

Eve O'Sullivan

Subject: S0033-01 Dublin Harbour project
Attachments: Dublin Harbour 33-01 comments on chemistry.docx

From: Margot Cronin <margot.cronin@marine.ie>
Sent: Tuesday 3 May 2022 16:56
To: Alison McCarthy <A.McCarthy@epa.ie>
Subject: S0033-01 Dublin Harbour project

Hi Alison,

Attached are my comments on the sediment quality for S0033-01 (Dublin Harbour project).

If you need clarification on anything, please give me a shout.

All the best, Margot

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To: Alison McCarthy, EPA

From: Margot Cronin, MI

RE: Dublin Port Company Dublin Harbour Dumping at Sea permit application

Date: 29/04/2022

Background

This application relates to capital dredging and dumping at sea of 500,000 m³ of material from channel deepening upriver and from berth widening and deepening. The depth of material to be removed averages 1- 2 m, with small areas down to 8 m around berths 46/47.

Some of the samples taken for chemical analysis were not included in the assessment as they are outside of the proposed dredging areas. Samples more than 50 m from the dredging outline were excluded from the assessment.

Most samples have concentrations of metals and organics below the lower action level.

Discussion

The sediment quality is considered fairly clean. Most samples had concentrations of metals, PAH, TBT, PCB below lower guidance levels. There were some results above lower guidance levels for copper, lead, US EPA PAH $\Sigma 16$ and ICES PCB $\Sigma 7$ though all within the lower quartile of Class 2 (details below). There were also some DDX results above the Effects Range Low (ERL), though all below any action lower levels set by other OSPAR Contracting Parties. Results exceeding lower guidance levels are shown in the table below.

Many cadmium results exceeded the lower guidance level, however, Cd results at that time were reported approx. three times higher than true result due to an issue with laboratory procedures. This issue was later corrected.

There were no exceedances of the upper guidance level.

Determinand	Sample no/area	Comment
Copper	11, 22, 32	All low Class 2
Lead	7, 8,	Low and mid Class 2
US EPA PAH $\Sigma 16$	5	Two low Class 2, one mid "Class 2" ¹ .
ICES PCB $\Sigma 7$	5, 7, 8, 20, 31	All low Class 2
Σ DDX	31	Low "Class 2" ²

¹ Ireland does not have an upper action level for PAH, but the Effects Range Median for Σ US EPA16 = 29040 ug kg⁻¹

² Along with most OSPAR countries, Ireland does not have action levels for sum DDX. The ERL (an ecotoxicology measure, is 1.58 ug/kg, while the lowest OSPAR lower action level is 4 ug/kg)

Cadmium	All	All reported as Class 2 due to laboratory error.
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The sediment chemistry is broadly in line with previous results from the area, and would be considered reasonable quality for urban port sediment.

Conclusion

The chemistry of these samples would not preclude dumping at sea, in the absence of a feasible alternative.

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