Supplementary material

Table S1. Mobile phase gradient for the UPLC

Time (min)	Flow (ml/min)	H_2O (%)	ACN (%)
0	0.4	50	50
6.75	0.4	50	50
8.25	0.4	33	67
11.25	0.3	33	67
14.25	0.4	23	77
18.00	0.4	50	50

Table S2. Wavelength programs for fluorescence detection

Time	Ex (nm)	Em (nm)
0.00	270	326
7.80	243	397
9.90	320	430
11.5	294	410
13.0	320	430
15.5	275	390
16.5	303	495
20.0	303	495

Table S3. Retention times and method detection limits of the 16 PAHs.

	Compound	Retention Time	MDL (µg/L)
1	Naphthalene	4.365	0.08
2	Acenaphthylene	5.374	0.2
3	Acenaphthene	6.980	0.09
4	Fluorene	7.317	0.04
5	Phenanthrene	8.911	0.2
6	Anthracene	9.394	0.05
7	Fluoranthene	10.414	0.08
8	Pyrene	10.826	0.07
9	Chrysene	12.713	0.04
10	Benzo(a) anthracene	12.857	0.15
11	Benzo(b) fluoranthene	14.647	0.08
12	Benzo(k) fluoranthene	14.813	0.001
13	Benzo(a) pyrene	15.168	0.015
14	Dibenz(a,h) perylene	16.216	0.18
15	Indeno(1,2,3-cd)pyrene	17.070	0.02
16	Benzo(g,h,i) perylene	17.439	0.08

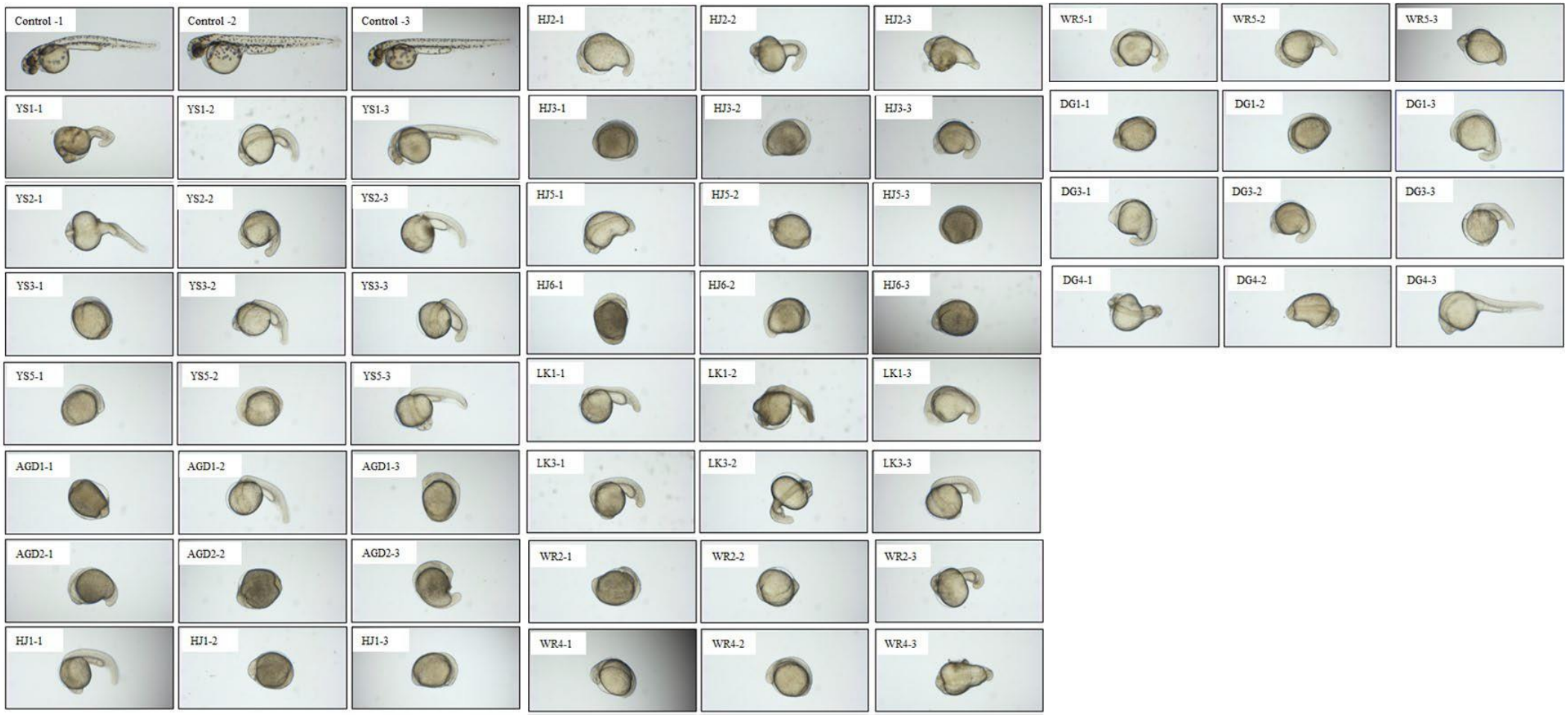

Figure S1. Effects of deformities caused by sediment porewater from different locations in Taiwan on zebrafish after a 2 days treatment. The main deformity forms include spinal cord curvature, cardiac edema, developmental stagnation, tail necrosis.

Figure S2. Effects of deformities caused by sediment porewater in different locations in Taiwan on zebrafish after 3 days treatment. The main deformities include spinal cord curvature, cardiac edema, developmental slowness and stagnation, or tail necrosis.