## COMMONWEALTH OF KENTUCKY

## BEFORE THE PUBLIC SERVICE COMMISSION

\* \* \* \* \*

## In the Matter of:

THE APPLICATION OF THE CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT, A WATER DISTRICT ORGANIZED PURSUANT TO CHAPTER 74 OF KENTUCKY REVISED STATUTES, OF CRITTENDEN AND LIVINGSTON COUNTIES, KENTUCKY, FOR (1) A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY, AUTHORIZ-ING AND PERMITTING SAID WATER DISTRICT CASE NO. 8985 TO ACQUIRE AND CONSTRUCT A NEW WATER-WORKS SYSTEM, CONSISTING OF A WATER TREATMENT PLANT, PUMPING STATIONS, AND THE NECESSARY DISTRIBUTION SYSTEM AND LINES NEEDED TO SERVICE WATER TO SAID DISTRICT; (2) APPROVAL OF THE PROPOSED PLAN OF FINANCING OF SAID PROJECT: (3) APPROVAL OF THE WATER RATES PROPOSED TO BE CHARGED BY THE DISTRICT TO CUSTOMERS OF THE DISTRICT

## ORDER

IT IS ORDERED that Crittenden-Livingston County Water District shall file an original and 5 copies of the following information within 20 days from the date of this Order. Each copy of the information should be placed in a bound volume with each item tabbed. When a number of pages are required for an item, each item should be indexed, for example, Item 1, Page 2 of 6. Include with each response the name of the witness who will be responsible for responding to questions relating to the information. Careful attention should be given to copied material to insure that it is legible. Where information has already been provided, reference may made to the location of the information in the record of the case.

If neither the information nor a motion for an extension of time is filed by the due date, the case may be dismissed.

- 1. A copy of the district's proposed tariff stating all proposed rates and charges, terms and conditions, and rules and regulations.
- 2. A billing analysis stating expected annual operating revenues from sales of water showing billing units, gallons of water sold, and revenues by class of service as outlined in Format No. 1. (The format is designed for reporting metered sales of water. In the event the district expects to have unmetered sales of water or other items such as fire hydrant revenues included in operating revenues from sales of water, these should be reported on a separate page).
- 3. An analysis of expected average monthly and total annual water usage per customer by class of service.
- 4. An analysis of expected total average daily water demand, total maximum day water demand, and total annual water demand.
- 5. A analysis of the weighted average monthly and total annual sales of water to the 188 customers served on the existing Marion-Salem distribution line for the 12-month period ended December 31, 1983.
- 6. An analysis of total average daily water demand, total maximum day water demand, and total annual water demand

to the 188 customers served on the existing Marion-Salem distribution line for the 12-month period ended December 31, 1983.

- 7. A reconciliation of any difference between operating revenues from sales of water stated in the operating budget and the billing analysis.
- 8. A list of all non-recurring charges that the district proposes to implement.
- 9. A cost study for each non-recurring charge that the district proposes to implement. (Format No. 2 should be used for all non-recurring charges except meter connections. Format No. 3 should be used for meter connections).
- 10. A billing analysis stating expected annual operating revenues from non-recurring charges. The billing analysis should state the name of each non-recurring rate element, the number of expected billing units, the proposed rate, and the amount expected revenues.
- 11. A reconciliation of any difference between total other operating revenues stated in the operating budget and non-recurring charges billing analysis.
- 12. If the district expects to provide public or private fire protection service, an analysis of the number of public and private hydrants expected by hydrant size, proposed public and private hydrant rates, and expected revenues from fire protection service.

- 13. If the district expects to provide public or private fire protection service, an analysis of expected plant investment, operation and maintenance expense, depreciation and amortization expense, and taxes attributable to fire protection service.
- 14. A brief narrative description of the district's proposed rate design. (The narrative should address class of service distinctions, minimum bill vs. customer charge rate structure, usage rate structure, and non-recurring rate structure, for example).
- 15. If the district's proposed usage rate structure is declining block, a brief narrative description of any other rate design alternatives that were considered by the district.
- 16. An explanation of the district's proposed surcharge to the 188 customers served on the Marion-Salem distribution line.
- 17. An explanation of the district's proposed sale for resale rate to Salem.
- 18. In the introduction of the Engineering Report filed March 27, 1984, it is stated that Crittenden County Water Company, Inc., was incorporated in 1971, but that no facilities had ever been constructed and that it was not presently operating a water system. It further stated that the Crittenden County Water Company, Inc., had a contractural agreement with the City of Salem to purchase a portion of the 8-inch water transmission main between Salem and Marion.

- (a) Provide a copy of the aforementioned contract.
- (b) Is this contract the sole basis for the purchase of the Marion-Salem main by the newly created Crittenden-Livingston County Water District? If not, provide an explanation of any other basis.
- 19. It is further stated in the same Engineering Report that Burna Water District had never constructed a water distribution system and would be merged into the newly created district and that those involved with Burna Water District were willing to release their interest to the new, larger water district.
- (a) When was Burna Water District formed by the Livingston County Fiscal Court?
- (b) Is Burna Water District the predecessor to the Livingston portion of the newly formed district?
- (c) Has the interests of Burna Water District been recognized by the Livingston County Fiscal Court? If so, when?
- 20. It is further stated that the water transmission main which connects Marion and Salem is owned by Salem and was constructed in 1971-72 with EDA funds.
- (a) What was the original cost of the above-mentioned transmission line between Marion and Salem?
- (b) Is the entire line or some portion of the line referenced in the contract with Crittenden Water Company, Inc.? If less then the entire line, provide an explanation

of how the line is divided and the allocation of its cost to each segment.

- (c) At what price is this transmission main to be transferred to the Crittenden-Livingston Water District?
- (d) How has the cost of the transmission main been recognized in the plan of financing?
- (e) Was any portion of the transmission main financed originally with grant funds? If so, how much?
- (f) Will additional master metering be necessary on this line since in effect water flow will be reversed.
- 21. Is the City of Marion presently the sole source of public treated water in the area encompassed by the newly created district.
- 22. At page 3 of the Engineering Report, it is stated that treated water from the proposed construction will be pumped to an existing standpipe between Salem and Marion.
- (a) Is this standpipe on the above-mentioned Marion-Salem transmission main?
  - (b) Who presently owns this standpipe?
- (c) Will this standpipe remain the property of the water system in response to question 5(b)? If not, at what price will this standpipe be transferred to the newly created district?
- (d) Will there be any rental or other compensation from the Crittenden-Livingston Water District to the present owner?

- 23. It is further stated that the District will purchase the 8-inch line between Salem and Marion and the 132 + 38 (Marion) + 18 (Salem) = 188 customers on that line will become district customers.
- (a) Please explain the customer portion of this statement.
- (b) Are these presently 188 customers on this line receiving water service? If not, how many?
- (c) Does this statement indicate that 38 and 18 customers are presently served by Marion and Salem respectively and that 132 customers will be added on the Marion-Salem Transmission main.
- (d) If the 132 customers are neither Salem nor Marion customers, identify these customers.
- (e) Provide a schedule of rates presently charged those customers of Salem and Marion, respectively.
- (e) What compensation are the Cities of Salem and Marion requiring for the release of the above customers?
- 24. It is stated that the City of Salem is expected to purchase all their water from the newly created district. Provide a copy of the water purchase agreement between Salem and the district.
- 25. It is further stated that the City of Marion may purchase water from the water district at some time in the future as per their tap on agreement and water purchase contract.

- (a) Provide a copy of this (these) agreement(s) between the district and the City of Marion.
- (b) Will the City of Marion continue to operate its treatment plant?
- (c) What consideration has been given to the loss of revenue to the City of Marion?
- 26. FmHA requires 718 customers for the system to be viable. How many customers have presently signed for water service?
- 27. Has the final Engineering Report been provided to the Commission? If not, when can it be expected?
- 28. Has Notice of Bids been advertized? If not, when are they scheduled?
- 29. Have bids been opened? If not, when are they scheduled to be opened?
- 30. If bids have been opened, for what period will the bids be effective?
- 31. Has the Commission received the final amended FmHA Letter of Conditions? If not, provide when available.
- 32. Has the Kentucky Department of Natural Resources and Environmental Protection given its final approval to the proposed project? If so, provide a copy. If not, provide when available.
- 33. With reference to the operating budget submitted April 5, 1984:
- (a) How many full-time and part-time employees will the District have?

- (b) What is inlcuded in the \$23,000 amount shown for General and Administrative?
- (c) What is included in the \$4,000 amount shown for Miscellaneous?
  - 34. With regard to Table IV-3:
    - (a) What does the term "80% Sign-Up" imply?
    - (b) Where has the proposed surcharge been shown?
- (c) What is the billing arrangement with the school?
- 35. Provide narrative description of the proposed daily operational sequences of the water system. Documentation should include the methods and mechanisms proposed to provide positive controls of the water levels in all tanks. Narrative description should also include how all tanks will "work" (expected inflow and outflow of water and approximate times of day) and how all pumps will function. Any assumptions are to be fully supported by appropriate measurements and hydraulic calculations.
- 36. Provide detailed description of the existing water system which will be incorporated into the proposed system of the water district. (Include all lines, tanks, pumps, etc.). Also state if any of the existing system is to be abandoned, changed, etc. Also provide information concerning flow characteristics of existing system. Flow characteristics

should be documented by appropriate measurements and hydraulic calculations.

Done at Frankfort, Kentucky, this 1st day of May, 1984.

PUBLIC SERVICE COMMISSION

Por the Commission

ATTEST:

Acting Secretary

## Name of Utility

Case No.

### **BILLING ANALYSIS**

The billing analysis is the chart reflecting the usage by the customers as well as the revenue generated by a specific level of rates. A billing analysis of both the current and proposed rates is mandatory for analysis of this rate filing. The following is a step-by-step description which may be used to complete the billing analysis. A completed sample of a billing analysis is also included. Although the sample reflects water usage, it is equally applicable for gas companies using a declining block rate design. This billing analysis is not intended for companies using a flat rate design.

## a. Usage Table (Usage by Rate Increment)

Information needed to complete the usage table should be obtained form the meter books or other available usage records. The usage table is used to spread total usage into the proper incremental rate step. Initial recording of usage should be in 100 gallon increments. Where there are only a few very large users or contract customers, actual usage should be used. Usage between 0-100 gallons should be shown as 100, between 101-200 as 200, etc. The usages and customers are then combined for purposes of the usage table as follows:

Column No. 1 is the incremental step in the present or proposed rate schedule for which the analysis is being made. Column No. 2 is the number of bills in each incremental rate step. Column No. 3 is the total gallons used in each incremental rate step. Column No.'s 4-9 are labeled to correspond to the incremental rate steps shown in Column No. 1 and contains the actual number of gallons used in each incremental rate step.

Example for completing Usage Table is as follows:

Column No. 1 is incremental rate steps.

Columns No. 2 and 3 are completed by using information obtained from usage records.

Columns No.'s 4-9 are completed by the following steps:

Format 1
Page 2 of 4

- Step 1: 1st 2,000 gallons minimum bill rate level
  432 Bills
  518,400 gallons used
  All bills use 2,000 gallons or less, therefore,
  all usage is recorded in Column 4.
- Step 2: Next 3,000 gallons rate level
  1,735 Bills
  4,858,000 gallons used
  1st 2,000 minimum X 1,735 bills = 3,470,000
  gallons record in Column 4
  Next 3,000 gallons remainder of water over
  2,000 = 1,388,000 record in Column 5
- Step 3: Next 10,000 gallons rate level
   1,830 Bills
   16,268,700 gallons used
   1st 2,000 minimum X 1,830 bills = 3,660,000
   gallons record in Column 4
   Next 3,000 gallons X 1,830 bills = 5,490,000
   gallons record in Column 5
   Next 10,000 gallons remainder of water over
   3,000 = 7,118,700 gallons record in Column 6
- Step 4: Next 25,000 gallons rate level
  650 Bills
  15,275,000 gallons used
  1st 2,000 minimum X 650 bills = 1,300,000
  gallons record in Column 4
  Next 3,000 gallons X 650 bills = 1,950,000
  gallons record in Column 5
  Next 10,000 gallons X 650 bills = 6,500,000
  gallons record in Column 6
  Next 25,000 gallons remainder of water over
  10,000 = 5,525,000 gallons record in
  Column 7
- Step 5: Over 40,000 gallons rate level
  153 Bills
  9,975,600 gallons used
  1st 2,000 minimum x 153 bills = 306,000 gallons
   record in Column 4
  Next 3.000 gallons x 153 bills = 459,000 gallons
   record in Column 5
  Next 10,000 gallons x 153 bills = 1,530,000
  gallons record in Column 6
  Next 25,000 gallons x 153 bills = 3,825,000
  gallons record in Column 7
  Over 40,000 gallons remainder of water over
  25,000 = 3,855,600 gallons record in
  Column 8

Format 1 Page 3 of 4

Step 6: Total each column for transfer to Revenue Table.

## b. Revenue Table (Revenue by Rate Increment)

Revenue Table is used to determine the revenue produced from the Usage Table. Column No. 1 is the incremental rate steps in the rate schedule for which the analysis is being made. Column No. 2 indicates the total number of bills. Column No. 3 is the number of gallons accumulated in each rate increment (Totals from Columns 4, 5, 6, 7 and 8 of the above usage table). Column No. 4 is the rates to be used in determining revenue. Column No. 5 contains revenue produced.

Example for completing Revenue Table is as follows:

Complete Columns No. 1, 2 and 3 using information from Usage Table.

Complete Column No. 4 using rates either present or proposed.

Column No. 5 is completed by first multiplying the bills times the minimum charge.

Then, starting with the second rate increment, multiply Column No. 3 by Column No. 4 and total.

## Name of Utility

Case No.

# Revenue from Present/Proposed Rates

Test Period from to to

USAGE TABLE

## Usage by Rate Increment

Total	First 2,000: Min. Bill Next 3,000 Gallons Next 10,000 Gallons Next 25,000 Gallons Over 40,000 Gallons	Class: Residential (1)
4,800	432 1,735 1,830 650 153	(2) Bills
46,895,700	518,400 4,858,000 16,268,700 15,275,000 9,975,600	(3) Gallons/MCF
9,254,400	518,400 3,470,000 3,660,000 1,300,000 306,000	(4) lst. 2,000
9,287,000	1,388,000 5,490,000 1,950,000 459,000	(5) Next 3,000
15,148,700	7,118,700 6,500,000 1,530,000	(6) Next 10,000
3,700 9,350,000	5,525,000 3,825,000	) (7) (8) 10,000 Next 25,000 Over 40,000
3,855,600	1 3,855,600	(8) Over 40,000
46,895,700	518,400 4,858,000 16,268,700 15,275,000 9,975,600	(9) Total

## REVENUE TABLE

# Revenue By Rate Increment

	First 2,000: Min. Bill Next 3,000 Gallons Next 10,000 Gallons Next 25,000 Gallons Over 40,000 Gallons	(1)
	4,800	(2) Bills
	9,254,400 9,287,000 15,148,700 9,350,000 3,855,600	(3) Gallons/MCF
	\$5.00 Min. 2.50 2.00 1.25 .75	(4) Rate
\$92,094.10 Total Revenue	\$24,000.00 23,217.50 30,297.40 11,687.50 2,891.70	(5) Reverue

## Format No. 2

## Name of Utility

Case	No.	
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	Special Charge Cost Schedule	
Name	of Special Charge:	
I. Fi	eld Expense	
	A. Materials (Itemize)	
		\$
		4
	B. Labor (Time and Wage Rate)	
	Subtotal Field Expense	\$
II. C	Clerical and Office Expense	
	A. Supplies	
	B. Labor (Time and Wage Rate)	
	Subtotal Clerical and Office Expense	\$
III.	Miscellaneous Expense	
	A. Transportation (Average Mileage and Mileage Rate)	
	B. Other (Itemize)	
	· ·	
	Subtotal Miscellaneous Expense	\$
	Total Special Charge Expense	
	forer phecial cuards exhause	\$

Format No. 3 Page 1 of 2

## Name of Utility

Case No.

	Average Metere	ed Service Con	nection Expens	e	
A.	Meter Size				
	5/8-Inch [] 3/4-Inch [Other (Specify)			2-Inch []	
В.	Materials Expense				
		Quantity	Unit Cost	Total Cost	
	1. Water Meter		\$	\$	~
	2. Meter Yoke				
	3. Corporation Stop	***************************************			····
	4. Meter Box and Top				
	<ol><li>Miscl. Fittings (Itemize)</li></ol>				

## C. Service Pine P

rvice Pipe Expense					
Type of Service Pipe:	,				
Size of Service Pipe:					
	Ouantity	Unit Cost		Total Cost	
1. Short Side Service	LF	\$	LF	\$	_
2. Long Side Service	LF		LF		_
<ol> <li>Subtotal (Add lines 2 and 3 and divide by 2)</li> </ol>				\$	

Format No. 3 Page 2 of 2

D.	Installation Expense			
	Labor	Total Hours	Rate Per Hour	Total Cost
	1. Short Side Service		\$	\$
	2. Long Side Service		· · · · · · · · · · · · · · · · · · ·	
	<ol> <li>Subtotal (Add lines 2 and 3 and divide by 2)</li> </ol>			\$
	Equipment	Total Hours	Rate Per Hour	Total Cost
	1. Short Side Service		\$	\$
	2. Long Side Service	-		••••••••••••••••••••••••••••••••••••••
	<ol> <li>Subtotal (Add lines 2 and 3 and divide by 2)</li> </ol>			\$
	Miscellaneous	Total Hours	Rate Per Hour	Total Cost
	1. Inspection	- William Will	\$	\$
	2. Site Clean-up			
	<ol><li>Other (Itemize on separate page)</li></ol>		***************************************	·
	<ol> <li>Subtotal (Add lines 1 through 3)</li> </ol>			\$
Z.	Overhead Expense			
	l. Installation expense (%) = Over	(\$_ head expense \$_	) x Overhea	nd rate -
F.	Administrative Expense			
	1. Office expense for expense for expense = \$	stablishing a (	new account and	billing
G.	Expense Summary			
	1. Total of items B thro	ough F = \$		