

Grainne Power

From: margot.cronin@marine.ie
Sent: 24 February 2016 13:56
To: Gary Salter
Cc: Martina Nolan; Francis X O Beirn
Subject: RE: sligo port- DaS application to EPA
Attachments: SAP Sligo 2016.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Gary,

Attached is an updated sampling and analysis plan.

My apologies for the delay in responding to your earlier email.

If you require clarification on anything, please let me know.

Best regards, Margot

From: Gary Salter [mailto:gsalter@sligococo.ie]
Sent: 24 February 2016 09:04
To: Margot Cronin <margot.cronin@marine.ie>
Subject: FW: sligo port- DaS application to EPA
Importance: High

Hi Margot,

The EPA have sent me an stern letter on "lack of progress here", requiring a written up date within 10 days. Please could you let me know what new/additional testing you would like us to have carried out, asap.

Best regards

Gary

0719111962

087 9119805

From: Gary Salter
Sent: 03 December 2015 16:09
To: 'Margot Cronin'
Cc: Tom Kilfeather; Pat Doyle; John OHara
Subject: sligo port- DaS application to EPA

Hi Margot.

Regarding our conversation last week, I attach some information as requested.

The entire application is viewable etc on the EPA web site under permits and applications ref SOO23-01

The sediment sampling was carried out at the locations shown on DRWG 4 and excel- see attached herewith

The quantities involved are 250,000 cum capital dredging (to -3.0m CD) to off shore dump site and importantly 5000 cum of maintenance dredging(to -2.0m CD), using WID- Attachment D of the full submission provides full details.

No dredging is intended upstream ie SE of Barytes Jetty. See pink area 1.2ha, marked on dwg 4, for area of WID, and upstream limit of operations.

I trust this information is adequate to allow you to make a determination regarding the necessity or otherwise of additional sampling and the amount of sampling and amount and parameter testing that might you might deem necessary.

As explained, permission to carry out dredging and dumping including WID is essential for the commercial ports survival.

Best regards
Gary Salter
SEE
Sligo Co Co

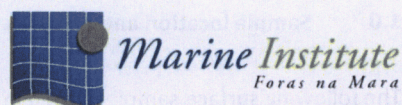


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SÉANADH: Is d'úsáid an duine/na ndaoine chuig a bhfuil sí seolta agus sin amháin atá an teachtaireacht seo. D'fhéadfadh go bhfuil faisnéis faoi phribhléid nó faoi rún de réir bhrí an dlí is infheidhme inti. Mura tusa an seolaí a bhí beartaithe, bí ar an eolas go bhfuair tú an ríomhphost seo in earráide agus go bhfuil cosc iomlán ar an ríomhphost seo, nó aon chuid de, a úsáid, a scaipeadh, a chur ar aghaidh nó a chóipeáil. Má fuair tú an ríomhphost seo de bharr earráide, téigh i dteagmháil leis an seoltóir chomh luath agus is féidir, le do thoil. Ní gá gurb ionann dearcaí na ríomhphosta seo agus dearcaí Chomhairle Chondae Sligeach. Tá aon iatáin seiceáilte ag scanóir víris agus dealraíonn sé go bhfuil siad glan. Bí cinnte go ndéanfaidh tusa scanáil ar gach teachtaireacht chomh maith, le do thoil, mar ní ghlacann an Chomhairle dliteanas ar bith i leith éilliú ná dármaiste do do chuid córas.

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Rinville
Oranmore
Co Galway
Tel: 091 387200

Mr Gary Salter
Sligo County Council
County Hall
Riverside
Sligo

24 February, 2016

Dear Gary,

Re: Sampling and Analysis plan – Sligo Harbour

A proposed sampling and analysis plan is detailed below. The plan is based on a quantity of material to be dredged of up to 250,000m³ from Sligo Harbour (quantities in excess of this may require additional sampling), and also takes into account the results of historic testing. All samples are surface samples.

You should give your contractor a copy of this plan. You will need to draw their attention especially to Section 3 and Section 4 to confirm that they are capable of meeting the requirements of the plan, including the quality assurance standards outlined in Section 3, below .

Results , including the results of the CRMs concurrently tested, should be reported in the EPA spreadsheet format.

If you need clarification on anything, please don't hesitate to contact me.

Best regards,

Margot Cronin
Marine Environment Chemist

1.0 Sample location and analyses required:

The following surface samples (listed in Table 1 below) should be taken. Sample locations are shown in Figure 1 at the end of this document.

Table 1. Locations and details of proposed samples

Sample No.	Latitude*	Longitude*	Parameters for analysis
1	54.28182	-8.48844	1, 2, 3, 4a, 4b, 4c, 4d, 4e, 4f, 4g
2	54.28271	-8.49067	1, 2, 3, 4a, 4b, 4c, 4d, 4e, 4f, 4g
3	54.28303	-8.49191	1, 2, 3, 4a, 4b, 4c, 4d, 4e, 4f, 4g
4	54.28389	-8.49277	1, 2, 3, 4a, 4b, 4c, 4d, 4e, 4f, 4g
5	54.29029	-8.50005	1, 2, 3, 4a, 4b, 4c, 4f
6	54.29619	-8.50824	1, 2, 3, 4a, 4b, 4c, 4f
7	54.30076	-8.53365	1, 2, 3, 4a, 4b, 4c, 4f
8	54.30275	-8.54831	1, 2, 3, 4a, 4b, 4c, 4f

* Positions given in decimal degrees, WGS84S

2.0 Parameter Code:

1. Visual inspection, to include colour, texture, odour, presence of animals etc
2. Water content, density (taking into account sample collection and handling)
3. Granulometry including % gravel (> 2mm fraction), % sand (< 2mm fraction) and % mud (< 63µm fraction).
4. The following determinants in the sand-mud (< 2mm) fraction * :
 - a) total organic carbon
 - b) carbonate
 - c) mercury, arsenic, cadmium, copper, lead, zinc, chromium, nickel, lithium, aluminium.
 - d) organochlorines HCH and γ-HCH (Lindane), and PCBs (to be reported as the 7 individual CB congeners: 28, 52, 101, 118, 138, 153, 180).
 - e) total extractable hydrocarbons.
 - f) tributyltin (TBT) and dibutyltin (DBT)
 - g) Polycyclic aromatic hydrocarbons (PAH) - Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (ghi) perylene, Benzo (k) fluoranthene, Chrysene, Dibenz (a,h) anthracene, Flourene, Fluoranthene, Indeno 1,2,3 – cd pyrene, Naphthalene, Phenanthrene, Pyrene.
 - h) Toxicity tests (Microtox or whole sediment bioassay) using appropriate representative aquatic species. (This requirement will depend on the results of the chemical analyses.)

**where the gravel fraction (> 2mm) constitutes a significant part of the total sediment, this should be taken into account in the calculation of the concentrations.*

3.0 Important notes:

- 3.1 Details of the methodologies used must be furnished with the results. This should include sampling, sub sampling and analytical methods used for each determinant
- 3.2 Appropriate marine CRM are to be analysed during each batch of analyses and the results to be reported along with sample results.
- 3.2.1 The required detection limits for the various determinants are given in Table 2. below.

Table 2. Minimum limits of detection required

Contaminant	Concentration	Units (dry wt)
Mercury	0.05	mg kg ⁻¹
Arsenic	1.0	mg kg ⁻¹
Cadmium	0.1	mg kg ⁻¹
Copper	5.0	mg kg ⁻¹
Lead	5.0	mg kg ⁻¹
Zinc	10	mg kg ⁻¹
Chromium	5.0	mg kg ⁻¹
Nickel	15	mg kg ⁻¹
Total extractable hydrocarbons	10.0	mg kg ⁻¹
TBT and DBT (not organotin)	0.01	mg kg ⁻¹
PCB – individual congener	1.0	µg kg ⁻¹
OCP – individual compound	1.0	µg kg ⁻¹
PAH – individual compound	20	µg kg ⁻¹

4.0 Reporting requirements

Reports should include the following information

- 4.1 Date of sampling
- 4.2 Location of samples eg ING or lat/long.
- 4.3 Treatment of samples and indication of sub sampling, compositing etc.
- 4.4 Tabulated geophysical and chemical test results
- 4.5 Completed excel spreadsheet for results
- 4.6 Summary method details
- 4.7 Method performance specifications: Limit of detection, Precision, Bias
- 4.8 Clear expression of units and indication of wet weight or dry weight basis
- 4.9 Blanks & in-house references to be run with each sample batch, and reported with sample results.
- 4.10 Appropriate Certified Reference Materials (CRM) to be run with each sample batch, and reported in full with sample results.
- 4.11 If determinant is not detected, report less than values, and indicate LoD/ LoQ used.
Other quality assurance information (e.g. accreditation status)



Figure 1: Sampling stations, Sligo Harbour (positions given in Table 1.)