EXHIBIT V

TESTIMONY OF MARK J. BUBEL, SR.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

AQUA PENNSYLVANIA WASTEWATER, INC.

DOCKET NO. A-2017-_____

DIRECT TESTIMONY OF MARK J. BUBEL, SR.

With Regard To
Description of the System
Integration into Current Operations
Technical Fitness

May 19, 2017

Q. Please state your name and business address.

A. My name is Mark J. Bubel, Sr. My business address is 762 West Lancaster Avenue, Bryn Mawr, Pennsylvania 19010.

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

A. I am employed by Aqua Services, Inc., ("Aqua Services") the Service Company for Aqua America, Inc., ("Aqua America") as a Senior Project Engineer.

Q. Please provide a brief description of you education and work experience.

A. I received a Bachelor's of Science Degree (B.S.) in Civil Engineering in 1980 from Lehigh University and a Master's Degree in Civil Engineering (M.C.E.) with a concentration in Environmental Engineering in 1983 from Villanova University. I have worked in various engineering roles and have over 36 years of experience in environmental engineering related to municipal and industrial wastewater treatment and operations. I have worked at Aqua America since 2003 in roles related to wastewater treatment facilities including planning, design, start-up, and operational troubleshooting. I am a Registered Professional Engineer in Pennsylvania, Delaware, Maryland, North Carolina, and Florida. I am also a Licensed Water and Wastewater Operator in Pennsylvania.

Q. Have you testified before this Commission before?

A. Yes. I provided testimony in Aqua Pennsylvania Wastewater, Inc.'s ("APW" or the "Company") New Garden application in Docket No. A-2016-2580061.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is as follows: (1) to provide a general description of the acquired system, (2) to explain how the acquired system will be integrated into APW's operations, and (3) to describe APW's technical fitness to run the system.

Q. Are you sponsoring any Exhibits with the Company's filing?

A. No.

Q. Please provide a general overview of APW.

A. APW, a subsidiary of Aqua Pennsylvania, Inc. ("Aqua PA"), is engaged in the business of collecting, treating, transporting, and disposing of wastewater for the public. APW serves approximately 20,000 customers in Adams, Bucks, Carbon, Chester, Clarion, Clearfield, Delaware, Lackawanna, Luzerne, Monroe, Montgomery, Pike, Schuylkill, Venango, and Wyoming Counties. APW operates 34 wastewater treatment plants ("WWTP") throughout the Commonwealth of Pennsylvania, and 17 systems of APW's Southeast Division are in proximity to Limerick Township allowing for operational efficiencies. APW, and its parent company Aqua PA, have approximately 600 employees bringing extensive expertise in providing water and wastewater service to citizens of Pennsylvania.

Q. Please provide a description of the Limerick Township ("Township") Sanitary Wastewater and Collection System ("Limerick Wastewater").

A. The Limerick Wastewater system is comprised of two (2) service areas, the King Road WWTP service area and the Possum Hollow WWTP service area. The service areas contain a mix of gravity collection sewers and pump stations with force main conveyance systems.

<u>General Description of Service Areas</u>

The King Road WWTP is an AeroMod® activated sludge biological treatment system that includes two-stage aeration and clarification. The system includes a pretreatment process contained within and around the headworks building consisting of a mechanical fine screen, aerated grit chamber, and grit classifier. Effluent disinfection is achieved via in-line ultraviolet units. Sludge handling is accomplished with two (2) aerobic digesters and holding tanks. Sludge is mechanically thickened by a rotary drum thickener and then hauled off site. Treated effluent is discharged to the Schuylkill River.

The Possum Hollow WWTP is an AeroMod® activated sludge biological treatment system that includes two-stage aeration and clarification. The system includes a pretreatment process contained within and around the pre-engineered steel headworks building consisting of a mechanical fine screen, aerated grit chamber, and grit classifier. Effluent disinfection is achieved via in-line ultraviolet units. Sludge handling is accomplished by hauling thickened liquid to the Pottstown WWTP for further processing and ultimate disposal.

Permitted Capacity of Service Areas

The King Road WWTP has a permitted capacity of 1.70 MGD. The Possum Hollow WWTP currently has a permitted capacity of 0.70 MGD.

The wastewater collection and transmission piping comprising both service areas is summarized as follows.

1

Summary of Collection System Gravity Pipe		
Diameter	Pipe Material	Total Lineal Feet
6"	PVC	105,318
8"	PVC	258,934
8"	DIP	10,015
8"	HDPE	447
8"	VTC	3,372
10"	PVC	23,746
10"	DIP	214
12"	PVC	21,561
12"	DIP	1,966
12"	HDPE	1,657
15"	PVC	10,510
16"	DIP	74
18"	PVC	932
21"	PVC	2,238
36"	DIP	382

2

Summary of Collection System Force Main Pipe		
Diameter	Pipe Material	Total Lineal Feet
2"	PVC	2,000
4"	PVC	4,925
4"	DIP	6,797
6"	PVC	2,420
6"	DIP	10,844
10"	DIP	364
12"	DIP	4,000
16"	DIP	10,800
18"	DIP	6,000

Q. Please state if there are any current environmental compliance issues for the Limerick Wastewater system.

A. APW is not aware of any current environmental compliance issues for the Limerick Wastewater system.

Q. Please provide the elevations of the major facilities of the Limerick Wastewater system.

A. King Road Wastewater Treatment Plant:

- Wastewater Treatment Plant: elevations vary generally from about EL 150 to EL 170.
- Service Area: Elevations vary generally from about EL 112 to EL 368.

Possum Hollow Wastewater Treatment Plant:

- Wastewater Treatment Plant: elevations vary generally from about EL 170 to EL 185.
- Service Area: Elevations vary generally from about EL 125 to EL 384.

Q. Please state the approximate time of the installation of the component facilities of the system.

A. With regard to the approximate time of the original construction of component facilities:

1. The King Road WWTP was constructed in approximately 2007.
2. The Possum Hollow WWTP was constructed in approximately 2003.

Further, APW is planning capital projects as follows over the next 10 years:

King Road WWTP service territory:

Location	Item	Approximate Cost
WWTP	Sludge dewatering project and general plant improvements	$1.28M
Collection System	Sewer lining, repair, and general infiltration and inflow reduction projects	$0.63M
Pump Stations	- PS #5: Formal odor control system, crane repairs, electrical repairs, wet well interior corrosion protection, general station repairs, pump electrical controls modifications - PS #7: Electrical controls upgrade - PS #10: Lightning and surge protection. - PS #3: Raise excessively deep valve vault, new pumps and rails, ARV replacement on FM. - PS #19: Pump replacement. - SCADA installed at all PS's. - Odor control on all FM ARV's.	$3.49M
	Sub-total King Road Service Area	$5.40M

Possum Hollow WWTP Service Territory

Location	Item	Approximate Cost
WWTP	Modify sludge wasting arrangement and general plant improvements	$0.38M
Collection System	Sewer lining, repair, and general infiltration and inflow reduction projects	$0.38M
Pump Stations	- PS #1: General valving replacements, building repair. - SCADA installed at all PS's. - Odor control on all FM ARV's.	$0.56M
	Sub-total Possum Hollow Service Area	$1.32M

Total System Capital Projects

Location	Item	Approximate Cost
Total System	IT Transition	$0.05M
Total System	IT CAPX	$1.53M
Sub-total King Road Service Area (from above)		$1.32M
Sub-total Possum Hollow Service Area (from above)		$5.40M
TOTAL		**$8.30M**

Q. Do you foresee any other projects that would be required in the near future?

A. Once the above noted projects are completed I don't foresee any immediate future projects.

Q. Please state the actual number of customers by class and gallons treated for those classes for the current year.

A. For customers by class, please see the below table:

Service Area	Resid.	Commer.	Apart.'s	School	Church	Public	Total
King Road & Possum Hollow	4,882	315	210	14	9	4	5,434

The number of gallons treated by customer class is as follows for the period of January 1, 2016 to December 31, 2016:

Service Area	Resid.	Commer.	Apart.'s	School	Church	Public	Total
King Road & Possum Hollow	235.349	97.165	40.027	8.342	0.335	5.528	386.745

Note: Million gallons treated

Q. Please state the estimated number of future connections for the system for the next 10 years.

A. The Township has projected the following future EDU's by service area in their 2016 Chapter 94 Report:

Service Territory / Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
King Road - Projected EDUs added	421	645	183	24	42					
Possum Hollow - Projected EDU's added	211	267	249	94	0					
Total Projected EDUs added	632	912	432	118	42	273	225	225	237	205

The Township's Chapter 94 reports project the EDU's annually in the upcoming five years as required by DEP. The report is not required to project 10 years into the future, however, the Township has provided the total projected EDU's as noted above.

Q. Please state how many miles the Limerick Wastewater system is from APW's existing service territory.

A. The Limerick Wastewater system's distance from APW's existing service territory is as follows:

Buyer's Plant	Location	Approximate Distance To Limerick Acquisition, miles
Media WWTP	Media, PA	22
Willistown WWTP	Willistown, PA	17
Bryn Mawr, PA Corporate HQ	Bryn Mawr, PA	19

Q. Will the Limerick Wastewater system be physically interconnected with APW's system or be operated as a standalone system?

A. The Limerick Wastewater system will be physically operated as a standalone system within APW's footprint.

Q. Please describe how APW will integrate the operation of the Limerick Wastewater system into its current operations.

A. The seven (7) existing Limerick employees will integrate with APW and continue to operate the Limerick wastewater system. Aqua PA's existing Gilbertsville employees in the area have already been presented with the opportunity to learn wastewater operations; many have shown interest. In January 2017 Aqua PA's President met with the seven Limerick employees and encouraged them to consider an opportunity to learn more about the water business. The cross-training of existing employees is always positive and will further our integration process. APW and Aqua PA also plan to co-locate the Gilbertville and Limerick employees into one existing office building at the Limerick King Road WWTP. This will result in reduced office expense for the Company. The Limerick Wastewater system operators will be supported by Thomas Cicala and Robert VanCleve and other APW and Aqua PA employees as needed. Management, customer service, regulatory compliance, engineering, financial, and ancillary services will be provided seamlessly from our Southeastern Division headquarters in Bryn Mawr, PA.

Q. Will other Aqua PA employees assist in the operation of the system, if needed.

A. Yes. Aqua PA and APW have 17 operators, many holding dual water and wastewater certifications, which may be called upon to assist in the operations of the system.

Q. Please explain the support services that Aqua Services will provide to the Limerick Wastewater system.

A. Aqua Services, the Service Company for Aqua America, provides expertise in a variety of areas to the subsidiaries of Aqua America. Aqua Services will provide support to the operation of the system through its employees' expertise in accounting and financial, administrative, communications, corporate secretarial, customer service and billing, engineering, fleet services, human resources, information systems, operations, regulatory compliance, rates and regulatory, risk management, water quality, legal, and purchasing, contracts and sales of real estate.

Q. Does APW plan any physical, operational, and managerial changes after closing?

A. As mentioned above, there are planned capital improvements. APW will be gaining seven (7) employees from the Township to operate the system. The Limerick Wastewater system will be operated under APW's Southeastern division, and, as stated above, APW will be combining its Gilbertsville office into the existing Limerick King Road WWTP offices.

Q. Is the Limerick Wastewater system and wastewater treatment plant similar to other systems owned and operated by APW?

A. Yes. The Limerick Wastewater, as stated above, is a wastewater treatment system employing the activated sludge mode of treatment. From a treatment type, disinfection approach, and mode of effluent disposal the Limerick Wastewater system is the same as APW's Media and Willistown activated sludge plants.

Q. Do you believe that APW is technically fit to own and operate the system?

A. Yes.

Q. Please describe the Company's technical fitness and how the Company can provide safe and reliable service to Limerick Wastewater customers.

A. Aqua PA and APW are Class A utilities that already have certificates to operate throughout the Commonwealth and have acquired many systems in the last three decades. APW will provide safe and reliable service to the Limerick Wastewater customers given the Company's operational expertise as well as engineering support local to the Limerick Wastewater system. APW has expertise in troubleshooting mechanical equipment as well as wastewater treatment processes. APW also has expertise in operating wastewater collection and conveyance systems. APW strives to ensure the collection, conveyance and pumping systems which the Company owns provide continuous safe and reliable service. Lastly, APW has worked with the Commission and statutory advocates to acquire and improve troubled wastewater systems (e.g., Washington Park Wastewater, Docket No. A230550F2000).

Q. Can APW provide adequate wastewater collection, treatment, or disposal capacity to meet present and future customer demands?

A. Yes. Based on my explanation of APW's current operations, the Limerick Wastewater system, the Limerick Wastewater system's similarity to other systems operated by APW, the Limerick Wastewater system's proximity to APW's service territory, and my explanation of APW's technical fitness, APW can provide adequate wastewater service for present and future customers.

DEP REQUIREMENTS

Q. Does the application include National Pollution Discharge Elimination System ("NPDES") permits?

A. Yes, the NPDES discharge permits for the King Road WWTP and Possum Hollow WWTP are included in the Application as Exhibit L1 and L2, respectively.

Q. Does the application include Water Quality Management ("WQM") Permits?

A. Yes, the WQM Permits for the King Road WWTP and Possum Hollow WWTP are included in the Application as Exhibit M1 and Exhibit M2, respectively.

Q. Is the required Act 537 plans included in the application?

A. Yes. The current Act 537 plans are included in the Application as Exhibit P1 and Exhibit P2.

Q. Does this conclude your testimony?

A. Yes, it does, however I reserve the right to supplement my testimony as additional issues and facts arise during the course of this proceeding. Thank you.