchment size of the Derry River at Clonegal, which is twice the contributing area compared to the Derry at Shillelagh). The Board also used a background figure of 0.035mg/l for ammonia concentrations in the Derry River (this related to background figures from sampling carried out by Wicklow County Council at Greenhall Bridge upstream, over a four year period, which resulted in mean Ammonium as N concentrations of 0.035mg/l). The result of the assimilative capacity calculation was an increase from background ammonia concentrations of 0.035mg/l to **0.617mg/l**, representing a **1662% increase** under dry weather flow conditions.

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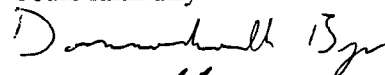
The Board notes that the limit for the non-ionised form of ammonia under the freshwater fish Directive is 0.025mg/l while the limit for non-ionised ammonia under the Salmonid Waters Regulations is 0.02mg/l. The un-ionised fraction of ammonia increases with rising pH value, and with rising temperature. The threat of toxicity from ammonia will be greatest during periods of sustained low flow, which are also likely to coincide with the highest water temperatures. The Board have reviewed higher temperatures and pH values recorded in the Derry in the vicinity of the discharge using the ERU Publication Water Quality in Ireland 1987 – 1990 which recorded a maximum pH value of 8.6 and a maximum temperature of 17.8 degrees celcius a short distance downstream. The Board believes that under such conditions the proportion of total ammonia in the non-ionised form will far exceed the limits under the Quality of Salmonid Waters Regulations and Freshwater Fish Directive and is liable to result in fish-kills / stress to salmonids over a significant stretch of the Derry Channel downstream.

The Eastern Regional Fisheries Board object to this IPPC License, given the toxicity threat to salmon & trout populations in the Derry River SAC as outlined above.

The Board request that the issue of assimilative capacity for Ammonia be fully addressed using the most up to date information available and that the issue of rising water temperatures expected due to global warming is also taken into account. The Board also request that any assimilative capacity calculation for this IPPC License also take into account the cumulative effect of the Kerry Foods discharge and that from Shillelagh WWTP (650 PE) a short distance downstream.

We attach a cheque for 126 euro.

Yours faithfully



Pat Doherty
Chief Executive Officer

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