COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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| THE APPLICATION OF BULLOCK PEN WATER DISTRICT, OF GRANT, BOONE, PENDLETON, AND GALLATIN COUNTIES, KENTUCKY, FOR APPROVAL OF CONSTRUCTION, FINANCING, AND INCREASED WATER RATES | ) | CASE NO. 9720 |

O R D E R

IT IS ORDERED that Bullock Pen Water District ("Bullock Pen") shall file an original and seven copies of the following information with the Commission with a copy to all parties of record no later than December 29, 1986. If the information cannot be provided by this date, Bullock Pen 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. Bullock Pen 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 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, 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 proposed water distribution system previously filed).

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

3. 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. As 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.

4. Provide a pressure recording chart showing the actual 24-hour continuously measured pressure available at the locations listed below on Bullock Pen'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.

a. Water line at the sale points to the City of Dry Ridge.

b. The Verona water storage tank.

c. The Crittenden water storage tank.

d. The South water storage tank.

e. Water line in the vicinity of junction 5.

f. Water line in the vicinity of junction 16.

g. Water line in the vicinity of junction 21.

h. Water line in the vicinity of junction 28.

i. Water line in the vicinity of junction 29.

j. On the suction and discharge sides of the existing pump station near the sale point to the City of Dry Ridge (If pump is in service and used on a regular basis).

k. On the discharge side of the high service pumps.

l. On the suction and discharge sides of the existing pump station near Crittenden.

m. On the suction and discharge sides of the existing pump station near the South water storage tank.

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

6. Provide a list of each of Bullock Pen's existing pump stations (this list should include all high service pumps). 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 characteristics (head/capacity) curve for each of Bullock Pen's existing pumps. Identify each curve as to the particular pump and pump station to which it applies. Also state if pump is in use and if pump will remain in use, will be abandoned or will be replaced.

7. Provide the criteria used in determining the location, size, overflow elevation and head range for the proposed water storage tank.

8. Hydraulic information filed in Bullock Pen's last construction case (C.N. 9148) indicated a "Dry Ridge Loading Station". The hydraulic information filed in this case does not depict a Loading Station in the Dry Ridge area of Bullock Pen's system. Provide clarification on this matter. If there is a Dry Ridge Loading Station state whether the demand for the Dry Ridge Loading Station is included in the hydraulic analysis to be filed in response to this Information Request. Also clarify if the demand is included in the hydraulic analysis filed with the application.

9. Provide the pertinent information which was analyzed that led to the conclusion that Bullock Pen's water treatment plant should be renovated and expanded. As a minimum this should include Bullock Pen's peak day usage; Bullock Pen's projected

annual peak day demands, how they were forecasted, and when 1 million gallons per day (GPD) will be needed. Also provide information concerning the documented problems with water quality which occur when more than 300,000 GPD are produced.

Done at Frankfort, Kentucky, this 24th day of November, 1986.

PUBLIC SERVICE COMMISSION

Richard D. Heman Jr.
For the Commission

ATTEST:

Executive Director