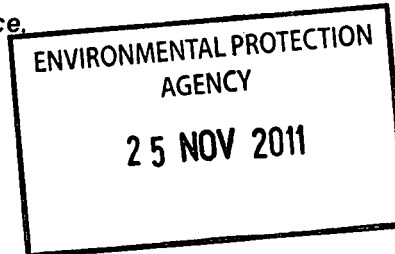




COMHAIRLE CONTAE CHIARRAÍ  
KERRY COUNTY COUNCIL

Guthán | Tel 066 7162025 Faics | Fax 066 7162051 Rphost | Email [environ@kerrycoco.ie](mailto:environ@kerrycoco.ie) Suíomh | Web [www.kerrycoco.ie](http://www.kerrycoco.ie)

**Environmental Licencing Programme Office,  
Environmental Protection Agency,  
PO Box 3000,  
Johnstown Castle,  
Johnstown Castle Estate,  
County Wexford.**



**North Kerry Landfill,  
Muingnaminnane,  
Tralee,  
County Kerry.**

24<sup>th</sup> November 2011

Re: Request for Technical Amendment of Waste Licence W0001-04, North Kerry Landfill – Condition 6.5.3

A Chara,

Reference is made to correspondence herein.

Kerry County Council as licensee request that Condition 6.5.3 of Waste Licence W0001-04 is varied through a Technical Amendment.

This request is made taking cognisance of Section 42B of the Waste Management Act 1996-2011.

Background to request.

As per condition 6.5.3 continuous monitoring of the eastern and western surface water lagoons is undertaken. This captures pH, conductivity and TOC readings.

The TOC measurement instruments require to be replaced. They have, while in service, proven to be difficult to operate in the environment in which they are required. This has lead to significant costs in maintenance and frequent periods of downtime.

KCC request that the Agency consider the substitution of an alternative continuous monitoring parameter in place of TOC which will provide an equivalent level of environmental protection. Ammonia would provide the same level of protection to surface waters. The instruments involved are more robust and suited to the location where they will be operating.

Attached please find a report from the Senior Executive Chemist of KCC setting out the technical background to this proposal. It further suggests trigger levels for other parameters that have not been formally regularised.

As assistance the proposal is assessed under the following headings.

a) Details of the requested change(s).

Replace the reference to TOC monitoring from condition 6.5.3 with Ammonia.

b) Reasons for the change(s) requested.

The TOC instrument has proven to be difficult to keep in continuous operation given the conditions associated with the monitoring location.



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As the protection of surface waters is of primary importance there are other environmental indicators that will provide the same level of protection without the operational difficulties associated with the particular monitoring equipment.

c) Details of any increase or changes in emissions resulting from the change(s).

There will be no change in emissions from the facility.

d) An assessment of the likely impacts of any increase/changes in emissions.

There are no anticipated impacts associated with this change in monitoring parameter.

I hope the above is satisfactory should you require any further information or assistance, please do not hesitate to contact this office.

Yours faithfully,

**John Ahern,**  
**A/SEE Waste Management**  
**(066) 716 00 00**

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Attachments:

1. Report from SEC KCC

**MEMO SATHORLANN COMHAIRLE CHONTAE CIARRAÍ**  
**KERRY CO COUNCIL LABORATORY MEMO**

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**Subject: Proposed Replacement of Automated TOC measurements**

**Author: David Lenihan SEC Environment**

**Date of report: Nov 21, 2011**

**ATTN: John Ahern, Senior Executive Engineer, Environmental Services**  
**Conor Culloo, Environmental Services**

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**Introduction**

For the past number of years automated measurement for TOC has been conducted in agreement with EPA at two sites, East Surface Water lagoon and West Surface Water lagoon.

In addition automated measurement pH, conductivity (and Turbidity at the new SW lagoon) were also conducted at same sites as well as at new station i.e. surface water lagoon at entrance gate.

**Problems encountered**

From an operational perspective it has been found that monitoring of TOC equipment has been problematic from the start. There have been numerous breakdowns.

Indeed for last few months we have intermittently unable to use this equipment because of ongoing maintenance issues. There has also been an ongoing risk associated with use of hazardous chemicals which are costly and involve a lot of labour.

**Proposed Solution**

It is therefore imperative that an alternative solution be found to this problem which will still provide appropriate monitoring cover to adequately address environmental impact to surrounding surface waters.

I propose therefore that automated Ammoniacal Nitrogen measurements be seriously considered by the Agency as a suitable alternative for following reasons

- Ammonia can readily be monitored using on line automation. This technique is already used in water treatment plants in the county. Measurements can also be readily cross checked in the Central Laboratory in Tralee
- As North Kerry landfill deals almost exclusively with municipal waste, nitrogenous based material comprises a significant proportion of waste received. Thus under degradation conditions, as exists in a typical municipal landfill, reduced forms of nitrogen will be produced i.e. Ammonia- making the latter an ideal "marker" for landfill contamination.
- Another advantage of using Ammonia as a marker parameter is that there are currently limits for this parameter specified in surface water regulations for surface waters  
Thus *high status* waters should have an annual mean of less than or equal to **0.04mg/L N** for total ammonia, while *good status* waters are required to have an annual mean of less than **0.065 mg/L N**

**Proposed Trigger values**

***The main objective of any trigger values set for discharges into surface water should be to guarantee high status of receiving water without unduly compromising on effective operation of landfill***

I therefore provisionally propose 3 levels of trigger parameters for Ammonia based on automated readings of a frequency not less than one measurement every 30 minutes

- No individual measurement should exceed 2 mg/L N
- The median of daily values should not exceed 0.1 mg/L N
- The median of monthly values should not exceed 0.05 mg/L N

However as we currently do not have a history of automated readings for this parameter - I propose that at end of three months these trigger levels be reviewed.

I propose that existing trigger values for pH and Conductivity already in force be maintained which are;

- pH, 4.5 < reading < 9
- Conductivity, reading < 1,500  $\mu$ s.

**Signed**

*David Lenihan MSc*  
**Senior Executive Chemist**

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