

~~AZ #624~~

File

AZ 462

**PUBLIC SERVICE OF NEW HAMPSHIRE**

**MERRIMACK STATION  
BOW, NEW HAMPSHIRE**

**NPDES REAPPLICATION  
NO. NH0001465**

May 8, 1990

ATTACHMENT I

In the enclosed July 27, 1989 letter, New Hampshire Water Supply and Pollution Control Division (NHWSPCD) listed several items they want considered during PSNH's reapplication for Merrimack Station. This attachment serves as our response. The items are addressed in the same sequence as in the letter.

1. PSNH has initiated an in-house study to be completed during 1990 that will consider options to isolate the on-site wetlands. The study will identify a method to terminate the wetlands' drainage to the slag settling pond and establish a barrier for coal pile runoff and slag sluicewaters. The resulting impact to the area hydrology may be significant and could require further, more costly modifications to maintain the wetlands. Discussions with various agencies will be necessary to determine the most appropriate strategy to assure compliance with all aspects of the Clean Water Act.
2. The direct discharge to the Merrimack River from the washing of the intake screens has been included in this permit reapplication. The outfall is discussed further in Attachment III.
3. The effect of changing river levels on the output of the condenser cooling pumps was calculated (Table 1) and it was found that changing levels do effect output. However, data from 1988 and 1989 (Table 2) shows that the river level stays fairly constant through- out the year, approximately 190 feet. Single pump output at 190 feet for Unit 1 is 25,800 gpm and Unit 2 is 67,000 gpm. This is a significant decrease from the design operating capacity we presently report. Therefore, PSNH requests future outputs for the condenser cooling pumps always be reported based on 190 foot river levels.
4. Condenser cooling pump outputs do vary when both pumps are on line as shown in Table 1. For the same reasons stated above, PSNH requests that outputs for the condenser cooling pumps always be reported based on 190 foot river levels.

TABLE 1

Merrimack Station Units 1&2  
Circulating Water Pump Capacity \*

RIVER LEVEL FT.	<u>UNIT 1</u>		<u>UNIT 2</u>	
	1 PUMP CW FLOW GPM	2 PUMPS CW FLOW GPM/PUMP	1 PUMP CW FLOW GPM	2 PUMPS CW FLOW GPM/PUMP
188	21,400	17,000	63,500	61,500
190	25,800	24,000	67,000	65,000
192	28,000	27,000	70,000	68,000
194	29,800	29,000	73,000	71,500
196	31,400	30,800	76,000	74,000
198	32,000	32,000	78,000	77,000
200	32,600**	32,600**	81,000	79,500
202	32,600	32,600	83,000	82,000
204	-----	-----	85,000**	85,000**

\*\* Maximum Pump Capacity

Unit #1 design operating capacity: 29,500 gpm per pump

Unit #2 design operating capacity: 70,000 gpm per pump

\* Based on individual unit's pump curves

TABLE 2

River Levels at Merrimack Station  
for 1988 and 1989\*

Month	<u>1988</u>	<u>1989</u>
	Average River Level (feet)	Average River Level (feet)
January	188.4	190.0
February	189.2	188.8
March	189.2	188.9
April	189.2	190.1
May	189.2	190.5
June	188.4	189.4
July	189.1	188.7
August	188.8	188.7
September	189.0	188.8
October	188.6	190.0
November	189.5	190.4
December	189.8	189.5
	Maximum 191.8	Maximum 192.4
	Minimum 188.0	Minimum 186.9
	Mean 189.6	Mean 189.8

\* Figures based on downstream Hooksett Hydroelectric Station headwater monitor