

**PAW STATEMENT NO. 1**

**DIRECT TESTIMONY  
OF  
DAVID R. KAUFMAN**

**WITH REGARD TO  
PENNSYLVANIA AMERICAN WATER  
CLAYSVILLE WASTEWATER OPERATIONS  
SCOPE OF OPERATIONS AND CLAIMED PLANT ADDITIONS**

**DOCKET NO. R-2010-2166210**

**DATE: April 23, 2010**

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**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

1 of Director of Engineering – Southeast Region with American Water Works Service  
2 Company and remained in that position until I accepted the position of Vice President of  
3 Engineering for PAW. I am a registered Professional Engineer in Pennsylvania and hold a  
4 Class A1 water treatment plant operator’s license.

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

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

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

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

12 **II. PURPOSE OF TESTIMONY**

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

14 A. The purpose of my testimony is three-fold. First, I will describe the Claysville Wastewater  
15 Operations (“CDWW”), including PAW’s acquisition of this wastewater system, and  
16 provide an overview of its scope of operations. Secondly, I will explain the Company’s  
17 claimed plant additions for the CDWW. Finally, I will introduce the other witnesses who  
18 will appear on behalf of CDWW in support of this rate increase request.

1 **III. DESCRIPTION OF PAW AND ITS SCOPE OF OPERATIONS**

2 **7. Q. Please begin by describing the PAW and organizational alignment.**

3 A. CDWW is an operating division of PAW. As of March 31, 2010, PAW provided service to  
4 approximately 636,281 water and 17,553 wastewater customers. These services are  
5 provided in approximately 390 communities located in 36 counties spread throughout  
6 Pennsylvania. As a Pennsylvania public utility, PAW operates under the rules and  
7 regulations of the Pennsylvania Public Utility Commission (“Commission”) which, in  
8 addition to regulating specific aspects of service, approves the rates charged for water and  
9 wastewater service. The Company also must comply with standards established by the  
10 Pennsylvania Department of Environmental Protection (“PaDEP”) and the federal  
11 Environmental Protection Agency (“EPA”).

12 **8. Q. When did PAW acquire the Claysville wastewater system?**

13 A. PAW acquired the Claysville wastewater system in July 2008 from the Claysville-Donnegal  
14 Joint Municipal Authority (“Authority”). The acquisition was approved by the Commission  
15 in its Order entered on February 15, 2008 at Docket No. A-212285F0145.

16 **9. Q. Provide a brief historical overview of the Claysville wastewater system before its  
17 acquisition by PAW.**

18 A. In its Order approving the Company’s acquisition of the Claysville wastewater system, the  
19 Commission noted that the Authority had a long history of environmental compliance  
20 issues with the PaDEP. The system had violated effluent standards for ammonia and  
21 nitrogen and allowed plant over flows that also violated applicable PaDEP regulations. At

1 the time of acquisition, the system was being operated in violation of regulatory standards  
2 by allowing excess wastewater to by-pass the treatment plant and go directly into the  
3 receiving stream during wet-weather events. Prior to acquiring the system, PAW identified  
4 upgrades needed to bring the system into compliance with its National Pollutant Discharge  
5 Elimination System (“NPDES”) permit and relevant provisions of the Clean Streams Law.  
6 When the closing occurred in July 2008, PAW entered into a Consent Order and Agreement  
7 (“CO&A”) with PaDEP and assumed responsibility for correcting the then-existing  
8 compliance problems, including eliminating sanitary sewer overflows that were occurring  
9 upstream of the plant’s headworks and eliminating violations of the NPDES permit effluent  
10 limitations. Between July 2008 and the end of 2009, PAW made capital investments  
11 totaling approximately \$328,000. The Company plans to undertake gross plant additions  
12 (inclusive of projects funded by customer advances and contributions) totaling  
13 approximately \$794,000 in 2010.

14 **10. Q. Please describe CDWW’s wastewater operations.**

15 A detailed description of CDWW operations is set forth in Volume1, Scope of Operations,  
16 which is being submitted with this rate filing. The Claysville wastewater collection system  
17 serves the Borough of Claysville and a portion of Donegal Township in Washington  
18 County. The collection system terminates at CDWW’s treatment plant in the Township of  
19 Donegal. The Claysville wastewater plant was constructed in 1983. The plant is a rotating  
20 biological contactor (“RBC”) facility designed for a rated capacity of 0.16 million gallons  
21 per day (mgd). The plant’s treatment process starts with screening and comminution  
22 which prevents large solids from entering the treatment process and potentially damaging  
23 the treatment equipment. The comminutor grinds large solids into small, manageable

1 pieces. The next step in the treatment process is flow equalization and primary settling,  
2 wherein flow rate variations are damped and solids in the wastewater are settled out. The  
3 process that follows are the dual parallel RBC units, wherein the biological activity takes  
4 place as wastewater flows through rotating media. Upon leaving the RBC units, the  
5 wastewater is transferred to the secondary clarifiers where the solids in the wastewater are  
6 settled out. The effluent overflow from the clarifiers is sent to the chlorine contact tank for  
7 disinfection. Sludge is processed in aerobic digesters and hauled away for further  
8 processing.

9 The collection system, which serves approximately 500 customers, contains approximately  
10 64,750 feet of 8-inch and 10-inch sewer mains, one lift station, and approximately 327  
11 manholes. The majority of the collection system consists of polyvinyl chloride (PVC) pipe  
12 installed approximately 27 years ago. Wastewater flows by gravity to the treatment plant  
13 for most of the collection system except for a short section of pressurized force main  
14 between the existing lift station and the treatment plant.

15 **11. Q. Since acquiring the Claysville wastewater system, what has PAW done to correct the**  
16 **significant problems that arose during the Authority's ownership?**

17 A. The Company made a number of improvements to correct the deficiencies that arose during  
18 the Authority's ownership of the system. The major improvements are described below.

- 19 • **Plant Upgrades:** Since acquiring the system, the Company replaced the comminutor,  
20 which had been removed by the Authority before PAW took ownership because it was  
21 in poor condition and beyond repair. A new comminutor was installed in March  
22 2009. The Company also replaced the second RBC unit, as it committed to do under

1 the terms of its 2008 CO&A with PaDEP. A section of media had been removed from  
2 the RBC shaft and, as a result, the unit was not operating as designed, which was the  
3 most likely reason that Authority exceeded the ammonia and nitrogen standards under  
4 its NPDES permit. The media, shaft, motor and bearings were all replaced. The  
5 Company also upgraded the influent building which is where the raw sewage enters the  
6 plant. The communitor and a bar screen are located in this building and need to be  
7 accessible for cleaning and repair. The building over the influent structure was in poor  
8 condition; its doors were rusted off the hinges and its stairways were in such poor  
9 structural condition that they posed a safety hazard. The grating on the clarifiers and  
10 RBC units that was not missing was in poor condition and required a complete  
11 replacement. The laboratory area had been used as office space and a lunch room. The  
12 upgrade consisted of constructing a separate office/lunch area; improving the  
13 laboratory area; replacing gratings, stairways and doors; improving the building's  
14 exterior; and adding security. The above-referenced work was completed in June 2009  
15 at a cost of approximately \$307,150.

- 16 • **Emergency Response:** To ensure emergency preparedness, table-top drills were held  
17 statewide in the fall of 2009 in which employees responded to a number of scenarios  
18 utilizing their Emergency Response Plans ("ERP"). CDWW personnel attended one of  
19 the sessions held in western Pennsylvania. CDWW management updates its ERP at  
20 least annually and more frequently if needed.

#### 21 IV. DESCRIPTION OF CLAIMED PLANT ADDITIONS

22 12. Q. Please describe the Company's claimed plant additions.

1 A. The Company has undertaken gross plant additions in the CDWW system totaling \$794,683  
2 for the 12 months ending December 31, 2010. I am sponsoring the portion of the  
3 supporting schedules of the filing, which sets forth the Company's claimed future plant  
4 additions by applicable property account and by Project Numbers. Additionally, the  
5 estimated completion date and associated retirements for each project are shown.

6 13. Q. **Please explain the projects included in the Company's future test year additions.**

7 A. Projects to be completed in 2010 focus on additional plant upgrades, collection system  
8 improvement projects, work needed to finalize the sewer system monitoring, investigation,  
9 and testing program, and preparing and submitting to PaDEP a plan to eliminate sanitary  
10 sewer overflows, pursuant to the CO&A. Details of these additions are described below.

11 **Treatment Plant Upgrades.** Planned improvements at the wastewater treatment plant  
12 consist of (a) installing variable frequency drive units on the raw sewage pump to reduce  
13 start-up torque on the units and maximize use of the plant's equalization basin storage in  
14 order to maintain a higher operating level in the tank on a more consistent basis and reduce  
15 the amount of back up into the influent building; (b) installing a new flow meter and control  
16 valve in the vault between the equalization tank and the primary settling tanks to improve  
17 process flow control and prevent overflows; (c) upgrading process control and monitoring  
18 equipment for improved process performance and alarm detection and response; (d)  
19 replacing the secondary sludge pump to recirculate sludge to the head end of the secondary  
20 clarifiers because the existing pump has failed and replacing it will assist with nitrification  
21 during the summer months; (e) replacing outdated laboratory equipment and inoperable  
22 chlorine scales; and (f) installing a sludge transfer pump to alleviate overflows and by-

1 passes at the plant's headwork. These additions will be completed and placed in service by  
2 December 2010 at a cost of approximately \$241,000.

3 **Collection System Improvements.** Collection system improvements include: (a)  
4 rehabilitating 27 manholes that are in poor condition and replacing approximately 100  
5 broken lateral vents and two laterals, at a cost of approximately \$99,517; (b) upgrading  
6 electrical hardware and replacing exposed wiring in lift station wet wells, which are a safety  
7 hazard, at a cost of approximately \$25,000; and (c) purchasing and installing two  
8 permanent flow meters and a rain gage to monitor flows within the collection system, at a  
9 cost of approximately \$20,000. Additionally, the Company anticipates installing three new  
10 service laterals at an estimated cost of \$9,000.

11 **Sewer System Evaluation Study.** In order to comply with the CO&A, flow monitoring,  
12 I&I analysis and smoke and dye testing was conducted on the entire basin. In 2010, the  
13 Company will use closed circuit television to inspect approximately 22,000 feet of sewer  
14 main to identify sources of infiltration and in-flow ("I&I"). The cost of this study, which  
15 will be completed by August 2010, is \$220,000.

16 **V. INTRODUCTION OF OTHER COMPANY WITNESSES**

17 14. **Q. Please identify the other witnesses who are providing direct testimony on behalf of**  
18 **PAW in this proceeding.**

19 A. In addition to myself, the following witnesses will be responsible for presenting PAW's  
20 case-in-chief:

1           **Rod Nevirauskas** is Director of Rates and Regulations for PAW. In PAW Statement No.  
2           2, Mr. Nevirauskas describes the Company's need for rate relief, revenues and supports its  
3           requested capital structure, including rate of return and claim for income taxes and the  
4           Company's proposed customer assistance program.

5           **John R. Cox** is Manager, Rates and Regulations for PAW. Mr. Cox's testimony (PAW  
6           Statement No. 3) discusses the Company's claimed rate base elements, expense adjustments  
7           and taxes other than income.

8           **Paul B. Herbert** is President of the Valuation and Rate Division of Gannett Fleming, Inc.  
9           Mr. Herbert is set forth in PAW Statement No. 4 and discusses the design of tariff rates.

10          **John J. Spanos** is Vice President of the Valuation and Rate Division of Gannett Fleming,  
11          Inc. His testimony (PAW Statement No. 5) explains the development of the depreciated  
12          original cost of the Company's utility plant in service and its claim for annual depreciation  
13          expense.

14          **Paul R. Moul** is the Managing Consultant of P. Moul & Associates, Inc. Mr. Moul's  
15          testimony (PAW Statement No. 6) presents his recommendation regarding the rate of return  
16          on common equity that the Company should be afforded an opportunity to earn.

17 15.   **Q.   Does this conclude your testimony?**

18        A.   Yes, it does.