

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF HARDIN COUNTY WATER)
DISTRICT NO. 1, A WATER DISTRICT ORGANIZED)
PURSUANT TO CHAPTER 74 OF THE KENTUCKY)
REVISED STATUTES, IN HARDIN COUNTY,)
KENTUCKY, FOR (1) A CERTIFICATE OF PUBLIC)
CONVENIENCE AND NECESSITY AUTHORIZING AND)
PERMITTING SAID WATER DISTRICT TO) CASE NO.
CONSTRUCT WATER STORAGE AND DISTRIBUTION) 10189
SYSTEM IMPROVEMENTS, CONSISTING OF)
ELEVATED STORAGE TANKS, AND WATER TRANS-)
MISSION LINES (THE PROJECT); (2) APPROVAL)
OF THE PROPOSED PLAN OF FINANCING OF SAID)
PROJECT; AND (3) APPROVAL OF INCREASED)
WATER RATES PROPOSED TO BE CHARGED BY THE)
DISTRICT TO ITS RETAIL AND WHOLESALE)
CUSTOMERS)

O R D E R

IT IS ORDERED that Hardin County Water District No. 1 ("the District") shall file an original and 12 copies of the following information with the Commission with a copy to all parties of record no later than October 21, 1988. If the information cannot be provided by this date, the District should submit a motion for an extension of time stating the reason a delay is necessary and include a date by which it will be furnished. Such motion will be considered by the Commission. The District shall furnish with each response the name of the witness who will be available at the public hearing for responding to questions concerning each item of information requested.

1. Provide a schedule showing all wells in 1986, 1987 and 1988. This schedule should indicate the following:

- a. Name of each well.
- b. Months during which the well was operating.
- c. Months during which the well was not operating and the reasons why it was not operational.
- d. Date which each well became operational.

2. Provide an itemized list of the various capital items included in the proposed construction project. Please state the estimated depreciable life of each item and how this estimate was derived.

3. Provide an explanation of the "drastic change in the nature and scope" of Contract No. 2 resulting from the Transportation Cabinet's involvement. What additional engineering work would be necessary to accommodate the change in the scope of the proposed construction project?

4. List those adjustments proposed in the original application which include labor charges that would fall under the category of "Special Charge - Unnecessary Service Call."

5. Provide an explanation for the \$3,805.64 expenditure included as Attachment 2 in the September 9, 1988 exceptions to the Staff report.

6. Provide the amount of the monthly minimum electric bill for power purchased at the Fort Knox connection at N. Wilson.

7. Provide a copy of the contract or agreement between the District and Fort Knox with regard to emergency water supply.

8. Justify why it is necessary to test hydrants after business hours. Indicate the type of pressure problems the District is experiencing, why these problems would only occur

during the District's business hours, and when these problems are expected to be corrected.

9. Explain why the District needs a new backhoe.

10. Explain how the services to be performed by Stiles, Carter and Mouser for the period of September 1, 1987 through December 31, 1988 differ in scope from those performed in previous years.

11. Was the contract to conduct a "Source-to-Tap" study awarded under a competitive bidding process? If yes, was the lowest bid chosen? If competitive bidding process was not used, how was contract awarded? Why was this procedure used?

12. Provide documentation to justify the expense of \$8,200 to move a service building from Pirtle Springs to Radcliff. Attachment 10 of the District's September 9, 1988 filing failed to include this documentation.

13. Provide a summary of Attachment 11 included in the September 9, 1988 filing. Several of the invoices are not legible and therefore, a fair adjustment could not be made. Please indicate how the various invoices relate to the Schedule of Fee Changes for 1988 included in that Attachment.

14. Is the District aware of any plans of Hardin County Water District No. 2 to become a producer of water? If yes, please describe these plans as you understand them.

15. If Hardin County Water District No. 2 does produce its own water, estimate the impact which its production of water will have on the District's sales, revenues, and expenses.

16. Will the proposed storage facilities be needed if Hardin County Water District No. 2 becomes a producer of water and reduces the amount of water which it purchases from the District? Explain your answer.

17. During the test year, how many pumps were operating at the West Point Well Field? If, at any time, more than two 125HP pumps were operating, please indicate the portion of test year purchased power expense applicable to the additional pumps and the time period in which additional pumps were operated.

18. Justify the need for a full-time employee to operate the meter testing program. How many meters are tested on an average workday?

19. Provide a copy of the engineering report which explains the need for the proposed construction.

20. A complete evaluation of the District's proposed construction requires more comprehensive hydraulic information. The additional hydraulic information for existing facilities should depict the operation of existing pumps, the "empty-fill" cycles of existing tanks, etc. The District should provide hydraulic analyses, supported by computations and actual field measurements, of typical operational sequences of the existing water distribution system. 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 system that shows pipeline sizes, lengths, connections, pumps, water storage tanks, and sea level elevations of all junctions, as well as allocations of actual customer demands. Flows used in the

analyses shall be identified as those 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 usage records. Any assumptions used in the analyses are to be fully justified.

21. Provide a summary of any operational deficiencies of the existing water system that are indicated by the hydraulic analyses or that are known.

22. The results of hydraulic analyses based on the proposed facilities being fully operational with existing facilities are essential to a demonstration that the new facilities as designed are needed. The information filed should depict pump operations, the "empty-fill" cycles of the water storage tanks, etc. Based on this, provide hydraulic analyses, supported by computations and actual field measurements, of typical operational sequences of the existing water distribution system. 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 system that shows pipeline sizes, lengths, connections, pumps, water storage tanks, and sea level elevations of all junctions, as well as allocations of actual customer demands. Flows used in the analyses shall be identified as those 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).

23. In order to obtain realistic results when utilizing computer hydraulic analyses to predict a water distribution system's performance, engineering references stress the importance of calibrating the results predicted to actual hydraulic conditions. This calibration process should include matching field measurements to the results predicted by the computer over a wide range of actual operating conditions. At a minimum this should include average and maximum water consumption periods, as well as "fire flow" or very high demand periods.

Based on the above, explain the procedures used to verify the computer hydraulic analyses filed in this case. This explanation should be documented by field measurements, hydraulic calculations, etc.

24. Provide a pressure recording chart showing the actual 24-hour continuously measured pressure available near the tank's pump stations, and several other representative locations on the District's 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.

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

26. Provide a list of the District's existing pump stations. Give the location, number of pumps and their rated capacities, and the purpose of each pump station. Explain how the operation of each pump station is controlled. Provide a copy of the pump manufacturer's characteristic (head/capacity) curve for each of the District's 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.

27. Provide a copy of the pump manufacturer's characteristic (head/capacity) curve on which the design of the proposed pump station is based.

28. Provide a narrative description of the proposed daily operational sequences 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 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.

29. Provide a distribution system map at a scale of at least one inch equals two miles marked to show the District's existing and proposed systems. The map of the systems shall show pipeline sizes, location, and connections as well as pumps, water storage tanks and sea level elevations of key points. The map shall also be marked to show the location of the District's boundaries and

labeled to indicate the appropriate court order from which each boundary was determined.

30. Has the Natural Resources and Environmental Protection Cabinet approved the construction of the proposed storage tanks and the proposed waterline along Kentucky Highway 313? If yes, provide written proof of its approval.

31. Has the District received all bids on the proposed construction project? If yes, provide a copy of the bid tabulation and the final summation of the cost of construction and funding arrangements, referred to as the Final Engineering Report. If no, when are all bids expected to be received?

32. If the proposed construction project is not approved by the Commission, would the District continue to seek approval for the 1988 bond series for the repayment of 1987 and 1988 bond notes? If so, provide a revised analysis of the projected debt service including a schedule of sources and uses of funds.

Done at Frankfort, Kentucky this 7th day of October, 1988.

PUBLIC SERVICE COMMISSION


For The Commission

ATTEST:

Executive Director