

1 **Re: Page B-11, Replace Cooling Water Systems Units 1 and 2, \$263,600**

2 Q. Please provide a schedule, including actual costs or forecast costs, of all
3 plants where piping has been or is planned to be replaced?
4
5

6 A. The requested information is provided below. Please note the following:

- 7 • AFUDC, Escalation, and Contingency costs have not been added to
8 costs for Upper Salmon and Cat Arm work orders. These are actual
9 labour and materials costs only.
- 10 • The size and configuration of piping is very different in each plant and
11 meaningful comparison of costs is therefore difficult.
- 12 • The commodity price of stainless steel has doubled since the pricing
13 estimates in the 2002 cooling water studies. An example is that the cost
14 of 4 inch s.s. sch 10 pipe in 2002 was \$12.97 per ft and as of the spring
15 of 2007, the cost of the same 4 inch s.s. sch 10 pipe is \$23.00 per ft.

16
17 **Upper Salmon**

18 *Surface Air Cooling (SAC) Piping*

19 SAC piping inside the generator housing was replaced in 2000.

20 Actual cost: \$30,000.

21 SAC piping outside the generator housing has not been replaced. The
22 forecast cost is \$30,488. Replacement work has not been planned.

23
24 *Generator Bearing Piping*

25 No generator bearing pipes have been replaced to date. The forecast cost
26 for replacement is \$44,000. The work has not been scheduled.

1 *Turbine Bearing Piping*

2 No turbine bearing pipes have been replaced. There is no forecast cost for
3 replacement and the work has not been scheduled.

4
5 **Cat Arm Unit #1**

6 *SAC Piping*

7 Replaced SAC pipes inside the generator housing in 2001.

8 Actual cost: \$20,200.

9 Replaced supply and discharge SAC piping outside of generator housing in
10 year 2005. Actual Cost \$25,000.

11
12 *Generator Bearing Piping*

13 No generator bearing pipes inside the generator housing have been
14 replaced. Forecast replacement cost is \$8,228. This work has not been
15 scheduled.

16
17 The supply and discharge generator bearing pipes outside of generator
18 housing have been replaced. Actual cost: \$25,000.

19
20 *Turbine Bearing Piping*

21 No turbine bearing pipes have been replaced. There is no forecast cost for
22 replacement and no work scheduled.

23
24 **Cat Arm Unit #2**

25 *SAC Piping*

26 SAC piping inside the generator housing was replaced in 2001.

27 Actual cost: \$20,200.

28 No Supply and discharge SAC piping outside of generator housing has been
29 replaced. Forecast cost is \$12,306. There is no scheduled work to replace
30 this pipe.

1 *Generator Bearing Piping*

2 Generator bearing pipes inside the generator housing were replaced in 2004.

3 Actual cost: \$12,500.

4 No generator bearing pipes outside generator housing have been replaced.

5 Forecast cost is \$8,228. There is no scheduled work to replace the pipe.

6
7 *Turbine Bearing Piping*

8 No turbine bearing pipes have been replaced. There is no forecast cost for
9 this work and no work has been scheduled.

10
11 **Hinds Lake**

12 Replace turbine and generator bearing piping inside generator housing in
13 2008. Forecast cost: \$193,400.

14
15 **BDE Units #3 & #4**

16 Replace SAC piping inside generator housing along with supply and
17 discharge piping outside generator housing in 2009.

18 Forecast cost: \$266,000.

19
20 **BDE Units #5 & #6**

21 Replace SAC piping inside of generator housing along with supply and
22 discharge piping outside generator housing in 2010.

23 Forecast cost: \$275,900.

24
25 **BDE Unit #7**

26 Forecast cost to replace the piping is \$41,833. There is no scheduled work to
27 replace it.