



# Pre-disposal Sampling Results Form

Version 2 - June 2017

This form should be used to submit the results from your pre-disposal sampling plan.

Full information must be provided in all relevant sheets of this workbook. The blue cells in each worksheet indicate where information can be entered.

Where information cannot be provided, or where there are more than 30 samples required, please contact the Marine Scotland - Licensing Operations Team (MS-LOT) using the contact details below.

Once you have completed this form, send it (including any reference number for the dredging and sea disposal marine licence application in the subject header of your email) to the following email address:

[ms.marinelicensing@gov.scot](mailto:ms.marinelicensing@gov.scot)

If you have any questions in relation to this form contact MS-LOT:

Marine Scotland - Licensing Operations Team  
Marine Laboratory  
375 Victoria Road  
Aberdeen, AB11 9DB

01224 295579

[ms.marinelicensing@gov.scot](mailto:ms.marinelicensing@gov.scot)





**Polyaromatic Hydrocarbons (PAH)**

**Explanatory Notes:**  
Results above Action Level 1 will be highlighted in blue

Definitions:	
ACENAPHTH	Acenaphthene
ACENAPHTHY	Acenaphthylene
ANTHRACEN	Anthracene
BAA	Benzo(a)anthracene
BAP	Benzo(a)pyrene
BBF	Benzo(b)fluoranthene
BEP	Benzo(e)pyrene
BENZGHP	Benzo(g,h,i)perylene
BKF	Benzo(k)fluoranthene
CIN	C1-naphthalenes
CIPHEN	C1-phthalenes
CZN	C2-naphthalenes
GN	C2-naphthalenes
CHRYSENE	Chrysene
DIBENZAH	Dibenz(a,h)anthracene
FLUORANT	Fluoranthene
FLUORENE	Fluorene
INDPYR	Indeno(1,2,3-cd)pyrene
NAPHTH	Naphthalene
PERYLENE	Perylene
PHENANTH	Phenanthrene
PYRENE	Pyrene
THC	Total Hydrocarbon Content

Sample Information:			ug/kg																								
Sample ID	Dredge area	Type of sample	Sample depth (m)	ACENAPHTH	ACENAPHTHY	ANTHRACEN	BAA	BAP	BBF	BEP	BENZGHP	BKF	CIN	CIPHEN	CZN	GN	CHRYSENE	DIBENZAH	FLUORANT	FLUORENE	INDPYR	NAPHTH	PERYLENE	PHENANTH	PYRENE	THC	
MAR2010.001	V001 (0.00m)	0	0	24.1	10.2	38.8	65.4	191	111	226	75.7	134	21.6	192	108	44.3	129	422	97.5	46	69000	292	164	150000			
MAR2010.002	V001 (1.00m)	0	0	6.59	<5	12.6	17.8	21.9	25.1	47.5	14.5	42.7	<5	31.7	18.7	10.9	21.1	97.5	46	146000	400	167	146000				
MAR2010.003	V001 (1.50m)	0	0	43	8.2	46.1	72.4	92.3	115	244	52.5	145	21.1	126	113	51.2	97.7	248	484	129	103000	484	129	103000			
MAR2010.004	V002 (0.00m)	0	0	33.7	9.88	39.8	74.8	138	140	293	72.8	145	21.3	128	109	61.1	248	484	129	103000	484	129	103000				
MAR2010.005	V002 (3.00m)	0	0	29.8	10.1	50.1	65.9	103	119	224	47.5	126	19.7	122	156	50	169	420	166	152000	420	166	152000				
MAR2010.006	V002 (4.00m)	0	0	49.3	17.4	194	389	414	406	403	342	376	66.1	654	100	359	216	410	776	460000	410	776	460000				
MAR2010.007	V002 (0.00m)	0	0	<5	<5	<5	<5	7.75	10.3	19.5	6.47	10.4	<5	10.2	<5	<5	21.2	15	34000	15	34000						
MAR2010.008	V003 (1.00m)	0	0	26.7	53.8	134	295	480	377	370	444	345	21.9	489	55.1	326	109	272	626	230000	272	626	230000				
MAR2010.009	V003 (2.00m)	0	0	12.8	3.87	24	43.7	59.9	67.3	126	38	75.3	8.33	78.8	45.5	29.3	40.6	156	59	33000	156	59	33000				
MAR2010.010	V004 (0.00m)	0	0	33.1	34.2	137	261	488	401	352	334	370	36.8	650	52.8	324	69.5	445	815	162000	445	815	162000				
MAR2010.011	V004 (2.00m)	0	0	36.9	8.33	52.6	108	180	195	359	97.2	181	33.1	172	178	85.2	151	588	232	172000	588	232	172000				
MAR2010.012	V004 (3.00m)	0	0	32.5	11.4	56.3	87.7	150	145	256	56.8	156	27.3	153	165	68.6	127	490	207	174000	490	207	174000				
MAR2010.013	V004 (0.00m)	0	0	54	40.4	180	322	354	338	380	350	341	64	696	113	317	168	480	739	330000	480	739	330000				
MAR2010.014	V005 (1.00m)	0	0	<5	<5	1.41	7.33	11.1	15.3	28	45	11.6	<5	11.8	<5	<5	<5	21.8	15.3	32000	21.8	15.3	32000				
MAR2010.015	V005 (2.00m)	0	0	6.57	<5	16.7	21.1	22.3	23	35.3	11.9	22.3	<5	35.8	<5	8.58	6.87	39.3	30.8	29000	39.3	30.8	29000				
MAR2010.016	V006 (0.00m)	0	0	50.6	51.1	227	499	491	608	503	500	508	83.5	848	97.7	476	198	592	1240	260000	592	1240	260000				
MAR2010.017	V006 (1.00m)	0	0	<5	<5	<5	3.63	12.5	19.3	22.2	10.1	15.2	<5	14.6	<5	8.86	9.56	32.1	23	34000	32.1	23	34000				
MAR2010.018	V006 (3.00m)	0	0	6.36	<5	13	28.9	42.2	47	87.3	30.4	49.4	8.86	43.6	18.8	25.3	27.8	68.3	63.6	50100	68.3	63.6	50100				
MAR2010.019	V007 (0.00m)	0	0	2.32	21.8	168	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266
MAR2010.020	V007 (2.00m)	0	0	<5	<5	3.63	7.55	10.1	16.1	12.6	8.76	11.8	<5	15.1	<5	7.16	8.73	28.5	18.4	18500	28.5	18.4	18500				
MAR2010.021	V007 (3.00m)	0	0	2.31	1.44	7.41	18.9	25.2	39.4	34.8	16.7	33	4.98	26.9	12.7	13.4	14.5	62.9	40	42000	62.9	40	42000				
MAR2010.022	V008 (0.00m)	0	0	<1	<1	2.39	3.35	8.31	12.3	11	8.03	8.24	1.8	8.29	3.16	6.14	5.16	18	14.3	12000	18	14.3	12000				
MAR2010.023	V008 (1.00m)	0	0	34.4	11	56.6	73.5	106	108	138	85.4	128	26.3	125	189	52.4	87.1	339	181	168000	339	181	168000				
MAR2010.024	V008 (3.00m)	0	0	<1	<1	2.44	3.59	7.03	11.5	8.45	4.54	7.6	1.93	7.84	6.19	5.49	5.78	17.9	14.4	20000	17.9	14.4	20000				
MAR2010.025	V008 (0.00m)	0	0	60.7	65.6	241	339	434	438	347	365	362	235	942	6.11	8.85	8.77	24.7	14.5	31700	24.7	14.5	31700				
MAR2010.026	V009 (2.00m)	0	0	3.78	<1	3.04	7.69	9.67	16.8	13.6	7.84	15.8	3.64	15.2	5.8	12.7	9.73	37.3	26.8	17500	37.3	26.8	17500				
MAR2010.027	V009 (3.00m)	0	0	2.68	<1	4.8	12.3	15.5	23.3	21	15.1	20.9	4.33	28	6.36	18.7	11.1	35.7	18.7	17800	35.7	18.7	17800				
MAR2010.028	V010 (0.00m)	0	0	3.7	3.62	13.8	28.2	40.4	39.5	33.7	33.7	32.1	5.91	40.8	6.73	31	12.8	42.4	65.3	30800	42.4	65.3	30800				
MAR2010.029	V010 (2.00m)	0	0	8.25	3.86	10	23.6	29.9	36.8	43.8	3.89	45.8	3.89	26.8	25.4	13.1	17	138	54.5	28900	138	54.5	28900				
MAR2010.030	V010 (3.00m)	0	0	11.5	2.45	15.7	39.3	47.7	58.7	61.1	26.7	59.9	9.42	66.6	28	31.2	23.9	132	92.4	69000	132	92.4	69000				
MAR2010.031	V011 (0.00m)	0	0	3	1.86	8.97	18.2	24	27.8	21.4	18	20.9	4.33	28	6.36	18.7	11.1	35.7	18.7	17800	35.7	18.7	17800				
MAR2010.032	V011 (2.00m)	0	0	1.71	<1	4.16	8.77	11.6	12.4	15	8.29	12.1	2.72	13.1	5.5	8.74	8.87	30.7	18.7	17800	30.7	18.7	17800				
MAR2010.033	V011 (3.00m)	0	0	1.76	<1	4.12	8.07	10.8	15.4	14.1	9.69	11.8	2.46	13.9	6.25	8.7	8.9	28.4	18	20700	28.4	18	20700				
MAR2010.034	V012 (0.00m)	0	0	36	89.2	336	431	468	468	468	468	468	468	468	468	468	468	468	468	468000	468	468	468000				
MAR2010.035	V012 (1.00m)	0	0	1.51	<1	3.22	6.68	9.06	15.6	6.6	11.5	8.72	2.04	9.07	4.53	7.88	7.07	21.2	14.9	32000	21.2	14.9	32000				
MAR2010.036	V012 (4.50m)	0	0	<1	<1	3.77	7.71	8.84	18.4	13.4	6.38	11.4	2.26	11.4	8.81	6.79	8.86	27.8	17.6	22200	27.8	17.6	22200				
MAR2010.037	V013 (0.00m)	0	0	3.66	2.92	9.85	18.5	26.6	25.4	22.4	19.7	22.4	4.18	26.1	6.68	17.4	9.62	33.3	60.6	29000	33.3	60.6	29000				
MAR2010.038	V013 (1.00m)	0	0	2.36	1.42	5.23	8.46	12	17.3	21.3	6.82	20.3	3.15	16.2	9.2	7.16	11	42.6	20.5	36500	42.6	20.5	36500				
MAR2010.039	V013 (2.00m)	0	0	4.24	2.27	7.38	16.6	21.2	27	41.7	14.5	30	3.95	20.5	17.3	13	19.4	75.5	37.9	71000	75.5	37.9	71000				
MAR2010.040	V013 (3.00m)	0	0	1.39	<1	3.27	8.15	13.1	13	11.3	2.21	11.3	2.21	11.3	3.59	7.8	6.21	22.4	15.3	12000	22.4	15.3	12000				
MAR2010.041	V014 (1.00m)	0	0	8.67	2.82	18.2	37.4	42	63.1	65.7	26.7	84.8	8.62	73.3	31.2	22.6	23.8	164	108	85000	164	108	85000				
MAR2010.042	V014 (3.00m)	0	0	19.4	5.29	29.3	37.4	43.8	62.4	64.3	32.4	84.3	9.8	63.5	16.9	24.6	47.6	201	104	138000	201	104	138000				
MAR1438.001	NVC01B.0.00	0	0	191	53.4	370	649	601	577	658	264	658	77.9	1400	176	376	222	1100	1360	320000	1100	1360	320000				
MAR1438.002	NVC01B.0.30	0	0	12.7	6.93	17.3	40.3	48.1	68.4	143	16.9	130	16.6	68.7	63.6	31.5	104	302	101	187000	302	101	187000				
MAR1438.003	NVC01B.1.00	0	0	16.7	7.91	23.9	49.2	57.4	105	163	19.7	162	18.5	85.4	78	38.3	118	369	132	233000	369	132	233000				
MAR1438.004	NVC02.0.00	0	0	117	42.9	367	781	714	751	741	361	787	118	1680	174	357	219	839	1640	263000	839	1640	263000				
MAR1438.005	NVC02.0.30	0	0	1708	268	2350	4538	5210	4780	4780	4780	4780	4780	4780	4780	4780	4780	4780	4780	4780000	4780	4780	4780000				
MAR1438.006	NVC02.3.50	0	0	31.3	10.6	38.1	98.2	136	155	362	40.5	156	29.1	149	136	66.6	216	457	193	221000	457	193	221000				
MAR1438.007	NVC03A.0.00	0	0	56.5	39.6	269	481	476	498	489	390	489	72.2	848	105	494	195	518	951	590000	518	951	590000				
MAR1438.008	NVC03A.0.30	0	0	10.6	7.9	19.4	44.4	47.4	64.4	94.6	19	92.2	10.3	69.6	44.5	28.1	56.2	186	100	166000</							



**PR Details**

Total amount to be dredged (wet tonnes)

**Explanatory Notes:**

The values entered for each determinand should be an average wet weight concentration from all the samples representing the material to be disposed to sea. They should be entered in the units stated in the Unit of measurement column in the table below. Results above Action Level 1 will be highlighted in blue and above Action Level 2 in red.

**Average for the total dredge area:**

Sample ID	Unit of measurement	
Total Solids	%	68.05
Gravel	%	7.32
Sand	%	24.65
Silt	%	68.03
Arsenic (As)	mg/kg	6.1
Cadmium (Cd)		0.31
Chromium (Cr)		32.3
Copper (Cu)		21
Mercury (Hg)		0.23
Nickel (Ni)		28.3
Lead (Pb)		27.5
Zinc (Zn)		64.8
Dibutyltin (DBT)		0.006
Tributyltin (TBT)		0.007
Acenaphth		43.1
Acenaphthylene		16.1
Anthracen		100
BAA		203
BAP	208	
BBF	218	
BEP		
Benzghip	205	
BKF	113	
C1N		
C1PHEN		
C2N		
C3N		
Chrysene	233	
Debenzah	32	
Flurant	407	
Fluorene	70.7	
Indypr	153	
naph	89.1	
perylene		
phenant	314	
pyrene	433	
THC	219342	
PCB28	0.97	
PCB52	1.03	
PCB101	1	
PCB118	0.72	
PCB138	1.56	
PCB153	2.26	
PCB18		
PCB105		
PCB110		
PCB128		
PCB141		
PCB149		
PCB151		
PCB156		
PCB158		
PCB170		
PCB180	1.85	
PCB183		
PCB187		
PCB194		
PCB31		
PCB44		
PCB47		
PCB49		
PCB66		
ICES7	9.36	
AHCH		
BHCH		
GHCH		
DIELDRIN		
HCB		
DDE		
DDT		
TDE		
BDE100		
BDE138		
BDE153		
BDE154		
BDE17		
BDE183		
BDE209		
BDE28		
BDE47		
BDE66		
BDE85		
BDE99		

**Comments:**



**Laboratory Details**

**Explanatory Notes:**  
Please complete a separate worksheet for each laboratory (e.g. complete 'Laboratory\_1' worksheet for 1 laboratory and complete 'Laboratory\_2' worksheet for a second laboratory). If there are more than 3 laboratories then please contact MS-LOT.

**Laboratory 2 Details:**

Laboratory name:	
Year:	

<b>LabRefMat</b>	<b>Q1</b>	Does the laboratory carrying out the analyses undertake the analysis of blank samples and laboratory reference materials with each batch of samples of waste and other material dumped in the maritime area that is analysed by that laboratory?	
<b>CompAnal</b>	<b>Q2</b>	Does the laboratory carrying out the analyses undertake periodic comparative analysis of laboratory reference materials and certified reference materials?	
<b>QAQC</b>	<b>Q3</b>	Does the laboratory carrying out the analyses undertake the compilation of quality control charts based upon the data resulting from the analyses of the laboratory reference materials and certified reference materials, and the use of those quality control charts to monitor analytical performance in relation to all samples of dumped wastes or other materials?	
<b>InterlabCaleb</b>	<b>Q4</b>	Does the laboratory carrying out the analyses undertake periodic participation in interlaboratory comparison exercises, including, where possible, international comparison exercises?	
<b>InternatCaleb</b>	<b>Q5</b>	Does the laboratory carrying out the analyses undertake periodic participation in national and, where possible, international laboratory proficiency schemes?	
<b>SpikedSamples</b>	<b>Q6</b>	If the answer to questions 4 or 5 is 'Yes' then does the laboratory analyse samples of substances which are provided by the organisers of the scheme?	
<b>BlindSamples</b>	<b>Q7</b>	If the answer to questions 4 or 5 is 'Yes' then does the laboratory confirm that the composition of those samples is not disclosed in advance?	
<b>Ranking</b>	<b>Q8</b>	If the answer to questions 4 or 5 is 'Yes' then does the laboratory confirm that the results of the scheme for each participating laboratory are made available to all participating laboratories?	
<b>FracAnal</b>	<b>Q9</b>	Enter the size fraction that is analysed i.e. Whole or less than 63µm etc.	
<b>GranMeth</b>	<b>Q10</b>	PSA method	
<b>OCMeth</b>	<b>Q11</b>	Organic Carbon method	
<b>MetExtrType</b>	<b>Q12</b>	Method of extraction used for metal analysis	
<b>MethOfDetMetals</b>	<b>Q13</b>	Method of detection used for metal analysis	
<b>PAHExtrType</b>	<b>Q14</b>	Method of extraction used for poly aromatic hydrocarbon analysis	
<b>MethOfDetPAH</b>	<b>Q15</b>	Method of detection used for poly aromatic hydrocarbons analysis	
<b>OHExtrType</b>	<b>Q16</b>	Method of extraction used for organohalogens inc PCBs, pesticides, flame retardants etc analysis	
<b>MethOfDetOH</b>	<b>Q17</b>	Method of detection used for organohalogens inc PCBs, pesticides, flame retardants etc analysis	
<b>OTExtrType</b>	<b>Q18</b>	Method of extraction used for organotin analysis	
<b>MethOfDetOT</b>	<b>Q19</b>	Method of detection used for organotin analysis	

		LOD/LOQ	Precision (%)	Recovery (%)	
mg/kg	Hg				
	As				
	Cd				
	Cu				
	Pb				
	Zn				
	Cr				
	Ni				
	TBT				
	DBT				
	µg/kg	PCB28			
		PCB31			
		PCB44			
		PCB47			
PCB49					
PCB52					
PCB66					
PCB101					
PCB105					
PCB110					
PCB118					
PCB128					
PCB138+163					
PCB141					
PCB149					
PCB151					
PCB153					
PCB156					
PCB158					
PCB170					
PCB180					
PCB183					
PCB187					
PCB194					
DDE					
DDT					
DDD					
Dieldrin					
Lindane					
HCB					
BDE17					
BDE28					
BDE47					
BDE66					
BDE85					
BDE99					
BDE100					
BDE138					
BDE153					
BDE154					
BDE183					
BDE209					
ACENAPHTH					
ACENAPHY					
ANTHRACN					
BAA					
BAP					
BBF					
BENZGHIP					
BEP					
BKF					
C1N					
C1PHEN					
C2N					
C3N					
CHRYSENE					
DBENZAH					
FLUORENE					
FLUORANT					
INDPYR					
NAPHTH					
PERYLENE					
PHENANT					
PYRENE					
THC					



**Laboratory Details**

**Explanatory Notes:**  
Please complete a separate worksheet for each laboratory (e.g. complete 'Laboratory\_1' worksheet for 1 laboratory and complete 'Laboratory\_2' worksheet for a second laboratory). If there are more than 3 laboratories then please contact MS-LOT.

**Laboratory 3 Details:**

Laboratory name:	
Year:	

<b>LabRefMat</b>	<b>Q1</b>	Does the laboratory carrying out the analyses undertake the analysis of blank samples and laboratory reference materials with each batch of samples of waste and other material dumped in the maritime area that is analysed by that laboratory?	
<b>CompAnal</b>	<b>Q2</b>	Does the laboratory carrying out the analyses undertake periodic comparative analysis of laboratory reference materials and certified reference materials?	
<b>QAQC</b>	<b>Q3</b>	Does the laboratory carrying out the analyses undertake the compilation of quality control charts based upon the data resulting from the analyses of the laboratory reference materials and certified reference materials, and the use of those quality control charts to monitor analytical performance in relation to all samples of dumped wastes or other materials?	
<b>InterlabCaleb</b>	<b>Q4</b>	Does the laboratory carrying out the analyses undertake periodic participation in interlaboratory comparison exercises, including, where possible, international comparison exercises?	
<b>InternatCaleb</b>	<b>Q5</b>	Does the laboratory carrying out the analyses undertake periodic participation in national and, where possible, international laboratory proficiency schemes?	
<b>SpikedSamples</b>	<b>Q6</b>	If the answer to questions 4 or 5 is 'Yes' then does the laboratory analyse samples of substances which are provided by the organisers of the scheme?	
<b>BlindSamples</b>	<b>Q7</b>	If the answer to questions 4 or 5 is 'Yes' then does the laboratory confirm that the composition of those samples is not disclosed in advance?	
<b>Ranking</b>	<b>Q8</b>	If the answer to questions 4 or 5 is 'Yes' then does the laboratory confirm that the results of the scheme for each participating laboratory are made available to all participating laboratories?	
<b>FracAnal</b>	<b>Q9</b>	Enter the size fraction that is analysed i.e. Whole or less than 63µm etc.	
<b>GranMeth</b>	<b>Q10</b>	PSA method	
<b>OCMeth</b>	<b>Q11</b>	Organic Carbon method	
<b>MetExtrType</b>	<b>Q12</b>	Method of extraction used for metal analysis	
<b>MethOfDetMetals</b>	<b>Q13</b>	Method of detection used for metal analysis	
<b>PAHExtrType</b>	<b>Q14</b>	Method of extraction used for poly aromatic hydrocarbon analysis	
<b>MethOfDetPAH</b>	<b>Q15</b>	Method of detection used for poly aromatic hydrocarbons analysis	
<b>OHExtrType</b>	<b>Q16</b>	Method of extraction used for organohalogens inc PCBs, pesticides, flame retardants etc analysis	
<b>MethOfDetOH</b>	<b>Q17</b>	Method of detection used for organohalogens inc PCBs, pesticides, flame retardants etc analysis	
<b>OTExtrType</b>	<b>Q18</b>	Method of extraction used for organotin analysis	
<b>MethOfDetOT</b>	<b>Q19</b>	Method of detection used for organotin analysis	

		LOD/LOQ	Precision (%)	Recovery (%)	
mg/kg	Hg				
	As				
	Cd				
	Cu				
	Pb				
	Zn				
	Cr				
	Ni				
	TBT				
	DBT				
	µg/kg	PCB28			
		PCB31			
		PCB44			
		PCB47			
PCB49					
PCB52					
PCB66					
PCB101					
PCB105					
PCB110					
PCB118					
PCB128					
PCB138+163					
PCB141					
PCB149					
PCB151					
PCB153					
PCB156					
PCB158					
PCB170					
PCB180					
PCB183					
PCB187					
PCB194					
DDE					
DDT					
DDD					
Dieldrin					
Lindane					
HCB					
BDE17					
BDE28					
BDE47					
BDE66					
BDE85					
BDE99					
BDE100					
BDE138					
BDE153					
BDE154					
BDE183					
BDE209					
ACENAPHTH					
ACENAPHY					
ANTHRACN					
BAA					
BAP					
BBF					
BENZGHIP					
BEP					
BKF					
C1N					
C1PHEN					
C2N					
C3N					
CHRYSENE					
DBENZAH					
FLUORENE					
FLUORANT					
INDPYR					
NAPHTH					
PERYLENE					
PHENANT					
PYRENE					
THC					