COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF NORTH MANCHESTER WATER)
ASSOCIATION FOR A CERTIFICATE OF PUBLIC)
CONVENIENCE AND NECESSITY, AND FOR ORDERS) CASE NO. 93-396
APPROVING AN ADJUSTMENT IN WATER RATES)
AND CONSTRUCTION FINANCING)

O R D E R

IT IS ORDERED that North Manchester Water Association ("North
Manchester") shall file the 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. If the information cannot be provided
by this date, North Manchester should submit a motion for an
extension of time stating the reason for which a delay is necessary
and include a date by which the information will be furnished.
Such motion will be considered by the Commission. North Manchester
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.   Summarize 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.   What measurements were made of the systems's maximum hourly usage? If it was not measured directly, state why not.

b.   How was the diurnal pattern for the system determined? How were the diurnal demand multipliers for the hydraulic analyses determined?

c.   Provide field measurements to document responses to (a) and (b) above.

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 water tank.

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

c.   Near the proposed pump stations.

d.   Near the connection points of the proposed extensions to existing mains.

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

7.   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.

8.   Provide a highway map with a minimum scale of at least one inch equals two miles showing pipeline sizes, locations, and connections, locations of pumps and water storage tanks, and sea level elevations of key points of the system.

9.   Information in this case indicates that pressure below 30 psi will occur on Reed Branch Road, Rader Creek Road, Island Creek

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Road, and U.S. 421 after the proposed construction is completed, contrary to 807 KAR 5:066, Section 5(1). North Manchester indicates that affected customers will not receive service. The Commission has ruled in the past that any applicant who can meet the utility's tariffed requirements must be provided service. Provide details, documented with hydraulic analyses and field measurements, of any preventive measures or additional construction North Manchester intends to perform to ensure proper pressure on the lines.

     10. 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.

     11. For each proposed pump station, state:

       a. the manufacturer's characteristic (head/capacity) curve;

       b. how its operation will be controlled;

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c. the criteria used to select them and the proposed hydropneumatic pump station.

12. Provide a preliminary engineering report which complies with KRS 322.340.

13. On what basis were proposed pump stations of slab on grade, concrete block/brick veneer, built-up roof construction chosen? Was a conventional shingle roof considered? Was a pre-manufactured below ground pump station considered? If neither was considered, why not?

14. The proposed hydropneumatic pump station with a below ground precast concrete manhole and roof hatch has no positive ventilation and only five fee of headroom. On what basis was this design chosen?

Done at Frankfort, Kentucky, this 22nd day of December, 1993.

PUBLIC SERVICE COMMISSION

For the Commission

ATTEST:

Executive Director