

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY-AMERICAN )	
WATER COMPANY FOR A )	
DETERMINATION BY THE PUBLIC )	
SERVICE COMMISSION OF THE )	CASE NO.
ADEQUACY OF ITS WATER STORAGE )	2005-00546
CAPACITY ANALYSIS DATED DECEMBER )	
21, 2005 AND FOR A DEVIATION FROM )	
807 KAR 5:066, SECTION 4 (4), UNTIL )	
DECEMBER 31, 2020, PURSUANT TO 807 )	
KAR 5:066, SECTION 18 )	

ORDER

On December 22, 2005, Kentucky-American Water Company (“Kentucky-American”) submitted an application to the Commission requesting approval of its Water Storage Capacity Analysis (“2005 Analysis”), and requesting authority to deviate from 807 KAR 5:066, Section 4(4) until December 31, 2020. This regulation states, “The minimum storage capacity for systems shall be equal to the average daily consumption.” The 2005 Analysis is unique to Kentucky-American, and is the result of prior orders issued by the Commission dating back to 1988.

In Case No. 10237<sup>1</sup>, Kentucky-American requested a determination by the Commission that its existing water storage was adequate pursuant to 807 KAR 5:066,

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<sup>1</sup> Case No. 10237, The Application of Kentucky-American Water Company for Determination by the Public Service Commission That Its Existing Water Storage is Adequate Pursuant to 807 KAR 5:066, Section 5(4), Order dated May 9, 1988.

Section 5(4).<sup>2</sup> At that time, Kentucky-American had 12.21 million gallons of treated water storage in the distribution system and another 2.95 million gallons of storage at the Kentucky River Treatment Plant, for a total of 15.16 million gallons of treated water storage capacity. Average daily consumption was 38.2 million gallons.

In the Order dated May 9, 1988, Kentucky-American was directed by the Commission to conduct a comprehensive engineering study of its water system, including the necessary hydraulic and economic analyses to determine the appropriate water storage requirements for its system. The Commission also granted a deviation from the water storage requirement until July 1, 1993, at which time the study was to be completed.

On November 17, 1993, Kentucky-American submitted an application for a determination by the Commission of the adequacy of its Water Storage Capacity Analysis ("1993 Analysis") and for a deviation from 807 KAR 5:066, Section 4(4) until December 31, 2005, pursuant to 807 KAR 5:066, Section 18.<sup>3</sup> The 1993 Analysis was created to comply with the directive in the 1988 Order.

Three zones were defined for the Kentucky-American system in the 1993 Analysis. The Main Service Zone covers the larger part of Fayette County including the urban service area. The North Counties High Service Zone covers parts of northern Fayette County plus the balance of the system in the counties north of Fayette, with the exception of Sadieville. The Sadieville Zone is a small reduced pressure zone serving

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<sup>2</sup> The regulation was re-numbered to 807 KAR 5:066, Section 4(4).

<sup>3</sup> Case No. 1993-00432, Application of Kentucky-American Water Company for a Determination by the Public Service Commission of the Adequacy of Its Water Storage Capacity Analysis and for a Deviation from 807 KAR 5:066, Section 4(4) Until December 31, 2005, Pursuant to 807 KAR 5:066, Section 18.

Sadieville. The 1993 Analysis determined that an appropriate way for Kentucky-American to meet its storage requirements was to provide one day's storage in the North Counties High Service Zone and the Sadieville Zone. The storage requirement in the Main Service Zone was proposed as a minimum of one-half of the average daily requirement in the Main Service Zone in finished storage, with up to one-half provided by standby production and pumping facilities at the treatment plants (the "50/50 plan").

Kentucky-American justified the 50/50 plan by arguing that the intent of 807 KAR 5:066, Section 4(4) is to require a water utility to have sufficient capability to deliver one day's supply of potable water to its customers during emergency conditions. Kentucky-American stated that:

[F]or the Main Service Zone one day's emergency supply capability should be defined as: (1) usable distribution system storage of one-half of the average day system delivery and a minimum of one-half of the average day system delivery from standby emergency pumping and production capacity; or (2) the storage necessary to provide equalization for the maximum day plus fire fighting requirements, whichever is greater. Because of the remoteness of the High and Sadieville Service Zones from the standby emergency pumping and production facilities, one day's emergency supply capability for those zones should be defined as usable distribution storage of one average day system delivery.<sup>4</sup>

In the application, Kentucky-American projected an average daily consumption of 37.21 million gallons in the Main Service Zone by 2005. Without building any new storage and implementing the criteria set forth in the 50/50 plan, this would result in a storage deficit of 7.95 million gallons.<sup>5</sup> Kentucky-American also projected average daily

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<sup>4</sup> Case No. 1993-00432, Application dated November 17, 1993, at 2-3.

<sup>5</sup> Application, Exhibit A, at 10.

consumption in the High Service Zone would be 2.39 million gallons, which would result in a storage deficit of 1.44 million gallons by 2005.<sup>6</sup> The Sadieville Service Zone demand was projected at .08 million gallons per day with no storage deficit.<sup>7</sup>

The application stated that Kentucky-American planned to build three storage tanks, each with a 3 million-gallon storage capacity, in the Main Service Zone (9 million gallons total), and a 0.75 million gallon tank along with a 1 million gallon tank in the High Service Zone (1.75 million gallons total) by 2005 to eliminate the projected deficits.<sup>8</sup> The total cost of the projects was estimated at \$8,890,000 (1992 dollars). Kentucky-American also estimated that building enough storage to provide for 100 percent storage capacity in the Main Service Zone would cost an additional \$17,000,000 to \$20,000,000. Kentucky-American went on to claim that the additional potable water storage facilities could lead to water quality problems during periods of low demand and are not necessary to meet its obligations as a public utility.<sup>9</sup>

In its Order dated December 20, 1993, the Commission found that the 50/50 combination method provides a reasonable, operationally sound, and cost-effective method of delivering one day's supply of water in emergency conditions for the Main Service Zone.<sup>10</sup> The Commission also found that because of the time necessary to plan, finance, and implement a program to construct water storage facilities to comply

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<sup>6</sup> Id. at 11.

<sup>7</sup> Id. at 11.

<sup>8</sup> Application at 3.

<sup>9</sup> Id. at 4.

<sup>10</sup> Case No. 1993-00432, Order dated December 20, 1993, at 3-4.

with the 50/50 combination method and to construct the facilities needed in the High Service Zone, Kentucky-American should be allowed a deviation until December 31, 2005.<sup>11</sup> The first ordering paragraph granted a deviation from 807 KAR 5:066, Section 4(4), with no expiration stated. The second ordering paragraph approved Kentucky-American's Analysis as complying with 807 KAR 5:066, Section 4(4). In paragraph three, the Commission allowed Kentucky-American until December 31, 2005 to comply "with the provisions of its application to deviate from 807 KAR 5:066, Section 4(4), as described in this Order."

#### CURRENT REQUEST

In the application filed December 22, 2005 in the instant case, Kentucky-American requests that the Commission "determine the adequacy of its Water Storage Capacity Analysis attached (to its application) and that it be authorized to deviate from the requirements of 807 KAR 5:066 Section 4(4) until December 31, 2020, by construction of an additional 3,000,000 gallon pumped storage tank, all pursuant to the authority contained in 807 KAR 5:066, Section 18."

The 2005 Analysis still proposes that storage requirements should be addressed by maintaining storage capacity in the High Service and Sadieville Service Zones equal to 100 percent of the average daily demand. It also continues to propose that the storage requirement in the Main Service Zone be accomplished by maintaining at least 50 percent of the average daily demand in finished water storage capacity, with the remainder of the average daily demand being provided by backup pumping and treatment capacity. The 2005 Analysis shows that the Sadieville Zone has sufficient

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<sup>11</sup> Id. at 4.

storage capacity to meet the projected average daily demand through 2020. The 2005 Analysis also indicates that the Main Service Zone has enough finished water storage to provide 2.10 million gallons more than what is necessary to achieve 50 percent of the average daily demand projected for 2020 with no additions.

Kentucky-American also has enough standby pumping capacity at the current water treatment plants to provide 19.4 million gallons per day of raw water and to pump at a rate of 26.4 million gallons per day of treated water from the plants to the distribution system. However, since the plant will be limited by its capacity to obtain raw water, the backup pumping capacity should be considered to be 19.4 million gallons per day. For the Main Service Zone, this represents 52 percent of the 2005 average daily demand of 37.21 million gallons per day, but only 45 percent of the 42.84 million gallons per day average daily demand projected for 2020. However, since the 50/50 plan only requires that at least 50 percent of the daily demand be provided by storage, and up to 50 percent be provided by backup treatment and pumping capacity, there is no deficit under the requirements of the plan in the Main Storage Zone.

The 2005 Analysis indicates an average daily demand of 3.87 million gallons per day in the High Service Zone for 2005, with a projected average daily demand of 4.45 million gallons per day by 2020. Currently only 2.71 million gallons of storage capacity exist within the geographic area of the High Service Zone. The 2005 Analysis anticipates, however, that the storage requirements could be supplied from the Main Service Zone without affecting the Main Service Zone's own capacity for backup. Under this scenario, there is no storage deficit until sometime between 2015 and 2020 if no storage or backup supply capacity is added beyond what exists today. The 2005

Analysis did note that an additional 3 million gallon storage tank would be built between 2006 and 2009 as part of an additional source of supply project. Given this plan, Kentucky-American would not be in violation of the approved 50/50 plan at least through the year 2020.

### FINDINGS

1. The 50/50 plan was approved in Case No. 1993-00432 without expiration. There is no need to continue to approve the plan, although the Commission may, of course, choose to re-examine the 50/50 plan in the future on its own motion or as otherwise provided by law. The request to approve it should be denied as moot, at this time.

2. Kentucky-American does not need a deviation from 807 KAR 5:066, Section 4(4), since it does not now violate the regulation and does not project a violation in its application. The planned 3 million gallon tank is proposed to be built at least 5 years before the system would experience a storage deficit without it. Therefore, the request should be denied as unnecessary.

IT IS THEREFORE ORDERED that:

1. Kentucky-American's request for approval of its 2005 Water Storage Capacity Analysis is denied as moot.

2. Kentucky-American's request for permission to deviate from 807 KAR 5:066, Section 4(4), is denied without prejudice.

Done at Frankfort, Kentucky, this 31<sup>st</sup> day of July, 2007.

By the Commission

ATTEST:

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke at the end, positioned above a solid horizontal line.

Executive Director