Turbine Unit Strainer Inspections 2009 -2010 Date Turbine Units MCN MCN MCN MCN MCN 15 -21 May 22-28 May 29 May - 4 Jun 4 -11 Jun 15, 17 Jun 19 -25 Jun 26 Jun - 2 Jul 3 -9 Jul 10 -16 Jul 17 -23 Jul 24 -30 Jul 31 Jul - 6 Aug 7 -13 Aug

MCN

MCN

MCN

Lamprey Notes Mortality Live 10 - 16 Apr 17 - 23 Apr Not Checked ---24 -30 Apr Not Checked ---1 -7 May Not Checked 12 -13 May

Not Checked

Not Checked

Not Checked

Not Checked

1-4, 6, 8-14

Not Checked

Live fish all in turbine unit 1, 0-15 morts removed from each of the rest. 14 Chinook morts removed from 1, 11 and 14 ------

30 1 Hatches on turbine units 5 and 7 could not be opened --- ---

--- ---

--- ---

701 0

41 0

0 15

--- ---

------ ---

--- ---

--- ---

--- ------ ---

--- ------ ------ ---

--- ------ ------ ---

--- ---

11 -17 Sep Not Checked 18 -24 Sep Not Checked 25 Sep - 1 Oct Not Checked 2 -8 Oct 9 -15 Oct 16-22 Oct 23 -29 Oct 30 Oct - 5 Nov 6 -19 Nov 7 -12 Nov 20 -26 Nov 21 -26 Nov 27 Nov - 3 Dec 4 -10 Dec 11 -17 Dec 18 -24 Dec

8 -20 Aug

14 -20 Aug

21 -27 Aug

4 -10 Sep

28 May - 3 Sep

Not Checked 25 -31 Dec Not Checked 2-Feb

10 -16 Apr Not Checked 20 -22 Apr 17 -23 Apr 24 -30 Apr 5 -7 May 15 -21 May 22-28 May 4 -11 Jun 12 -18 Jun 19 -25 Jun 26 Jun - 2 Jul

3 -9 Jul 10 -16 Jul 17 -23 Jul 24 -30 Jul 3-Aug 7 -13 Aug 17, 18 Aug 1, 2, 4 25-Aug 28 May - 3 Sep 2, 3, 4, 5, 6 9-Sep 11 -17 Sep 25 Sep - 1 Oct 2 -8 Oct 9 -15 Oct 16-22 Oct

23 -29 Oct 2 -3 Nov 6 -12 Nov 2, 3, 4, 5 18, 19 Nov 23-Nov 3, 5, 6 2-Dec 4 -10 Dec 11 -17 Dec 18 -24 Dec 25 -31 Dec 2-Feb 1-5 Mar

Not Noted 8-Apr Not Noted 17 - 23 Apr Not Checked 24 -30 Apr Not Checked 1 -7 May Not Checked 13-May Not Noted 15 -21 May Not Checked 22-28 May Not Checked Not Checked 29 May - 4 Jun 8-Jun 12 -18 Jun Not Checked 19 -25 Jun Not Checked Not Checked 3 -9 Jul Not Checked 13-Jul 17 -23 Jul Not Checked 24 -30 Jul Not Checked Not Checked

26 Jun - 2 Jul 31 Jul - 6 Aug 7 -13 Aug Not Checked 19-Aug 21 -27 Aug Not Checked 28 Aug - 3 Sep Not Checked 4 -10 Sep Not Checked 16-Sep 1, 2, 3, 4, 5, 6 20-Sep 1, 2, 3, 4, 5, 6 25 Sep - 1 Oct Not Checked 2 -8 Oct Not Checked 20-Oct 2, 3, 4, 5, 6 4-Nov 1, 2, 3, 4, 5, 6 6 -12 Nov Not Checked 7 -19 Nov Not Checked 20 -26 Nov

Not Checked 3-Dec 1, 2, 3, 4, 5, 6 4 -10 Dec Not Checked 11 -17 Dec Not Checked 18 -24 Dec 25 -31 Dec 26-Jan Not Checked Not Checked 3, 5, 6 17 -23 Apr Not Checked 24 -30 Apr 1 -7 May Not Checked Not Checked Not Checked 8 -14 May 15 -21 May Not Checked 22-28 May Not Checked Not Checked 29 May - 4 Jun Not Checked 4 -11 Jun 12 -18 Jun Not Checked 19 -25 Jun Not Checked Not Checked 26 Jun - 2 Jul 10 -16 Jul 17 -23 Jul 24 -30 Jul Not Checked Not Checked

31 Jul - 6 Aug 10-Aug 20-Aug 27-Aug 1, 2, 4, 5, 6 1, 2, 4, 5, 6 28 Aug - 3 Sep 8-Sep 1, 2, 3, 4, 5, 6 11 -17 Sep Not Checked 22-Sep 1, 2, 3, 4, 5, 6 30-Sep 1, 2, 3, 4, 5, 7 6-Oct 1, 2, 3, 4, 5, 8 9 -15 Oct 21-Oct 1, 2, 3, 4, 5, 8 23 -29 Oct 30 Oct - 5 Nov Not Checked 6 -12 Nov 7 -19 Nov Not Checked Not Checked Not Checked 27 Nov - 3 Dec 4 -10 Dec 11 -17 Dec 18 -24 Dec 25 -31 Dec 8-Feb Not Checked Not Checked 10 -16 Apr 17 -23 Apr Not Checked Not Checked 24 -30 Apr 1 -7 May Not Checked 8 -14 May

Not Checked 15 -21 May 22-28 May Not Checked Not Checked 29 May - 4 Jun 4 -11 Jun 12 -18 Jun 19 -25 Jun Not Checked Not Checked 26 Jun - 2 Jul 3 -9 Jul 14-Jul Not Checked 17 -23 Jul 24 -30 Jul 31 Jul - 6 Aug 7 -13 Aug 14 -20 Aug Not Checked Not Checked Not Checked 21 -27 Aug 28 Aug - 3 Sep 4 -10 Sep 11 -17 Sep Not Checked 23-Sep 28-Sep 2 -8 Oct 2 -8 Oct Not Checked
9 -15 Oct Not Checked
16-22 Oct Not Checked
23 -29 Oct Not Checked
30 Oct - 5 Nov Not Checked
6 -12 Nov Not Checked
7 -19 Nov Not Checked
27 Nov - 3 Dec Not Checked
4 -10 Dec Not Checked
11 -17 Dec Not Checked
18 -24 Dec Not Checked
25 -31 Dec Not Checked 300 0 400 lamprey reported in strainers by email, no tally of live fish and mortalities.

Pressure differential check - no direct inspection Pressure differential check - no direct inspection

Direct Inspections done Strainers cleaned concurrently with STS inspections. Pressure differential check - no direct inspection Pressure differential check - no direct inspection Direct Inspections done Strainers cleaned concurrently with STS inspections, turbine unit 2 out of service. Pressure differential check - no direct inspection Pressure differential check - no direct inspection

Direct Inspections done Strainers cleaned concurrently with STS inspections. Pressure differential check - no direct inspection Lamprey mortality found in turbine unit 2, unidentified mortality found in turbine unit 4. Pressure differential check - no direct inspection Other mortalities included 7 shad, 2 clam shells, 11 Siberian Prawns, 1 crayfish and 7 unidentified fish. Pressure differential check - no direct inspection Pressure differential check - no direct inspection Pressure differential check - no direct inspection

Pressure differential check - no direct inspection Pressure differential check - no direct inspection Pressure differential check - no direct inspection Pressure differential check - no direct inspection Turbine units 2, 3, and 4 found plugged with shad, #5 was clear. Turbine 1 and 6 out of service. Turbine unit 3 found plugged with shad.

Several shad mortalities found. Pressure differential check - no direct inspection

Pressure differential check - no direct inspection Pressure differential check - no direct inspection Pressure differential check - no direct inspection 140 3 Live lamprey released into tailrace

------O 35 Other mortalities include 12 chinook, 5 steelhead and 31 unidentifiable fish.

Other mortalities include 15 Chinook, 3 steelhead and 45 unidentifiable fish.

O Other mortalities include 22 shad. 0 Other mortalities include 37 shad.

--- Strainers cleaned, no biologists present.

86 0 16 morts out of turbine unit 3, 27 out of turbine unit 5 and 43 out of turbine unit 6.

0 Other Mortalities - 1 Sand Roller in Turbine Unit 1.

0 Other Mortalities - 1 unidentified fish.

---17 0 Mortality distribution: 3 in #2, 13 in #3 and 1 in #5.

Turbine Unit S	_	pections 2	010													1							_		_							
MCN 12	Date 2-Mar-10 2-Apr-10	1 3 1	2 1 0	3 2 1	4 6 0	5 0 0	urbine l 6 11 2	Units (No 6 1 2	7 10 0	amprey For 8 3 2	ound) 9 0 2	10 3 1	11 0 0	12 0 0	13 1 1	14 2 1	Totals 42 8 11		13.0 9	56.0	967.0	5 291.0	6 167.0	Units (Hou 7 220.0	 470.0	9 611.0	10 790.0	11 782.0		13 969.0	962.0 Incl	udes 1 live lamprey found in turbine unit 3. Inspections done 3/1, 3/2 and 3/5 udes 1 live lamprey each found in turbine units 1 and 8.
12	4-May-10 2-Jan-10 2-Feb-10 9-Feb-10	3 	1 3 1 0	4 5 200 13	0 * 415 14	 1 75 17	2 * 10 1	2 * O 1	19 	1 	 	8 	8 	 	6 	3 	59 9 2 701 45	months since la 0.0 45 0.0 17	last inspect 53.0 3 79.5 1	tion 311.0 31.2	146.0 75.1	1029.0 306.0 123.2	8.0	142.0 ough hand 	253.0 count of h	512.0 nours) 	650.0 		926.0	954.0	1015.0 Smd Inclu	olts: 20 in #1, 6 in #7, 1 ea in #10 & #11, 6 in #14. 9 unidentified fish also found. udes 1 lamprey in turbine unit 2 and four in turbine unit 3 found alive live lamprey found udes 1 lamprey each in turbine units 3 and 4 found alive.
2 2 4 12 22	6-Feb-10 2-Mar-10 2-Apr-10 4-May-10 2-May-10 2-Jun-10	0 0 	0 0 0 0 	8 1 0 1 	5 0 0 15 10	11 1 0 8 12	6 0 0 8 15	6 0 0 - - 3 5	 	 	 	 	 	 	 	 	30 2 0 1 31 37	0.0 13 364.0 50 688.3 9 49	30.2 09.0 5 94.6 1 95.7	54.4 690.0 18.2 	82.9 22.9 366.0 203.4 816.6	190.2 54.1 58.0 16.4 565.3	14.0 0.0 0.0 5.6 394.7	 	 	 	 	 	 	 	Inclu No I No I No I	live lamprey found udes 1 lamprey in turbine unit 3 found alive. fish found. live fish found. live fish found, 1 uncl unidentified juv in #5 and #4 (ea), cl juv st found in #4. live fish found
N 26 N 3	3-Jun-10 6-Jan-10 3-Feb-10 1-Mar-10 2-Apr-10	0 1 2	 0 1	0 63 16 3 0	11 0 0	86 27 9 0	47 43 1 0	- 7 3 1	 	 	 	 	 	 	 	 	207 2 86 14 3	1.0 1,06	last inspect 0.0 2 66.0 8	211.0	0.0 127.0 43.0	124.0 290.0 2.0	104.0 (R	 ough hand ough hand ough hand	count of h	ours)	 	 	 	 	Inclu	live fish found. udes 3 live lamprey each in turbine units 5 and 6 live lamprey found, cooling water runs 24/7. Prawn in #1, 2 S. Prawn in #5, 2 S. Prawn & 1 Crappie in #6 all mortalities. live lampreys found. S. Prawn in #3, 1 S. Prawn in #4 and 1 S. Prawn in #5 all live.
6 9 6 22 6 8 6 7 6 31	8-Feb-10 9-Mar-10 2-Mar-10 8-Apr-10 7-May-10 1-May-10 0-Jun-10	0 0 0 0 0 0 6 4	0 0 0 0 1 9 5	3 2 0 0 0 15 17	13 0 0 0 0 0	1 0 1 2 0 11 16	0 0 0 0 0 127))))))		 	 	 	 	 	 	 	17 4 2 1 2 1 41 41	328.0 401.0 22 699.0 47 743.0 74	57.0 3 0.0 1 20.0 7 70.0 1 43.0 5	661.0 90.0 86.0 28.0 679.0	23.0 18.0 11.0 87.0 167.0 657.0	443.0 0.0 5.0 7.0 53.0 404.0	37.0 (R 0.0 1.0 6.0 0.0 363.0	ough hand 	count of h 	oours) 	 	 	 	 	1 lar Tota No I No I	live lamprey found mprey, 2 siberian prawn motalities found in turbine unit 5. al includes 1 live lamprey in turbine unit 5. live fish found. live fish found. 2 smolt mortalities found in #3, probably yearling Chinook. live fish found. 1 subyearling Chinook mortality (ea) found in turbine units 5 & 6.
/G 15 /G 15 /G 15	1-Feb-10 5-Mar-10 5-Apr-10 6-May-10 2-Jun-10	0 0 5 72 10	125 3 92 4	0 0 0 0	25 3 97	 44 2 76 5	16 0 61	- 6 0 1	 	 	 	 	 	 	 	 	0 L 210 13 398 22	694.0 35 678.0 90	79.0 53.0 02.0	0.0 0.0 0.0	382.0	662.0	eptember 2 228.0 (T 0.0 179.0 539.9	urbine unit				 	 	 	No I All ro All ro	lampreys found. pine units 2 - 6 not inspected in the previous month. ecovered lampreys were mortalities. ecovered lampreys were mortalities. ecovered lampreys were mortalities. ecovered lampreys were mortalities.