COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF WEBSTER COUNTY WATER DISTRICT (1) FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF MAJOR ADDITIONS AND IMPROVEMENTS TO ITS WATER DISTRIBUTION SYSTEM; AND (2) SEEKING APPROVAL OF THE ISSUANCE OF CERTAIN SECURITIES, PURSUANT TO THE PROVISIONS OF KRS 278.020, KRS 278.300, AND 807 KAR 5:001	)	CASE NO. 96-170

O R D E R

IT IS ORDERED that Webster County Water District ("Webster") shall file an original and 10 copies (two copies of engineering-related materials) of the following information with the Commission, with a copy to all parties of record within 14 days from the date of this Order. Webster shall furnish with each response the name of the witness who will be available at the public hearing, if one is held, for responding to questions concerning each item of information requested.

1. Describe the proposed daily operational sequence of the water system. Documentation should include the methods and mechanisms proposed to provide positive control of all storage tank water levels. The description should also include an hourly summary of how all tanks (existing and proposed) will "work" (expected inflow or outflow of water) and how all pumps will function. The description should be fully supported by appropriate field measurements and hydraulic calculations.

2. Webster filed computer hydraulic analyses for the proposed water distribution system. These analyses did not depict the "on-off" operation of the pumps, the "empty-fill" cycles of the existing and proposed tanks, etc. Based on this, provide hydraulic analyses, supported by computations and actual field measurements, of typical operational sequences of the water distribution system with the improvements proposed in this case in place. These hydraulic analyses should demonstrate the operation of all pump stations and the "empty-fill" cycle of all water storage tanks. Computations are to be documented by a labeled schematic map of the systems that show pipeline sizes, lengths, connections, pumps, water storage tanks, wells, and sea level elevations of key points, as well as allocations of actual customer demands. Flows used in the analyses shall be identified as to whether they are based on average instantaneous flows, peak instantaneous flows, or any combination or variation thereof. The flows used in the analyses shall be documented by actual field measurements and customer use records. Justify fully any assumptions used in the analyses. (Note - these analyses should use the same schematic as the analyses of the existing water distribution system to facilitate comparison.)

3. Most engineering references state that instantaneous customer demands can peak at 3 to 15 times the 24-hour average demand. In addition, most engineering references also state that a water distribution system should be designed to meet at least the maximum hourly demand of its customers.

a. State exactly what measurements were made of the maximum hourly usage of Webster. If the maximum hourly usage was not measured directly, state why it was not.

b. State exactly how the diurnal pattern for Webster's water system was determined. Also detail how the diurnal demand multipliers for any hydraulic analyses were determined. This response should be documented by appropriate field measurements.

4. Provide a pressure recording chart showing the actual 24-hour continuously measured pressure available at the locations listed below on Webster's water system. Identify the 24-hour period recorded, the exact location of the pressure recorder, and the sea level elevation of the recorder. Also state the schematic junction number nearest the location of the pressure recorder:

a. In the vicinity of all existing water storage tanks.

b. On the suction and discharge side of all existing pump stations.

c. In the vicinity of the proposed water storage tank locations.

d. Any other location necessary to provide a complete understanding of the existing system's operation in the proposed construction areas.

5. The previously filed computer hydraulic analyses for Webster's existing and proposed water distribution system indicate that the potential exists for low pressure (i.e., less than 30 psig) at Nodes 18 and 23. Such pressures violate Commission

Regulation 807 KAR 5:066, Section 5(1). What measures is Webster planning to take to protect against this possibility?

6. Webster filed information concerning its existing pump stations with its application. However pump curves were not submitted for all of the existing pump stations. In addition, the pump curves submitted do not match pump curves filed in previous cases before the Commission. Provide a copy of the manufacturer's pump characteristics (head/capacity) curve for each of the existing pumps. Identify each curve as to the particular pump and pump station to which it applies. Also state whether the pump is in use, and whether it will remain in use, be abandoned or replaced.

7. Webster presently utilizes a hydropneumatic station to serve its customers in the U.S. Hwy. 41A area. A 300,000-gallon tank is proposed in the U.S. Hwy. 41A area as part of the current case. Provide clarification on the disposition of the existing hydropneumatic station. If the pump station is to be used to fill the proposed tank, state whether any modifications to the pump station are included in the proposed construction.

8. The Division of Water ("DOW") approval for part of the proposed construction project expires on May 26, 1996. The Commission's review of this case may not be finalized prior to this date. Provide an updated approval from the DOW.

9. Provide the criteria used in determining the location, size, overflow elevation, and head range for the proposed water storage tanks. State what other sites were considered and why they were not selected. Provide, in detail, the engineering and

economic rationale for placing two water storage tanks on the same site rather than at different sites.

Done at Frankfort, Kentucky, this 22nd day of May, 1996.

PUBLIC SERVICE COMMISSION

Linda K Breathitt
For the Commission

ATTEST:

Don Mills
Executive Director