

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF BRACKEN COUNTY WATER)
DISTRICT #1 FOR A CERTIFICATE OF PUBLIC) CASE NO. 94-211
CONVENIENCE AND NECESSITY TO CONSTRUCT)
AND FINANCE A WATER STORAGE TANK)

O R D E R

IT IS ORDERED that Bracken County Water District #1 ("Bracken Water") shall file the original and one copy of the following information with the Commission, with a copy to all parties of record within 30 days from the date of this Order. Bracken Water 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. If the hydraulic analyses provided in response to this request are computer-generated, provide a copy of the input data on an IBM compatible 5 1/4-inch or 3 1/2-inch floppy disk.

2. Provide separate hydraulic analyses, supported by computations and actual field measurements, of typical operational sequences of the existing and proposed water distribution systems including the operation of all pump stations and the "empty-fill" cycle of all storage tanks. Provide labeled schematic maps of the existing and proposed systems showing pipeline sizes, lengths, and connections; pumps; storage tanks; wells; sea level elevations of key points; and allocations of actual customer demands. State

whether flows used in the analyses are based on average instantaneous flows, peak instantaneous flow, or any combination or variation thereof, and document with actual field measurements and customer use records. Justify fully any assumptions used in the analyses. If the proposed construction is in an area which can be hydraulically isolated from the rest of the system, only analyses for the isolated portion need be filed.

3. Provide a summary of any operational deficiencies of the existing system that are demonstrated by the hydraulic analyses or known from experience.

4. Calibrate the predicted results of the computer hydraulic analyses to actual hydraulic conditions by matching field measurements to the predicted results for, at a minimum, average and maximum water consumption periods and "fire flow" situations.

5. a. Provide field measurements of the system's maximum hourly usage.

b. Provide information on how the diurnal pattern for the system was determined. Also provide information on how the diurnal demand multipliers for the hydraulic analyses were determined.

6. For the locations listed below, provide a pressure recording chart showing the actual 24-hour continuously measured pressure available, and identify the 24-hour period recorded, the exact location and sea level elevation of the pressure recorder, and the schematic junction number nearest it:

a. Near the existing and proposed water tanks.

b. On the suction and discharge sides of each existing pump station.

c. Any other locations necessary to provide a complete understanding of the existing system operation in the proposed construction areas.

7. Provide a list of Bracken Water's storage tanks. Give the location, capacity, and overflow elevation of each tank. Explain how water is supplied to each tank.

8. Describe the proposed daily operational sequence of the system. Document the methods and mechanisms proposed to provide positive control of all storage tank water levels. Include an hourly summary, with appropriate field measurements and hydraulic calculations, of the expected inflow or outflow of water for all existing and proposed tanks and how the pumps will function.

9. Provide a highway map at a scale of at least one inch equals two miles marked to show pipeline sizes, locations, and connections; locations of pumps and water storage tanks, and sea level elevations of key points of the system.

10. Provide the criteria used in determining the location, size, overflow elevation, and head range for the proposed water storage tank. Provide detailed information on how the sea level elevation for the proposed tank site was determined. Identify the particular methods and specific vertical datum and bench marks used in this effort. In addition, state what other sites were considered and why they were not selected.

11. a. For each existing pump station, provide:
 - (1) its location;
 - (2) its purpose;
 - (3) its method of operation and control.
- b. For each existing pump, state:
 - (1) its location;
 - (2) its rated capacity;
 - (3) the manufacturer's characteristic (head/capacity) curve;
 - (4) its history of modification or renovation;
 - (5) whether it is in use, will remain in use, be abandoned, or will be replaced.
- c. For each proposed pump, state:
 - (1) its location;
 - (2) its rated capacity;
 - (3) the manufacturer's characteristic (head/capacity) curve.
12. Provide a copy of the bid tabulation whenever the bids are received.
13. Provide a copy of the final summation of the total cost of construction and funding arrangements referred to as a "Final Engineering Report" after the bids are received.
14. KRS 322.340 requires that: "Plans, specifications, plats and reports approved by a registrant shall be signed and dated by

the registrant and stamped with the seal when filed with public authorities." Provide appropriate documents which indicate compliance with KRS 322.340.

Done at Frankfort, Kentucky, this 16th day of September, 1994.

PUBLIC SERVICE COMMISSION


For the Commission

ATTEST:


Executive Director