

Eve O'Sullivan

Subject: Killycronaghan Historic Landfill H0366-01

From: James O'Neill <james.oneill@ftco.ie>
Sent: 15 July 2020 11:41
To: Ewa Babiarczyk <E.Babiarczyk@epa.ie>
Subject: RE: Killycronaghan - Lead

Ewa,

Please see below from my colleague

To follow up. I've checked the lead threshold values included in Table 4-3 in the Killycronaghan tier 2.

The value of 0.01 mg/l as per the EPA IGV standards (that is the TOWARDS SETTING GUIDELINE VALUES FOR THE PROTECTION OF GROUNDWATER IN IRELAND – Interim Report produced by the EPA and predates the groundwater regulations) is correct.

A value of 0.025 mg/l is also applied in Table 4-3. At first I thought the EPA query arose as the column heading 'S.I. No. 9 of 2016 Standards' isn't correct. The first groundwater regulations are 'S.I. No. 9 of 2010' and were subsequently amended as 'S.I. No. 366 of 2016'. The footnote in table 4-3 however does reference S.I. No. 9 of 2010.

Having checked both regulations the threshold values applied for lead are as follows:

*S.I. No. 9 of 2010 – 18.75 ug/l (0.01875 mg/l equivalent)
S.I. No. 366 of 2016 – 7.5 ug/l (0.0075 mg/l equivalent)*

I can't be sure where the value of 0.025 mg/l came from, however regardless of this discrepancy lead concentrations shown for GW01, GW02 and GW03 in Table 4-3, exceed the correct threshold value (if applied) and the discrepancy has not had any bearing on our determination of the potential impact on groundwater quality as indicated by the groundwater monitoring results or in conducting the Tier 3 DQRA.

The correct value of 7.5 ug/l (or 0.0075 mg/l) as per S.I. No. 366 of 2016 was applied in the Tier 3 report.

Please let me know if this answers your query and if we need to update our reporting to reflect this.

Regards

James O'Neill
Senior Engineer

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From: Ewa Babiarczyk <E.Babiarczyk@epa.ie>
Sent: Thursday 9 July 2020 15:14
To: James O'Neill <james.oneill@ftco.ie>
Subject: RE: Killycronaghan - Ammonia vs. Ammoniacal Nitrogen

Thank you very much James.

Regards

Ewa Babiarczyk

Inspector

Environmental Licensing Programme
Environmental Protection Agency

Tel: 053 916 0662

From: James O'Neill <james.oneill@ftco.ie>
Sent: 09 July 2020 14:07
To: Ewa Babiarczyk <E.Babiarczyk@epa.ie>
Subject: Killycronaghan - Ammonia vs. Ammoniacal Nitrogen

Ewa,

Please see below from my colleague.

Regarding the EPA's query on the comparison of surface water monitoring results for 'ammoniacal nitrogen as N' against the surface water Environmental Quality Standards (EQS) thresholds for 'Total Ammonia' (as per *European Communities Environmental Objectives (Surface waters) regulations 2009 – S.I. No. 272 of 2009*)

FT can confirm that this comparison is appropriate and that no conversion of monitoring results or the EQS or use of an alternative quality threshold value is required.

As stated in the EPA document entitled '*Parameters of Water Quality – Interpretation and Standards (2001)*' total ammonia is defined as 'total ammonia (NH₃ and NH₄⁺)' i.e. total ammonia is the sum of both 'free' ammonia as NH₃ and 'saline' NH₄⁺ present in the environment.

Surface water analysis was conducted by ALS Environmental applying method 'TM099' for the determination of 'ammoniacal nitrogen as N' concentration in samples. For method TM099 – Determination of Ammoniacal Nitrogen in Aqueous Samples, ALS define ammoniacal nitrogen as 'both free ammonia (NH₃) and ammonium (NH₄) present in a sample', therefore application of this method is appropriate for comparison against the EQS for 'Total Ammonia'.

Please let me know if this answers your query.



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