PAW STATEMENT NO. 2

DIRECT TESTIMONY
OF
DAVID R. KAUFMAN

WITH REGARD TO
PENNSYLVANIA AMERICAN WATER
COATESVILLE WASTEWATER OPERATIONS
CLAIMED PLANT ADDITIONS

DOCKET NO. R-2010-2166212

DATE: April 23, 2010

DIRECT TESTIMONY OF DAVID R. KAUFMAN

I. INTRODUCTION

1. Q. Please state your name and business address.

A. My name is David R. Kaufman, and my business address is 800 West Hershey Park Drive, Hershey, Pennsylvania 17033.

2. Q. By whom are you employed and in what capacity?

A. I am employed by Pennsylvania-American Water ("PAW" or the "Company") as Vice President of Engineering.

3. Q. Please describe your educational background and business experience.

A. In 1975, following graduation from Pennsylvania State University with a Bachelor of Science Degree in Civil Engineering, I accepted an engineering position with Pennsylvania Gas and Water Company ("PG&W") in Wilkes-Barre, Pennsylvania. I remained in that position until 1989, when I was promoted to Manager of Water Engineering for PG&W. In August 1991, I was promoted to Vice President of Water Resources for PG&W. In that position, I was responsible for PG&W's water operations relating to water supply, water quality and treatment, water engineering and planning. When the water assets of PG&W were acquired by PAW in February 1996, I accepted an Operations Manager position with the Company in its Northeast Region. I remained in that position until February 2001, when I was promoted to Manager of Northeast Operations. In 2004, I accepted the position of Director of Engineering – Southeast Region with American Water Works Service

Company and remained in that position until I accepted the position of Vice President of Engineering for PAW. I am a registered Professional Engineer in Pennsylvania and hold a Class A1 water treatment plant operator's license.

4. Q. Do you belong to any professional or industry associations?

A. Yes, I am a member of the American Water Works Association, the American Society of Civil Engineers and the Water Environmental Federation.

5. Q. What are your duties and responsibilities in your current position?

A. As Vice President of Engineering for PAW, I am responsible for the administration of engineering services, including the planning, design and construction of water and wastewater capital investment projects, for all of PAW's systems and facilities.

6. Q. What is the purpose of your testimony?

A. The principal purpose of my testimony is to explain the Company's claimed plant additions to its Coatesville wastewater operations. Additionally, I will introduce the infiltration and in-flow study that was performed pursuant to a term of the settlement of the last base rate case for the Coatesville wastewater system.

II. DESCRIPTION OF PLANT ADDITIONS

7. Q. Please describe the Company's plant additions since the last rate case and the claimed plant additions for the future test year.

A. In 2009, the Company made gross plant additions (inclusive of projects funded by customer advances and contributions) totaling $40,768,778. This amount consists primarily of the

additions associated with the initial phase of the Coatesville Wastewater Treatment Plant upgrade. The initial phase of the plant upgrade was placed in service in 2009.

Additionally, the Company has undertaken gross plant additions (inclusive of projects funded by customer advances and contributions) totaling $18,618,393 for the 12 months ending December 31, 2010. When projected retirements of $3,496,361 are taken into account, most of which are associated with the Coatesville Wastewater Treatment Plant, the net increase in plant in service in 2010 is estimated to be $15,122,033.

8. Q. In general terms, what types of projects are included in the $18.0 million claim?

A. I am sponsoring the portion of Exhibit 3-B which sets forth the Company's claimed future plant additions by applicable property account and by Project Number. Additionally, the estimated completion date and associated retirements for each project are shown. As can be seen from the projects listed in Exhibit 3-B, the Company's claimed plant additions vary from what may be characterized as small, routine projects, such as the installation of new or replacement manholes to substantially larger projects, such as the Coatesville Wastewater Treatment Plant.

9. Q. Are there any particular projects that, because of their size or importance, would like to discuss further?

A. Yes. While there are many individual plant additions detailed in Exhibit 3-B, the larger components of the Company's claimed plant additions are described below.

A. Coatesville Wastewater Treatment Plant Upgade

10. Q. Why was it necessary to upgrade the Coatesville Wastewater Treatment Plant?

A. The Coatesville Wastewater Treatment Plant is located in the Borough of South Coatesville and discharges to the West Branch of Brandywine Creek. The plant was originally constructed in 1932 and has been expanded and upgraded several times. It provides sewage treatment service for homes and businesses in the following ten municipalities in Chester County, Pennsylvania: City of Coatesville, Borough of Parkesburg, and the Townships of East Fallowfield, Highland, West Caln, West Sadsbury, Valley, Caln, West Brandywine and Sadsbury.

Customer growth in the service area over the prior years resulted in increased flows to the wastewater treatment plant approaching the plant's permitted average annual flow capacity of 3.85 million gallons per day ("MGD"). Previous Chapter 94 Annual Municipal Wasteload Management reports submitted to the Pennsylvania Department of Environmental Protection (PaDEP) identified projected hydraulic overload conditions due to anticipated connections. PAW entered into a Consent Order and Agreement ("CO&A") with the PaDEP on November 30, 2005 and agreed to: (1) limit customer connections in accordance with a Department-approved Connection Management Plan ("CMP") due to the projected hydraulic overload condition; (2) submit permit applications and award construction contracts for plant expansion by certain dates, and 3) complete construction of the expanded plant within 24 months of the issuance of all necessary permits.

The plant's hydraulic design capacity was based upon an average daily flow of 7 MGD, with provisions for future expansion, and a peak hourly design flow rate of 21 MGD. The

treatment process was changed from trickling filter-extended aeration to a new biological nutrient removal process utilizing oxidation ditches to enable the plant to meet more stringent NPDES effluent limitations imposed by PaDEP. The existing treatment processes were incapable of handling the increased hydraulic and organic loadings and reliably meeting the more stringent effluent limitations and could not be effectively expanded.

Where appropriate, existing parts of the treatment plant were re-utilized. However, the existing plant infrastructure was in poor and deteriorating condition and many of the existing treatment facilities were at or near the end of their useful life and would have required substantial rebuilding or modification for continued service.

11. Q. How was the capacity of the expanded plant determined?

A. PAW prepared a regional Act 537 plan on behalf of the tributary municipalities and collected growth data from the municipalities documenting the need for an expanded plant capacity of 7 MGD to satisfy their projected sewage flow needs. The Act 537 Plan projected a 10-year flow total of approximately 7.5 MGD for the design year of 2017, with additional flows anticipated beyond that time period.

In addition, PAW has worked with the tributary municipalities in the preparation of their individual Act 537 plans. The regional Act 537 plan is considered to be a part of each municipality's individual Act 537 plan, thereby requiring each municipality to approve the regional plan as part of the approval for its own individual plan. With adoption of the regional plan by all ten municipalities, PaDEP approved the regional plan by letter dated October 21, 2009. PaDEP further clarified its approval of the regional plan with a reissuance of an approval letter dated November 19, 2009.

12. Q. Explain generally the improvements that are being made to the Coatesville Wastewater Treatment Plant.

A. The upgraded plant consists of a new influent pump station, headworks structure for screening and grit removal, chemical feed systems, new biological treatment process including anaerobic and aerobic process units, three new secondary clarifiers, return activated sludge ("RAS") pumping station, tertiary filtration units, expansion of an existing UV disinfection system, and upgrades and modifications to the sludge handling facilities. Sludge is dewatered with a gravity belt thickener and centrifuge and the dewatered sludge cake is disposed of by either land application or in a landfill. A new administration building contains the plant's laboratory, control room, maintenance work area, electrical room, meeting room, locker room, and office space. Emergency generators are located at the plant site to provide continuous service under emergency conditions.

13. Q. What is the current status of the plant upgrade?

A. Design of the wastewater treatment plant upgrade was performed by Buchart Horn Engineers, York, Pennsylvania. A Water Quality Management Part 2 (WQM Part 2) permit application for the expansion of the Wastewater Treatment Plant was submitted to PaDEP on March 31, 2006. PaDEP approved the design and issued the WQM Part 2 permit on January 11, 2008. The notice to proceed for plant construction was issued to Allan A. Myers, Inc. on May 5, 2008.

Construction was phased, which resulted in the influent pumping, headworks, biological treatment units, and secondary clarification and UV disinfection being placed in service on June 24, 2009. The plant is current operating under NPDES permit number PA0026859A2,

which conditionally provides for phased increases to plant capacity from 3.85 MGD to 7.0 MGD. These increases are applicable upon commensurate Act 537 planning approval. The capital cost of the initial phase of plant construction, which was placed in service in 2009, was approximately $40.6 million. The remaining facilities were placed in service on March 31, 2010. The capital cost of the entire project totaled approximately $54.6 million.

B. East Fallowfield Sewer Main Installation

14. Q. Please explain the sewer main extension project that the Company is undertaking in East Fallowfield Township.

A. PAW is extending sewer service to 77 existing East Fallowfield Township residents along Cardinal Drive, Robin Road, 17th Avenue, 15th Avenue, Valmont Drive, and West Chester Road who have failing on-lot septic systems, pursuant to an asset purchase agreement between East Fallowfield Township and PAW approved by the Commission at Docket No. A-230073F0008. Approximately 7,500 feet of 8-inch gravity sewer main is being installed at an estimated cost of $1,855,499. The projected in-service date is June 2010.

C. Collection System Improvements

15. Q. Please explain the improvements PAW has made to the Coatesville collection system.

A. Two collection system improvement projects being constructed in 2010 involve the installation of approximately 522 feet of 8-inch PVC pipe on Olive Street and approximately 715 feet of 8-inch PVC pipe on Walnut and Fulton Streets in the City of Coatesville. These pipe sections are being replaced as a result of PAW's internal pipe inspection program which revealed numerous cracks, sags and three collapsed sections, some with active leaks, which could not be corrected through trenchless methods. PAW

conducts an aggressive infiltration and inflow (I&I) abatement program to minimize extraneous flows in the collection system. These projects are expected to be completed and placed in service by December 31, 2010. The estimated cost for the main and associated service lateral replacements on the Olive Street project is $220,139. The estimated cost for the main and associated service lateral replacements on the Walnut and Fulton Street project is $340,745.

D. Other Plant Additions

16. Q. Please explain in general terms the other types of improvements that the Company is making to its Coatesville collection system.

A. In addition to the manholes and service laterals that the Company will install in connection with the other major collection system improvements, discussed above, it will replace or install new a number of other manholes and service laterals throughout its collection system. Service laterals and manholes are typically replaced due to their poor physical condition, which can be a contributing source of I&I. New service laterals are installed as a result of customer requests for public wastewater service. New manholes are usually installed to allow access to the collection system. The Company anticipates replacing ten laterals and four manholes and installing six new manholes and six new service laterals during the future test year. The estimated capital costs associated with this manhole and service lateral work are approximately $70,000 and $80,000, respectively.

17. Q. Please explain the Company's capital investment planning and governance process for capital improvements.

A. The Company utilizes a standardized Capital Investment Management ("CIM") process for the management of all capital investment. All capital investment programs and projects are prioritized within an overall strategic planning process, utilizing drivers associated with various asset investment strategies (such as regulatory compliance, capacity, customer satisfaction, etc.), to formulate a five-year Strategic Capital Expenditure Plan ("SCEP"). More detailed design engineering is conducted and implementation plans are developed for those projects contained in the SCEP. The Company's annual capital construction plan is based upon projects and programs contained in the SCEP. The governance process provides for formal approvals and consistent controls that optimize the effectiveness of asset investment and ensures that the capital investment meets the strategic intent of the business.

18. Q. How does the Company's construction planning process impact its claim?

A. All of the Company's claimed plant additions are expected to be completed during 2010. As the year progresses, some adjustments to the capital program may be required due to unanticipated events requiring an immediate action, such as plant or equipment that has experienced failure and needs to be replaced. In general, however, the overall cost of plant construction will remain stable.

III. INFILTRATION AND IN-FLOW STUDY

19. Q. Please explain Exhibit DRK-1.

A. Exhibit DRK-1 is the report on, and all information supporting, the results of the I&I study that the Company performed pursuant to Paragraph 8.j. of the Joint Petition for Settlement of its 2008 Coatesville wastewater base rate case ("I&I Study"). As provided in the Joint Petition, the Company prepared "a study that will provide an empirical basis for the manner in which the cost of infiltration and in-flow (I&I) is allocated to customer classes for ratemaking cost of service purposes." The Company met with the Joint Petitioners in that case to discuss its plan for conducting the study and served the report on the Joint Petitioners in the prior case 30 days before this case was filed.

20. Q. Have the results of the I&I study been employed in allocating the cost of service in this case?

A. Yes, Mr. Herbert used the results of the I&I Study in developing the cost of service allocation study he is sponsoring in this case, which is discussed in Mr. Herbert's direct testimony in this case.

21. Q. Does this conclude your direct testimony?

A. Yes, it does.