

Eve O'Sullivan

From: Licensing Staff
Subject: Material analysis - Dublin Port Company S0024-02
Attachments: MP2 comments on chemistry.docx

From: Margot Cronin <margot.cronin@marine.ie>
Sent: Monday 11 April 2022 20:25
To: Alison McCarthy [REDACTED]
Subject: RE: Material analysis - Dublin Port Company S0024-02

Hi Alison,

Attached are my comments on the sediment quality for S0024-02 (MP2).

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 MP2 Dumping at Sea permit application

Date: 11/04/2022

Chemistry review

Assessment of sediment chemistry was carried out on both original samples (sampled 27/07/21 and 13/08/2021) and additional samples (sampled 21/09/2021). The following samples are more than 25 m from the modified boundary of the side slopes– D1, D2, D3, D10, D15, D23, D24. Samples 7B, 8b and 9B are in an area to be infilled. 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 and zinc, 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.

Determinand	Sample no/area	Comment
Copper	D16, D17 (edge of new quay extension, LO-LO berth)	Low class 2
Zn	D20, (oil berth no.3) D22 (edge of new quay extension, LO-LO berth)	Low class 2
Σ DDX ¹	D12, D14 (north side turning circle) D19-D22 (LO-LO and oil berths)	Slightly above Effect Range Low (ERL) but below other OSPAR CP lower action levels.

There were no exceedances of the upper guidance level.

The sediment chemistry is broadly in line with previous results from the area, and would be considered reasonable quality for urban port sediment.

Comparison of original and follow up samples.

The addition of follow up samples with overlap in an area already sampled provides an opportunity for almost direct comparison of the quality of the results. Acknowledging that the samples aren't in

¹ 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)

exactly the same locations, there was little variance in the analysis results between both sets of samples (see table below). This allows good confidence in the quality of both the sampling and the analysis.

Analyte	Original sites	Additional	Comments
As	< 12	18-21	Not considered appreciably different. CRM* results for As higher for additional areas than originals.
Cu	=	=	Largely similar
Zn	=	=	Largely similar
Hg	=	=	Largely similar
Pb	=	=	Largely similar
Cr	=	=	Largely similar
Cd	=	=	Largely similar
Ni	=	=	Largely similar
TBT	=	=	Largely similar, apart from one higher sample result
PCB	=	=	Largely similar
PAH	=	=	Largely similar, apart from one higher sample result
DDX	0.9-1.5	0.3-3.5	Not considered significantly different as includes overlap of all early values.

* Certified reference material

Conclusion

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

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