

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the beginning of a 60 day exposure, Round II, Part 2.

Treatment: HWSE-M

Tank#: G

Date: 6/26/97

Fork			Fork			Fork		
Fish#	Length	Weight	Fish#	Length	Weight	Fish#	Length	Weight
1	98	9.5	36	94	8.3	71	96	9.3
2	96	9.0	37	98	9.2	72	95	8.4
3	96	9.0	38	87	6.6	73	91	7.6
4	96	8.5	39	93	8.5	74	95	8.7
5	90	6.6	40	92	7.3	75	90	6.8
6	90	7.2	41	95	8.1	76	95	8.7
7	97	8.9	42	87	6.0	77	90	7.6
8	93	8.2	43	89	6.3	78	90	6.9
9	91	7.4	44	91	7.5	79	94	8.3
10	96	8.2	45	89	6.9	80	97	7.7
11	92	8.0	46	90	7.3	81	87	6.6
12	93	8.0	47	98	9.6	82	95	8.0
13	94	7.4	48	88	7.2	83	96	8.5
14	93	7.8	49	90	6.5	84	90	6.8
15	96	9.2	50	91	7.1	85	93	8.2
16	92	7.7	51	90	6.8	86	96	9.1
17	97	9.7	52	91	7.3	87	87	6.3
18	91	7.0	53	98	9.1	88	90	7.0
19	97	8.6	54	95	8.7	89	94	7.1
20	87	6.3	55	91	7.8	90	90	7.3
21	95	8.5	56	92	7.9	91	91	7.3
22	89	6.4	57	98	9.6	92	92	8.2
23	84	8.1	58	95	9.2	93	98	9.5
24	86	8.5	59	92	7.6	94	87	6.5
25	87	6.3	60	95	8.4	95	95	8.5
26	98	9.3	61	92	7.8	96	93	8.3
27	91	6.3	62	96	8.7	97	96	8.7
28	89	6.2	63	88	6.3	98	97	8.6
29	95	8.8	64	97	8.9	99	93	7.9
30	92	7.5	65	87	6.8	100	92	7.5
31	91	7.2	66	93	7.4			
32	97	9.4	67	94	7.7			
33	97	8.0	68	87	6.6			
34	93	8.5	69	92	7.5			
35	95	8.0	70	93	7.8			

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the beginning of a 60 day exposure, Round II, Part 2.

Treatment: HWSE-P

Tank#: H

Date: 6/26/97

Fork		
Fish#	Length	Weight
1	95	7.9
2	96	8.8
3	96	9.4
4	94	8.1
5	95	8.7
6	94	8.6
7	94	8.0
8	91	7.6
9	87	6.9
10	90	7.2
11	96	9.4
12	90	7.9
13	90	8.2
14	96	8.6
15	97	10.9
16	95	9.2
17	90	7.8
18	95	7.2
19	95	8.9
20	91	7.5
21	93	8.0
22	88	6.6
23	89	6.9
24	96	7.3
25	89	6.3
26	97	8.7
27	96	9.1
28	92	6.7
29	95	8.0
30	89	7.1
31	97	9.6
32	92	8.0
33	97	9.5
34	98	7.4
35	87	5.9

Fork		
Fish#	Length	Weight
36	98	8.8
37	97	9.9
38	88	6.2
39	93	7.9
40	88	6.9
41	87	6.5
42	97	8.2
43	95	8.8
44	92	7.8
45	93	7.9
46	96	9.1
47	93	7.3
48	94	8.1
49	95	8.9
50	91	9.1
51	88	6.4
52	87	6.7
53	87	7.2
54	87	6.3
55	97	9.1
56	87	6.6
57	91	7.3
58	96	8.9
59	97	9.3
60	95	8.6
61	91	7.8
62	92	7.6
63	90	6.3
64	98	8.9
65	92	8.2
66	98	9.3
67	92	7.6
68	92	7.9
69	96	7.7
70	93	8.1

Fork		
Fish#	Length	Weight
71	98	9.4
72	89	7.1
73	97	8.2
74	87	6.3
75	89	6.2
76	87	6.2
77	87	6.2
78	92	7.7
79	96	6.6
80	86	9.1
81	92	7.6
82	90	7.4
83	93	7.8
84	92	6.9
85	92	7.7
86	96	9.3
87	92	7.2
88	93	7.9
89	89	7.3
90	91	8.1
91	96	8.0
92	89	8.5
93	92	7.7
94	96	8.5
95	87	6.3
96	96	8.1
97	89	7.4
98	96	8.6
99	87	6.4
100	92	7.9

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the beginning of a 60 day exposure, Round II, Part 2.

Treatment: NQSE

Tank#: I

Date: 6/26/97

Fork		
Fish#	Length	Weight
1	98	8.8
2	89	7.9
3	92	6.9
4	95	7.0
5	92	7.2
6	96	8.8
7	93	7.8
8	96	8.8
9	97	9.3
10	98	9.3
11	95	7.8
12	98	8.7
13	95	7.8
14	95	8.2
15	92	7.7
16	95	8.3
17	92	7.2
18	94	8.0
19	97	8.5
20	91	7.2
21	98	8.6
22	88	6.3
23	98	10.1
24	97	8.8
25	94	9.0
26	93	7.3
27	98	8.8
28	93	7.6
29	94	7.5
30	95	7.2
31	94	8.5
32	93	7.4
33	94	8.2
34	94	8.0
35	87	6.1

Fork		
Fish#	Length	Weight
36	94	7.3
37	96	8.8
38	90	6.9
39	93	7.2
40	97	9.3
41	88	7.0
42	94	8.8
43	90	6.7
44	98	9.2
45	90	7.5
46	95	8.9
47	94	9.0
48	98	9.3
49	97	9.3
50	98	8.9
51	95	7.7
52	95	8.6
53	95	8.0
54	94	7.7
55	96	8.8
56	93	8.1
57	95	8.5
58	94	8.4
59	91	7.2
60	96	8.9
61	95	8.8
62	94	8.3
63	92	6.8
64	98	10.2
65	96	8.6
66	98	9.6
67	89	6.8
68	98	9.8
69	97	8.8
70	94	8.0

Fork		
Fish#	Length	Weight
71	86	6.2
72	93	8.0
73	96	8.7
74	90	6.3
75	90	7.4
76	95	8.8
77	98	9.6
78	90	7.3
79	97	9.3
80	93	6.6
81	97	9.6
82	94	8.0
83	95	9.3
84	89	6.8
85	96	9.0
86	97	9.2
87	91	7.4
88	97	9.2
89	98	9.0
90	93	7.1
91	98	9.2
92	97	8.5
93	89	7.0
94	97	9.1
95	93	8.0
96	93	8.0
97	93	7.1
98	89	7.2
99	98	9.9
100	94	8.8

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the beginning of a 60 day exposure, Round II, Part 2.

Treatment: HCBD

Tank#: J

Date: 6/26/97

Fork		
Fish#	Length	Weight
1	96	8.5
2	88	6.6
3	99	9.8
4	98	8.5
5	99	9.1
6	95	8.2
7	97	9.5
8	96	8.7
9	89	7.0
10	95	7.7
11	97	9.8
12	98	10.4
13	98	9.4
14	93	7.7
15	96	9.0
16	93	7.7
17	98	9.4
18	97	10.0
19	96	8.4
20	98	9.1
21	90	6.7
22	91	7.1
23	96	9.0
24	97	7.7
25	97	9.2
26	95	8.2
27	96	8.7
28	98	8.0
29	96	9.0
30	98	9.9
31	87	6.7
32	92	7.7
33	89	6.8
34	95	9.0
35	87	7.7

Fork		
Fish#	Length	Weight
36	94	8.3
37	93	7.7
38	97	9.1
39	89	7.4
40	96	9.3
41	97	8.7
42	94	8.2
43	91	6.8
44	99	9.5
45	94	8.8
46	93	7.6
47	97	8.3
48	89	7.2
49	89	7.7
50	93	8.3
51	99	9.3
52	98	9.3
53	92	8.0
54	97	8.7
55	88	7.2
56	95	7.5
57	94	8.4
58	89	7.3
59	91	7.4
60	95	8.3
61	97	9.5
62	99	9.2
63	98	8.3
64	93	7.7
65	89	7.0
66	98	9.4
67	90	7.2
68	98	9.4
69	98	9.0
70	90	7.0

Fork		
Fish#	Length	Weight
71	90	7.0
72	96	8.6
73	92	7.6
74	97	8.9
75	93	7.2
76	92	7.6
77	98	7.6
78	89	6.8
79	96	8.9
80	96	8.3
81	92	7.5
82	96	8.7
83	95	7.5
84	92	7.5
85	93	7.2
86	95	8.2
87	90	6.8
88	92	7.5
89	99	9.5
90	99	8.6
91	94	8.6
92	93	7.4
93	94	7.1
94	94	7.9
95	98	10.0
96	98	10.3
97	98	6.7
98	97	7.9
99	96	8.1
100	91	6.7

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the beginning of a 60 day exposure, Round II, Part 2.

Treatment: HWSE-M

Tank#: K

Date: 6/26/97

Fork			Fork			Fork		
Fish#	Length	Weight	Fish#	Length	Weight	Fish#	Length	Weight
1	90	7.3	36	89	6.5	71	94	7.9
2	95	8.4	37	88	6.9	72	95	8.0
3	90	6.7	38	91	7.2	73	90	7.5
4	90	7.7	39	96	8.4	74	92	7.8
5	96	9.2	40	92	7.4	75	91	7.1
6	95	8.6	41	96	9.6	76	91	7.5
7	96	9.8	42	95	8.7	77	97	9.8
8	97	6.7	43	98	9.4	78	87	6.2
9	92	7.6	44	89	6.5	79	95	8.9
10	96	6.8	45	92	6.8	80	91	7.5
11	92	7.4	46	91	7.5	81	89	7.1
12	97	9.4	47	93	8.1	82	95	8.3
13	97	10.1	48	93	7.5	83	96	9.2
14	89	6.7	49	90	7.1	84	96	9.9
15	93	7.6	50	96	8.5	85	88	7.4
16	93	7.9	51	90	7.2	86	92	8.8
17	92	7.0	52	90	6.9	87	96	8.9
18	94	8.2	53	89	6.7	88	89	7.4
19	98	8.8	54	91	8.0	89	95	9.0
20	89	7.9	55	91	7.1	90	92	8.1
21	92	7.5	56	90	7.3	91	89	7.0
22	95	8.1	57	95	7.9	92	89	7.4
23	94	8.0	58	95	8.7	93	89	6.3
24	92	7.5	59	95	8.7	94	91	7.8
25	92	7.3	60	90	7.7	95	92	7.9
26	90	7.3	61	95	9.0	96	91	7.4
27	90	7.2	62	95	8.2	97	89	6.9
28	90	7.4	63	92	7.4	98	91	7.3
29	97	9.1	64	97	8.7	99	88	6.7
30	89	6.2	65	97	9.1	100	90	6.4
31	90	7.2	66	97	9.3			
32	95	8.0	67	92	8.0			
33	95	8.1	68	91	8.0			
34	91	7.8	69	95	9.1			
35	93	7.2	70	96	9.6			

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the beginning of a 60 day exposure, Round II, Part 2.

Treatment: ACE/EMUL

Tank#: L

Date: 6/26/97

Fork		
Fish#	Length	Weight
1	90	6.0
2	89	6.2
3	91	7.3
4	96	9.2
5	88	6.1
6	96	7.7
7	98	7.1
8	90	7.2
9	98	9.9
10	89	6.2
11	89	7.1
12	92	7.1
13	95	8.3
14	95	8.5
15	97	8.4
16	98	8.5
17	98	10.1
18	94	7.2
19	95	9.2
20	96	6.1
21	95	7.3
22	95	8.1
23	95	7.0
24	98	10.3
25	95	8.5
26	90	7.7
27	95	8.8
28	93	8.5
29	92	8.5
30	93	7.5
31	94	8.3
32	92	6.5
33	94	8.4
34	92	7.4
35	98	9.0

Fork		
Fish#	Length	Weight
36	95	8.2
37	96	8.9
38	89	6.9
39	95	7.9
40	90	6.9
41	97	9.1
42	97	9.1
43	92	7.7
44	98	9.2
45	95	8.6
46	97	9.3
47	94	8.5
48	98	9.8
49	93	8.2
50	94	8.5
51	95	7.2
52	90	6.6
53	97	9.1
54	94	8.6
55	95	8.5
56	89	6.9
57	93	7.6
58	98	7.1
59	92	7.5
60	91	8.6
61	95	8.8
62	94	7.9
63	87	6.7
64	96	9.8
65	92	8.6
66	95	8.9
67	95	9.1
68	90	7.2
69	92	8.1
70	93	7.9

Fork		
Fish#	Length	Weight
71	95	8.3
72	88	6.6
73	96	8.7
74	96	8.7
75	94	7.6
76	96	9.1
77	96	9.5
78	92	7.6
79	94	8.3
80	92	7.4
81	92	7.5
82	93	7.8
83	95	8.8
84	94	8.2
85	90	8.4
86	96	9.1
87	96	8.5
88	95	8.6
89	97	9.6
90	89	7.0
91	93	8.3
92	94	8.2
93	90	7.6
94	95	8.4
95	94	7.4
96	90	7.3
97	97	8.7
98	96	8.9
99	97	6.5
100	96	8.5

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the beginning of a 60 day exposure, Round II, Part 2.

Treatment: PAHs

Tank#: M

Date: 6/26/97

Fork			Fork			Fork		
Fish#	Length	Weight	Fish#	Length	Weight	Fish#	Length	Weight
1	94	7.7	36	93	8.0	71	90	7.8
2	98	9.3	37	98	9.6	72	97	8.5
3	94	8.0	38	89	6.9	73	91	7.4
4	90	7.4	39	91	7.1	74	90	7.2
5	93	8.0	40	93	7.6	75	95	8.2
6	95	7.9	41	96	8.3	76	91	7.0
7	89	6.9	42	98	9.2	77	95	8.3
8	92	8.6	43	97	8.9	78	93	7.9
9	90	6.9	44	97	8.9	79	94	8.1
10	89	6.2	45	97	9.4	80	97	9.6
11	91	6.7	46	92	7.7	81	95	8.9
12	95	8.1	47	96	8.9	82	90	7.2
13	94	8.4	48	98	9.8	83	97	9.4
14	93	7.5	49	95	7.6	84	90	9.7
15	96	8.5	50	93	8.1	85	97	7.7
16	95	8.3	51	90	6.7	86	94	7.4
17	94	8.2	52	93	7.5	87	95	8.6
18	98	9.4	53	90	6.9	88	90	7.1
19	92	7.5	54	88	6.7	89	95	7.8
20	98	8.8	55	98	9.0	90	95	8.6
21	87	6.0	56	98	8.5	91	96	8.5
22	92	7.6	57	98	9.5	92	94	8.1
23	94	7.6	58	90	6.7	93	89	7.7
24	90	7.0	59	90	6.9	94	89	7.1
25	90	7.5	60	94	7.9	95	92	8.3
26	95	7.5	61	92	7.9	96	95	8.8
27	94	7.8	62	96	7.8	97	93	7.2
28	95	8.1	63	90	7.0	98	93	8.7
29	96	9.0	64	90	7.1	99	90	7.6
30	87	6.5	65	97	8.8	100	94	8.2
31	91	7.0	66	91	7.1			
32	89	5.9	67	94	7.8			
33	92	7.6	68	91	7.3			
34	93	7.2	69	91	6.9			
35	92	6.3	70	97	8.0			

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the beginning of a 60 day exposure, Round II, Part 2.

Treatment: NQSE

Tank#: N

Date: 6/26/97

Fork		
Fish#	Length	Weight
1	98	9.3
2	97	9.0
3	96	9.9
4	90	7.2
5	94	7.8
6	98	9.2
7	95	8.5
8	96	9.1
9	93	7.6
10	97	9.0
11	95	8.3
12	89	6.5
13	95	8.1
14	89	6.3
15	96	8.8
16	89	6.5
17	95	7.9
18	95	8.7
19	94	8.6
20	98	9.1
21	97	9.1
22	97	9.5
23	97	8.9
24	89	6.9
25	93	7.3
26	96	8.0
27	97	9.2
28	94	7.4
29	90	7.1
30	90	7.0
31	94	8.7
32	96	8.8
33	97	8.8
34	94	8.3
35	91	6.4

Fork		
Fish#	Length	Weight
36	89	7.0
37	91	7.1
38	97	9.1
39	93	7.9
40	91	7.5
41	87	6.7
42	95	8.0
43	98	9.2
44	97	8.8
45	95	9.4
46	95	8.4
47	92	7.7
48	89	7.3
49	89	6.2
50	91	7.2
51	89	6.9
52	88	6.4
53	89	6.9
54	96	8.9
55	87	5.9
56	98	9.2
57	96	8.7
58	91	7.1
59	94	8.2
60	93	7.5
61	96	8.8
62	90	6.6
63	93	8.1
64	98	9.0
65	96	9.7
66	98	8.6
67	92	8.0
68	95	8.5
69	97	8.5
70	88	6.4

Fork		
Fish#	Length	Weight
71	97	9.0
72	94	7.7
73	93	8.1
74	95	8.7
75	89	6.7
76	90	6.6
77	94	8.2
78	95	8.3
79	90	7.0
80	97	9.1
81	88	6.4
82	97	8.7
83	98	9.2
84	90	7.0
85	91	7.1
86	98	9.5
87	93	7.8
88	89	7.6
89	98	8.7
90	93	7.2
91	96	9.3
92	96	8.9
93	89	6.7
94	91	7.4
95	91	7.6
96	95	9.8
97	95	8.5
98	94	8.2
99	94	8.5
100	89	7.0

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the beginning of a 60 day exposure, Round II, Part 2.

Treatment: HWSE-P

Tank#: O

Date: 6/26/97

Fork		
Fish#	Length	Weight
1	88	5.7
2	97	9.4
3	89	7.1
4	92	7.5
5	92	7.8
6	97	8.5
7	89	6.9
8	98	9.3
9	92	7.7
10	92	8.9
11	89	7.0
12	95	7.4
13	88	6.0
14	94	8.3
15	87	6.0
16	93	7.9
17	87	6.8
18	92	8.2
19	93	8.1
20	98	9.6
21	88	6.8
22	92	7.5
23	91	7.4
24	93	7.6
25	97	7.1
26	88	6.8
27	89	6.7
28	96	8.6
29	94	9.3
30	95	8.3
31	92	8.0
32	95	8.4
33	95	8.7
34	94	8.5
35	96	9.4

Fork		
Fish#	Length	Weight
36	92	8.2
37	95	8.6
38	92	8.1
39	95	8.6
40	94	8.5
41	98	9.0
42	87	6.7
43	91	6.9
44	95	9.6
45	96	8.5
46	90	7.3
47	89	7.2
48	96	8.6
49	90	7.3
50	91	7.6
51	90	5.6
52	92	7.4
53	88	6.9
54	92	7.4
55	92	7.8
56	96	8.5
57	98	10.0
58	96	8.4
59	98	7.7
60	95	9.2
61	95	8.6
62	90	7.4
63	90	7.6
64	91	7.4
65	94	7.9
66	92	7.9
67	91	6.6
68	91	8.1
69	94	8.3
70	96	9.2

Fork		
Fish#	Length	Weight
71	91	7.6
72	94	8.1
73	90	6.5
74	93	8.5
75	88	6.8
76	90	7.4
77	91	7.5
78	96	8.5
79	95	8.6
80	97	9.0
81	93	7.3
82	92	8.6
83	95	8.9
84	91	7.7
85	93	8.2
86	96	8.9
87	87	6.3
88	95	8.7
89	98	10.1
90	92	7.6
91	88	7.3
92	90	8.3
93	95	9.3
94	91	7.6
95	95	9.2
96	95	8.6
97	90	6.8
98	95	7.7
99	95	8.5
100	96	8.6

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the beginning of a 60 day exposure, Round II, Part 2.

Treatment: HCBD

Tank#: P

Date: 6/26/97

Fork		
Fish#	Length	Weight
1	93	7.4
2	97	7.4
3	90	7.4
4	98	7.9
5	91	6.4
6	91	8.9
7	98	9.2
8	90	6.8
9	96	7.4
10	91	7.4
11	98	8.7
12	97	7.5
13	98	8.4
14	96	8.4
15	93	7.6
16	96	8.1
17	95	9.0
18	98	8.6
19	94	8.0
20	98	9.6
21	92	7.1
22	98	9.8
23	89	6.8
24	96	8.2
25	92	7.4
26	91	7.6
27	92	7.4
28	97	8.5
29	93	8.2
30	97	8.7
31	90	7.1
32	87	5.5
33	89	6.6
34	94	8.0
35	89	6.1

Fork		
Fish#	Length	Weight
36	96	8.4
37	93	7.3
38	95	7.5
39	98	9.4
40	98	8.3
41	98	9.6
42	93	6.2
43	92	7.4
44	97	6.5
45	93	8.5
46	97	8.9
47	90	6.8
48	96	6.6
49	93	7.1
50	94	7.6
51	92	8.0
52	93	7.4
53	98	9.9
54	94	7.5
55	93	7.4
56	98	9.3
57	94	7.6
58	96	7.0
59	98	8.9
60	97	9.4
61	90	7.2
62	88	7.0
63	96	8.2
64	91	7.0
65	98	9.5
66	98	9.3
67	94	8.2
68	95	7.5
69	95	8.3
70	95	8.8

Fork		
Fish#	Length	Weight
71	91	7.5
72	95	7.8
73	96	8.1
74	96	8.5
75	95	9.0
76	90	7.3
77	90	6.5
78	88	6.7
79	87	5.9
80	91	7.0
81	97	9.2
82	90	6.8
83	93	7.5
84	94	7.0
85	93	8.0
86	87	6.0
87	94	8.6
88	94	8.0
89	93	8.0
90	94	8.0
91	94	7.8
92	90	6.5
93	91	7.3
94	92	7.3
95	94	7.4
96	98	9.3
97	97	8.6
98	95	8.7
99	91	7.8
100	93	7.4

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round 11, Part 2.

Treatment: PCB

Tank#: A

Date: 8/25/97

Fish#	Meas.		Calc.		Weight
	Fork Length	Total Length	Fork Length	Total Length	
1		142	134		32.0
2		143	135		30.0
3		146	138		33.0
4		152	143		38.5
5		151	142		40.0
6		146	138		33.0
7		146	138		34.0
8		133	125		25.0
9		134	126		24.0
10		162	153		47.0
11		144	136		29.0
12		140	132		30.0
13		160	151		45.0
14		148	140		35.0
15		143	135		29.0
16		145	137		34.0
17		148	140		35.0
18		136	128		25.0
19		148	140		35.0
20		151	142		38.0
21		139	131		29.0
22		140	132		35.0
23		146	138		31.0
24		141	133		31.0
25		147	139		36.0
26		141	133		30.0
27		133	125		24.0
28		147	139		33.0
29		144	136		31.0
30		141	133		29.0
31		139	131		27.0
32		131	124		24.0
33		148	140		33.0
34		135	127		27.0

Fish#	Meas.		Calc.		Weight
	Fork Length	Total Length	Fork Length	Total Length	
35		142	134		29.0
36	134				30.3
37	129				26.7
38	135				34.3
39	130				24.2
40	134				28.7
41	135				30.4
42	130				27.6
43	137				35.9
44	135				32.8
45	137				31.4
46	138				36.4
47	138				33.2
48	145				38.9
49	130				27.7
50	128				23.7
51	136				32.0
52	143				37.4
53	140				34.0
54	140				34.5
55	152				42.1
56	130				27.0
57	141				37.0
58	140				33.3
59	142				35.8
60	132				28.6
61	140				37.8
62	135				33.9
63	130				28.4
64	131				26.9
65	138				34.3
66	128				27.6
67	136				31.2
68	133				30.5

Fish#	Meas.		Calc.		Weight
	Fork Length	Total Length	Fork Length	Total Length	
69	137				33.2
70	138				34.2
71	132				29.0
72	130				27.5
73	135				28.6
74	135				31.6
75	122				23.2
76	132				27.9
77	126				26.2
78	141				32.2
79	130				26.8
80	135				31.3
81	138				31.2
82	133				28.7
83	139				36.4
84	128				27.8

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2.

Treatment: Acetone Emulphor

Tank#: C

Date: 8/25/97

Meas. Calc.					Meas. Calc.					Meas. Calc.				
Fork		Total		Fork	Fork		Total		Fork	Fork		Total		Fork
Fish#	Length	Length	Length	Weight	Fish#	Length	Length	Length	Weight	Fish#	Length	Length	Length	Weight
1	134	140		31.0	35	128	135		26.0	69	131			26.7
2	139	145		35.0	36	135			29.1	70	136			32.8
3	135	143		27.0	37	130			28.3	71	137			31.7
4	138	143		30.0	38	145			41.5	72	125			24.2
5	137	143		32.0	39	143			38.3	73	140			34.4
6	138	145		35.0	40	140			34.8	74	135			29.8
7	137	145		35.0	41	139			33.7	75	129			24.3
8	137	146		32.0	42	136			32.3	76	143			38.6
9	140	148		36.0	43	122			21.2	77	140			32.0
10	126	133		25.0	44	123			23.4	78	134			32.8
11	140	150		38.0	45	123			23.5	79	133			29.8
12	135	143		31.0	46	133			27.1	80	137			32.5
13	130	140		32.0	47	137			32.2	81	125			23.8
14	128	140		31.0	48	123			24.0	82	126			24.0
15	133	142		32.0	49	137			32.4	83	137			32.1
16	131	139		29.0	50	130			26.8	84	126			23.2
17	130	139		29.0	51	141			36.0	85	143			37.5
18	135	143		33.0	52	136			31.1	86	133			30.8
19	131	140		30.0	53	134			29.6	87	136			33.7
20	129	135		28.0	54	134			31.5	88	130			27.9
21	141	152		40.0	55	139			33.0	89	137			31.9
22	134	143		29.0	56	130			26.7	90	126			24.2
23	135	145		34.0	57	140			32.8					
24	149	160		43.0	58	144			37.6					
25	129	136		28.0	59	135			30.3					
26	123	131		24.0	60	135			30.2					
27	125	135		24.0	61	140			35.0					
28	140	147		37.0	62	142			37.7					
29	139	145		34.0	63	133			31.2					
30	129	139		27.0	64	139			33.7					
31	131	140		32.0	65	133			28.8					
32	134	142		34.0	66	144			40.8					
33	139	148		35.0	67	142			37.3					
34	149	156		45.0	68	134			31.4					

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2.

Treatment: PAH

Tank#: E

Date: 8/25/97

Fish#	Meas.		Calc.		Weight
	Fork Length	Total Length	Fork Length	Total Length	
1		135	127		24.0
2		152	143		38.0
3		135	127		24.0
4		142	134		29.0
5		136	128		30.0
6		146	138		36.0
7		145	137		34.0
8		142	134		32.0
9		145	137		31.0
10		152	143		36.0
11		129	122		21.0
12		138	130		24.0
13		147	139		34.0
14		131	124		23.0
15		132	125		25.0
16		134	126		24.0
17		143	135		40.0
18		131	124		25.0
19		146	138		29.0
20		134	126		25.0
21		151	142		37.0
22		133	125		24.0
23		134	126		24.0
24		138	130		27.0
25		147	139		35.0
26		136	128		25.0
27		151	142		37.0
28		140	132		30.0
29		142	134		30.0
30		142	134		29.0
31		146	138		31.0
32		147	139		35.0
33		141	133		29.0
34		140	132		30.0

Fish#	Meas.		Calc.		Weight
	Fork Length	Total Length	Fork Length	Total Length	
35		135	127		27.0
36	124				22.4
37	127				25.6
38	130				28.3
39	134				27.5
40	143				38.3
41	128				26.3
42	129				25.2
43	135				32.1
44	136				31.4
45	132				29.0
46	120				20.5
47	123				22.3
48	131				27.3
49	136				29.4
50	145				39.3
51	132				28.5
52	140				37.4
53	126				24.7
54	120				20.6
55	134				26.7
56	132				28.9
57	127				26.4
58	131				28.0
59	127				23.6
60	139				32.9
61	136				32.4
62	130				29.0
63	128				24.1
64	112				21.3
65	130				28.0
66	126				25.1
67	143				38.4
68	135				30.0

Fish#	Meas.		Calc.		Weight
	Fork Length	Total Length	Fork Length	Total Length	
69	137				33.3
70	128				25.6
71	131				28.1
72	150				46.9
73	137				29.2
74	137				33.7
75	135				31.0
76	125				23.3
77	139				34.2

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2.

Treatment: PCB

Tank#: F

Date: 8/25/97

Fish#	Meas.		Calc.	
	Fork Length	Total Length	Fork Length	Weight
1		145	137	35.0
2		134	126	26.0
3		135	127	27.0
4		138	130	28.0
5		130	123	24.0
6		143	135	31.0
7		135	127	26.0
8		138	130	28.0
9		141	133	31.0
10		142	134	30.0
11		135	127	27.0
12		145	137	34.0
13		144	136	30.0
14		138	130	25.0
15		134	126	26.0
16		125	118	19.0
17		121	114	18.0
18		142	134	33.0
19		138	130	28.0
20		138	130	26.0
21		149	141	35.0
22		144	136	33.0
23		135	127	28.0
24		129	122	22.0
25		134	126	24.0
26		143	135	31.0
27		136	128	27.0
28		135	127	25.0
29		141	133	30.0
30		135	127	25.0
31		141	133	31.0
32		140	132	27.0
33		141	133	32.0
34		136	128	27.0

Fish#	Meas.		Calc.	
	Fork Length	Total Length	Fork Length	Weight
35		132	125	25.0
36	122			21.5
37	123			22.9
38	124			24.8
39	122			24.4
40	130			26.4
41	131			34.7
42	125			24.2
43	133			26.7
44	133			28.8
45	125			23.9
46	119			18.7
47	138			30.7
48	136			30.2
49	137			30.7
50	125			22.5
51	129			25.9
52	127			27.5
53	133			32.5
54	128			26.5
55	140			34.8
56	135			29.7
57	134			28.5
58	132			28.4
59	128			23.7
60	125			23.4
61	129			28.2
62	127			23.3
63	126			23.3
64	129			23.4
65	136			30.9
66	121			27.1
67	138			33.0
68	136			32.6

Fish#	Meas.		Calc.	
	Fork Length	Total Length	Fork Length	Weight
69	142			35.7
70	132			29.0
71	122			22.3
72	125			22.5
73	136			30.9
74	135			29.2
75	130			28.1
76	138			33.1
77	127			26.0
78	138			35.0
79	130			27.1
80	128			27.4
81	138			32.4
82	124			23.4
83	126			24.7
84	139			35.2
85	128			25.0
86	116			22.8

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2

Treatment: HWSE-M

Tank#: G

Date: 8/25/97

Meas. Calc.					Meas. Calc.					Meas. Calc.				
Fish#	Length	Total Fork	Length	Weight	Fish#	Length	Total Fork	Length	Weight	Fish#	Length	Total Fork	Length	Weight
1		135	127	25.0	35		150	142	37.0	69	137			34.4
2		140	132	28.0	36	126			22.9	70	127			27.2
3		136	128	27.0	37	138			34.9	71	140			32.6
4		136	128	30.0	38	135			30.2	72	132			29.5
5		135	127	23.0	39	131			29.5	73	127			24.6
6		140	132	30.0	40	149			41.1	74	126			23.5
7		138	130	26.0	41	137			32.8	75	136			34.5
8		141	133	30.0	42	138			33.3	76	122			21.1
9		142	134	31.0	43	127			24.9	77	120			20.8
10		133	125	25.0	44	130			24.1	78	133			32.0
11		145	137	33.0	45	130			27.2	79	130			26.7
12		140	132	29.0	46	131			28.3	80	132			28.9
13		141	133	28.0	47	136			32.2	81	135			32.9
14		143	135	33.0	48	138			30.9	82	136			28.9
15		145	137	34.0	49	139			35.2	83	134			31.1
16		140	132	30.0	50	136			33.2	84	139			31.7
17		147	139	35.0	51	121			21.7	85	142			34.9
18		151	142	37.0	52	133			29.6	86	141			31.8
19		136	128	25.0	53	136			32.1	87	133			27.4
20		145	137	33.0	54	131			27.9	88	132			25.4
21		147	139	35.0	55	139			34.7					
22		138	130	29.0	56	142			39.2					
23		149	141	36.0	57	129			23.9					
24		139	131	30.0	58	126			26.7					
25		137	129	28.0	59	140			34.9					
26		131	124	26.0	60	134			30.6					
27		150	142	38.0	61	125			24.5					
28		143	135	31.0	62	135			30.2					
29		143	135	34.0	63	134			29.2					
30		149	141	38.0	64	123			24.0					
31		140	132	31.0	65	140			33.3					
32		134	126	28.0	66	130			28.5					
33		134	126	27.0	67	129			26.8					
34		141	133	30.0	68	140			36.1					

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2.

Treatment: HWSE-P

Tank#: H

Date: 8/25/97

Meas.					Calc.									
Fish#	Length	Total Fork	Length	Weight	Fish#	Length	Total Fork	Length	Weight	Fish#	Length	Total Fork	Length	Weight
1		131	124	23.0	35		133	125	26.0	69	130			28.4
2		157	148	46.0	36	124			23.6	70	130			28.2
3		140	132	32.0	37	135			31.2	71	130			28.4
4		135	127	24.0	38	140			36.5	72	131			27.6
5		135	127	27.0	39	140			35.9	73	132			28.2
6		145	137	33.0	40	129			26.8	74	131			29.5
7		138	130	25.0	41	143			38.0	75	130			28.2
8		132	125	27.0	42	132			28.8	76	130			26.6
9		139	131	30.0	43	135			30.9	77	125			23.8
10		139	131	30.0	44	150			48.7	78	133			28.6
11		128	121	23.0	45	135			31.6	79	129			27.1
12		130	123	24.0	46	130			28.5	80	135			32.7
13		146	138	33.0	47	124			24.0	81	128			28.9
14		141	133	32.0	48	135			31.5	82	143			35.2
15		135	127	26.0	49	137			32.3	83	131			29.0
16		142	134	32.0	50	130			26.2	84	138			33.1
17		128	121	23.0	51	127			25.9	85	129			26.4
18		134	126	25.0	52	138			36.4	86	128			26.6
19		133	125	25.0	53	133			29.8	87	133			30.9
20		141	133	27.0	54	136			33.8	88	135			29.1
21		141	133	30.0	55	123			22.3	89	125			24.9
22		146	138	34.0	56	126			24.5	90	130			28.6
23		139	131	31.0	57	126			25.3					
24		141	133	29.0	58	130			28.9					
25		139	131	27.0	59	137			32.6					
26		138	130	27.0	60	145			41.7					
27		138	130	27.0	61	131			28.5					
28		139	131	28.0	62	133			27.1					
29		129	122	23.0	63	146			40.4					
30		141	133	29.0	64	125			22.1					
31		141	133	31.0	65	136			29.4					
32		135	127	26.0	66	127			26.6					
33		140	132	29.0	67	140			34.8					
34		140	132	28.0	68	140			34.0					

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2.

Treatment: NQSE

Tank#: I

Date: 8/25/97

Fish#	Meas.		Calc.		Weight
	Fork Length	Total Length	Fork Length	Total Length	
1	138	146			36.0
2	145	153			40.0
3	135	144			31.0
4	136	145			34.0
5	129	138			28.0
6	142	149			37.0
7	125	133			24.0
8	135	144			34.0
9	128	136			25.0
10	128	136			27.0
11	143	153			37.0
12	137	145			33.0
13	131	138			27.0
14	127	135			27.0
15	145	154			39.0
16	140	149			33.0
17	133	142			30.0
18	147	155			43.0
19	138	148			36.0
20	142	151			41.0
21	128	135			27.0
22	131	139			28.0
23	125	132			24.0
24	138	147			34.0
25	135	143			33.0
26	135	143			32.0
27	130	140			29.0
28	132	138			26.0
29	127	133			23.0
30	133	142			31.0
31	134	144			29.0
32	136	146			33.0
33	142	149			38.0
34	133	141			32.0

Fish#	Meas.		Calc.		Weight
	Fork Length	Total Length	Fork Length	Total Length	
35	135	144			35.0
36	143	151			37.0
37	137				32.6
38	146				40.8
39	139				35.4
40	136				32.8
41	134				30.9
42	146				43.2
43	143				37.0
44	153				47.5
45	135				31.2
46	123				23.1
47	145				36.7
48	146				41.2
49	136				31.1
50	130				27.9
51	136				33.8
52	135				30.0
53	141				38.0
54	149				42.5
55	134				30.0
56	138				30.9
57	141				37.1
58	124				23.6
59	125				23.2
60	129				26.6
61	150				40.7
62	141				34.0
63	134				32.4
64	142				39.0
65	140				34.7
66	140				36.7
67	130				26.1
68	133				31.6

Fish#	Meas.		Calc.		Weight
	Fork Length	Total Length	Fork Length	Total Length	
69	125				25.4
70	122				23.7
71	139				34.0
72	137				32.6
73	145				40.6
74	142				39.4
75	139				35.6
76	129				26.6
77	137				33.8
78	131				28.0
79	131				29.2
80	130				29.7
81	135				32.5
82	139				37.1
83	122				23.1
84	133				30.2
85	142				38.9
86	135				30.1
87	142				39.2
88	136				35.0
89	142				39.1
90	144				39.2
91	139				32.9
92	136				33.1
93	130				25.1
94	134				32.1
95	129				25.6

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2.

Treatment: HCBD

Tank#: J

Date: 8/25/97

Fish#	Meas. Fork Length	Total Length	Calc. Fork Length	Weight
1	125	132		24.0
2	128	135		27.0
3	133	142		30.0
4	135	143		31.0
5	131	139		31.0
6	127	133		29.0
7	125	131		24.0
8	130	136		29.0
9	129	138		26.0
10	133	140		28.0
11	138	147		35.0
12	143	151		37.0
13	128	134		26.0
14	127	137		29.0
15	125	135		26.0
16	122	130		23.0
17	128	137		28.0
18	138	147		33.0
19	134	143		31.0
20	124	131		22.0
21	135	144		32.0
22	131	140		28.0
23	135	144		32.0
24	130	137		29.0
25	138	145		34.0
26	134	141		30.0
27	135	141		31.0
28	121	129		22.0
29	125	134		25.0
30	140	148		36.0
31	135	142		33.0
32	122	131		22.0
33	142	152		40.0
34	115	123		18.0

Fish#	Meas. Fork Length	Total Length	Calc. Fork Length	Weight
35	118	127		21.0
36	130			29.4
37	125			23.4
38	130			29.8
39	130			25.7
40	133			28.5
41	126			24.3
42	141			32.7
43	118			18.8
44	140			32.6
45	125			23.2
46	122			22.4
47	135			31.3
48	144			35.6
49	143			35.5
50	140			34.3
51	123			21.2
52	126			26.2
53	131			27.9
54	125			25.0
55	147			38.4
56	138			32.0
57	143			40.6
58	133			32.3
59	128			25.1
60	127			24.7
61	125			23.9
62	130			25.1
63	133			31.0
64	137			31.2
65	137			31.6
66	125			24.8
67	128			25.6
68	126			24.4

Fish#	Meas. Fork Length	Total Length	Calc. Fork Length	Weight
69	126			24.0
70	122			24.6
71	142			39.9
72	130			28.2
73	131			27.8
74	150			44.8
75	130			29.5
76	122			23.6
77	123			24.6
78	125			21.8
79	136			28.3
80	128			26.0
81	121			22.8
82	131			30.6
83	130			28.1
84	135			32.1

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2.

Treatment: HWSE-M

Tank#: K

Date: 8/25/97

Meas. Calc.					Meas. Calc.					Meas. Calc.				
Fish#	Length	Total Fork	Length	Weight	Fish#	Length	Total Fork	Length	Weight	Fish#	Length	Total Fork	Length	Weight
1		147	139	34.0	35		140	132	29.0	69	130			27.6
2		133	125	24.0	36	123			22.2	70	138			30.4
3		135	127	29.0	37	133			30.3	71	133			29.4
4		145	137	32.0	38	134			37.2	72	138			33.8
5		142	134	30.0	39	135			31.0	73	140			33.1
6		145	137	34.0	40	129			27.6	74	142			36.2
7		135	127	27.0	41	136			30.3	75	131			27.8
8		132	125	23.0	42	143			38.3	76	121			21.2
9		133	125	24.0	43	131			31.0	77	133			29.8
10		145	137	33.0	44	142			37.1	78	129			27.0
11		142	134	32.0	45	138			35.0	79	130			27.3
12		140	132	31.0	46	132			27.9	80	135			30.7
13		141	133	29.0	47	140			31.6	81	137			34.4
14		140	132	30.0	48	130			27.3	82	131			27.4
15		144	136	31.0	49	128			25.6	83	151			42.9
16		147	139	34.0	50	136			32.0	84	133			26.4
17		138	130	28.0	51	139			32.6	85	128			25.5
18		138	130	26.0	52	140			33.9	86	129			27.4
19		136	128	28.0	53	130			25.9	87	124			22.9
20		138	130	30.0	54	141			36.9	88	136			31.4
21		133	125	26.0	55	128			26.3	89	121			23.9
22		138	130	31.0	56	133			30.5					
23		144	136	33.0	57	130			27.7					
24		140	132	31.0	58	130			26.8					
25		145	137	38.0	59	129			25.7					
26		133	125	24.0	60	144			37.7					
27		135	127	25.0	61	129			26.4					
28		144	136	29.0	62	133			27.5					
29		146	138	40.0	63	138			37.2					
30		141	133	29.0	64	128			26.3					
31		132	125	24.0	65	135			30.5					
32		145	137	34.0	66	142			36.5					
33		136	128	28.0	67	136			30.3					
34		131	124	23.0	68	120			21.8					

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2.

Treatment: Acetone Emulphor

Tank#: L

Date: 8/25/97

Meas. Fork Total Fork					Meas. Fork Total Fork					Meas. Fork Total Fork				
Fish#	Length	Length	Length	Weight	Fish#	Length	Length	Length	Weight	Fish#	Length	Length	Length	Weight
1	146	155		38.0	35	132	141		31.0	69	131			26.2
2	138	146		36.0	36	120			22.7	70	138			34.0
3	131	141		31.0	37	150			40.4	71	122			22.6
4	128	135		30.0	38	125			25.4	72	141			36.3
5	138	148		33.0	39	140			36.8	73	136			33.1
6	135	143		34.0	40	140			33.6	74	133			29.4
7	132	138		28.0	41	144			41.5	75	137			33.0
8	128	135		24.0	42	138			32.7	76	147			41.9
9	131	141		31.0	43	135			30.8	77	147			44.1
10	128	136		30.0	44	136			32.7	78	136			31.6
11	124	132		24.0	45	136			30.6	79	146			37.9
12	142	148		36.0	46	141			37.9	80	135			30.3
13	128	134		26.0	47	141			37.4	81	144			37.4
14	138	146		35.0	48	142			38.9	82	136			33.8
15	130	137		26.0	49	142			35.6	83	128			27.0
16	128	136		29.0	50	141			37.8	84	145			41.7
17	131	141		32.0	51	140			33.6	85	129			27.4
18	143	150		36.0	52	131			28.2	86	130			27.9
19	135	142		33.0	53	135			31.8	87	120			21.2
20	135	142		33.0	54	142			38.0	88	130			25.8
21	132	139		27.0	55	132			27.1	89	146			43.1
22	134	140		30.0	56	130			28.8					
23	137	145		32.0	57	130			27.0					
24	150	160		44.0	58	148			44.0					
25	149	156		44.0	59	138			32.3					
26	131	138		30.0	60	147			43.6					
27	140	147		34.0	61	136			33.5					
28	127	134		24.0	62	133			28.9					
29	132	140		27.0	63	145			37.8					
30	137	147		34.0	64	141			37.1					
31	134	141		28.0	65	150			47.7					
32	145	153		39.0	66	136			31.2					
33	142	149		36.0	67	128			25.9					
34	127	133		25.0	68	135			30.4					

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2.

Treatment: PAH

Tank#: M

Date: 8/25/97

Fish#	Meas.		Calc.	
	Fork Length	Total Length	Fork Length	Fork Weight
1		140	132	28.0
2		145	137	31.0
3		142	134	31.0
4		147	139	36.0
5		156	147	44.0
6		152	143	33.0
7		150	142	36.0
8		147	139	34.0
9		139	131	30.0
10		131	124	27.0
11		144	136	33.0
12		150	142	37.0
13		131	124	23.0
14		151	142	39.0
15		145	137	34.0
16		151	142	37.0
17		142	134	37.0
18		150	142	37.0
19		143	135	29.0
20		135	127	26.0
21		151	142	37.0
22		150	142	39.0
23		148	140	33.0
24		159	150	44.0
25		132	125	25.0
26		135	127	28.0
27		145	137	34.0
28		142	134	33.0
29		141	133	31.0
30		140	132	31.0
31		145	137	32.0
32		149	141	35.0
33		142	134	34.0
34		133	125	24.0

Fish#	Meas.		Calc.	
	Fork Length	Total Length	Fork Length	Fork Weight
35		139	131	29.0
36	139			34.6
37	123			25.1
38	129			26.1
39	128			27.0
40	137			34.4
41	145			37.6
42	145			37.7
43	131			27.2
44	143			38.1
45	145			39.3
46	135			30.3
47	141			35.9
48	140			30.6
49	141			38.7
50	141			35.0
51	130			29.1
52	130			27.7
53	131			28.4
54	141			35.6
55	132			26.3
56	120			21.4
57	140			31.2
58	143			34.4
59	140			33.3
60	134			30.6
61	140			33.6
62	140			34.8
63	140			37.2
64	131			28.8
65	140			32.8
66	152			43.3
67	144			37.2
68	143			34.0

Fish#	Meas.		Calc.	
	Fork Length	Total Length	Fork Length	Fork Weight
69	140			33.7
70	138			33.1
71	137			30.2
72	140			35.9
73	147			42.2
74	136			32.4
75	133			29.3
76	148			45.5
77	133			30.3
78	136			32.2

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2.

Treatment: NQSE

Tank#: N

Date: 8/25/97

Fish#	Meas.		Calc.		Weight
	Fork Length	Total Length	Fork Length	Total Length	
1	140	148			36.0
2	133	142			31.0
3	125	131			26.0
4	128	134			26.0
5	135	145			33.0
6	145	154			41.0
7	117	122			20.0
8	127	136			28.0
9	140	147			35.0
10	118	125			19.0
11	144	153			38.0
12	140	149			37.0
13	127	132			26.0
14	140	149			37.0
15	135	144			33.0
16	137	145			35.0
17	132	137			28.0
18	130	138			31.0
19	128	134			27.0
20	128	134			26.0
21	122	130			23.0
22	140	148			37.0
23	139	147			35.0
24	129	135			27.0
25	124	133			24.0
26	139	147			35.0
27	127	136			29.0
28	130	139			28.0
29	142	149			36.0
30	145	153			41.0
31	131	139			30.0
32	139	146			32.0
33	140	149			37.0
34	142	150			36.0

Fish#	Meas.		Calc.		Weight
	Fork Length	Total Length	Fork Length	Total Length	
35	134	144			32.0
36	136				31.2
37	133				30.2
38	136				32.4
39	141				37.0
40	135				29.8
41	132				28.9
42	125				22.8
43	131				29.2
44	148				40.8
45	140				32.4
46	126				24.0
47	143				39.7
48	132				29.4
49	139				32.3
50	134				30.0
51	143				35.8
52	116				18.3
53	132				31.9
54	134				30.0
55	124				21.0
56	126				23.1
57	138				35.1
58	145				38.2
59	135				29.7
60	145				40.7
61	139				35.7
62	128				26.3
63	126				26.7
64	135				31.9
65	140				35.7
66	142				36.1
67	142				36.8
68	132				29.6

Fish#	Meas.		Calc.		Weight
	Fork Length	Total Length	Fork Length	Total Length	
69	134				29.8
70	132				31.0
71	140				35.3
72	137				31.5
73	140				35.4
74	135				35.1
75	125				23.6
76	137				33.8
77	146				43.7
78	136				33.5
79	130				30.3
80	130				29.5
81	128				27.1
82	132				29.0
83	130				28.5
84	134				29.8
85	135				29.9
86	130				21.8
87	130				27.6
88	146				39.5

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2.

Treatment: HWSE-P

Tank#: O

Date: 8/25/97

Meas. Calc.					Meas. Calc.					Meas. Calc.				
Fish#	Length	Length	Length	Weight	Fish#	Length	Length	Length	Weight	Fish#	Length	Length	Length	Weight
		Meas. Fork	Calc. Fork				Meas. Fork	Calc. Fork				Meas. Fork	Calc. Fork	
1		143	135	34.0	35		140	132	29.0	69	131			30.0
2		139	131	27.0	36	125			24.9	70	123			22.9
3		135	127	25.0	37	127			23.4	71	148			42.8
4		141	133	32.0	38	138			35.1	72	134			28.8
5		144	136	32.0	39	133			32.0	73	130			26.4
6		143	135	32.0	40	130			27.6	74	136			33.6
7		142	134	31.0	41	121			22.6	75	131			26.5
8		140	132	31.0	42	147			40.0	76	133			35.6
9		143	135	30.0	43	130			27.7	77	138			33.7
10		138	130	28.0	44	137			37.6	78	147			36.8
11		142	134	28.0	45	130			27.7	79	134			30.7
12		145	137	34.0	46	132			28.6	80	130			27.1
13		133	125	25.0	47	130			26.1	81	137			30.9
14		146	138	34.0	48	130			26.9	82	131			29.0
15		142	134	32.0	49	129			27.3	83	137			35.2
16		142	134	31.0	50	133			29.5	84	132			29.5
17		147	139	37.0	51	121			23.3	85	138			32.2
18		142	134	29.0	52	134			31.0	86	132			30.5
19		146	138	32.0	53	141			35.3	87	145			41.0
20		149	141	38.0	54	131			27.7	88	131			29.0
21		149	141	34.0	55	129			26.2	89	133			30.0
22		130	123	23.0	56	130			27.7	90	135			30.0
23		142	134	32.0	57	134			30.1	91	137			32.2
24		148	140	33.0	58	139			35.9	92	127			23.2
25		148	140	33.0	59	133			30.3	93	140			36.8
26		140	132	29.0	60	136			36.1	94	128			25.9
27		145	137	33.0	61	130			27.8	95	152			44.5
28		138	130	28.0	62	125			24.2	96	138			35.7
29		141	133	30.0	63	136			35.0	97	135			28.1
30		149	141	36.0	64	135			33.2	98	127			24.0
31		144	136	32.0	65	134			33.2	99	143			33.9
32		136	128	27.0	66	143			39.4					
33		146	138	35.0	67	131			28.1					
34		140	132	31.0	68	132			30.3					

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data tables of length and weight of juvenile chinook salmon at the end of a 60 day exposure, Round II, Part 2.

Treatment: HCBD

Tank#: P

Date: 8/25/97

Meas. Calc.					Meas. Calc.					Meas. Calc.				
Fish#	Fork Length	Total Length	Fork Length	Weight	Fish#	Fork Length	Total Length	Fork Length	Weight	Fish#	Fork Length	Total Length	Fork Length	Weight
1	139	147		35.0	35	139	145		34.0	69	140			34.2
2	140	148		37.0	36	132			30.4	70	142			35.7
3	135	144		31.0	37	135			32.3	71	145			39.0
4	141	150		37.0	38	134			27.6	72	140			34.3
5	133	140		31.0	39	148			44.2	73	130			32.4
6	140	149		33.0	40	136			35.0	74	139			32.6
7	130	138		26.0	41	140			32.6	75	138			34.3
8	137	145		34.0	42	131			30.9	76	125			27.1
9	128	136		27.0	43	135			32.5	77	131			31.9
10	150	160		44.0	44	130			32.0	78	131			28.9
11	140	149		37.0	45	122			22.2	79	145			41.8
12	133	142		32.0	46	136			31.9	80	146			38.1
13	130	139		28.0	47	145			43.7	81	140			36.8
14	128	138		30.0	48	143			38.2	82	142			39.4
15	145	154		40.0	49	140			36.3	83	139			34.4
16	138	147		35.0	50	136			31.3					
17	138	144		35.0	51	140			35.7					
18	119	127		21.0	52	136			33.0					
19	135	144		35.0	53	128			27.3					
20	130	141		31.0	54	136			32.9					
21	130	139		29.0	55	138			36.0					
22	137	146		33.0	56	135			31.6					
23	145	153		41.0	57	135			31.5					
24	138	144		32.0	58	125			25.3					
25	131	140		28.0	59	134			32.3					
26	132	141		31.0	60	140			35.7					
27	135	144		33.0	61	135			31.3					
28	138	147		35.0	62	146			40.6					
29	143	151		36.0	63	136			31.6					
30	125	132		24.0	64	132			29.4					
31	138	146		34.0	65	140			34.7					
32	119	125		22.0	66	138			32.6					
33	133	142		29.0	67	140			36.7					
34	129	139		29.0	68	140			34.9					

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data table containing daily mortalities of juvenile chinook salmon from June 26 to July 25, 1997 in Round II, Part 2.

		Acetone Emulphor		NQSE		HWSE-P		HCBD		HWSE-M		PAH		PCB	
Tank	Day	C	L	I	N	H	O	J	P	G	K	E	M	A	F
	1														
	2														
	3														
	4	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	5	2			1	1					2			2	3
	6	1											1		1
	7										1	1		1	
	8	2	1					1				2			
	9	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	10	1	4					1		2	2	5	4	4	3
	11	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	12	1	2	2	2		2	1	3	1		6	5		1
	13	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	14	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	15				1					2		1	3		
	16	1	1			2	1	1	3				2	2	1
	17	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	18	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	19			2		2		1		3	2	2	2		3
	20														
	21				1										1
	22				1	1				1					
	23	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	24	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	25	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	26							2					1		
	27														
	28														
	29														
	30	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R

N/R denotes days for which no records were maintained in contrast to a blank which signifies no mortalities recorded on the day indicated.

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data table containing daily mortalities of juvenile chinook salmon from July 26 to August 24, 1997 in Round II, Part 2.

		Acetone Emulphor		NQSE		HWSE-P		HCBD		HWSE-M		PAH		PCB	
Tank	Day	C	L	I	N	H	O	J	P	G	K	E	M	A	F
	31												1		
	32	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	33														
	34	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	35													1	
	36														
	37														
	38	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	39														
	40										1				
	41														
	42								1						
	43														
	44					1								1	
	45				1										
	46	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	47														
	48														
	49														
	50														
	51														
	52														
	53	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	54														
	55		1			1								1	
	56														
	57														
	58	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	59	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	60														

N/R denotes days for which no records were maintained in contrast to a blank which signifies no mortalities recorded on the day indicated.

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data table containing daily feed, by weight in grams, for tanks containing chinook salmon, from June 26 through July 25, 1997 as part of the Round II, Part 2

Tank	A	C	E	F	G	H	I	J	K	L	M	N	O	P
Day														
26-Jun	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
27-Jun	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
28-Jun	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
29-Jun	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
30-Jun	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
1-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
2-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
3-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
4-Jul	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
5-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
6-Jul	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
7-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
8-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
9-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
10-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
11-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
12-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
13-Jul	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
14-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
15-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
16-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
17-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
18-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
19-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
20-Jul	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
21-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
22-Jul	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
23-Jul	42.0	44.0	39.0	40.0	43.0	45.0	46.0	45.0	44.0	44.0	40.0	45.0	46.0	45.0
24-Jul	42.0	44.0	39.0	40.0	43.0	45.0	46.0	45.0	44.0	44.0	40.0	45.0	46.0	45.0
25-Jul	42.0	44.0	39.0	40.0	43.0	45.0	46.0	45.0	44.0	44.0	40.0	45.0	46.0	45.0

N/F indicates days that juvenile chinook salmon were not fed.

Effects of chemical contaminants from the Hylebos Waterway on growth of juvenile chinook salmon.

Data table containing daily feed, by weight in grams, for tanks containing chinook salmon, from July 26 through August 24, 1997 as part of the Round II, Part 2.

Tank	A	C	E	F	G	H	I	J	K	L	M	N	O	P
Day														
26-Jul	42.0	44.0	39.0	40.0	43.0	45.0	46.0	45.0	44.0	44.0	40.0	45.0	46.0	45.0
27-Jul	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
28-Jul	42.0	44.0	39.0	40.0	43.0	45.0	46.0	45.0	44.0	44.0	40.0	45.0	46.0	45.0
29-Jul	42.0	44.0	39.0	40.0	43.0	45.0	46.0	45.0	44.0	44.0	40.0	45.0	46.0	45.0
30-Jul	46.0	49.0	43.0	44.0	47.0	48.0	51.0	48.0	48.0	48.0	43.0	49.0	50.0	48.0
31-Jul	46.0	49.0	43.0	44.0	47.0	48.0	51.0	48.0	48.0	48.0	43.0	49.0	50.0	48.0
1-Aug	46.0	49.0	43.0	44.0	47.0	48.0	51.0	48.0	48.0	48.0	43.0	49.0	50.0	48.0
2-Aug	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
3-Aug	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
4-Aug	46.0	49.0	43.0	44.0	47.0	48.0	51.0	48.0	48.0	48.0	43.0	49.0	50.0	48.0
5-Aug	46.0	49.0	43.0	44.0	47.0	48.0	51.0	48.0	48.0	48.0	43.0	49.0	50.0	48.0
6-Aug	46.8	50.4	45.4	46.9	50.1	50.6	54.0	50.0	50.1	51.4	45.5	52.7	53.4	51.4
7-Aug	46.8	50.4	45.4	46.9	50.1	50.6	54.0	50.0	50.1	51.4	45.5	52.7	53.4	51.4
8-Aug	46.8	50.4	45.4	46.9	50.1	50.6	54.0	50.0	50.1	51.4	45.5	52.7	53.4	51.4
9-Aug	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
10-Aug	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
11-Aug	46.8	50.4	45.4	46.9	50.1	50.6	54.0	50.0	50.1	51.4	45.5	52.7	53.4	51.4
12-Aug	46.8	50.4	45.4	46.9	50.1	50.6	54.0	50.0	50.1	51.4	45.5	52.7	53.4	51.4
13-Aug	49.6	54.0	48.7	50.3	53.7	53.7	57.8	53.6	53.7	55.0	48.7	55.9	57.3	54.5
14-Aug	49.6	54.0	48.7	50.3	53.7	53.7	57.8	53.6	53.7	55.0	48.7	55.9	57.3	54.5
15-Aug	49.6	54.0	48.7	50.3	53.7	53.7	57.8	53.6	53.7	55.0	48.7	55.9	57.3	54.5
16-Aug	49.6	54.0	48.7	50.3	53.7	53.7	57.8	53.6	53.7	55.0	48.7	55.9	57.3	54.5
17-Aug	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
18-Aug	49.6	54.0	48.7	50.3	53.7	53.7	57.8	53.6	53.7	55.0	48.7	55.9	57.3	54.5
19-Aug	49.6	54.0	48.7	50.3	53.7	53.7	57.8	53.6	53.7	55.0	48.7	55.9	57.3	54.5
20-Aug	52.3	57.5	52.0	53.6	57.4	56.7	61.7	57.2	57.4	58.1	52.0	59.6	61.1	58.2
21-Aug	52.3	57.5	52.0	53.6	57.4	56.7	61.7	57.2	57.4	58.1	52.0	59.6	61.1	58.2
22-Aug	52.3	57.5	52.0	53.6	57.4	56.7	61.7	57.2	57.4	58.1	52.0	59.6	61.1	58.2
23-Aug	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F
24-Aug	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F	N/F

N/F indicates days that juvenile chinook salmon were not fed.

Effects of chemical contaminants from the Hylebos Waterway on the growth of juvenile chinook salmon.

ANOVA results (SuperANOVA, Abacus Concepts Inc., Berkeley, CA).
 Evaluation of size (fork length) of juvenile chinook salmon at the beginning of 60-day exposure period with respect to treatment.

Type III Sums of Squares

Source	df	Sum of Squares	Mean Square	F-Value	P-Value
Treatment	6	496.089	82.681	8.543	.0001
Residual	1393	13481.465	9.678		

Dependent: Fork Length (mm)

Means Table

Effect: Treatment

Dependent: Fork Length (mm)

	Count	Mean	Std. Dev.	Std. Error
PCB	200	93.825	2.968	.210
HWSE-M	200	92.640	3.138	.222
HWSE-P	200	92.645	3.275	.232
PAHs	200	93.410	3.053	.216
HCBD	200	94.155	3.216	.227
NOSE	200	93.880	3.120	.221
ACE/EMUL	200	94.070	2.995	.212

Dunnett One-Tailed: mean < control

Effect: Treatment

Dependent: Fork Length (mm)

Significance level: .05

	Vs.	Diff.	Crit. diff.	
ACE/EMUL	HWSE-M	-1.430	.712	S
	HWSE-P	-1.425	.712	S
	PAHs	-.660	.712	
	PCB	-.245	.712	
	NOSE	-.190	.712	
	HCBD	.085	.712	

S = Significantly different at this level.

Dunnett One-Tailed: mean < control

Effect: Treatment

Dependent: Fork Length (mm)

Significance level: .01

	Vs.	Diff.	Crit. diff.	
ACE/EMUL	HWSE-M	-1.430	.899	S
	HWSE-P	-1.425	.899	S
	PAHs	-.660	.899	
	PCB	-.245	.899	
	NOSE	-.190	.899	
	HCBD	.085	.899	

S = Significantly different at this level.

Effects of chemical contaminants from the Hylebos Waterway on the growth of juvenile chinook salmon.

ANOVA results (SuperANOVA, Abacus Concepts Inc., Berkeley, CA).
 Evaluation of size (weight) of juvenile chinook salmon at the beginning of 60-day exposure period with respect to treatment.

Type III Sums of Squares

Source	df	Sum of Squares	Mean Square	F-Value	P-Value
Treatment	6	15.003	2.501	2.704	.0130
Residual	1393	1288.206	.925		

Dependent: Weight (g)

Means Table

Effect: Treatment

Dependent: Weight (g)

	Count	Mean	Std. Dev.	Std. Error
PCB	200	8.005	.935	.066
HWSE-M	200	7.858	.942	.067
HWSE-P	200	7.906	.963	.070
PAHs	200	7.929	.917	.065
HCBD	200	8.021	.981	.069
NOSE	200	8.103	.984	.070
ACE/EMUL	200	8.172	.987	.070

Dunnett One-Tailed: mean < control

Effect: Treatment

Dependent: Weight (g)

Significance level: .05

	Vs.	Diff.	Crit. diff.	
ACE/EMUL	HWSE-M	-.315	.220	S
	HWSE-P	-.266	.220	S
	PAHs	-.243	.220	S
	PCB	-.167	.220	
	HCBD	-.151	.220	
	NOSE	-.070	.220	

S = Significantly different at this level.

Dunnett One-Tailed: mean < control

Effect: Treatment

Dependent: Weight (g)

Significance level: .01

	Vs.	Diff.	Crit. diff.	
ACE/EMUL	HWSE-M	-.315	.278	S
	HWSE-P	-.266	.278	
	PAHs	-.243	.278	
	PCB	-.167	.278	
	HCBD	-.151	.278	
	NOSE	-.070	.278	

S = Significantly different at this level.

Effects of chemical contaminants from the Hylebos Waterway on the growth of juvenile chinook salmon.

ANOVA results (SuperAnova, Abacus Concepts Inc., Berkeley, CA).
 Evaluation of treatment effects on growth (fork length) of juvenile chinook salmon at the end of 60-day exposure period.

Type III Sums of Squares

Source	df	Sum of Squares	Mean Square	F-Value	P-Value
Treatment	6	1456.512	242.752	5.718	.0001
Residual	1213	51493.378	42.451		

Dependent: Fork Length (mm)

Means Table

Effect: Treatment
 Dependent: Fork Length (mm)

	Count	Mean	Std. Dev.	Std. Error
PCB	170	132.505	6.417	.492
HWSE-M	177	132.880	5.674	.426
HWSE-P	189	132.862	5.830	.424
PAH	155	134.541	7.073	.568
HCBD	167	133.468	7.105	.550
NOSE	183	135.108	6.919	.511
A/E	179	135.366	6.568	.491

Dunnett One-Tailed: mean < control

Effect: Treatment
 Dependent: Fork Length (mm)
 Significance level: .05

	Vs.	Diff.	Crit. diff.	
A/E	PCB	-2.861	1.598	S
	HWSE-P	-2.504	1.556	S
	HWSE-M	-2.486	1.582	S
	HCBD	-1.898	1.605	S
	PAH	-.825	1.637	
	NOSE	-.258	1.568	

S = Significantly different at this level.

Dunnett One-Tailed: mean < control

Effect: Treatment
 Dependent: Fork Length (mm)
 Significance level: .01

	Vs.	Diff.	Crit. diff.	
A/E	PCB	-2.861	2.017	S
	HWSE-P	-2.504	1.964	S
	HWSE-M	-2.486	1.996	S
	HCBD	-1.898	2.026	
	PAH	-.825	2.066	
	NOSE	-.258	1.979	

S = Significantly different at this level.

Effects of chemical contaminants from the Hylebos Waterway on the growth of juvenile chinook salmon.

ANOVA results (SuperANOVA, Abacus Concepts Inc., Berkeley, CA).
 Evaluation of treatment effects on growth (weight) of juvenile chinook salmon at the end of 60-day exposure period.

Type III Sums of Squares

Source	df	Sum of Squares	Mean Square	F-Value	P-Value
Treatment	6	1051.766	175.294	6.704	.0001
Residual	1213	31719.387	26.150		

Dependent: Weight (g)

Means Table

Effect: Treatment

Dependent: Weight (g)

	Count	Mean	Std. Dev.	Std. Error
PCB	170	29.579	4.835	.371
HWSE-M	177	29.937	4.408	.331
HWSE-P	189	30.137	4.709	.342
PAH	155	31.118	5.474	.440
HCBD	167	30.786	5.432	.420
NOSE	183	32.025	5.506	.407
A/E	179	32.080	5.379	.402

Dunnett One-Tailed: mean < control

Effect: Treatment

Dependent: Weight (g)

Significance level: .05

	Vs.	Diff.	Crit. diff.	
A/E	PCB	-2.502	1.254	S
	HWSE-M	-2.143	1.241	S
	HWSE-P	-1.943	1.221	S
	HCBD	-1.294	1.260	S
	PAH	-.962	1.285	
	NOSE	-.056	1.231	

S = Significantly different at this level.

Dunnett One-Tailed: mean < control

Effect: Treatment

Dependent: Weight (g)

Significance level: .01

	Vs.	Diff.	Crit. diff.	
A/E	PCB	-2.502	1.583	S
	HWSE-M	-2.143	1.567	S
	HWSE-P	-1.943	1.541	S
	HCBD	-1.294	1.590	
	PAH	-.962	1.621	
	NOSE	-.056	1.554	

S = Significantly different at this level.

Effects of chemical contaminants from the Hylebos Waterway on the growth of juvenile chinook salmon.

ANOVA results (SuperANOVA, Abacus Concepts Inc., Berkeley, CA).

Evaluation of tank effects nested within treatment effects on growth (fork length) of juvenile chinook salmon.

Type III Sums of Squares

Source	df	Sum of Squares	Mean Square	F-Value	P-Value	Error Term
Treatment	6	1439.736	239.956	.449	.8255	Replicate (Treatm...
Replicate (Treat...	7	3738.401	534.057	13.487	.0001	Residual
Residual	1206	47754.977	39.598			

Dependent: Fork Length (mm)

Residual Summary

Dependent: Fork Length (mm)

SS[e(i)-e(i-1)] 90806.295

number >= 0 594

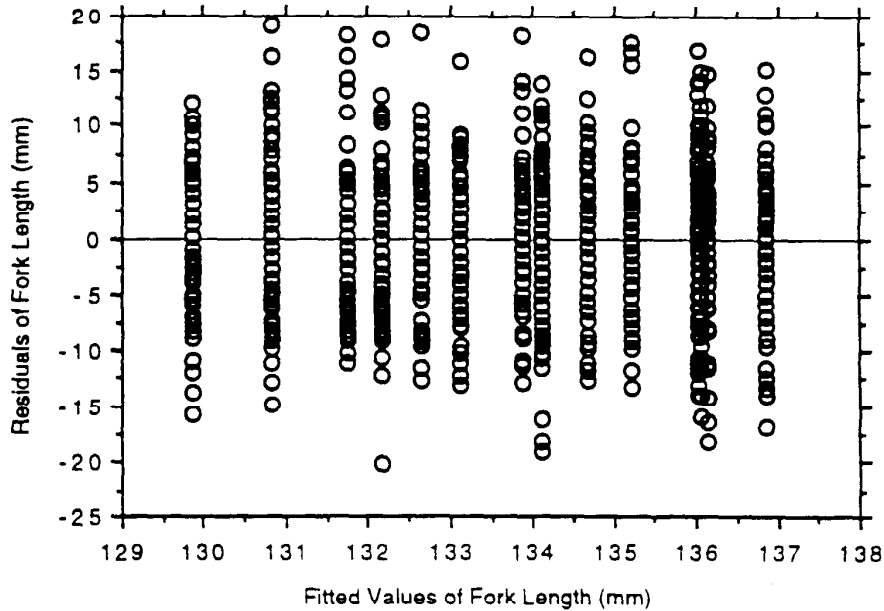
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Durbin-Watson 1.902

Serial Autocorrelation .048

Scattergram of Residuals versus Fitted Y

Dependent: Fork Length (mm)



Effects of chemical contaminants from the Hylebos Waterway on the growth of juvenile chinook salmon.

ANOVA results (SuperANOVA, Abacus Concepts Inc., Berkeley, CA).
 Evaluation of tank effects nested within treatment effects on growth (weight) of juvenile chinook salmon at the end of the 60-day exposure period.

Type III Sums of Squares

Source	df	Sum of Squares	Mean Square	F-Value	P-Value	Error Term
Treatment	6	1039.479	173.247	.518	.7799	Replicate (Treatm...
Replicate (Treat...	7	2343.162	334.737	13.742	.0001	Residual
Residual	1206	29376.225	24.358			

Dependent: Weight (g)

Residual Summary

Dependent: Weight (g)

SS[e(i)-e(i-1)] 58211.603

number >= 0 579

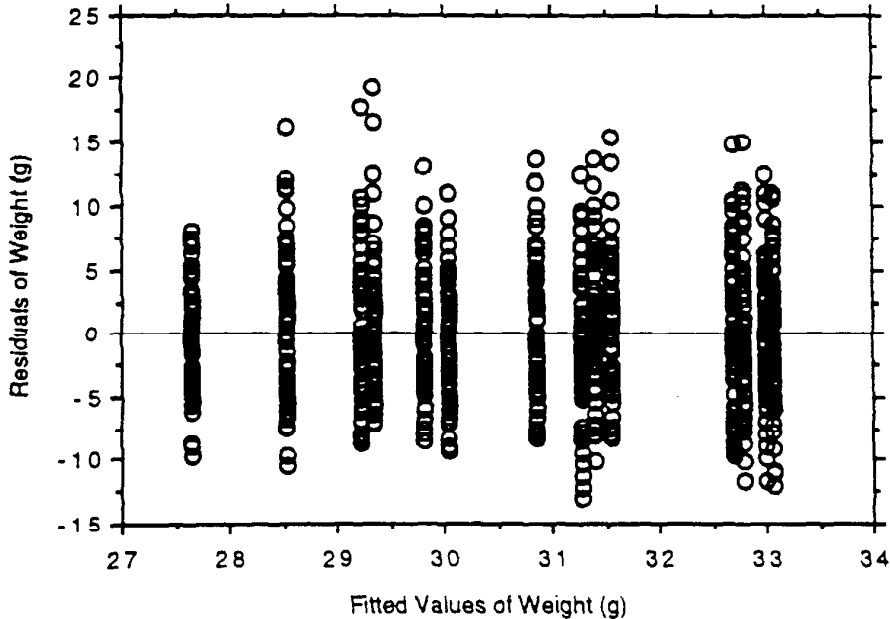
number < 0 641

Durbin-Watson 1.982

Serial Autocorrelation .007

Scattergram of Residuals versus Fitted Y

Dependent: Weight (g)



Effects of chemical contaminants from the Hylebos Waterway on the growth of juvenile chinook salmon.

Chi-square analysis (Statview, Abacus Concepts Inc., Berkeley, CA).
Contingency Analysis of mortality (among treatments) of juvenile chinook salmon over the 60-day exposure period.

Summary Table for Treatment, Live/Dead

Num. Missing	0
DF	6
Chi Square	28.617
Chi Square P-Value	<0.0001
G-Squared	26.268
G-Squared P-Value	0.0002
Contingency Coef.	0.142
Cramer's V	0.143

Expected Values for Treatment, Live/Dead

	Live	Dead	Totals
PCB	181.286	18.714	200.000
HWSE-M	181.286	18.714	200.000
HWSE-P	181.286	18.714	200.000
PAH	181.286	18.714	200.000
HCBD	181.286	18.714	200.000
NQSE	181.286	18.714	200.000
ACE/EMUL	181.286	18.714	200.000
Totals	1269.000	131.000	1400.000

Observed Frequencies for Treatment, Live/Dead

	Live	Dead	Totals
PCB	175	25	200
HWSE-M	183	17	200
HWSE-P	189	11	200
PAH	164	36	200
HCBD	186	14	200
NQSE	189	11	200
ACE/EMUL	183	17	200
Totals	1269	131	1400

Post Hoc Cell Contributions for Treatment, Live/Dead

	Live	Dead
PCB	-1.648	1.648
HWSE-M	0.450	-0.450
HWSE-P	2.023	-2.023
PAH	-4.533	4.533
HCBD	1.236	-1.236
NQSE	2.023	-2.023
ACE/EMUL	0.450	-0.450

Cell Chi Squares for Treatment, Live/Dead

	Live	Dead
PCB	0.218	2.111
HWSE-M	0.016	0.157
HWSE-P	0.328	3.180
PAH	1.648	15.966
HCBD	0.123	1.188
NQSE	0.328	3.180
ACE/EMUL	0.016	0.157

Effects of chemical contaminants of Hylebos Waterway on the growth of juvenile chinook salmon.

Chi-square analysis (Statview, Abacus Concepts Inc., Berkeley, CA).
Contingency analysis of mortality (among tanks) of juvenile chinook salmon over the 60-day exposure period.

Observed Frequencies for Tank I.D., Live/Dead

Summary Table for Tank I.D., Live/Dead

Num. Missing	0
DF	13
Chi Square	31.034
Chi Square P-Value	0.0033
G-Squared	29.945
G-Squared P-Value	0.0048
Contingency Coef.	0.147
Cramer's V	0.149

	Live	Dead	Totals
A	88	12	100
F	87	13	100
K	92	8	100
G	91	9	100
H	92	8	100
O	97	3	100
E	83	17	100
M	81	19	100
J	93	7	100
P	93	7	100
I	96	4	100
N	93	7	100
C	92	8	100
L	91	9	100
Totals	1269	131	1400

Percents of Overall Total for Tank I.D., Live/Dead

	Live	Dead	Totals
A	6.286	0.857	7.143
F	6.214	0.929	7.143
K	6.571	0.571	7.143
G	6.500	0.643	7.143
H	6.571	0.571	7.143
O	6.929	0.214	7.143
E	5.929	1.214	7.143
M	5.786	1.357	7.143
J	6.643	0.500	7.143
P	6.643	0.500	7.143
I	6.857	0.286	7.143
N	6.643	0.500	7.143
C	6.571	0.571	7.143
L	6.500	0.643	7.143
Totals	90.643	9.357	100.000

Post Hoc Cell Contributions for Tank I.D., Live/Dead

	Live	Dead
A	-0.942	0.942
F	-1.298	1.298
K	0.484	-0.484
G	0.127	-0.127
H	0.484	-0.484
O	2.265	-2.265
E	-2.723	2.723
M	-3.436	3.436
J	0.840	-0.840
P	0.840	-0.840
I	1.909	-1.909
N	0.840	-0.840
C	0.484	-0.484
L	0.127	-0.127

Expected Values for Tank I.D., Live/Dead

	Live	Dead	Totals
A	90.643	9.357	100.000
F	90.643	9.357	100.000
K	90.643	9.357	100.000
G	90.643	9.357	100.000
H	90.643	9.357	100.000
O	90.643	9.357	100.000
E	90.643	9.357	100.000
M	90.643	9.357	100.000
J	90.643	9.357	100.000
P	90.643	9.357	100.000
I	90.643	9.357	100.000
N	90.643	9.357	100.000
C	90.643	9.357	100.000
L	90.643	9.357	100.000
Totals	1269.000	131.000	1400.000

Cell Chi Squares for Tank I.D., Live/Dead

	Live	Dead
A	0.077	0.746
F	0.146	1.418
K	0.020	0.197
G	1.407E-3	0.014
H	0.020	0.197
O	0.446	4.319
E	0.644	6.243
M	1.026	9.937
J	0.061	0.594
P	0.061	0.594
I	0.317	3.067
N	0.061	0.594
C	0.020	0.197
L	1.407E-3	0.014

Effects of chemical contaminants from the Nylebos Waterway on the growth of juvenile chinook salmon.

ANCOVA results (SuperANOVA, Abacus Concepts Inc., Berkeley, CA).
 Evaluation of treatment effects on growth (fork length) of juvenile chinook salmon with respect to time over the 60-day exposure period.

Type III Sums of Squares

Source	df	Sum of Squares	Mean Square	F-Value	P-Value
Treatment	6	481.226	80.204	3.217	.0038
Day	1	1056687.743	1056687.743	4.238E4	.0001
Treatment * D...	6	567.124	94.521	3.791	.0009
Residual	2606	64974.843	24.933		

Dependent: Fork Length (mm)

Means Table

Effect: Treatment

Dependent: Fork Length (mm)

	Count	Mean	Std. D...	Std. E...
PCB	370	1.12E2	19.904	1.035
HWSE-M	377	1.12E2	20.607	1.061
HWSE-P	389	1.12E2	20.665	1.048
PAH	355	1.11E2	21.079	1.119
HCBD	367	1.12E2	20.318	1.061
NQSE	383	1.14E2	21.286	1.088
ACE/EMUL	379	1.14E2	21.241	1.091

Model Summary

Dependent: Fork Length (mm)

Count	2620				
R	.971				
R-Squared	.942				
Adj. R-Squared	.942				
RMS Residual	4.993				
	df	Sum of ...	Mean Squa...	F-Value	P-V...
Model	13	1.061E6	81583.225	3272.126	.0001
Error	2606	6.497E4	24.933		
Total	2619	1.126E6			

Model Coefficient Table

Dependent: Fork Length (mm)

	Beta	Std. Error	t-Test	P-Value
Intercept	93.370	.359	259.998	.0001
Treatment				
PCB	-.201	.508	-.395	.6928
HWSE-M	-1.412	.508	-2.780	.0055
HWSE-P	-1.407	.508	-2.770	.0056
PAH	-.657	.508	-1.294	.1958
HCBD	.119	.508	.234	.8154
NQSE	-.189	.508	-.372	.7100
ACE/EMUL	0.000	.	.	.
Day	.700	.009	80.379	.0001
Treatment * Day				
PCB, Day	-.044	.012	-3.576	.0004
HWSE-M, Day	-.018	.012	-1.451	.1470
HWSE-P, Day	-.018	.012	-1.496	.1349
PAH, Day	-.003	.013	-.223	.8236
HCBD, Day	-.034	.012	-2.703	.0069
NQSE, Day	-.001	.012	-.093	.9255
ACE/EMUL, Day	0.000	.	.	.

Effects of chemical contaminants from the Hylebos waterway on the growth of juvenile chinook salmon.

ANCOVA results (SuperANOVA, Abacus Concepts Inc., Berkeley, CA).
 Evaluation of treatment effects on growth (weight) of juvenile chinook salmon with respect to time over the 60-day exposure period.

Type III Sums of Squares

Source	df	Sum of Squares	Mean Square	F-Value	P-Value
Treatment	6	11.976	1.996	.158	.9876
Day	1	338501.948	338501.948	2.673E4	.0001
Treatment * D...	6	467.854	77.976	6.156	.0001
Residual	2606	33007.593	12.666		

Dependent: Weight (g)

Means Table

Effect: Treatment
 Dependent: Weight (g)

	Count	Mean	Std. D...	Std. E...
PCB	370	1.8E1	11.273	.586
HWSE-M	377	1.8E1	11.459	.590
HWSE-P	389	1.9E1	11.619	.589
PAH	355	1.8E1	12.089	.642
HCBD	367	18.38	11.949	.624
NQSE	383	2E1	12.574	.642
ACE/EMUL	379	1.9E1	12.529	.644

Model Summary

Dependent: Weight (g)

Count	2620				
R	.955				
R-Squared	.912				
Adj. R-Squared	.911				
RMS Residual	3.559				
	df	Sum of Squa...	Mean Sq...	F-Value	P-V...
Model	13	340336.481	2.618E4	2066.930	.0001
Error	2606	33007.593	12.666		
Total	2619	373344.074			

Model Coefficient Table

Dependent: Weight (g)

	Beta	Std. Error	t-Test	P-Value
Intercept	7.767	.256	30.346	.0001
Treatment				
PCB	-.127	.362	-.352	.7248
HWSE-M	-.284	.362	-.785	.4328
HWSE-P	-.238	.362	-.658	.5108
PAH	-.231	.362	-.639	.5229
HCBD	-.132	.362	-.365	.7151
NQSE	-.070	.362	-.193	.8473
ACE/EMUL	0.000	.	.	.
Day	.405	.006	65.290	.0001
Treatment * Day				
PCB, Day	-.040	.009	-4.477	.0001
HWSE-M, Day	-.031	.009	-3.525	.0004
HWSE-P, Day	-.028	.009	-3.261	.0011
PAH, Day	-.012	.009	-1.361	.1737
HCBD, Day	-.019	.009	-2.186	.0289
NQSE, Day	2.312E-4	.009	.026	.9789
ACE/EMUL, Day	0.000	.	.	.