

DIOXIN AND FURAN RESIDUES IN FISH AND SHELLFISH FROM THE VICINITY OF HARMAC PULP MILL (BC) - PARTS PER TRILLION

NO.	SITE	LAB ID NO	% LIPID	SPECIES/TISSUE	IND. PER COMP.	2,3,7,8 SUBST. TCDD	TOTAL TCDD	2,3,7,8 SUBST. PCDD	TOTAL PCDD	2,3,7,8 SUBST. H6CDD	TOTAL H6CDD	2,3,7,8 SUBST. H7CDD	TOTAL H7CDD	OCDD	2,3,7,8 SUBST. TCDF	TOTAL TCDF	1,2,3,7,8 PCDF	2,3,4,7,8 PCDF	2,3,7,8 SUBST. PCDF	TOTAL PCDF	2,3,7,8 SUBST. H6CDF	TOTAL H6CDF	2,3,7,8 SUBST. H7CDF	TOTAL H7CDF	OCDF
1	NANAIMO ESTUARY C1 6.0 KM NW of OUTFALL	2603-06	7.33	Dungeness Crab - hepatopancreas	3	<1.9	<1.9	<3.0	<3.0	23.0	75.0	<6.9	<6.9	<8.8	100.0	140.0	<1.2	3.0	3.0	18.0	<5.8	<5.8	7.1	11.0	<18.0
2	NANAIMO ESTUARY C1 6.0 KM NW of OUTFALL	2647-01A	10.20	Dungeness Crab - hepatopancreas	3	1.0	3.4	5.3	13.0	38.0	110.0	16.0	26.0	NDR(28)	79.0	110.0	4.6	6.1	11.0	34.0	11.0	140.0	26.0	45.0	NDR(2.2)
3	NANAIMO ESTUARY C1 6.0 KM NW of OUTFALL	2647-01B Duplicate	10.20	Dungeness Crab - hepatopancreas	3	1.2	3.8	4.9	17.0	36.0	100.0	18.0	28.0	NDR(16)	79.0	110.0	4.5	6.3	11.0	40.0	9.2	140.0	25.0	40.0	3.2
AVERAGE OF SAMPLES 2 & 3				Dungeness Crab - hepatopancreas		1.1	3.6	5.1	15.0	37.0	105.0	17.0	27.0	NDR(28)	79.0	110.0	4.6	6.2	11.0	37.0	10.1	140.0	25.5	42.5	1.6
4	DESCANSO BAY C2-1 5.5 KM N of OUTFALL	2603-16	0.77	Dungeness Crab - leg muscle	1	<0.6	<0.6	<0.8	<0.8	<2.3	<2.3	<2.8	<2.8	<3.7	1.6	1.6	<0.5	<0.5	<0.5	<0.5	<1.8	<1.8	<2.2	<2.2	<2.7
5	DESCANSO BAY C2-2 5.5 KM N of OUTFALL	2603-17	0.79	Dungeness Crab - leg muscle	1	<0.7	<0.7	<1.0	<1.0	<2.9	<2.9	<3.6	<3.6	<4.5	4.3	4.3	<0.6	<0.6	<0.6	<0.6	<2.3	<2.3	<2.8	<2.8	<3.4
6	DESCANSO BAY C2-3 5.5 KM N of OUTFALL	2603-18	0.82	Dungeness Crab - leg muscle	1	<0.8	<0.8	<1.0	<1.0	<3.1	<3.1	<3.8	<3.8	<5.0	1.9	1.9	<0.7	<0.7	<0.7	<0.7	<2.5	<2.5	<2.9	<2.9	<3.6
AVERAGE OF SAMPLES 4, 5, 6				Dungeness Crab - leg muscle		<0.8	<0.8	<1.0	<1.0	<3.1	<3.1	<3.8	<3.8	<5.0	2.0	2.0	<0.7	<0.7	<0.7	<0.7	<2.5	<2.5	<2.9	<2.9	<3.6
7	DESCANSO BAY C2 5.5 KM N of OUTFALL	2647-02	1.21	Dungeness Crab - leg muscle	1	<0.05	<0.05	<0.2	<0.2	<0.3	1.0	<0.8	<0.8	NDR(6.2)	0.7	0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2
8	DESCANSO BAY C2 5.5 KM N of OUTFALL	2647-03	1.04	Dungeness Crab - leg muscle	1	<0.05	<0.05	<0.2	<0.2	<0.2	<0.2	<0.9	<0.9	NDR(4.7)	1.0	1.3	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2
9	DESCANSO BAY C2 5.5 KM N of OUTFALL	2647-04	1.06	Dungeness Crab - leg muscle	1	<0.1	<0.1	<0.3	<0.3	<0.4	2.2	<0.9	<0.9	NDR(6.2)	1.2	1.6	<0.2	<0.2	<0.2	<0.2	<0.4	<0.4	<0.5	<0.5	<1.2
AVERAGE OF SAMPLES 7, 8, 9				Dungeness Crab - leg muscle		<0.1	<0.1	<0.3	<0.3	<0.4	1.1	<0.9	<0.9	NDR(6.2)	1.0	1.2	<0.2	<0.2	<0.2	<0.2	<0.4	<0.4	<0.5	<0.5	<1.2
10	DESCANSO BAY C2 5.5 KM N of OUTFALL	2603-07	16.10	Dungeness Crab - hepatopancreas	3	13.0	13.0	<2.9	24.0	142.0	380.0	<5.0	<5.0	<9.8	380.0	560.0	<1.7	10.0	10.0	26.0	<5.8	<5.8	<4.3	<4.3	<13.0
11	DESCANSO BAY C2 5.5 KM N of OUTFALL	2647-05	13.80	Dungeness Crab - hepatopancreas	3	3.2	9.3	8.6	30.0	74.0	240.0	9.6	19.0	NDR(12)	120.0	160.0	1.8	2.9	4.7	14.0	1.1	28.0	7.1	12.0	NDR(1.3)
12	WEST OF JOAN POINT C3-1 1.8 KM N of OUTFALL	2603-19A	0.84	Dungeness Crab - leg muscle	1	<1.1	<1.1	<1.5	<1.5	<4.5	<4.5	<5.5	<5.5	<7.2	2.5	2.5	<1.0	<1.0	<1.0	<1.0	<3.6	<3.6	<4.2	<4.2	<5.3

DIOXIN AND FURAN RESIDUES IN FISH AND SHELLFISH FROM THE VICINITY OF HARMAC PULP MILL (BC) - PARTS PER TRILLION

NO.	SITE	LAB ID NO	% LIPID	SPECIES/TISSUE	IND. PER COMP.	2,3,7,8 SUBST. TCDD	TOTAL TCDD	2,3,7,8 SUBST. PCDD	TOTAL PCDD	2,3,7,8 SUBST. H6CDD	TOTAL H6CDD	2,3,7,8 SUBST. H7CDD	TOTAL H7CDD	OCDD	2,3,7,8 SUBST. TCDF	TOTAL TCDF	1,2,3,7,8 PCDF	2,3,4,7,8 PCDF	2,3,7,8 SUBST. PCDF	TOTAL PCDF	2,3,7,8 SUBST. H6CDF	TOTAL H6CDF	2,3,7,8 SUBST. H7CDF	TOTAL H7CDF	OCDF
13	WEST OF JOAN POINT C3-1 1.8 KM N of OUTFALL	2603-19B	0.84	Dungeness Crab - leg muscle (duplicate)	1	<0.8	<0.8	<1.1	<1.1	<3.3	<3.3	<4.1	<4.1	<5.3	3.0	3.0	<0.7	<0.7	<0.7	<0.7	<2.7	<2.7	<3.1	<3.1	<3.9
	AVERAGE OF SAMPLES 12 & 13			Dungeness Crab - leg muscle		<1.1	<1.1	<1.5	<1.5	<4.5	<4.5	<5.5	<5.5	<7.2	2.8	2.8	<1.0	<1.0	<1.0	<1.0	<3.6	<3.6	<4.2	<4.2	<5.3
14	WEST OF JOAN POINT C3-2 1.8 KM N of OUTFALL	2603-20	0.81	Dungeness Crab - leg muscle	1	<1.1	<1.1	<2.1	<2.1	<2.6	<2.6	<4.0	<4.0	<8.2	4.3	4.3	<0.8	<0.8	<0.8	<0.8	<1.9	<1.9	<3.4	<3.4	<5.7
15	WEST OF JOAN POINT C3-3 1.8 KM N of OUTFALL	2603-21	0.73	Dungeness Crab - leg muscle	1	<0.4	<0.4	<1.0	<1.0	<1.9	<1.9	<2.5	<2.5	<3.0	6.1	7.9	<0.7	<0.7	<0.7	<0.7	<2.0	<2.0	<2.8	<2.8	<3.1
	AVERAGE OF (AVG OF 12 & 13, 14, 15)			Dungeness Crab - leg muscle		<1.1	<1.1	<2.1	<2.1	<4.5	<4.5	<5.5	<5.5	<8.2	4.4	5.0	<1.0	<1.0	<1.0	<1.0	<3.6	<3.6	<4.2	<4.2	<5.7
16 2851-6 06-02-92	WEST OF JOAN POINT C3 1.8 KM N of OUTFALL	2647-06	1.08	Dungeness Crab - leg muscle	1	<0.08	<0.08	<0.1	<0.1	1.0	3.2	<0.9	<0.9	NDR(3.9)	1.6	2.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.3	<0.2	<0.2	<0.2
17 2851-7 06-02-92	WEST OF JOAN POINT C3 1.8 KM N of OUTFALL	2647-07	0.94	Dungeness Crab - leg muscle	1	<0.05	<0.05	<0.1	<0.1	<0.3	<0.3	<0.8	<0.8	NDR(4.7)	0.7	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3
18 2851-8 06-02-92	WEST OF JOAN POINT C3 1.8 KM N of OUTFALL	2647-08	0.96	Dungeness Crab - leg muscle	1	<0.1	<0.1	<0.1	<0.1	0.6	2.1	<1.0	<1.0	NDR(5.3)	2.7	3.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	AVERAGE OF SAMPLES 16, 17, 18			Dungeness Crab - leg muscle		<0.1	<0.1	<0.1	<0.1	0.5	1.8	<1.0	<1.0	NDR(5.3)	1.7	2.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
19	WEST OF JOAN POINT C3 1.8 KM N of OUTFALL	2603-08	16.60	Dungeness Crab - hepatopancreas	3	17.0	21.0	34.0	86.0	305.0	680.0	19.0	26.0	<12.0	750.0	1000.0	5.6	14.0	19.6	79.0	<8.2	39.0	8.2	10.0	<5.4
20 2851-9 06-02-92	WEST OF JOAN POINT C3 1.8 KM N of OUTFALL	2647-09	17.10	Dungeness Crab - hepatopancreas	3	9.1	22.0	20.0	94.0	199.0	640.0	20.0	35.0	NDR(14)	360.0	470.0	6.4	11.0	17.0	48.0	11.0	88.0	13.0	16.0	<0.7
21	NORTH MUDGE ISLAND C4 4.5 KM E of OUTFALL	2603-09A	5.01	Dungeness Crab - hepatopancreas	3	5.0	9.4	8.7	25.0	70.9	170.0	1.8	1.8	<2.5	180.0	250.0	1.0	2.9	3.9	14.0	<0.9	7.1	<1.2	<1.2	<1.2
22	NORTH MUDGE ISLAND C4 4.5 KM E of OUTFALL	2603-09B	5.01	Dungeness Crab - hepatopancreas (duplicate)	3	4.8	10.0	8.2	26.0	63.0	150.0	<0.5	2.6	<2.3	180.0	250.0	1.1	2.8	3.9	12.0	<0.6	6.5	<1.5	<1.5	<1.5
	AVERAGE OF SAMPLES 21 & 22			Dungeness Crab - hepatopancreas		4.9	9.7	8.5	25.5	67.0	160.0	0.9	2.2	<2.5	180.0	250.0	1.1	2.9	3.9	13.0	<0.9	6.8	<1.5	<1.5	<1.5
23 2851-10 05-02-92	NORTH MUDGE ISLAND C4 4.5 KM E of OUTFALL	2647-10	7.61	Dungeness Crab - hepatopancreas	3	3.4	5.6	5.2	12.0	27.0	61.0	NDR(3.1)	2.6	NDR(3.4)	120.0	160.0	0.9	2.3	3.2	4.4	<0.5	3.6	1.1	1.1	<1.9
24	NORTH MUDGE ISLAND C4 4.5 KM E of OUTFALL	2603-15	2.50	Red Rock Crab - hepatopancreas	5	2.6	2.6	<1.7	<1.7	30.5	44.0	<6.2	<6.2	<7.8	76.0	120.0	<1.0	1.3	1.3	1.3	<3.9	<3.9	<4.6	<4.6	<6.1

IDR = PEAK DETECTED BUT NOT MEET QUANTIFICATION CRITERIA

DIOXIN AND FURAN RESIDUES IN FISH AND SHELLFISH FROM THE VICINITY OF HARMAC PULP MILL (BC) - PARTS PER TRILLION

NO.	SITE	LAB ID NO	% LIPID	SPECIES/TISSUE	IND. PER COMP.	2,3,7,8 SUBST. TCDD	TOTAL TCDD	2,3,7,8 SUBST. PCDD	TOTAL PCDD	2,3,7,8 SUBST. H6CDD	TOTAL H6CDD	2,3,7,8 SUBST. H7CDD	TOTAL H7CDD	OCDD	2,3,7,8 SUBST. TCDF	TOTAL TCDF	1,2,3,7,8 PCDF	2,3,4,7,8 PCDF	2,3,7,8 SUBST. PCDF	TOTAL PCDF	2,3,7,8 SUBST. H6CDF	TOTAL H6CDF	2,3,7,8 SUBST. H7CDF	TOTAL H7CDF	OCDF
25	PYLADES CHANNEL C5 7.5 KM E of OUTFALL	2603-10	4.92	Dungeness Crab - hepatopancreas	3	4.0	8.9	6.5	20.0	46.2	120.0	2.6	4.6	<3.0	160.0	230.0	0.9	2.3	3.2	13.0	<0.7	6.8	<1.6	<1.6	<1.6
26 2851-11 05-02-92	PYLADES CHANNEL C5 7.5 KM E of OUTFALL	2647-11	12.30	Dungeness Crab - hepatopancreas	3	2.8	5.8	5.6	14.0	36.0	100.0	6.6	14.0	7.0	100.0	130.0	1.0	2.0	3.0	7.6	<0.7	11.0	3.1	5.4	<1.8
27	STUART CHANNEL C7-1 9.8 KM SE of OUTFALL	2603-22	0.77	Dungeness Crab - leg muscle	1	<1.1	<1.1	<1.7	<1.7	<3.0	<3.0	<3.7	<3.7	<4.7	2.9	2.9	<0.8	<0.8	<0.8	<0.8	<2.5	<2.5	<3.0	<3.0	<3.8
28	STUART CHANNEL C7-2 9.8 KM SE of OUTFALL	2603-23	0.80	Dungeness Crab - leg muscle	1	<1.0	<1.0	<1.5	<1.5	<2.1	<2.1	<4.0	<4.0	<5.5	7.9	9.2	<0.9	<0.9	<0.9	<0.9	<1.6	<1.6	<3.4	<3.4	<4.6
29	STUART CHANNEL C7-3 9.8 KM SE of OUTFALL	2603-24	0.84	Dungeness Crab - leg muscle	1	<1.0	<1.0	<1.8	<1.8	<1.6	<1.6	<2.5	<2.5	<4.1	<0.7	<0.7	<1.0	<1.0	<1.0	<1.0	<1.4	<1.4	<2.3	<2.3	<3.4
	AVERAGE OF SAMPLES 27, 28, 29			Dungeness Crab - leg muscle		<1.1	<1.1	<1.8	<1.8	<3.0	<3.0	<4.0	<4.0	<5.5	3.6	4.0	<1.0	<1.0	<1.0	<1.0	<2.5	<2.5	<3.4	<3.4	<4.6
30	STUART CHANNEL C7 9.8 KM SE of OUTFALL	2603-11	9.70	Dungeness Crab - hepatopancreas	3	7.5	10.0	<0.5	23.0	75.0	190.0	5.1	7.9	2.1	300.0	400.0	1.3	8.2	9.5	26.0	<1.6	7.4	1.5	1.9	<1.0
31	PILOT BAY C8 8.5 KM N of OUTFALL	2603-12	6.51	Dungeness Crab - hepatopancreas	3	3.5	4.5	<0.9	2.8	32.5	65.0	<3.8	<3.8	<5.3	170.0	220.0	<0.5	2.0	2.0	5.0	<2.0	<2.0	<3.2	<3.2	<8.5
32 2851-12 07-02-92	PILOT BAY C8 8.5 KM N of OUTFALL	2647-12	9.61	Dungeness Crab - hepatopancreas	3	2.6	4.8	3.4	6.8	23.0	73.0	4.2	9.1	5.9	80.0	100.0	1.0	2.2	3.2	6.5	<0.3	14.0	3.1	4.5	<2.2
33	NEWCASTLE ISLAND PASSAGE C9 9.1 KM NW of OUTFALL	2603-13R	13.80	Dungeness Crab - hepatopancreas	3	3.0	3.0	7.3	11.0	44.2	95.0	25.0	37.0	9.6	150.0	190.0	2.6	6.2	8.8	52.0	<3.7	92.0	37.0	58.0	<5.8
34 2851-13 07-02-92	NEWCASTLE ISLAND PASSAGE C9 9.1 KM NW of OUTFALL	2647-13	14.40	Dungeness Crab - hepatopancreas	3	1.2	3.2	2.5	4.9	16.0	47.0	4.5	9.8	4.8	45.0	58.0	0.3	0.5	0.8	1.1	<0.2	16.0	3.8	5.6	<3.2
35	JACK POINT C11 5.2 KM NW of OUTFALL	2603-14A	12.50	Dungeness Crab - hepatopancreas	3	2.6	2.6	5.2	8.8	55.0	180.0	12.0	21.0	<7.1	110.0	150.0	<0.9	3.7	3.7	22.0	<3.6	28.0	12.0	18.0	<5.6
36	JACK POINT C11 5.2 KM NW of OUTFALL	2603-14B	12.50	Dungeness Crab - hepatopancreas (duplicate)	3	2.6	2.6	5.4	12.0	57.0	180.0	12.0	19.0	<6.7	110.0	140.0	1.3	3.1	4.4	22.0	<3.3	29.0	12.0	18.0	<5.2
	AVERAGE OF SAMPLES 35 & 36			Dungeness Crab - hepatopancreas		2.6	2.6	5.3	10.4	56.0	180.0	12.0	20.0	<7.1	110.0	145.0	0.7	3.4	4.1	22.0	<3.6	28.5	12.0	18.0	<5.6
37 2851-14 06-02-92	JACK POINT C11 5.2 KM NW of OUTFALL	2647-14	2.80	Dungeness Crab - hepatopancreas	2	0.7	1.2	1.4	2.8	32.0	120.0	4.6	9.1	4.0	17.0	21.0	NDR(0.4)	0.6	0.6	1.2	<0.5	18.0	3.7	4.8	<3.8

DIOXIN AND FURAN RESIDUES IN FISH AND SHELLFISH FROM THE VICINITY OF HARMAC PULP MILL (BC) - PARTS PER TRILLION

NO.	SITE	LAB ID NO	% LIPID	SPECIES/TISSUE	IND. PER COMP.	2,3,7,8 SUBST. TCDD	TOTAL TCDD	2,3,7,8 SUBST. PCDD	TOTAL PCDD	2,3,7,8 SUBST. H6CDD	TOTAL H6CDD	2,3,7,8 SUBST. H7CDD	TOTAL H7CDD	OCDD	2,3,7,8 SUBST. TCDF	TOTAL TCDF	1,2,3,7,8 PCDF	2,3,4,7,8 PCDF	2,3,7,8 SUBST. PCDF	TOTAL PCDF	2,3,7,8 SUBST. H6CDF	TOTAL H6CDF	2,3,7,8 SUBST. H7CDF	TOTAL H7CDF	OCDF
38 2851-15 07-02-92	NEWCASTLE ISLAND C12 10.5 KM NW of OUTFALL	2647-15	13.50	Dungeness Crab - hepatopancreas	3	2.5	6.4	4.9	9.3	28.0	84.0	5.6	12.0	5.3	120.0	150.0	2.8	4.1	6.9	15.0	2.0	43.0	7.6	10.0	<5.2
39 2851-18 07-02-92	NEAR GABRIOLA ISLAND C13 13 KM N of OUTFALL	2647-18	11.50	Dungeness Crab - hepatopancreas	3	4.5	9.0	6.0	13.0	24.0	64.0	3.6	8.0	NDR(1.9)	220.0	280.0	1.4	3.6	5.0	11.0	<0.4	7.7	1.7	2.1	<3.0
40 2851-17 05-02-92	PYLADES CHANNEL C14 9.8 KM E of OUTFALL	2647-17A	13.00	Dungeness Crab - hepatopancreas	3	3.0	5.8	6.7	23.0	51.0	190.0	8.6	18.0	5.2	99.0	140.0	0.9	2.0	2.9	6.5	<0.4	20.0	3.6	6.9	<6.9
41 2851-17 05-02-92	PYLADES CHANNEL C14 9.8 KM E of OUTFALL	2647-17B Duplicate	13.30	Dungeness Crab - hepatopancreas	3	3.1	7.9	7.1	26.0	53.0	210.0	10.0	26.0	7.5	100.0	140.0	1.0	2.0	3.0	5.9	1.0	22.0	4.9	8.0	<5.9
AVERAGE OF SAMPLES 40 & 41				Dungeness Crab - hepatopancreas		3.1	6.9	6.9	24.5	52.0	200.0	9.3	22.0	6.4	99.5	140.0	1.0	2.0	3.0	6.2	0.5	21.0	4.3	7.5	<6.9
42 2851-16 03-02-92	STUART CHANNEL C15 16.1 KM S of OUTFALL	2647-16	9.64	Dungeness Crab - hepatopancreas	2	6.4	13	22	56	105	270	7.2	14	3.5	240	310	2.2	5.5	7.7	20	<0.5	20	5.1	4.4	<3.8