BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

C-00015377

CINDY PARKS,	:	**DOCKET NO. ~~C-00015337~~**
RICHARD MINUTELLO, AND	:	**DOCKET NO. C-20028177**
IRWIN A. POPOWSKY, CONSUMER ADVOCATE	:	**DOCKET NO. C-20028361**
v.	:	
PENNSYLVANIA-AMERICAN WATER COMPANY	:	

SUPPLEMENTAL TESTIMONY
OF JAY LUCAS

ON BEHALF OF PENNSYLVANIA-AMERICAN WATER COMPANY

Responding To The Supplemental Direct Testimony
Of OCA Witness Fought
And Witnesses At The September 9, 2002 Hearing

PAWC STATEMENT NO. 1.1
& Exhs. 1.3 & 1.4

12/3/02
Hbg
Jan

October 25, 2002

PENNSYLVANIA-AMERICAN WATER COMPANY

SUPPLEMENTAL TESTIMONY OF JAY LUCAS

Q. Please state your full name and business address.

A. My name is Jay R. Lucas and my business address is 300 Galley Road, McMurray, PA 15317.

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

A. I am employed by Pennsylvania-American Water Company ("Pennsylvania-American" or "Company") as an Operations Manager. Until August 31, 2002, I was the Operations Manager for the Southwest Area of Pennsylvania-American's Western Operations, which consists of four separate districts (McMurray, Brownsville/California, Elizabeth/Monongahela, and Uniontown/Connellsville). Effective September 1, 2002, I became the Operations Manager for the Company's Pittsburgh District.

Q. Have you presented any other testimony in this proceeding?

A. Yes, I sponsored Pennsylvania-American Statement No. 1.0. My work experience, professional qualifications and educational background are set forth in that statement.

Q What is the purpose of your testimony?

A. The purpose of my testimony is to respond to (1) the supplemental direct testimony of Mr. Terry L. Fought (OCA Statement No. 1A), who submitted testimony on behalf of the Office of Consumer Advocate ("OCA"); and (2) the testimony of witnesses who testified at the hearing held on September 9, 2002.

Q. Please summarize what OCA witnesses Fought and Kraus have proposed in this case.

A. Mr. Fought has proposed a project for the installation of mains in Mt. Pleasant Township to serve property-owners that expressed interest in receiving water service from Pennsylvania-

American if they can do so without having to bear any of the costs to install the necessary facilities. Mr. Fought also contends that the service these customers desire can be provided without installing mains greater than 8 inches in diameter in certain streets (as identified by Mr. Fought) and without the installation of a storage tank in Mt. Pleasant Township.

Although the project, as defined by Mr. Fought, would cost more than the aggregate of the Company-required per customer investment determined in accordance with the Commission's regulations and the Company's tariff, Mr. Fought and Ms. Kraus propose that the Commission depart from its regulations, waive the applicable provision of the Company's tariff and require Pennsylvania-American to construct the project entirely at its own cost. According to the OCA's witnesses, this would be accomplished by (1) directing the Company to seek a PennVest loan to finance the project and, assuming that the Company's loan request is granted; (2) using the interest rate applicable to the first five years of the PennVest loan's 20-year term to calculated the Company's revenue-justified investment instead of using the Company's weighted average cost of debt, as required by the Commission's regulations and Rule 27 of the Company's Commission-approved tariff.

Q. Please summarize the Company's response to the OCA witnesses' position.

A. Mr. Hankey will explain why Mr. Fought's project specifications are wrong. Without the installation of a storage tank and the installation of 12-inch pipe in certain areas in Mt. Pleasant Township, reliability of service would be compromised to the customers Mr. Fought proposes be served; well-accepted-accepted design criteria would not be met; and the capacity of the Gretna Booster in Chartiers Township would be exceeded. Moreover, the ability to provide fire flows would be compromised.

Mr. Diskin will explain why Ms. Kraus's proposal to re-compute the Company-required investment is contrary to the Commission's regulation at 52 Pa. Code §65.21, is internally inconsistent and, if adopted, would require a significant change in the Commission's ratemaking procedures. Mr. Diskin will also explain relevant portions of the Company's tariff and explain the alternatives available for applicants to finance the Customer Contribution. As Mr. Diskin will show, financing alternatives are available that could permit homeowners to pay the Customer Contribution and their monthly water bill from Pennsylvania-American at a cost comparable to, or even less than, the expenses they are currently incurring to obtain water supplies.

Q. Where does Mr. Fought define the scope of his proposed project?

A. The project scope is defined in Mr. Fought's supplemental testimony and is depicted on the map he presented as Exhibit TLF-1A. Mr. Fought's estimate of the cost for his project is contained in Exhibit TLF-2A.

Q. What is Mr. Fought's estimate of the cost of the project he has defined?

A. Mr. Fought estimates that cost to be $5,303,352, as shown on Exhibit TLF-2A. However, his project cost estimate does not include the cost of 12-inch mains in certain streets or the storage tank that, as Mr. Hankey explains, would have to be installed to furnish the service that property owners within the scope of Mr. Fought's project in Mt. Pleasant Township desire.

Q. What is the estimated cost for the project Mr. Fought has defined including the installation of 12-inch mains in the designated areas and the construction of a storage tank?

A. Mr. Fought's Exhibit TLF-2A shows the difference in costs between 8-inch and 12-inch mains in those areas where the Company determined that 12-inch mains would have to be installed to provide the desired service. Those costs total $217,350. The estimated cost of the elevated tank is $850,000. Adding those costs to Mr. Fought's estimate of $5,303,352 yields a total of $6,370,702. However, several other differences and/or errors were found in Mr. Fought's cost estimate, as detailed on Exhibit No. 1.3, which shows a project cost estimate of $6,290,499. Of course, under the terms of the Company's tariff, at the conclusion of a project's construction, the applicants' Customer Contribution would be reconciled to the actual completed cost of the project, and a refund or additional payment would have to be made to true-up the Customer Contribution initially deposited by applicants based on that actual cost.

Q. Based on the revenue-justified investment formula in the Company's tariff and the Commission's regulations, as described by Mr. Diskin, what would the Company-required investment be for a project with the geographic scope defined by Mr. Fought?

A. The Company-required investment is $6,200 per customer that actually takes service from the mains installed by the Company as part of the project. Consequently, the aggregate Company investment will depend on the number of customers that take service. The more customers that take service, the larger the aggregate Company-required investment and the smaller the Customer Contribution, if any.

Q. How many customers will take service within the project scope defined by Mr. Fought?

A. We don't know. Mr. Fought has made some estimates based on answers to an OCA survey that asked property-owners about their interest in obtaining a public water supply if it could be done at no cost to them. However, under the terms of the Company's Commission-

approved tariff, the Company-required investment is based on the number of applicants that will actually take service and deposit the necessary Customer Contribution with the Company prior to construction. In other words, the Company-required investment is not, nor should it be, based on speculation about the number of customer that might attach to the mains either immediately after installation or in the future.

Q. What about Mr. Fought's position that the Company should consider customers that take service in the future, including new homes and business that represent "growth" stimulated by the installation of a public water system?

A. Under the Commission's regulation (Section 65.22(b)) and Rule 27 of the Company's tariff, there is a true-up mechanism to assure that Bona Fide Service Applicants who pay Customer Contributions receive appropriate credits if additional customers take service from the mains funded by those Customer Contributions. In that event, if additional customers connect directly to those mains at any time up to 10 years after the Customer Contribution is paid, the Bona Fide Service Applicants who paid the Customer Contributions receive a refund equal to the Company's per-customer investment ($6,200 for a residential customer) for each additional connecting customer. In that way, customers that paid Customer Contributions get the entire benefit of future growth and get some, or all, of their contributions refunded. In other words, the Customer Contributions and Company-required investment amounts are trued-up based on actual events over a prospective 10-year period. Mr. Fought apparently wants to deviate from this Commission-approved procedure by speculating about the number of customers that might take service, basing the Company-required investment on that speculation, and then assigning to the Company the risk that his estimates are overstated.

Q. Although the Commission-approved procedure you described will reconcile Customer Contributions and Company-required investment based on the actual customer count, it makes it difficult to determine the Company-required investment and, therefore, the Customer Contribution that would have to be deposited with the Company before construction begins. Is there any way to determine a more specific customer count before property owners apply for service?

A. Yes. There is a simple, straight-forward way to do that. Like many other municipalities in similar circumstances, Mt. Pleasant Township could pass an ordinance requiring all owners of improved property with access to a public water main to connect to that main. If that were done, no one would have to speculate about how many applicants would take service, because the number would be known with a fairly high degree of certainty. In fact, Mr. Fought has testified that there are "701 possible customers" (p. 7) within the footprint of the project he defined. He also testified that 17 of those customers are non-residential customers with water usage "which is equivalent to 60 residential customers" (p. 5). Assuming the correctness of his figures, there would be 744 equivalent residential customers within the scope of his proposed project (701 – 17 + 60). If a mandatory connection ordinance were passed, then 744 could be used as the customer count to determine the Company-required investment, which would be $4,612,800 (744 x $6,200).

Q. Has Mr. Fought previously addressed the desirability of having a municipality adopt a mandatory connection ordinance?

A. Yes. Mr. Fought has recently submitted testimony in *Morra v. Pennsylvania-American Water Company* at Docket No. C-00014733, where the OCA is proposing that the Company install main extensions solely at its cost in Hanover Township, Washington County, Pennsylvania.

In his testimony in that case (p. 3), Mr. Fought offered the existence of Hanover Township's mandatory connection ordinance as a factor supporting his position, and he presented a copy of that ordinance as an exhibit to his testimony. I am providing a copy of Mr. Fought's testimony and exhibits in that case as Exhibit No. 1.4.

Q. Are there any other factors that would favor Mt. Pleasant Township's adoption of a mandatory connection ordinance?

A. In addition to providing certainty as to the number of applicants and, therefore, the Company-required investment and the Customer Contribution, a mandatory connection ordinance would assure that potentially unsafe water supplies are removed from service. At the September 9, 2002 hearing, a number of individuals and government officials expressed their concerns about possible adverse health impacts resulting from continued use of existing well water supplies in Mt. Pleasant Township because of the lack of public sewers and malfunctioning on-lot septic systems. If that is the case, a mandatory connection ordinance would alleviate those concerns and would promote public health and safety. Additionally, a mandatory connection ordinance would maximize the number of Bona Fide Service Applicants and, thereby, maximize the Company-required investment and minimize the Customer Contribution, at no cost to the Township.

Q. Have other municipalities adopted mandatory connection ordinances?

A. Yes. There are many municipalities in Pennsylvania-American's service territory that have passed such ordinances. PennVest typically requires the adoption of a mandatory connection ordinance by those municipalities to which it lends money for water or sewer projects, or binding contractual commitments by the individual property-owners within the scope of the

PennVest-funded project. PennVest strongly encourages the passage of those ordinances in municipalities where it is lending money to a third-party water or sewer utility.

Q. **Other than passing a mandatory connection ordinance, is there anything else Mt. Pleasant Township could do to give its residents certainty as to the number of applicants that would be counted in determining the Company-required investment?**

A. Yes. The Township could underwrite 744 residential-equivalent Bona Fide Service Applicants. That is, it could agree to pay the initial Customer Contribution for the difference between 744 applicants and the number of property owners that actually apply for service and pay a Customer Contribution. As in the case of a mandatory connection ordinance, this alternative would let property-owners know in advance the amount of the Customer Contribution they would have to pay. If less than 744 applicants initially take service, the Township would pay the difference (744 minus the actual number of customers multiplied by the Customer Contribution). If any of the property-owners on whose behalf the Township paid a Customer Contribution were to later decide to take service, the Township could seek reimbursement from them of the amount paid on their behalf.

Q. **Have other municipalities paid all or a portion of the Customer Contribution on behalf of their residents?**

A. Yes, they have. In fact, Chartiers Township, located immediately to the south of Mt. Pleasant Township did so to assure that a public water supply was provided to its residents. Chartiers is incurring a cost of $880,000 to cover the difference between the Company-required investment and the project cost for the project that brought water service to the northern tier of that Township. In two other recent examples, Nottingham Township and North Strabane

Township also partnered with Pennsylvania-American to complete main extension projects for their residents by paying the costs in excess of the Company-required investment.

Q. Could Mt. Pleasant Township realize any benefits from the installation of a public water supply system within the Township?

A. Yes. First, local government officials testified at the September 9, 2002 hearing that the installation of a public water supply system would unleash "growth" within the Township, including commercial and business development. If that is the case, the Township would experience an increase in its property tax base as new homes and other buildings are constructed (Tr. p. 159). The Township would also get more business tax revenue if commercial and business development materializes, as a number of government officials believe will occur (Tr. pp. 99, 159-161). A growing tax base could more than offset the Township's expenditure to fund a portion of, or all, of the Customer Contributions for the project Mr. Fought has proposed.

Second, Mr. Patrick Gallagher, the Chairman of the Mt. Pleasant Township Authority, testified that Mt. Pleasant Township is in the process of complying with the requirements of Act 537, the Pennsylvania Sewage Facilities Act, by developing a plan for sewage treatment and disposal for the Township (Tr. pp. 202-203). He explained that one option would be "collection, conveyance and treatment," while another option would be to allow continued use of individual on-lot disposal systems with enhanced monitoring and maintenance (Tr. p. 203). Collection, conveyance and treatment (the installation of public sewer mains and a treatment plant) would be a much more expensive option. Because existing on-lot systems that were either improperly installed and/or currently malfunctioning are a source of ground water contamination, the installation of a public water supply system would make it more likely that

the costly alternative of installing a public sewer system in the Township could be avoided or minimized in scope, with resulting savings to the Township and its residents.

Third, as various witnesses at the September 9, 2002 hearing testified (Tr. pp. 118, 189), the existence of a public water system capable of providing fire protection service is likely to reduce property insurance rates. That benefit would flow to all current and future property-owners in the Township, including the Township, which is itself a property owner.

Q. If 744 residential-equivalent Bona Fide Service Applicants were assured by either the passage of a mandatory connection ordinance or the Township's underwriting that level of participation, what would the Company-required investment and the corresponding Customer Contribution be?

A. If 744 residential-equivalent applicants were assured, the Company-required investment would be $4,612,800. Based on a project cost of $6,290,499, the aggregate Customer Contribution would be $1,677,699 or $2,255 per residential-equivalent applicant. Mr. Diskin will explain the options available to Bona Fide Service Applicants to finance this amount, including the financing option under the Company's tariff (1/3 down, the balance over 36 months) and financing with third-party lenders. Of course, any payments toward this cost made by the Township would reduce the per-applicant Customer Contribution. Based on 744 residential equivalent applicants, the per-applicant Customer Contribution would be reduced by $100 for each increment of $74,400 paid by the Township.

Q. Earlier, you mentioned one of the factors contributing to the degradation of groundwater supplies in Mt. Pleasant Township. Please elaborate.

A. Based on the testimony and various exhibits presented at the September 9, 2002 hearing, there are three principal causes of the degradation of groundwater supplies in Mr. Pleasant

Township: (1) malfunctioning or improperly installed septic systems; (2) the character of the Township – a rural area with substantial land devoted to livestock pasture; and (3) the history of underground coal mining in the area. Malfunctioning septic systems and livestock are sources of *e coli* and fecal coliform contamination. Coal mining can cause deterioration of the quantity and quality of groundwater.

Q. How did malfunctioning septic systems become a problem?

A. As I mentioned earlier, there are no public sewers in most of Mt. Pleasant Township. Apparently, at some time in the past, the Township did not require permits before landowners could build individual on-lot septic systems (Tr. p. 100). As a result, some of those systems were built in areas that do not "percolate" or were built too close to water wells. Even after permitting was required, septic systems were improperly installed and maintained (Tr. pp. 198-202). Apparently, Mt. Pleasant Township does not currently have any form of on-going health inspection program to identify such problems and to mandate that homeowners fix the problems that are creating a public health concern. As I noted before, Mr. Gallagher testified that the Township is only now looking into such a monitoring program as a means of trying to comply with the state Sewage Facilities Act (Tr. p. 203).

Q. What about problems created by livestock?

A. Because Mt. Pleasant Township is such a rural area, keeping livestock is consistent with local zoning and land use regulations. Based on the testimony from the September 9, 2002 hearing, it appears that many current residents moved to the Township because of its rural nature (Tr. p. 131) and their desire to keep livestock on their property (Tr. pp. 97-98).

Q. Several witnesses at the September 9, 2002 hearing testified about their belief that the public meeting held in Mt. Pleasant Township on March 21, 2002, announced a

"settlement" of this proceeding under which the Company would install all of the facilities to serve applicants that desired water service at no cost to the applicants. Is that correct?

A. Obviously, it is not. First, a little background. As earlier parts of my testimony explained, the size of a project, the number of Bona Fide Service Applicants within the project scope, the Company-required investment and, therefore, the Customer Contribution are all inter-related. Expressions of interest for water service will help define the scope of the proposed project, which, in turn, will affect both the cost and the number of likely customers within the project boundaries. Those factors will determine the Company-required investment and the Customer Contribution, if any. (Because of that inter-relatedness, when large-scale projects, like the one the OCA proposes for Mt. Pleasant Township, are done, they require the active involvement, and sponsorship, of the municipality. By passing a mandatory connection ordinance or underwriting the Customer Contribution, the municipality provides a fixed target for determining the Company-required investment.)

At the invitation and urging of the Mt. Pleasant Township Authority and the OCA, Pennsylvania-American attended the March 21 meeting to get, firsthand, feedback from the public about where, relative to a preliminarily defined project footprint, there were property-owners that desired water service. It was not the purpose of that meeting to announce any sort of "settlement."

Q. Please summarize your conclusions.

A. Pennsylvania-American stands ready and willing to extend its mains to furnish water service to Bona Fide Service Applicants in Mt. Pleasant Township in accordance with the terms of its tariff and the Commission's regulations. Under Rule 27 of its tariff, Pennsylvania-American

will invest $6,200 for each Bona Fide Service Applicant that takes service from the mains installed at their request. The balance of the main installation cost must be paid as a Customer Contribution by the applicant or by a third party on the applicant's behalf.

There are number of things that Mt. Pleasant Township can do to make it easier and less costly for its residents to receive water service, including passing a mandatory connection ordinance, underwriting a specified number of applicants and/or paying some or all of the Customer Contribution. According to the testimony of government officials and other Township residents, the Township would realize significant financial benefits from the introduction of a public water supply, by increasing its tax base and tax revenues and reducing other costs and expenditures.

With the Township's assistance, a level of 744 equivalent residential applicants could be assured within the footprint of the project proposed by Mr. Fought. In that event, the Customer Contribution would be $2,255 per residential-equivalent applicant, which, under Rule 27 of its tariff, the Company will finance (1/3 down, the balance over 36 months). As explained by Mr. Diskin, other financing alternatives, from third-party lenders, would produce even lower monthly payments, which would result in a total monthly cost to a residential applicant (including their monthly water bill) that would be comparable to, or even less than, their current level of expense to obtain water for home use.

The OCA's proposal to have the Company pay the entire cost of the project proposed by Mr. Fought is improper and contrary to the terms of both the Company's Commission

approved tariff and the Commission's regulations that apply to main extensions, as explained in Mr. Diskin's testimony.

Q. Does this conclude your responsive testimony?

A. Yes, it does.

EXHIBITS ACCOMPANYING THE SUPPLEMENTAL TESTIMONY OF JAY LUCAS

PAWC Exhibit No. 1.3

TLF project		$5,303,352	
12" Adjustment			
McCarrell		$18,734	
Wabash		$6,423	
Tank Site		$27,003	
Ft Cherry		$66,475	
McCarrell		$9,700	
Ridge		$52,481	
SR 519		$12,154	
Burgettstown Rd		$3,217	
Avella Rd		$5,537	
Westland Road		$15,626	$217,350
	Total	$5,520,702	
		$850,000	Tank
	Total	$6,370,702	
		-$95,581	Westland estimate higher than PAWC's ($123,430 + $158,695 vs. $186,544)
	Total	$6,275,121	
		-$84	Burgettstown Road estimate higher than PAWC's ($40,075 vs. $39,991)
	Total	$6,275,037	
		$43	Kelly Lane estimate lower than PAWC's ($28,050 vs. $28,093)
	Total	$6,275,080	
		$15,419	Red Fox Road estimate lower than PAWC's ($161,700 vs. $177,119)
	Total	$6,290,499	

C-00015317

PAWC EXHIBIT NO. 1.4

OCA STATEMENT 1

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

EDWARD D. MORRA, JR.	:	
	:	
v.	:	Docket No. C-00014733
	:	
PENNSYLVANIA-AMERICAN WATER COMPANY	:	

DIRECT TESTIMONY

OF

TERRY L. FOUGHT

ON BEHALF OF

THE PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

OCTOBER 4, 2002

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

A. Terry L. Fought, 780 Cardinal Drive, Harrisburg, Pennsylvania, 17111.

Q BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am a self-employed consulting engineer under contract with the OCA.

Q. PLEASE DESCRIBE YOUR BACKGROUND AND QUALIFICATIONS.

A. I graduated from Cleveland State University in 1967 with a Bachelor of Civil Engineering Degree. In 1983, I became a self-employed consulting engineer generally working on wastewater, water supply, and stormwater management projects. Prior to 1983, I was a member of a consulting engineering firm and provided service to water supply and waste-water clients. I have consulted with the Pennsylvania Office of Consumer Advocate (OCA) since 1984 and the New Jersey Rate Counsel before that. Since 1996, the OCA has retained me to investigate approximately thirteen different complaints regarding Pennsylvania-American Water Company (PAWC) water main extensions; most located in the western region of the State. The PAWC complaints involved groups of applicants as small as 3 and as large as over 300.

Appendix A, which is attached to this testimony, describes my educational background and applicable experience in detail.

Q. WHAT WAS YOUR ASSIGNMENT IN THIS CASE?

A. I was asked by the OCA to investigate a complaint by a resident in the McCracken Hill area of Hanover Township, Washington County regarding obtaining water utility service from the PAWC.

Q. WHAT DID YOUR INVESTIGATION CONSIST OF?

A. My investigation consisted of a review of the formal complaint form submitted to the Public Utility Commission (PUC) by Edward D. Morra, Jr.; a field inspection of the proposed water main extension alignments and the adjacent areas; a meeting with Mr. Morra and other residents; interrogatory responses by PAWC and Mr. Morra including all maps and attachments; a Pennsylvania Department of Environmental Protection (PaDEP) survey of the area to document water quality and quantity problems; review of Hanover Township Ordinance No. 98; and a review of the tax map for the area.

Q. IS THE MCCRACKEN HILL AREA OF HANOVER TOWNSHIP WITHIN PAWC's FRANCHISE TERRITORITY?

A. Yes, it is.

Q. BASED UPON THE INFORMATION YOU REVIEWED, IS THERE A PUBLIC NEED FOR WATER SERVICE IN THE MCCRACKEN HILL AREA?

A. Yes. Since 1999, the residents have made attempts to obtain public water supply service because of quality and/or quantity of their well water. According to the PaDEP survey 33% of the wells in the McCracken Hill area are contaminated with coliform bacteria and are considered unsafe for human consumption. The PaDEP survey also noted that 57% of

the surveyed homes indicate serious problems with water quantity to the extent that the wells go dry. See Exhibit TLF-1. Also, Hanover Township has passed an ordinance mandating connection to public water supply of all occupied structures within 150 feet from a water main. See Exhibit TLF-2.

Q. WHERE ARE EXISTING PAWC WATER MAINS LOCATED IN RELATIONSHIP TO THE MCCRACKEN HILL AREA?

A. The McCracken Hill area is adjacent to the end of PAWC's water main on South Kings Creek Road. The first applicant is approximately 150 feet from the end of the existing water main. See Exhibit TLF-3.

Q. HAVE YOU BEEN ABLE TO DEFINE A PROJECT THAT IS ECONOMICALLY JUSTIFIED?

A. Yes, based on the Company's response to OCA interrogatory, Set II, Nos. 1 and 2, I have been able to define an economically justified project. I recommend that the water line should be extended a total of 3,385 feet along Kings Creek Road, 880 feet along an existing electric power line right-of-way between Kings Creek Road and McCracken Hill Road, 6,160 feet along McCracken Hill Road (from the power line right-of-way) to Devils Den Road, and then 1,076 feet southwesterly along Devils Den Road. The estimated installation cost for this project is $321,588. The location of the proposed project is shown on Exhibit TLF-3.

Q. HOW DOES YOUR RECOMMENDED PROJECT DIFFER FROM THE PROJECT THAT THE COMPANY HAS PROPOSED?

A. The Company has proposed installing the water main along the entire length of McCracken Hill Road. My recommended footprint eliminates approximately 900 feet of line along McCracken Hill Road and uses the power right-of-way instead.

Q. IS THERE A COST DIFFERENCE BETWEEN YOUR RECOMMENDED PROJECT FOOTPRINT AND THE COMPANY'S?

A. Yes. The Company first estimated the installation cost of their project footprint at $337,050 (OCA Set I, No. 21). After taking bids, the Company increased the estimate of their footprint to $415,076. The Company estimates the installation cost of my recommended footprint at $321,588 (OCA Set II, No. 2).

Q. DOES INSTALLING THE WATER MAIN ALONG THE POWER LINE RIGHT-OF-WAY ELIMINATE SERVICE TO ANY EXISTING PARCEL OF LAND ALONG MCCRACKEN HILL ROAD?

A. No. According to the applicable tax map of the area, all existing parcels of land on McCracken Hill Road between Kings Creek Road and where the power line right-of-way crosses McCracken Hill Road can be served if the water main is installed along the right-of-way.

Q. PLEASE ADDRESS THE NUMBER OF CUSTOMERS PRESENT IN YOUR RECOMMENDED PROJECT FOOTPRINT.

A. Within the area that I am recommending there are 32 current homeowners who will connect to PAWC's system. An additional person has a barn, for which he wants public water supply service. Several of the potential customers plan to build additional homes and/or subdivide their lots, creating 10 to 12 additional future customers. See Exhibit TLF-4.

Q. WHY IS THIS INFORMATION IMPORTANT TO MAIN EXTENSION ANALYSIS?

A. Because the higher the revenues to be generated by potential customers, the more likely a project is to be economic under the PAWC tariff.

Q. ARE YOU FAMILIAR WITH PAWC's TARIFF REGARDING WATER MAIN EXTENSIONS?

A. Yes, due to my past experience in main extension cases involving PAWC, I am aware of the applicable tariff, which contains the following formula:

Company Investment = [Average Annual Revenue minus Operation and Maintenance Expense] divided by [Depreciation Rate and weighted cost of debt].

This formula is intended to be a "break-even" analysis, calculating the minimum Company Investment in a water main extension.

Q. HOW DOES THE APPLICATION OF THIS FORMULA AFFECT THE APPLICANTS FOR RESIDENTIAL WATER SERVICE?

A. The Company is required only to pay for the cost of the construction of the project to the extent those expenditures are justified by the anticipated revenues. Currently, the minimum Company investment per applicant is $6,200. The Company multiplies this amount by the number of expected initial customers and deducts the total from the total estimated costs of construction.

Q. PLEASE EXPLAIN HOW PAWC CALCULATED THE CUSTOMER CONTRIBUTION IN THIS CASE.

A. PAWC has estimated the construction cost of the proposed water main extension at $321,588. Assuming a PAWC Investment of $6,200 per customer and 33 customers, the remainder to be financed by the customers is $116,988. Therefore, each customer must contribute $3,545 ($116,988 ÷ 33) to obtain service.

Q. IS THE PROJECT THAT YOU ARE RECOMMENDING ECONOMICALLY JUSTIFIED UNDER THE TERMS OF THE PAWC TARIFF?

A. Yes. The project that I have recommended above is economically justified under the terms of the PAWC Tariff using a "least-cost" approach to estimate project costs and project financing as discussed later.

Q. IF THIS PROJECT IS ECONOMIC UNDER THE PAWC TARIFF, WHY DON'T THE POTENTIAL HANOVER TOWNSHIP CUSTOMERS HAVE WATER SERVICE NOW?

A. In contrast to our "least-cost" approach, the Company applies its tariff formula in the strictest possible way. After the rate case decided in January 2002, the Company required investment rose to $6,200 per residential customer. Using this number, in the Company's view, PAWC has to invest only about 64% [100×($6,200×33)/$321,588] of the project cost and the Hanover Township customers or other entities must supply the remainder.

Q. WHY IS THIS APPROACH UNREASONABLE?

A. There are several reasons. First, the Company justified investment of $6,200 is based upon the overall cost of debt, currently 4.08% according to OCA witness Marilyn J. Kraus. In instances such as this, low-cost PennVest funding, now 1.387%, is available to finance the project. The lower cost of capital would justify a higher Company investment. The PUC approved formula does not take into account the availability of low-cost, taxpayer-supplied capital.

Q. HOW WOULD THE JUSTIFIED COMPANY INVESTMENT CHANGE IF THE LOWER COST PENNVEST FUNDING WAS AVAILABLE FOR THIS PROJECT?

A. The Company investment would be more than double. According to OCA witness Kraus, the justified Company investment would be $12,971 per customer.

Q. IS THE WATER MAIN EXTENSION THAT YOU HAVE RECOMMENDED ECONOMICALLY JUSTIFIED USING PENNVEST FINANCING?

A. Yes. The Company Investment assuming PennVest financing would be $428,043 ($12,971×33 customers), which exceeds the estimated installation cost of $321,588. The

project would be economically justified if 25 customer connect to PAWC's system. It should be noted that this analysis does not include the additional revenues that the Company would be receiving from the 10 to 12 future customers or from the Township for fire hydrant installations.

Q. DOES THIS COMPLETE YOUR WRITTEN DIRECT TESTIMONY?

A. Yes.

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APPENDIX A

BACKGROUND AND QUALIFICATIONS

TERRY L. FOUGHT, P.E.

Education

Cleveland State University, Cleveland, Ohio, Bachelor of Civil Engineering, 1967

Professional Registrations

Professional Engineer, Pennsylvania, PE-023343-E, 1975

Professional Engineer, New Jersey, GE 25392, 1978

Professional Engineer, Virginia, 10850, 1979

Professional Land Surveyor, Pennsylvania, SU-000194-A, 1980

Employment

From March 1983 to date, I have been a self-employed consulting engineer engaged in providing consulting engineering services to water and wastewater utilities, both private and municipal.

From May 1969 to March 1983, I was employed be E. H. Bourquard & Associates, Inc. as a project engineer to water and wastewater clients. At the time I left the firm I was a vice-president.

From 1962 to 1969, I was employed by the State of Ohio, Department of Highways and the Geauga County Ohio Sanitary Engineers Office as an engineer's assistant to assistant sanitary engineer with breaks in employment to attend college and 1½ years active duty military service.

Experience

I have prepared studies related to and designed water supply, treatment, transmission, distribution and storage facilities. I have provided services to the following private and municipal water suppliers: Amber Hill Mobile Home Park, Brockway Borough Municipal Authority, Dallas Water Company, Eastern Gas and Water Investment Company, Haddonfield Hills Development, Halifax Borough, Langhorne Spring Water Company, Mifflintown Municipal Authority, Neshaminy Water Resources Authority, Newberry Water Company, Pleasant View Mobil Home Park, H. B. Reese Candy Company, Shavertown Water Company, Smethport Water Company, Tunkhannock Water Company, and Watts Business Center.

I have prepared studies related to and designed wastewater collection and interceptor sewers, pumping stations and force mains, and treatment plants. I have provided services to the following private and municipal sewerage utilities: Brockway Glass Company, Central Dauphin School District, Clean Waste Technologies, Inc., Dauphin Borough, Dauphin Borough Municipal Authority, Halifax Area School District, Halifax Municipal Authority, Mercersburg Borough, Middle Paxton Township, Newberry Sewer Company, Newberry Township Municipal Authority, Park-a-way Park Family Campground, Reading Township Municipal Authority, Reynoldsville Borough, Saint Thomas Township, and Watts Business Center.

List of Public Utility cases which I have testified or provided substantial assistance.

Docket Number	Company Name and Jurisdiction
7712-1140	City of Trenton New Jersey Bureau of Public Utilities
787-847	Hackensack Water Company New Jersey Bureau of Public Utilities
814-119	City of Trenton New Jersey Bureau of Public Utilities

Docket Number	Company Name and Jurisdiction
R-850174	Philadelphia Suburban Water Company Pennsylvania Public Utility Commission
C-00924186, et al	Oneida Water Company Pennsylvania Public Utility Commission
C-00945867	Valley Utilities, Inc. Pennsylvania Public Utility Commission
8310-862	City of Trenton New Jersey Bureau of Public Utilities
I-840377	Pennsylvania Gas and Water Company Pennsylvania Public Utility Commission
	Shickshinny Water Company Pennsylvania Public Utility Commission
C-00923960	Spring Run Water Company Pennsylvania Public Utility Commission
C-00923959	Bradford Glen Water Company Pennsylvania Public Utility Commission
R-00932785	Meadows Water Company Pennsylvania Public Utility Commission
R-00963708 (Sewer) R-00963709 (Water)	Wynnewood Water & Sewer Corporation Pennsylvania Public Utility Commission
C-00968510	Eaton Water & Sewer Company Pennsylvania Public Utility Commission
A-211070F0006	Citizens Utility Water Company Pennsylvania Public Utility Commission
R-00984375C0006	City of Bethlehem Pennsylvania Public Utility Commission
R-984257C002 R-984257C-003	Consumers Pa. Water Company Pennsylvania Public Utility Commission
A-213955F0008 R-00994672	Superior Water Company Pennsylvania Public Utility Commission
C-00981448	United Water Pennsylvania, Inc. Pennsylvania Public Utility Commission
R-00984334	National Utilities, Inc. Pennsylvania Public Utility Commission

Docket Number	Company Name and Jurisdiction
C-00992270	Redstone Water Company Pennsylvania Public Utility Commission
C-00003337	Scott Water Company Pennsylvania Public Utility Commission
R-00005031	Penn Estates Utilities, Inc. Pennsylvania Public Utility Commission
R-00005050	Emporium Water Company Pennsylvania Public Utility Commission
R-00005997	Jackson Sewer Corporation Pennsylvania Public Utility Commission
C-00957224 (Water) C-00967956 (Water) C-00968365 (Water) C-00970869 (Water) C-00971010 (Water) C-00981517 (Water) C-00981949 (Water) C-00992167 (Water) C-00992268 (Water) C-00003200 (Water) C-00003636 (Water) R-00005212 (Sewer)	Pennsylvania-American Water Company Pennsylvania Public Utility Commission

EDWARD D. MORRA, JR.
V.
PENNSYLVANIA-AMERICAN
WATER COMPANY
DOCKET NO. C-00014733

EXHIBIT TLF-1

DEP Letter to Hanover Township,
February 7, 2000

Pennsylvania Department of Environmental Protection

3913 Washington Road
McMurray, PA 15317
February 7, 2000

McMurray District Office 724-941-7100

Marian Barish
Hanover Township
901 Steubenville Pike
Burgettstown, PA 15021

Re: McCracken Hill Area

Dear Marian:

Per your request a survey to identify on-lot water supply problems in the McCracken Hill area was conducted on January 26, 2000. The purpose of the study is to document water quality and quantity problems to determine the need for a possible water main extension.

Of the appropriate thirty-two (32) homes in the study area 43% or fourteen of the homes were surveyed. Eleven (11) of the homes were tested for the presence of coliform bacteria. Three (3) of these eleven (11) homes were found to be contaminated with total coliform bacteria. One (1) was found to be contaminated with fecal coliform. The home with the fecal contamination shares its water supply with another home.

Two (2) of the homes surveyed have no water and another six (6) of the surveyed homes report serious water quantity problems.

In summary, 33% of the water supplies are contaminated with coliform bacteria and are considered unsafe for human consumption. Fifty-seven percent of the surveyed homes indicate serious problems with water quantity to the extent that the wells go dry and they are left with no potable water. This study indicates a need for the extension of public water lines into this area.

Sincerely,

M. Clark Harris
Sanitarian
Water Supply Management

Enclosures

cc: Rep. Victor J. Lescovitz

EDWARD D. MORRA, JR.
V.
PENNSYLVANIA-AMERICAN
WATER COMPANY
DOCKET NO. C-00014733

EXHIBIT TLF-2

Hanover Township Ordinance No. 98

HANOVER TOWNSHIP
WASHINGTON COUNTY, PENNSYLVANIA

ORDINANCE NO. 98

AN ORDINANCE OF HANOVER TOWNSHIP, WASHINGTON COUNTY, PENNSYLVANIA, REQUIRING ALL OWNERS OF IMPROVED PROPERTY LOCATED WITHIN THE TOWNSHIP AND ACCESSIBLE TO AND WHOSE HOUSE, PRINCIPAL BUILDING OR OCCUPIED STRUCTURE IS WITHIN 150 FEET FROM A WATER LINE THAT IS PRESENTLY BEING CONSTRUCTED OR WHICH SHALL BE CONSTRUCTED IN THE FUTURE, OR ANY NEW HOUSE, PRINCIPAL BUILDING OR OCCUPIED STRUCTURE WHICH SHALL BE CONSTRUCTED WITHIN 150 FEET OF AN EXISTING WATER LINE, TO CONNECT SUCH PROPERTY WITH AND TO USE SUCH WATER SYSTEM WITHIN 90 DAYS AFTER NOTICE IS SERVED BY THE TOWNSHIP; REGULATING THE MANNER OF MAKING SUCH CONNECTION; PROVIDING FOR THE INSPECTION OF SUCH CONNECTIONS; PROVIDING SAFETY REGULATIONS IN REGARD TO SAID CONNECTIONS; AND PROVIDING PENALTIES FOR VIOLATION HEREOF.

WHEREAS, the Township is authorized pursuant to the authority of the Act of May 1, 1993, P.L. 103, as amended (53 P.S. Section 66602.2 et seq.) to require connection to an available water system; and,

WHEREAS, the availability and use of a water system is a benefit to the health and safety of the residents of the Township and is necessary to promote the economic development within the municipality; and,

WHEREAS, certain grants and funding sources available for the construction and development of a water system require an Ordinance mandating connection to said systems.

NOW, THEREFORE, THE BOARD OF SUPERVISORS OF HANOVER TOWNSHIP, WASHINGTON COUNTY, PENNSYLVANIA, ENACTS AND ORDAINS AS FOLLOWS:

SECTION I
DEFINITIONS

SECTION 1.01 Unless the context specifically and clearly indicates otherwise, the meaning of the terms and phrases used in the Ordinance shall be as follows:

A. IMPROVED PROPERTY means any property located within the Township upon which there is erected a structure intended for continuous or periodic habitation, occupancy or use by human beings.

B. OWNER means any person vested with ownership, legal or equitable, sole or partial, of any Improved Property.

C. PERSON means any individual, partnership, company, association, society, trust, corporation, joint stock company, unincorporated association, governmental body, political subdivision, township or other group or entity.

D. TOWNSHIP means Hanover Township, Washington County, Pennsylvania, a political subdivision of the Commonwealth of Pennsylvania, acting by or through its Board of Supervisors or, in appropriate cases, acting by and through its authorized representatives.

E. WATER SUPPLIER means any company or entity, whether public or private, who shall construct and/or operate a water system within the Township with the approval of the Township. There may be more than one water supplier providing service within the Township.

F. WATER SYSTEM means all facilities, as of any particular time, for providing, transporting and supplying water for human use and consumption, situate

in or adjacent to the Township, owned by, leased to or under contract or agreement with the Township for operation and use.

SECTION II
USE OF WATER SYSTEM REQUIRED

SECTION 2.01 The Owner of any Improved Property located within the Township and accessible to and whose house, principal building or occupied structure is within 150 feet from a water line which is presently being constructed or which shall be constructed in the future, or any new house, principal building or occupied structure which shall be constructed within 150 feet of an existing water line, shall connect to, at his own expense, and use such water system within 90 days after Notice to such Owner from the Township to make such connection: subject, however, to such limitations and restrictions as shall be established herein or otherwise shall be established by the Township or its designated water supplies from time to time.

SECTION 2.02 Those industries and farms who have their own supply of water for uses other than human consumption shall be exempt from said connection requirement.

SECTION 2.03 The Notice by the Township to make connection to the water system referred to in Section 2.01 shall be given by the Township Supervisors, in writing, and shall be served upon the Owner either by personal service or by registered mail or by such other methods as shall be permitted by law.

SECTION III
CONNECTIONS

SECTION 3.01 No persons shall uncover, connect with, make any opening into or use, alter or disturb in any manner, any part of the water system without first obtaining a permit, in writing, from the Township of its designated water supplier.

SECTION 3.02 Application for a permit required under Section 3.01 shall be made by the Owner of the Improved Property served or to be served or by a person authorized by the Owner of the Improved Property to make such application to the Township or its designated water supplier.

SECTION 3.03 All connections to the water system must be done in accordance with the specifications, plans and procedures established by the designated water supplier.

SECTION 3.04 No person shall make or cause to be made a connection of any Improved Property with the water system until such person shall have fulfilled each of the following conditions:

(a) Such person shall have notified this Township or its designated water supplier of the desire and intention to connect such Improved Property to the water system.

(b) Such person shall have applied for and obtained a permit as required by Sections 3.01 and 3.02.

(c) Such person shall have furnished any information required by the Township or its designated water supplier prior to connections and received any necessary approvals from the water supplier.

(d) Such person shall have given the Township or its designated water supplier at least 24 hours notice of the time when such connection will be made so that the Township or its designated water supplier may supervise and inspect the work of connection and necessary testing. At the time of inspection of the connection, the Owner of the Improved Property shall permit the person conducting the inspection full and complete access to all water facilities in each building and in and about all parts of the property. No water connection line shall be covered, or in any way concealed, until after it has been inspected and approved.

SECTION 3.05 Except as otherwise provided in this Section 3.05, each structure or principal building shall be connected separately and independently with the water system. Grouping of more than one structure on one connection shall not be permitted except under special circumstances and for good cause shown and then only after special permission of the Township or its designated water supplier, in writing, shall hav been secured and subject to such rules, regulations and conditions as may be prescribed by the Township or its designated water supplier.

SECTION IV
ENFORCEMENT

SECTION 4.01 In the event the Owner of an Improved Property shall neglect or refuse to connect with and use said water system following a period of ninety (90) days after Notice to do so as set forth in Section 2.01, the Township Supervisors, or their agents, may enter upon such property and construct such connection.

SECTION 4.02 In such case, the Township Supervisors shall, upon completion of the work, send an itemized bill of the costs of construction of such connection to the Owner of the property to which connection has been made, which bill shall be payable forthwith.

SECTION 4.03 In case of neglect or refusal by the Owner of such Improved Property to pay said bill within six (6) months of the date of completion of construction of said connection, the Township Supervisors shall, within said period, file a municipal lien for said construction, which shall be subject in all respects to the general law providing for the filing and recovery of municipal liens.

SECTION 4.04 Every person who shall violate this Ordinance shall be liable, upon summary conviction for a first offense and upon subsequent conviction for each subsequent offense to a civil penalty of not less than One Hundred Dollars ($100.00) nor more than One Thousand Dollars ($1,000.00), together with costs of each case. Each day that a violation shall continue shall be deemed and shall be taken to be a separate offense and shall be assessed as such.

SECTION V
MISCELLANEOUS

SECTION 5.01 The Township or its designated water supplier shall have the right to access, at reasonable times, to any part of any Improved Property served by the water system as shall be required for purposes of inspection, measurement, sampling and testing and for performance of other functions relating to service rendered by the Township or its designated water supplier through the water system.

SECTION 5.02 The Township shall not be liable for a deficiency or failure of service when occasioned by an emergency, required repairs or for any cause beyond its control. The Township reserves the right to restrict the use of the water system whenever the public welfare may require it.

SECTION 5.03 The Owner shall be responsible, at the owner's expense, for seeing that all excavations for water connections shall be adequately guarded with barricades and lights to protect the public from hazards and that all streets, sidewalks and public property, disturbed in the course of making a water connection, shall be restored in a manner satisfactory to the Township or its designated water supplier for such purpose.

SECTION 5.04 The Owner shall indemnify and save harmless the Township from any loss or damage directly or indirectly, caused by or arising out of installatin and/or connection on the Improved Property.

SECTION VI
ADDITIONAL RULES AND REGULATIONS

SECTION 6.01 The Township reserves the right to adopt, by resolution, from time to time, additional rules and regulations as it shall deem necessary and proper relating to connections with the water system.

SECTION VII
EFFECTIVE DATE

SECTION 7.01 This Ordinance shall become effective five (5) days after the date of Enactment.

SECTION VIII
SEVERABILITY

SECTION 8.01 In the event that any provision, section, sentence, clause or part of this Ordinance shall be held to be invalid, such invalidity shall not effect or impair any remaining provision, section, sentence, clause or part of this Ordinance, it being the intent of the Township that such remainder shall be and shall remain in full force and effect.

SECTION IX
REPEALER

SECTION 9.01 All Ordinances or parts of Ordinances inconsistent herewith expressly are repealed insofar as they conflict with this Ordinance.

DUT ENACTED AND ORDAINED, this 17 day of January, 2002, by the Board of Supervisors of Hanover Township, Washington County, Pennsylvania, in lawful session duly assembled.

HANOVER TOWNSHIP
Washington County,
Pennsylvania

BOARD OF SUPERVISORS
BY:

Douglas R. Bartram

William Hendrick

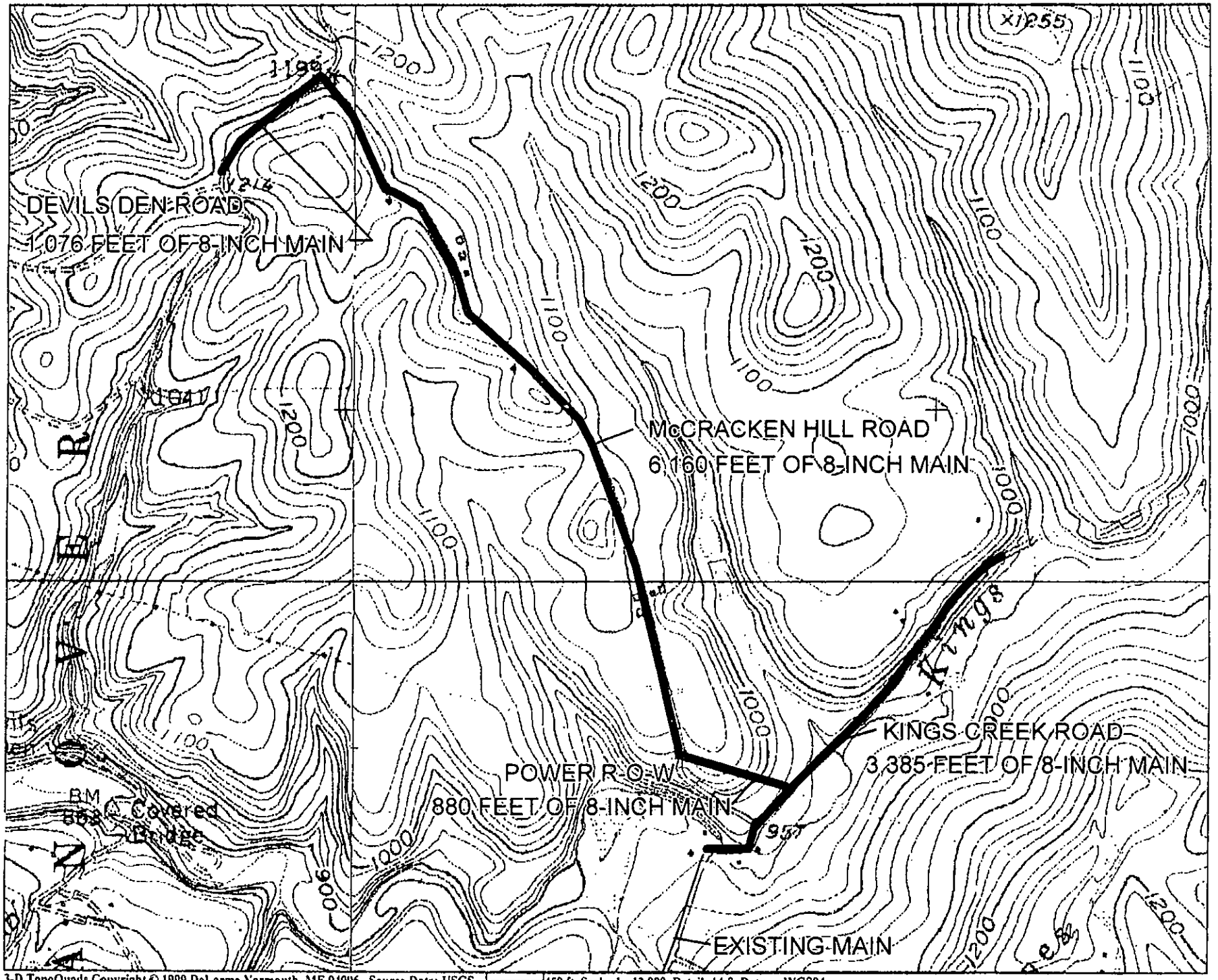
Herbert Suddles

ATTEST:
Charlotte Gabler

EDWARD D. MORRA, JR.
V.
PENNSYLVANIA-AMERICAN
WATER COMPANY
DOCKET NO. C-00014733

EXHIBIT TLF-3

MAP



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 450 ft Scale: 1 : 12,000 Detail: 14-0 Datum: WGS84

EXHIBIT TLF-3

EDWARD D. MORRA, JR.
V.
PENNSYLVANIA-AMERICAN
WATER COMPANY
DOCKET NO. C-00014733

EXHIBIT TLF-4

McCracken Hill Area Residents Who Want Water Service From PAWC

McCracken Hill Area Residents Who Want Water Service from PAWC

Potential Customer	Address	Currently Want a Connection	Plan to Subdivide and/or Build Homes
Donald Barkhurst	2 North Kings Creek Rd.	1 (barn)	
Sam Stafford	12 North Kings Creek Rd.	1	
Grace Barkhurst	22 North Kings Creek Rd.	1	
James Murphy, Jr.	62 North Kings Creek Rd.	1	
James Murphy, Sr.	68 North Kings Creek Rd.	1	
Vivian Hargest	73 North Kings Creek Rd.	1	
George Olsen	85 North Kings Creek Rd.	1	
Robert Hargest	91 North Kings Creek Rd.	1	
James and Linda Yates	109 North Kings Creek Rd.	1	
Tim and Brenda Finch	110 North Kings Creek Rd.	1	
William Schramm	234 North Kings Creek Rd.	1	
Bob Harper, Sr.	34 McCracken Hill Rd.	1	
Bob Harper, Jr.	34 McCracken Hill Rd.		1
Edward D. Morra, Sr. and Joyce Morra	55 McCracken Hill Rd.	1	1
Mario Bellisaria	56 McCracken Hill Rd.	1	
John McKee	84 McCracken Hill Rd.	1	1
Michael and Stacy Morra	95 McCracken Hill Rd.	1	1

Barbara Robertson	117 McCracken Hill Rd.	1	
Tracey and Gary Ward	127 McCracken Hill Rd.	1	
Edward D. Morra, Jr. and Sandy Morra	130 McCracken Hill Rd.		4 to 5
Edward D. Morra, Jr. and Sandy Morra	138 McCracken Hill Rd.	1	
Merle Miller	155 McCracken Hill Rd.	1	
Terry Callahan	160 McCracken Hill Rd.	1	
Charlotte Boyer	163 McCracken Hill Rd.	1	
Ben Floffegen	182 McCracken Hill Rd.	1	
Helen M. Smith	200 McCracken Hill Rd.	1	2 to 3
Janet Williamson	215 McCracken Hill Rd.	1	
Betty L. Williamson	205 McCracken Hill Rd.	1	
Randall K. Paulin	206 McCracken Hill Rd.	1	
Jeffrey Cox	222 McCracken Hill Rd.	1	
Donald Marshall	229 McCracken Hill Rd.	1	
Marcia Novak	235 McCracken Hill Rd.	1	
Doug and Dianne Jena	596 Devil's Den Rd.	1	
Danny Mitchen	608 Devil's Den Rd.	1	
Ruby Mitchen	600 Devil's Den Rd.	1	
TOTALS		33	10 to 12

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

C-00015377

CINDY PARKS,	:	**DOCKET NO. ~~C-00015337~~**
RICHARD MINUTELLO, AND	:	**DOCKET NO. C-20028177**
IRWIN A. POPOWSKY, CONSUMER ADVOCATE	:	**DOCKET NO. C-20028361**
v.	:	
PENNSYLVANIA-AMERICAN WATER COMPANY	:	

SUPPLEMENTAL TESTIMONY OF JERRY E. HANKEY

ON BEHALF OF PENNSYLVANIA-AMERICAN WATER COMPANY

Responding To The Supplemental Direct Testimony Of OCA Witness Fought

PAWC STATEMENT NO. 2.1

12/3/02

October 25, 2002

PENNSYLVANIA-AMERICAN WATER COMPANY

SUPPLEMENTAL TESTIMONY OF JERRY E. HANKEY

Q. Please state your full name and business address.

A. My name is Jerry E. Hankey and my business address is 1909 Oakland Avenue, Indiana, Pennsylvania 15701

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

A. I am employed by Pennsylvania-American Water Company ("Pennsylvania-American" or "Company") as an Engineering Manager.

Q. Have you presented any other testimony in this proceeding?

A. Yes, I sponsored Pennsylvania-American Statement No. 2.0. My work experience, professional qualifications and educational background are set forth in that statement.

Q What is the purpose of your testimony?

A. The purpose of my testimony is to respond to the supplemental direct testimony of Mr. Terry L. Fought (OCA Statement No. 1A), who submitted testimony for the Office of Consumer Advocate ("OCA"). Specifically, I will address Mr. Fought's position that neither a water storage tank nor mains larger than 8 inches in diameter, in certain areas he identified, are needed to furnish general and fire protection service to property-owners within the footprint of the project described in his testimony.

Q. Please address Mr. Fought's proposal that adequate general and fire protection service could be provided within the project he defined in Mt. Pleasant Township without the construction of a storage tank.

A. Mr. Fought is not correct for several reasons. Without a storage tank, reliability for both general and fire protection service would be compromised and generally accepted design criteria would not be met.

First, the booster pump referenced by Mr. Fought (OCA St. 1A, p. 8) is the Gretna Booster Station located in Chartiers Township, which was constructed principally to serve demands in Chartiers Township, where there are currently approximately 233 customers. The main on suction side of the Gretna Booster is approximately 30,000 feet in length. Once that main leaves the Company's Washington distribution grid, it is single main, and a single feed into the Gretna Booster, for its entire 30,000 foot length. The main that Mr. Fought proposes be installed from the discharge side of the Gretna Booster to Main Street in Hickory would be approximately 19,780 feet in length. A break in the main on either the suction or discharge side of the booster would put the Mt. Pleasant Township system out of service. This is a particular concern given the cumulative length of these two mains. With a storage tank located in Mt. Pleasant Township, sufficient storage would be available to meet demands while a main break or other emergency is being addressed and corrected.

In addition, even without the lengthy runs of main on the suction and discharge sides of the Gretna Booster, the number of customers that would be served from that booster, when the Chartiers' demand (233 customers) and Mr. Fought's estimate for Mt. Pleasant (568) are combined, would exceed the level at which well accepted engineering design criteria for water systems dictate that distribution storage should be provided. Water storage on a system of this size is necessary to provide stable pressure and reliable service. Of course, if 744 residential-equivalent customers are within the project scope (as explained in Mr. Lucas' supplemental testimony), the problem would be even worse.

Because of the long run of pipe and the topography from the Gretna Booster to the Hickory area, an air release/air vacuum valve would have to be fitted at the high point along this section of main. This valve would allow air to enter the line if the discharge main from the booster were to break, thus avoiding a potential collapse of the main or system contamination from back-siphoning caused by a vacuum condition. Additionally, this valve provides protection from "water hammer" or transient pressure surges that could damage the Company's and potentially customers' facilities if the large amount of air in the main was not able to be expelled when refilling the main. Despite the presence of the air release/air vacuum valve, some air would remain in the line after refilling, which, absent a storage tank near the high point on that line, could be transmitted along the main to customer facilities and could cause damage, potentially severe, to those facilities.

Q. Is Mr. Fought correct that the Gretna Booster could meet the general and fire protection demands of both Chartiers Township and the customers desiring service in Mt. Pleasant Township?

A. No. The Gretna Booster was designed to meet the instantaneous demand of approximately 200 customers plus the fire flow requirements for the Chartiers' system. The additional instantaneous demand from customers that Mr. Fought estimates would take service on the Mt. Pleasant Township system is greater than the design flow of that booster.

Q. Please address Mr. Fought's position that general and fire protection service can be provided within the project scope he has defined without putting 12-inch mains in certain streets, as the Company determined would be needed.

A. The specific locations of those 12-inch main installations are identified in Mr. Fought's Exhibit TLF-2A. As shown, most of the main installations for the project can appropriately

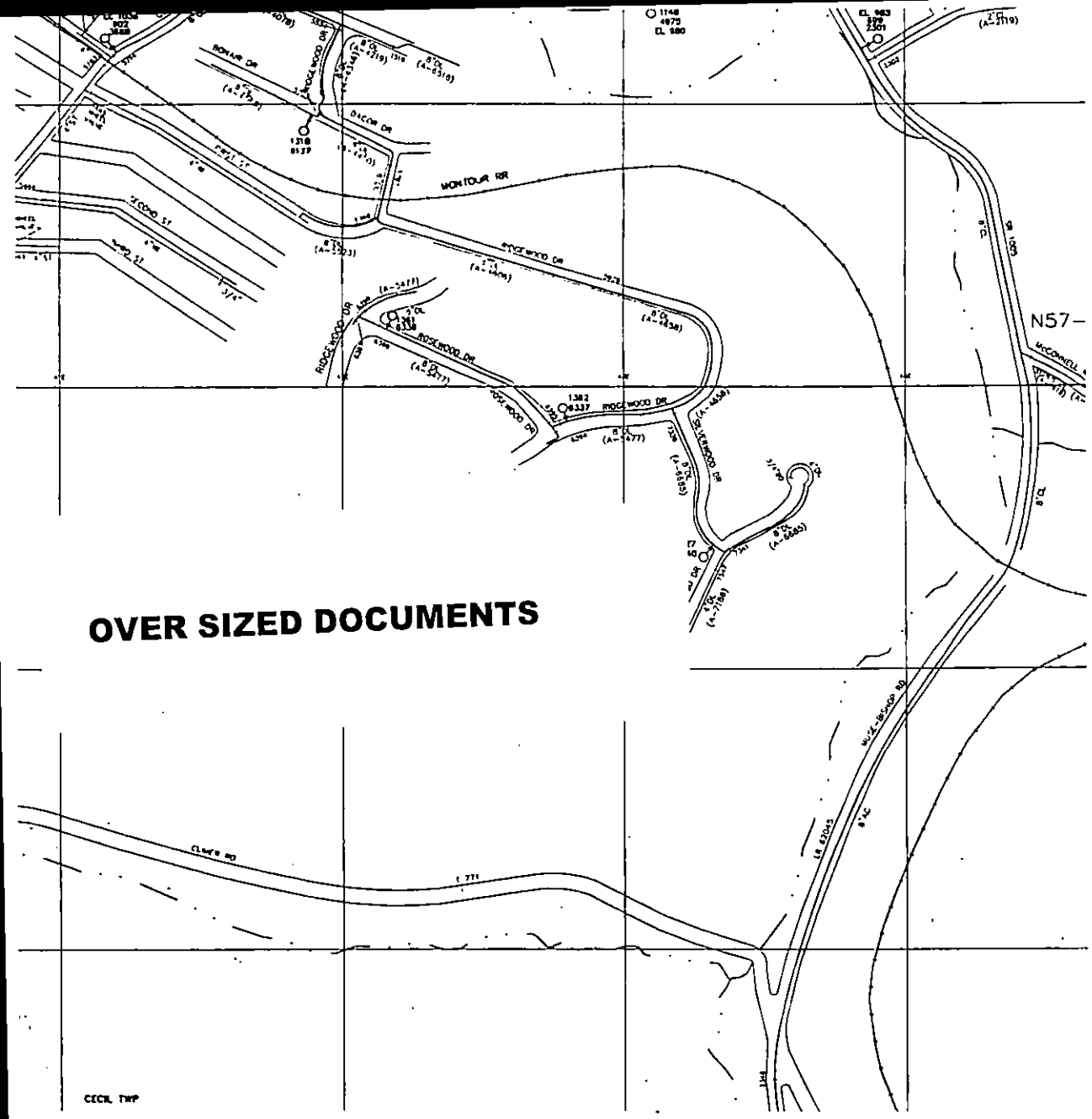
be sized for 8-inch diameter mains. There are a few streets where, given their locations, 12-inch diameter mains are needed to get flows adequate for fire protection service, specifically, 750 gallons per minute at pressure not less than 20 pounds per square inch, which is a minimum flow standard. Since the Township and its residents clearly will look to any public water system installed in the Township to provide flows adequate for fire protection service, the mains installed must be adequate to meet those criteria. The installation of 8-inch mains in those critical areas, as Mr. Fought suggests, would not suffice.

Q. Please address Mr. Fought's assumption that the Company is seeking to install over-sized facilities in order to meet anticipated "future" demand in Mt. Pleasant Township.

A. For the reasons I explained above, that is certainly not the case. The facilities that are at issue – the tank and certain 12-inch diameter mains – would be needed to serve existing properties desiring water service within the footprint of the project Mr. Fought has proposed. The Company should not ask Bona Fide Service Applicants to contribute the cost of facilities that are oversized – and the Company certainly has not done that here. By the same token, the Company should not be expected to "low-ball" its size determinations so that applicants can pay less than they otherwise should under the Company's tariff for facilities clearly necessary to provide the service they desire.

Q. Does this conclude your supplemental testimony?

A. Yes, it does.



OVER SIZED DOCUMENTS

DOCUMENT FOLDER

C-00015377

REVISIONS

CINDY PARK V.
PENNSYLVANIA-AMERICAN WATER COMPANY
DOCKET No.C-00015377

PAWC – EXHIBIT 2.1

PENNSYLVANIA-AMERICAN WATER COMPANY
CORPORATE ENGINEERING

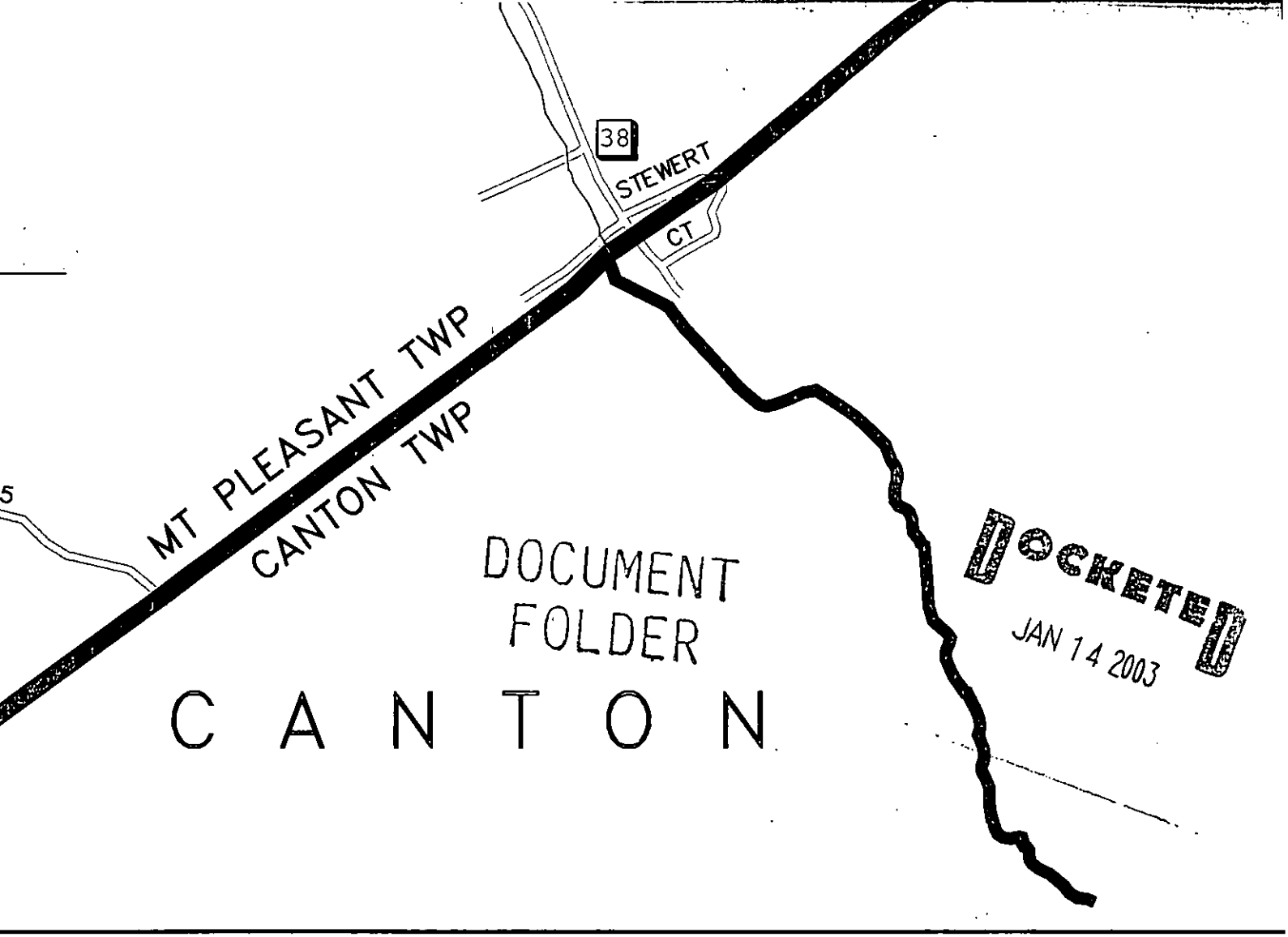
410 COOKE LANE PITTSBURGH, PA 15234

DRAWN BY: IU
PROJECT ENG'R: JEH
APPROVED:

DATE:
PROJECT:

USE DIMENSIONS ONLY
SCALE: NOT TO SCALE

USE APPROVED DRAWINGS ONLY



EGEND

PAWC 2" WATER MAIN

TOWNSHIP BOUNDARY

77 12/3/02 Hbj gw

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

C-00015377

CINDY PARKS,	:	**DOCKET NO. ~~C-00015337~~**
RICHARD MINUTELLO, AND	:	**DOCKET NO. C-20028177**
IRWIN A. POPOWSKY, CONSUMER ADVOCATE	:	**DOCKET NO. C-20028361**
v.	:	
PENNSYLVANIA-AMERICAN WATER COMPANY	:	

SUPPLEMENTAL TESTIMONY
OF PAUL T. DISKIN

ON BEHALF OF PENNSYLVANIA-AMERICAN WATER COMPANY

Responding To The Supplemental Direct Testimony
Of OCA Witness Kraus

PAWC STATEMENT NO. 3.1

& Exh 3.3 thru 3.6

12/3/02
1105

October 25, 2002

Q. What is your name and address?

A. My name is Paul T. Diskin and my business address is 800 West Hershey Park Drive, Hershey, Pennsylvania 17033.

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

A. I am employed by Pennsylvania-American Water Company ("Pennsylvania-American" or the "Company") as Director of Rates and Planning.

Q. Have you presented any other testimony in this proceeding?

A. Yes, I sponsored Pennsylvania-American Statement No. 3.0. My work experience, professional qualifications and educational background are set forth in that statement

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to respond to the direct testimony of OCA witness Kraus concerning the Company's tariff provisions and the Commission's regulations concerning main extensions. Because Ms. Kraus proposes a substantial departure from the terms of the Company's tariff and the Commission's regulation on which it is based, I will explain the operation of both, with specific reference to the provisions that are implicated by Ms. Kraus' proposal. I will also address: (1) the costs that Ms. Parks, Mr. Minutello and their neighbors would have to pay to have the Company extend its mains in a manner consistent with the terms of the Company's tariff and the Commission's regulations; (2) the alternatives available for Ms. Parks, Mr. Minutello and their neighbors to finance those costs; and (3) the reasons why Ms. Kraus' proposal to depart from the revenue-justified investment formula in the Commission's regulations on main extensions is

improper and, if adopted, would require a major change in the way rates must be calculated in base rate proceedings.

Q. Does the Company's tariff set forth the terms on which it will extend its main to serve applicants for water service?

A. Yes, Rule 27, set forth at pages 71 to 86 of the Company's Tariff Water-PA P.U.C. No. 4, addresses "Main Extension For Bona Fide Service Applicants." Rule 27 defines a "Bona Fide Service Applicant" (Rule 27.1 (D)(1)) and delineates a specific formula for determining the amount of Company investment that would be economically justified based upon the revenue that would be produced by a Bona Fide Service Applicant. The amount of revenue-justified investment is the amount that the Company is required to invest, per applicant, to extend its mains to serve Bona Fide Service Applicants. If the main installation or other costs exceed the Company-required investment, the applicant(s) are required to pay the costs in excess of the Company investment (Rule 27.1 (D) (2)). If there are costs to be borne by the applicant, the applicant can elect to pay one-third of the Customer Contribution prior to start of construction and pay the balance over 36 months with interest at the Company's embedded cost of long-term debt (Rule 27.2, Paragraph Third).

The Company's Tariff Rule 27 also contains a true-up mechanism that assures Bona Fide Service Applicants that pay Customer Contributions receive appropriate credits if additional customers take service in the future from the mains funded by their Customer Contributions. In that event, if additional customers connect directly to those mains at any time up to 10 years after the Customer Contribution was made, the Bona

Fide Service Applicants receive a refund equal to the Company's per-customer revenue-justified investment for each additional connecting customer. In other words, the customers that paid Customer Contributions benefit from future growth and, in that way, can get some or all of their contributions refunded.

Finally, it should be noted that the initial Customer Contribution is calculated based on the estimated cost to install the mains necessary to provide the service requested by the Bona Fide Service Applicants. However, the applicants' cost responsibility is based upon the actual construction cost, whatever it may turn out to be. If it is more or less than the amount initially deposited by the applicant(s), the difference is refunded to or paid by the applicant(s) as applicable (Rule 27.2, Paragraph Third).

Q. **What is the basis for the terms set out in Rule 27 of the Company's tariff?**

A. Rule 27 was prepared in compliance with the terms of the Commission's regulation at 52 Pa. Code §65.21, which became effective on February 15, 1997. That regulation was the culmination of a process that began in 1993 with the Commission's issuance of an *Advance Notice of Proposed Rulemaking Re Line Extensions* at Docket No. L-930089. In that Order, the Commission stated that its goal in adopting regulations on main extensions was to eliminate "uncertainty" created by its prior policy statement and to provide "predictability regarding the outcome of specific cases" by establishing "practical subsidiary standards" for determining the amount of investment a water utility would be required to make to extend its mains for Bona Fide Service Applicants. In 1994, the Commission issued proposed regulations for comment. The proposed regulations contained a form of revenue-justification formula similar to the one ultimately adopted by

the Commission. In 1995, the Commission issued a *Final Rulemaking Re Line Extensions*, which revised the revenue-justification formula in the proposed regulations to reduce the utility-required investment. After review by the Independent Regulatory Review Commission, the final regulations became effective upon publication in the *Pennsylvania Bulletin* on February 15, 1997. In its Order approving what become the final regulations, the Commission stated: "[A] public utility's obligation to make line extensions is not unlimited and, accordingly, it will not be obligated to make a line extension that is uneconomic or unreasonable absent an appropriate customer contribution."

The final regulations contain the revenue-justified investment formula as well as the other terms and conditions that are incorporated in Rule 27 of the Company's tariff. Under that formula, an investment is economically justified if annual revenue will equal or exceed the company's operating and maintenance expenses, depreciation and debt costs and, in that case, no customer contribution is required. If the annual revenue is not sufficient to cover the costs outlined by the Commission, a contribution may be required for the cost of the line extension not covered by annual customer revenue. The formula set forth in the regulations is:

X	=	[AR – OM] divided by [I + D]; and,
AR	=	the utility's annual revenue
OM	=	the utility's operating and maintenance costs
I	=	the utility's current debt ratio multiplied by the utility's weighted long-term debt cost rate
D	=	the utility's current depreciation accrual rate

Q. Did the Company file a tariff in compliance with the Commission's regulations at 52 Pa. Code § 65.21?

A. Yes, the Company filed a tariff supplement in compliance with the Commission's regulations, which is currently on file with the Commission and is the basis for the Company's position in this case.

Q. What is the Company's current revenue-justified investment based on the formula prescribed by the Commission's regulations and Rule 27 of the Company's tariff?

A. For a residential Bona Fide Service Applicant, the current revenue-justified investment per applicant is $6,200, which is determined as follows:

Average Annual Revenue		$ 424
Less: Operating and Maintenance Expense		104
Subtotal		$ 320
Divided by:		
Depreciation Rate for 8" Mains	1.08%	
Plus: Weighted Cost of Debt	4.08%	
Composite Rate:		0.0516
Company Investment		$6,200

Q. What is the Company-required investment for the number of customers identified in PAWC witness Lucas' testimony?

A. As explained in Mr. Lucas' supplemental testimony, if Mount Pleasant Township were to enact a mandatory connection ordinance, the number of equivalent residential customers would be 744, taking into account usage Mr. Fought estimated for 17 non-residential customers. Alternatively, and also explained by Mr. Lucas, the Township could guarantee and underwrite 744 residential-equivalent applicants. In that event, the Company-required investment would be $4,612,800 (744 x $6,200).

Q. What is the estimated cost of the main installations to provide service to those applicants?

A. As explained in Mr. Lucas' supplemental testimony, the estimate cost for the project scope proposed by Mr. Fought is $6,290,499.

Q. How much would the Customer Contribution be, based on those inputs?

A. The Customer Contribution would be the difference between the estimated project cost ($6,290,499) and the Company-required investment ($4,612,800) or $1,677,699. Assuming 744 applicants, this amounts to $2,255 per applicant.

Q. Does the Customer Contribution need to be paid in a lump sum?

A. No, it does not. Pursuant to Rule 27.1(D)(2) of the Company's tariff, only one-third of the Customer Contribution must be paid prior to the Company commencing construction. In this case, that sum is $752. The balance ($1,503) may be paid over 36 months with interest calculated at the Company's embedded long-term debt cost, which is presently 7.26% as determined by the Commission in the Company's last base rate proceeding at Docket No. R-0016339. (I will round it off to the nearest quarter point, or 7.25%). Using that interest rate and a three-year term, the level monthly payment would be $46.58.

Q. Are other alternatives available for financing the Customer Contribution?

A. Yes. Since each of the applicants is a homeowner, they could finance the Customer Contribution with a home equity loan or line of credit from a third-party lender.

Q. Have you determined the likely carrying costs for third-party financing?

A. Yes, I have. During the second week of October 2002, local lending institutions in Washington County (National City Bank, Washington Federal Savings and Loan and Community Bank) were offering variable rate home-equity lines of credit at 4.75%.

Q. Have you calculated a monthly payment for such a loan?

A. Yes, I have. I added 2.5 points for up-front costs, which results in a loan balance of $2,311. Then, to be conservative, I used a 5.00% interest rate. I used a 10-year pay-off period to calculate a level monthly payment. Based on these inputs, the monthly pre-tax payment is $24.51. For taxpayers that itemize, the after-tax cost would be lower, because the interest portion of the payment would be tax deductible. Since all of the applicants are homeowners that pay property tax and probably have deductible first mortgage interest, it is likely that most, if not all, itemize their deductions and would experience an after-tax cost of less than $24.51 for the loan payment I calculated above.

Q. What would be the total monthly cost (water rate plus debt amortization) for a residential customer in this situation?

A. Based on the Company's average residential bill of approximately $35, the total cost would be approximately $60 on a pre-tax basis.

Q. Would $60 be the incremental pre-tax cost borne by a residential customer?

A. No. Based on the testimony presented at the September 9, 2002 hearing, the incremental cost would be much less and, in fact, would be negative for many customers. In other words, compared to $60 per month, many Township residents would experience net savings because costs above that amount would be eliminated. I have summarized below

the testimony presented by witnesses about their current costs:

Cindy Parks (Tr. 62-65): $75-$100/mo. for water; $50/mo. for laundry additives.

Richard Minutello (Tr. 67): $200/yr. for bottled water ($16.67/mo.).

Paul Nimal (Re. 70): $20/mo. for bottled water; $50/mo. for laundromat; plus "transportation costs."

Carl Armstrong (Tr. 80-81): $70-$80/mo. for laundromat; $20-$30/mo. for drinking water.

Lee Clayton (Tr. 86): $10,000-$15,000 per year for water hauling; $200/mo. for electric pumping costs (for 33-unit mobile home park). Equates to $31.31 to $43.94 per month per unit.

Catherine Taggart (Tr. 90-91): $35/wk. for water hauling; $10/wk. for drinking water. Equates to $195/mo. ($45 x 52 ÷ 12).

Robert Loughry (Tr. 95): $11/wk. for laundromat; $10/wk. for drinking water. Equates to $91/mo. ($21 x 52 ÷ 12).

Shawn Staley (Tr. 128): $30/mo. for bulk water deliveries.

William Donati (Tr. 138-39): $50 for annual replacement of UV bulb; $50/mo. for drinking water. Equates to $54.17/mo. In addition, during "dry periods" purchases four loads of water per month at $40/load.

Jack Rupert (Tr. 140-41): Uses laundromat and has water hauled. Costs not provided.

Arthur Mueller (Tr. 156): $24-$30/mo. for laundromat.

Anita Steigerwald (Tr. 205): $10,000 for water deliveries over 5 years. Equates to $166.67/mo.

James White (Tr. 214): $1,500/yr. for water ($125/mo.).

Jeffry Zofchak (Tr. 235): $800/yr. for last two years ($66.67/mo.).

JoAnn Bilski (Tr. 238): $700/yr. for water hauling ($58.33/mo.).

Clair McCracken (Tr. 240); Purchases water in 3,000 gallon lots. Costs not provided.

Walt Moorhead (Tr. 245-46): Buys water for cooking and drinking. Costs not provided.

Denis Lucas (Tr. 246-47): $600/yr. to purchase water ($50/mo.).

Donald J. Kovac (Tr. 260): $80/mo. from August to December to purchase water.

Patricia Golobish (Tr. 271): $30/wk. for water hauling. Equates to $130/mo. ($30 x 52 ÷ 12).

Q. Would property owners experience any other saving?

Witnesses at the public hearing testified that the construction of a public water system capable of providing adequate fire flows would reduce property insurance premiums. Larry Grimm, a Township Supervisor, testified that "homeowners' policies would go down" (Tr. 118). David Moorhead testified (Tr. 189) that, on average, Township residents paid $200 per year more for fire insurance without access to a public water/fire protection system. Brian Bell, president of the Mt. Pleasant Volunteer Fire Department, testified that the availability of fire hydrants would "lower everyone's fire insurance" (Tr. 209).

Several witnesses (Tr. 67, 152, 224 and 256) testified that the installation of a public water system would increase housing values. A number of witnesses also testified that they could avoid capital expenditures and maintenance costs for well pumps, "coyote" systems, filters and treatment devices if a public water system were installed (Tr. 80-81, 117, 125, 156 and 235).

Several witnesses also testified that the installation of a public water system would allow them to unlock the value of their property by subdividing (Tr. 112-13; 231).

Mr. John Bedillion, a member of the Mt. Pleasant Township Planning Commission, testified that he believed a public water system would lead to growth and, thereby, increase the Township's "tax base" (Tr. 159). An increase in tax base generally means lower taxes for property owners, expanded municipal services or some combination of the two.

Q. OCA witness Kraus proposes that the Company investment for main extensions in Mount Pleasant Township area be calculated at the initial PennVest interest rate of 1.387% instead of PAWC's weighted average cost of debt (4.080%). Please address this proposal.

A. Obviously, the proposal is contingent upon PAWC actually getting PennVest funding. Leaving that aside, the proposal to "target" a specific interest rate to a particular main extension, as the OCA's witness proposes, is improper for several reasons.

First, it is contrary to the PUC's regulation, which specifies the interest rate to be used to calculate a utility's investment as follows: "I = the utility's current debt ratio

multiplied by the utility's weighted long-term debt cost rate." The PUC has not waived or modified this provision for PAWC, and it is reflected in the Company's tariff, which has been approved by the Commission.

Second, Ms. Kraus apparently wants to "target" the PennVest rate to the Company-required investment calculation because that rate is lower than the Company's weighted average cost of debt. However, she presumably would want to continue to use the weighted average cost of debt for all non-PennVest-funded main extensions. In short, she wants to "target" a specific financing rate to a specific project only when that rate is lower than the Company's weighted average debt cost. If specific interest rates are to be "targeted" to specific projects, that would have to be done across the board. Since the Company's incremental debt cost rate (i.e., the rate for new projects that are not funded by PennVest loans) is higher than its weighted average embedded debt cost rate, all non-PennVest-funded projects would have a correspondingly higher debt component and lower Company-required investment. Of course, to prevent different treatment of applicants based on differences in funding sources, the Commission, in its regulation, specified the use of the weighted average cost of debt for all main extensions.

Third, there are significant ratemaking implications to what Ms. Kraus proposes, which she has overlooked. Specifically, at page 8 of Statement 2A, she states that, in PAWC's next rate case, "this PennVest loan would be added to the total debt in PAWC's capital structure at the appropriate rate, i.e., either 1.387%, 2.774% or a combination thereof . . ." It is clearly improper to both "target" a PennVest loan rate to a specific main extension, as if the loan were used solely to finance that project, and also "add" the

favorable PennVest loan rate to Pennsylvania-American's total capital structure in a subsequent base rate case, which assumes the same funds are available to finance PAWC's entire rate base on a pro rata basis. Obviously, both cannot be true. As I will demonstrate, the approach Ms. Kraus proposes will short-change the Company unless the Commission approves a major change in its ratemaking approach.

If the 1.387% loan rate is assumed to finance only the Mount Pleasant Township main extensions, as Ms. Kraus proposes, then that interest rate would be applied to determine the Company's return on that specific investment ($6,290,499 x 1.387% = $87,249). Pennsylvania-American's debt ratio and debt cost, without regard to the PennVest financing, should, therefore, be used to calculate PAWC's weighted overall cost of capital for ratemaking for all other ratebase. The ratios and cost rates determined in the Company's last rate case are shown on Exhibit No. 3.3, as applied to Pennsylvania-American's Commission-determined rate base in that case of $1,297,613,716. As shown, the return is $112,892,393. Adding the return from the PennVest funded assets, the total is $112,979,642.

Exhibit No. 3.4 shows the calculation of Pennsylvania-American's total return as Ms. Kraus proposes. The $6,290,499 PennVest loan balance, at a cost rate of 1.387%, was included in PAWC's weighted cost of capital, to calculate an overall rate of return that was applied to a total rate base that includes the $6,290,499 investment for the main extensions Mr. Fought proposes. The total annual return is $112,657,342 or $322,318 less than that calculated on Exhibit No. 3.3. Over the five year period that the 1.387% rate is in effect, the total cumulative effect of that annual underrecovery would be

substantial.

Exhibits Nos. 3.5 and 3.6 show the same two calculations set forth in Exhibit Nos. 3-B and 3-C, but reflecting two changes. First, the 2.774% interest rate in effect for the last 15 years of the PennVest loan term is used. Second, the PennVest loan balance has been reduced to reflect the principal that would have been repaid by the Company to PennVest over the preceding five years. As shown on Exhibit No. 3.6, the annual amount of Pennsylvania-American's underrecovery in year six of the PennVest loan is $370,368. The annual underrecovery would continue in subsequent years, but would decrease in magnitude as the outstanding balance of the PennVest loan is paid down by the Company.

Q. What do these calculations show?

A. They show that Ms. Kraus' proposal to "target" PennVest financing to a specific main extension project, if adopted by the PUC, requires an associated change to ratemaking procedures. The specific assets assumed to be funded with PennVest financing would have to be separated from Pennsylvania-American's other rate base, and a return calculated thereon at the PennVest rate. Correspondingly, the Company's weighted cost of capital applied to the rest of its rate base (exclusive of the PennVest-funded assets) would have to be calculated without regard to the PennVest financing. Without this ratemaking change, Ms. Kraus' proposal would assure that Pennsylvania-American does not fully recovery its return over the term of the PennVest loan.

Q. Is Ms. Kraus correct that the PUC was unaware of the Distribution System Improvement Charge ("DSIC") when it adopted the main extension regulation at 52

Pa. Code § 65.21?

A. No, she is not. The Company petitioned the PUC to establish the DSIC on March 15, 1996. The Commission's final Order approving the DSIC was entered on August 26, 1996. The Commission's final regulation on main extensions was approved by the Commission's final Order issued October 3, 1996 and the regulation became effective February 13, 1997. Compliance tariffs had to be filed by April 16, 1997. Significantly, in the Company's Petition requesting approval of a DSIC, it asked that the Company-funded portion of main extensions be included in the DSIC, which the Commission denied.

Q. What is the maximum rate the DSIC can ever achieve?

A. Under the terms of the DISC, as established by the Commission, the DSIC cannot exceed 5% of a customer's bill. Even if the DSIC rate went to 5% and were included in the "revenue" component of the Company's investment calculation, the resulting Company investment would only be approximately $6,610.

Q. What is the Company's DSIC rate in effect today?

A. The DSIC rate that became effective on October 1, 2002, is .73%.

Q. What was the Company's average DSIC rate over the entire period since the DSIC became effective in January 1997?

A. The average DSIC rate since the DSIC was initiated is 1.04%.

Q. How would the Company-required investment change if either the current or "average" DSIC were included in the revenue component of the calculation?

A. If the current DSIC rate of .73% were included in the revenue component of the formula used to calculate the Company-required investment, the Company-required investment figure would increase by approximately $60, to $6,260 per applicant. If the average DSIC rate of 1.04% were used, the Company-required investment would increase by approximately $90, to $6,290 per applicant.

Q. Does this complete your testimony?

A. Yes, it does.

APPENDIX A

		DOCKET NO.
Pennsylvania-American Water Company		R-00016339
	(Wastewater)	R-00005212
		R-00994638
	(Wastewater)	R-00973973
		R-00973944
		R-00943231
		R-00932670
		R-922428
		R-911909
		R-901652
		R-891208
Pennsylvania-American Water Company (Pre-merger)		R-880916
Keystone Water Company		R-850245
Berwick District		R-842759
Northeast Region		R-842755
Southern Central Region		R-842756
Riverton Consolidated Water Company		R-850153
Western Pennsylvania Water Company		R-870825
		R-860397
Butler District		R-842624
Clarion-Punxsutawney District		R-842625
Indiana-Kane		R-842623
Warren District		R-842622
		R-850097
Western Region		R-842621
		R-850096

APPENDIX B

FORMAL CUSTOMER COMPLAINT PROCEEDINGS

DOCKET NO.	COMPLAINT
C-00971106	Gilbert
C-00981273	Drew
C-00992304	Sayegh
C-00992569	Waste Recycling
C-00003629	Ellis
C-00004511	Valvanno
C-20016173	Noll
C-00014733	Morra

EXHIBITS ACCOMPANYING THE SUPPLEMENTAL TESTIMONY OF PAUL T. DISKIN

PENNSYLVANIA-AMERICAN WATER COMPANY

EXHIBIT NO. 3.3
C-00015337

		AMOUNT	RATIO	COST RATE	WEIGHTED COST
WEIGHTED COST OF CAPITAL	LONG TERM DEBT	$735,467,161	56.15%	7.26%	4.08%
	PREFERRED STOCK	16,040,400	1.23%	8.05%	0.10%
	COMMON EQUITY	558,226,884	42.62%	10.60%	4.52%
		$1,309,734,445	100.00%		8.70%

	AMOUNT	COST RATE	ROI /1
RATE BASE	$1,297,613,716	8.70%	$112,892,393
PENNVEST LOAN	6,290,499	1.387%	87,249
TOTAL RETURN ON INVESTMENT	$1,303,904,215		$112,979,642

WEIGHTED COST OF CAPITAL AND RATE BASE INFORMATION TAKEN FROM DOCKET NO. R-00016339
/1 ROI = RETURN ON INVESTMENT

PENNSYLVANIA-AMERICAN WATER COMPANY

EXHIBIT NO. 3.4
C-00015337

DOCUMENT FOLDER

		AMOUNT	RATIO	COST RATE	WEIGHTED COST
WEIGHTED COST OF CAPITAL	LONG TERM DEBT /1	$741,757,660	56.36%	7.17%	4.04%
	PREFERRED STOCK	16,040,400	1.22%	8.05%	0.10%
	COMMON EQUITY	558,226,884	42.41%	10.60%	4.50%
		$1,316,024,944	100.00%		8.64%

	AMOUNT	COST RATE	ROI /2
RATE BASE + PENNVEST LOAN	$1,303,904,215	8.64%	$112,657,324

DIFFERENCE ON RETURN BETWEEN EXHIBIT NO. 3-B AND EXHIBIT NO. 3-C	($322,318)

WEIGHTED COST OF CAPITAL AND RATE BASE INFORMATION TAKEN FROM DOCKET NO. R-00016339
/1 REFLECTS ADDITION TO LONG TERM DEBT OF PENNVEST ISSUANCE
/2 ROI = RETURN ON INVESTMENT

DOCKETED
JAN 14 2003

C-00015337

PENNSYLVANIA-AMERICAN WATER COMPANY

EXHIBIT NO. 3.5
C-00015337

		AMOUNT	RATIO	COST RATE	WEIGHTED COST
WEIGHTED COST OF CAPITAL	LONG TERM DEBT	$735,467,161	56.15%	7.26%	4.08%
	PREFERRED STOCK	16,040,400	1.23%	8.05%	0.10%
	COMMON EQUITY	558,226,884	42.62%	10.60%	4.52%
		$1,309,734,445	100.00%		8.70%

	AMOUNT	COST RATE	ROI /1
RATE BASE	$1,297,613,716	8.70%	$112,892,393
PENNVEST LOAN	4,877,406	2.774%	135,299
TOTAL RETURN ON INVESTMENT	$1,302,491,122		$113,027,692

WEIGHTED COST OF CAPITAL AND RATE BASE INFORMATION TAKEN FROM DOCKET NO. R-00016339
/1 ROI = RETURN ON INVESTMENT

C-00015337

PENNSYLVANIA-AMERICAN WATER COMPANY

EXHIBIT NO. 3.6
C-00015337

		AMOUNT	RATIO	COST RATE	WEIGHTED COST
WEIGHTED COST OF CAPITAL	LONG TERM DEBT /1	$740,344,567	56.32%	7.17%	4.04%
	PREFERRED STOCK	16,040,400	1.22%	8.05%	0.10%
	COMMON EQUITY	558,226,884	42.46%	10.60%	4.50%
		$1,314,611,851	100.00%		8.64%

	AMOUNT	COST RATE	ROI /2
RATE BASE + PENNVEST LOAN	$1,303,904,215	8.64%	$112,657,324

DIFFERENCE ON RETURN BETWEEN EXHIBIT NO. 3-C AND EXHIBIT 3-D	($370,368)

WEIGHTED COST OF CAPITAL AND RATE BASE INFORMATION TAKEN FROM DOCKET NO. R-00016339
/1 REFLECTS ADDITION TO LONG TERM DEBT OF PENNVEST ISSUANCE
/2 ROI = RETURN ON INVESTMENT

C-00015337

OCA STATEMENT 1A

12/3/02
1M05
Jan

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Cindy Parks, Richard Minutello, and Irwin A. Popowsky, Consumer Advocate	:	C-00015377
V.	:	Docket Nos. ~~C-00015337~~, C-20028177 and C-20028361
Pennsylvania-American Water Company	:	

SUPPLEMENTAL DIRECT TESTIMONY

OF

TERRY L. FOUGHT

ON BEHALF OF

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

SEPTEMBER 27, 2002

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

A. Terry L. Fought, 780 Cardinal Drive, Harrisburg, Pennsylvania, 17111.

Q BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am a self-employed consulting engineer under contract with the OCA.

Q. HAVE YOU SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes. I submitted direct testimony on December 7, 2001 in OCA Statement 1.

Q. WHY ARE YOU PROVIDING SUPPLEMENTAL DIRECT TESTIMONY?

A. Since my initial Direct Testimony was served on December 7, 2001, I have continued to obtain and review more information about the Mount Pleasant Township ("MPT") service territory. The sources of this information are PAWC, additional survey results obtained by the OCA, recent discovery responses, and sworn testimony of sixty-two MPT residents and officials at the hearings on September 9, 2002.

Q WHICH ISSUES RELEVANT TO THE MAIN EXTENSION TARIFF ARE AFFECTED BY THIS NEW INFORMATION?

A. The new information that affects issues relevant to the PAWC main extension tariff are (1) the change in the place of connection to PAWC's distribution system; (2) the number and type of customers; (3) the scope and estimated cost of the project, and (4) the compelling need for public water supply service in the area.

Q. WHAT CHANGE WAS MADE IN THE PLACE OF CONNECTION TO THE COMPANY'S DISTRIBUTION SYSTEM?

A. The proposed connection point to the Company's system has been changed from near Primrose located northeast of Hickory to Route 18 in Chartiers Township located south of Hickory. This has changed the number of potential customers, the type of customers, and the scope and cost of the project to serve areas in Mount Pleasant Township.

Q. HOW DID THIS CHANGE THE NUMBER AND TYPE OF POTENTIAL CUSTOMERS?

A. The new water main extension alignment to the Hickory area will serve an additional 87 possible customers along Route 18 while deleting only a few along the previous alignment. There are more businesses located along the Route 18 alignment than the previous alignment.

Q. HOW DID THIS CHANGE THE SCOPE AND ESTIMATED COST OF THE PROJECT?

A. The new alignment along Route 18 requires a longer pipe length and has increased the cost of the project.

Q. WHAT IS THE NEW INFORMATION THAT INDICATES A COMPELLING NEED FOR PUBLIC WATER SUPPLY SERVICE?

A. The testimony by potential customers at the September 9, 2002 hearings has indicated a compelling need for public water supply service in the area. Many residents testified that

they don't have sufficient quantity of water from their wells. To increase the quantity of their water, some residents have installed "coyote" systems with cisterns for collecting rainwater off their roofs – a setup that can provide contaminated water from the rain falling on bird droppings and decaying organic matter such as leaves, small dead animals, etc.

Most of the residents who testified that they do have sufficient quantity of well water stated that the quality of their water was so bad that it could not be used for drinking and cooking. A number of residents have had their water tested with the results showing that the water was not potable due to malfunctioning on-lot septic systems. One witness presented documents indicating that his child's illness was caused by their water supply. Some residents have installed treatment devices such as water softeners, filters, and disinfection systems so that they may use their water for some domestic purposes. In general, residents of MPT have incurred enormous expense for less than normal water usage.

Many residents testified to fire protection concerns; some noting that, in the past, nearby fire hydrants would have saved buildings and lives. A few residents testified about the difficulty in obtaining homeowners insurance. One resident testified that she could not obtain homeowners insurance because of lack of public fire hydrants.

Q. HAVE YOU BEEN ABLE TO DEFINE A PROJECT THAT IS ECONOMICALLY JUSTIFIED?

A. Yes. Using the project footprint that PAWC presented at a public meeting on March 20, 2002 as a starting point, I have been able to define an economically justified project.

Q. HOW DOES THE PROJECT THAT YOU RECOMMEND DIFFER FROM THE ONE PROPOSED BY PAWC AT THE MARCH 20, 2002 PUBLIC MEETING?

A. I recommend that the Water Storage Tank and its related pipeline within the Tank Site be deleted from the project footprint, for reasons explained later.

Furthermore, I recommend that the following 8-inch water mains be included in the project footprint: 860 feet on Avella Road; 700 feet on Burgettstown Road; 660 feet on Hoop Lane; an additional 3,100 feet on Hornhead Road (from Route 519); 850 feet on Kelley Lane; an additional 1,250 feet on McCarrell Road; 2,500 feet on Plum Run Road; 4,900 feet on Red Fox Road; an additional 750 feet on Washington Avenue; 2,000 feet on Water Dam Road; and an additional 5,400 feet on Westland Road. The project footprint as modified by my recommendations is shown in map form on Exhibit TLF-1A.

Q. PLEASE ADDRESS THE NUMBER OF CUSTOMERS PRESENT IN YOUR RECOMMENDED PROJECT FOOTPRINT.

A. Within the project footprint that I am recommending, there are approximately 701 potential customers. In response to the OCA Customer Survey, testimony of residents, and other contact between residents and the OCA, approximately 81% (430/530) of those within the project footprint stated that they will connect to the public water supply sys-

tem. Using the same percentage for those possible customers who did not respond to the survey indicates that approximately 568 customers would connect to the system.

Q. PLEASE DESCRIBE THE INFORMATION YOU HAVE ABOUT THE TYPE OF POTENTIAL CUSTOMERS.

A. Most of the potential customers will be residential. However, the response to the OCA Customer Survey and public hearing testimony indicate that some non-residential customers will use considerably more water than an average residential customer. These customers are the Hickory UP Church, the Wabash Community Center, Mount Pleasant Township Fire Company, Hickory Junction Tavern, Old Hickory Inn, Hickory Dickory Doc Animal Hospital, a law office at 86 Main Street, Village Green Golf Course, Mount Pleasant Township Building, Fort Cherry Grill, Costello Door Co., Donate Machine Shop, PC Whip, Hickory Telephone Co., Battery Specialists, Corwins' AMC, and Red Fox Lodge. These 17 non-residential customers together have an estimated daily usage of 9,350 gallons per day which is equivalent to that of 60 residential customers. The economic analysis discussed later does not include this additional revenue the Company would receive from these 17 customers.

Q. WHY IS THIS INFORMATION IMPORTANT TO THE MAIN EXTENSION ANALYSIS?

A. Because the higher the revenues to be generated by potential customers, the more likely a project is to be economic under the PAWC tariff.

Q. IS THE PROJECT THAT YOU ARE RECOMMENDING ECONOMICALLY JUSTIFIED UNDER THE TERMS OF THE PAWC TARIFF EVEN WITHOUT THE ADDITIONAL REVENUES YOU MENTIONED?

A. Yes. The project that I have recommended above and shown in map form in Exhibit TLF-1A is economically justified under the terms of the PAWC Tariff using a "least-cost" approach to estimate project costs and project financing as discussed later. See Exhibit TLF-2A for a tabulation of the economic analysis.

Q. IF THIS PROJECT IS ECONOMIC UNDER THE PAWC TARIFF, WHY DON'T THE POTENTIAL MOUNT PLEASANT TOWNSHIP CUSTOMERS HAVE WATER SERVICE NOW?

A. In contrast to our "least-cost" approach, the Company applies its tariff formula in the strictest possible way. After the rate case decided in January 2002, the Company required investment for main extension projects rose to $6,200 per residential customer. Using this number, in the Company's view, PAWC has to invest only about 66% [100×($6,200×568)/$5,303,352] of the project cost and the Mount Pleasant Township customers or other entities must supply the remainder. The $5,303,352 estimated installation cost is shown on Exhibit TLF-2A.

Q. WHY IS THIS APPROACH UNREASONABLE?

A. There are several reasons. First, the Company justified investment of $6,200 is based upon the overall cost of debt, currently 4.08% according to OCA witness Kraus. In instances such as this, low-cost PennVest funding is available to finance the project, now

1.387%. The lower cost of capital would justify a higher Company investment. The PUC approved formula does not take into account the availability of low-cost taxpayer supplied capital.

Q. HOW WOULD THE JUSTIFIED COMPANY INVESTMENT CHANGE IF THE LOWER COST PENNVEST FUNDING WAS AVAILABLE FOR THIS PROJECT?

A. The Company investment would be more than double. According to OCA witness Marilyn J. Kraus, the justified Company investment would be $12,971.

Q. DOES YOUR CUSTOMER NUMBER DIFFER FROM THAT USED BY PAWC?

A. Yes. PAWC takes the most conservative approach possible in determining the number of potential customers by counting only those who are willing to sign up for service in advance of construction. In this case, out of a total of 701 possible customers, 430 have indicated that they will connect to the system. It is reasonable to project that some of the remaining 171 residents would connect into the water system. According to OCA witness Marilyn J. Kraus, it is reasonable to project that those who did not respond will connect or not connect at approximately the same percentage as those who did respond. Therefore, it is projected that 568 customers would connect to the system immediately or soon after service is available.

Q. HAS THE COMPANY INCLUDED ANY ITEMS IN ITS COST ESTIMATE USED TO DETERMINE THE CUSTOMER CONTRIBUTION THAT ARE INAPPROPRIATE?

A. The Company has included the cost of a tank in its base cost. I have excluded this cost and the main within the tank site because, according to the Company's response to OCA Interrogatory Set IV, Nos. 9 and 11, the booster pump station in Chartiers Township will serve 233 customers in Chartiers Township, have a capacity of approximately 1,000 gallons per minute, and is designed to pump into a closed system without a water storage tank. This pumping station is adequate to also provide domestic and fire service to the proposed customers in Mount Pleasant Township without a water storage tank.

Q. ARE THERE ANY OTHER COSTS WHICH SHOULD BE EXCLUDED FROM PAWC'S COST ESTIMATES FOR PURPOSES OF DETERMINING CUSTOMER CONTRIBUTIONS?

A. Yes. The Company's estimates are based upon the largest mains that would be justified from an engineering perspective taking into account future customers. These larger mains would not be required to provide residential and public fire service to just the potential applicants. As OCA witness Marilyn J. Kraus testifies, it is unfair to charge potential customers for costs in excess of that required to provide them service. For that reason, I have reduced the cost of some of the 12-inch mains to that of similar 8-inch mains.

Q. HAVE YOU PERFORMED AN ECONOMIC ANALYSIS OF THE COST OF INSTALLING WATER MAINS THAT YOU RECOMMEND?

A. Yes. Exhibit TLF-2A is an economic analysis of the project footprint shown in map form on Exhibit TLF-1A.

Q. PLEASE EXPLAIN THE ECONOMIC ANALYSIS TABULATED IN EXHIBIT TLF-2A.

A. The projected number of customers within the proposed footprint was estimated by calculating the percentage of those who indicated that they wanted service on the OCA Customer Survey (and adjusted by later testimony) and applying that percentage to the total possible customers. OCA witness Marilyn J. Kraus has determined a Company Investment of $12,971 per customer (assuming that PennVest will finance the entire project) and that amount was compared to the estimated installation costs. As can be noted near the bottom of the Exhibit, the Company Investment of $7,367,528 for the 568 projected customers exceeds the Estimated Main Installation Cost of $5,303,352. Assuming a Company Investment of $12,971 with PennVest financing, only 409 customers must connect for the project to be economically justified.

As previously mentioned, 17 of the 430 customers who have indicated that they will connect to the system are equivalent to 60 average residential customers. Taking this into account, 473 equivalent residential customers have stated that they are willing to connect to the system - and 611 equivalent residential customers are projected to connect to the system immediately or after service is available.

Q. DOES THIS COMPLETE YOUR WRITTEN SUPPLEMENTAL DIRECT TESTIMONY?

A. Yes.

Cindy Parks, *et al.*

v.

Pennsylvania-American Water Company

Docket No. C-00015337, *et al.*

Exhibit TLF-1A (MAP)

Cindy Parks, *et al.*

SCALE: 1 IN. EQUALS 2265 FEET
(APPROX.)

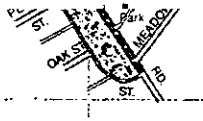


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EXHIBIT TLF-IA
OCA STATEMENT NO. IA

PROPOSED WATER MAIN

CES DIRECTORY
VERSE SIDE)

T U V W

5 6 7

Cindy Parks, *et al.*

v.

Pennsylvania-American Water Company

Docket No. C-00015337, *et al.*

Exhibit TLF-2A

EXHIBIT TLF-2A

CINDY PARKS v. PENNSYLVANIA-AMERICAN WATER COMPANY
Docket No. C-00015377

ECONOMIC ANALYSIS OF PROPOSED WATER MAIN EXTENSIONS

Location	Total Possible Within Footprint	Estimated Number of Customers Customer Survey Within Footprint Yes	No	Projected Number	Estimated Main Installation Cost
Phase 1, Part 1 - Route 18 from Chartiers Township (1)					
Chartiers Township (2)	23	23			
Henderson Road (Chartiers to Donaldson)	64	29	11		
Sub-Total	87	52	11		$750,105
Phase 1, Part 2 - Route 50 and Route 18 (1)					
Henderson Road (Donaldson to Main)		11	1		
Main Street (Henderson to Millers Run)		72	16		
Millers Run Road (Main to 1/2 mile east of Herriott)		20	14		
Total - Phase 1, Part 2	174	103	31		$1,050,384
Phase 1, Part 3 - Hickory Distribution System (1)					
McCarrell Road (Main to Donaldson)	29	14	1		$157,675
Deduction for changing 12-inch Pipe to 8-inch Pipe					-$18,734
Allison Road (All)	7	7	0		$25,656
Casey Road (All)	16	13	1		$91,960
Dire Road (All)	28	20	2		$48,607
Donaldson Road (None)					Deleted
Grandview Road (All)	24	15	2		$81,001
Johnston Road (All)	9	5	0		$74,490
Pleasant Road (Millers Run to Casey & Hse #110)	16	8	4		$140,942
Wabash Road (All)	26	19	2		$81,550
Deduction for changing 12-inch Pipe to 8-inch Pipe					-$6,423
Hornhead Road - (Millers Run to Casey)	11	8	3		$207,430
Eleanor Road (All)	4	4	0		$17,000
Fort Cherry Road (Rte 50 to 4th Hse)	4	1	3		$49,431
Washington Avenue	15	12	2		$98,377
Sub-Total	189	126	20		$1,048,962
Phase 1, Part 4 - Tank and Related Pipeline (1)					
Tank					Deleted
4,800 ft of 12-in Pipeline (Avella, Skyline, Tank Site)	9	6	3		$164,066
Deduction for 790 feet of 12-inch Pipeline (Tank Site)					-$27,003
Sub-Total	9	6	3		$137,063
Extensions added in PAWC's Footprint prior to March 20, 2002 Public Meeting (3)					
Bowen Road (Hse #2 to #50)	4	2	1		$39,220
Chapman Road/Clayton Court (All)	42	34	2		$118,778
Eberle Road	5	2	1		$45,505
Fort Cherry Road Extension (From 4th Hse to Chiarelli)	45	23	10		$553,879
Deduction for changing 12-inch Pipe to 8-inch Pipe					-$66,475
Herriot Lane (Hse #2 to Hse #17)	3	2	1		$35,014
Kelso Road (Hse #86 to Hse #129) (7)	4	3	0		$28,800
McCarrell Road Ext. to Hse # 114	10	4	3		$89,400
Deduction for changing 12-inch Pipe to 8-inch Pipe					-$9,700
Primrose Road (Hse # 38 to Hse #164)	19	10	3		$255,463
Ridge Road (Walbash to 700 feet north of Miller)	22	12	3		$417,165
Deduction for changing 12-inch Pipe to 8-inch Pipe					-$52,481
Westland Road Rte 519 (2,800 feet of pipe) (6)	12	5	1		$123,430
Deduction for changing 12-inch Pipe to 8-inch Pipe (6)					-$12,154
Sub-Total	166	97	25		$1,565,844
Other Recommended Extensions (3)					
Avella Road Extension (to Hse #140) (7)	3	3	0		$30,960
Burgettstown Road (Hse # 1223 to Hse #1225) (5)	3	2	1		$40,075
Deduction for changing 12-inch Pipe to 8-inch Pipe					-$3,217
Hoop Lane (2 Hses) (4)	2	2	0		$21,780
Hornhead Road - (Route 519 to Hse #241)	2	1	0		$91,117
Kelley Lane (McCarrell to Hse #70) (4)	6	5	0		$28,050
McCarrell Road Ext. to Hse # 152	2	2	0		$53,997
Deduction for changing 12-inch Pipe to 8-inch Pipe					-$5,537
Plum Run Road (Johnston to Hse #51)(7)	7	4	2		$90,000
Red Fox Road (All) (4)	14	5	5		$161,700
Washington Avenue Extension (to Hse #55) (7)	15	13	0		$27,000
Water Dam Road (7)	4	3	1		$72,000
Westland Road Extension (to Hse #611) (6)	18	6	1		$158,695
Deduction for changing 12-inch Pipe to 8-inch Pipe (6)					-$15,626
Sub-Total	76	46	10		$750,994
Totals, Ph. 1, Parts 1-4 & Other Ext.	701	430	100	568	$5,303,352

COMPANY INVESTMENT = 568 CUSTOMERS @ $12,971 = $7,367,528 AND EXCEEDS ESTIMATED PROJECT COST OF $5,303,352

(1) Exhibit 1.2, PAWC Statement 1.0
(2) Company's response to OCA-2, Set V (Rte 18 - 7 houses; Stewert Lane 16 - houses)
(3) Costs from Company's response to OCA-1, Set V
(4) Estimated @ $33/foot
(5) Estimated @ $57.25/foot
(6) 6,400 feet - based on PAWC cost/ft for 1,000 feet of 12-inch pipe
(7) Estimated @ $36/foot

OCA STATEMENT 1S

12/3/02
HOS

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Cindy Parks, Richard Minutello, and Irwin A. Popowsky, Consumer Advocate	:	C-00015377
V.	:	Docket Nos. ~~C-00015337,~~ C-20028177 and C-20028361
Pennsylvania-American Water Company	:	

SURREBUTTAL TESTIMONY

OF

TERRY L. FOUGHT

ON BEHALF OF

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

NOVEMBER 15, 2002

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

A. Terry L. Fought, 780 Cardinal Drive, Harrisburg, Pennsylvania, 17111.

Q BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am a self-employed consulting engineer under contract with the OCA.

Q. HAVE YOU SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes. I submitted direct testimony on December 7, 2001 in OCA Statement 1 and supplemental direct testimony on September 27, 2002 in OCA Statement 1A.

Q. WHY ARE YOU PROVIDING THIS SURREBUTTAL TESTIMONY?

A. The purpose of this surrebuttal testimony is to respond to (1) the supplemental testimony of Mr. Jay Lucas (PAWC Statement No. 1.1) and (2) the supplemental testimony of Mr. Jerry E. Hankey (PAWC Statement No. 2.1) who have testified on behalf of the Pennsylvania-American Water Company.

Q WHAT ARE THE ISSUES IN MR. LUCAS' TESTIMONY THAT YOU ARE YOU RESPONDING TO?

A. I am responding to Mr. Lucas' testimony regarding the (1) estimated project cost and (2) my testimony in *Morra v. Pennsylvania-American Water Company* at Docket No. C-00014733. Mr. Lucas' testimony also referred to the following issue explained in Mr. Hankey's testimony: (1) the need for 12-inch mains vs. 8-inch mains in some locations; (2) the need for a water storage tank; (3) the capacity of the Gretna Booster in Chartiers

Township; and (4) required fire flows. My response to Mr. Hankey's testimony will cover the last four issues.

Q. WHAT IS MR. LUCAS' ESTIMATE OF THE TOTAL PROJECT COST?

A. Mr. Lucas has estimated the total cost of the project at $6,290,499.

Q. HOW DOES THIS DIFFER FROM YOUR ESTIMATE OF THE TOTAL PROJECT COST?

A. My estimate of the total cost of the project is $6,370,702.

Q. WHY ARE YOUR TOTAL PROJECT COSTS DIFFERENT FROM MR. LUCAS'?

A. We have different estimates for main extensions along four roads. My estimated cost for these main extensions is $80,203 higher than Mr. Lucas'.

Q. IS THIS A SIGNIFICANT DIFFERENCE?

A. No. Our estimates are within 1.28% of each other. I based my estimates on interpolating information provided by PAWC and have no objection to using their estimates.

Q. HOW DOES THAT AFFECT THE ESTIMATED COST SHOWN IN EXHIBIT TLF-2A?

A. Using Mr. Lucas' estimated costs for the main extensions changes the Estimated Project Cost from $5,303,352 to $5,223,149.

Q. PLEASE EXPLAIN THE DIFFERENCE BETWEEN THE TOTAL PROJECT WITH AN ESTIMATED COST OF $6,290,499 AND THE PROJECT WITH AN ESTIMATED COST OF $5,223,149?

A. The project with an estimated cost of $5,223,149 is that part of the total project that is necessary to provide domestic and fire service to the initial customers. The costs of the proposed water storage tank and its related water main, which are included in the $6,290,499 figure, have been removed from the total project cost. Also, the costs of some 12-inch mains in the estimated cost for the total project have been reduced to represent the costs of 8-inch mains.

Q. WHY DID YOU INCLUDE A COPY OF HANOVER TOWNSHIP'S MANDATORY CONNECTION ORDINANCE IN YOUR TESTIMONY IN *MORRA V. PENNSYLVANIA-AMERICAN WATER COMPANY* AT DOCKET NO. C-00014733?

A. It was included only to demonstrate that the Hanover Township Board of Supervisors recognized a need for public water service in Hanover Township.

Q. IS A MANDATORY CONNECTION ORDINANCE NECESSARY TO DEMONSTRATE A NEED FOR PUBLIC WATER SERVICE IN MOUNT PLEASANT TOWNSHIP?

A. No. The 1987 PaDEP water quality survey (OCA Statement 1, Exhibit TLF-1) and the testimony presented at the September 9, 2002 public hearing have demonstrated a compelling need for public water supply service in Mount Pleasant Township.

Q PLEASE SUMMARIZE THE ISSUES IN MR. HANKEY'S TESTIMONY TO WHICH YOU ARE RESPONDING.

A. I am responding to the issues in Mr. Hankey's testimony regarding (1) fire flow requirements and the need for 12-inch mains instead of 8-inch mains in some locations; (2) the need for a storage tank; (3) air-valve installations; and (4) the capacity of the Gretna Booster Pumping Station.

Q. WHAT IS MR. HANKEY'S POSITION ON FIRE FLOW REQUIREMENTS AND THE NEED FOR 12-INCH MAINS INSTEAD OF 8-INCH MAINS IN CERTAIN LOCATIONS?

A. As previously mentioned, I recommended that costs of some 12-inch mains in the estimated cost for the total project be reduced to that of 8-inch mains. In PAWC Statement No. 2.1, Mr. Hankey states that these 12-inch mains are needed to provide a fire flow of 750 gallons per minute (gpm) (p. 4).

Q. WHY ARE YOU RECOMMENDING THAT THE ESTIMATED COST OF 8-INCH MAINS BE USED AT THESE LOCATIONS?

A. Because 8-inch mains at these locations will provide a fire flow of at least 500 gpm which is PaDEP's minimum acceptable fire flow for new systems with fire hydrants.

Q. WHY DID YOU USE 500 GPM INSTEAD OF 750 GPM FOR THE FIRE FLOW RATE?

A. Because CIAC should be based on the "least cost" for providing adequate service for those who need such service. If the Company chooses to do something more than required, it should do so at its own expense.

Q. DO YOU KNOW OF ANY PLACE IN MOUNT PLEASANT TOWNSHIP WHERE PAWC'S EXISTING WATER SYSTEM HAS LESS THAN 750 GPM FIRE FLOW?

A. Yes. The Company's response to OCA Set II, No. 17 refers to a 700 gpm fire flow at a fire hydrant near the intersection of State Route 519 and Sabo Road.

Q. WHAT IS MR. HANKEY'S POSITION ON THE NEED FOR A STORAGE TANK?

A. Mr. Hankey states that a water storage tank is needed to provide reliable service and meet generally accepted design criteria (p. 2). He mentioned that the suction side of the Gretna Booster pump station is a single main 30,000 feet in length and the discharge side main is 19,780 feet to Main Street in Hickory. He is concerned because a break in a main in either the suction or discharge side of the booster pump will put all Mount Pleasant customers out of service. He states that the water storage tank would provide sufficient storage to meet demands while a main break or other emergency is being addressed and corrected.

Q. CONSIDERING MR. HANKEY'S TESTIMONY, WHAT IS YOUR OPINION ON WHETHER THE COSTS OF A STORAGE TANK SHOULD BE INCLUDED IN THE OVERALL COSTS TO CONSTRUCT THIS PROJECT?

A. It is still my opinion that the cost of the tank should not be included in the estimated project cost used to determine CIAC. Except for the added length of the main on the discharge side of the booster pump to serve Mount Pleasant Township, all of his arguments apply to just providing service to the existing 233 customers in Chartiers Township on the discharge side of the booster pump. It is interesting to note the Company's response to OCA IV, No. 12. In that response, the Company did not indicate any concern about the reliability of the 30,000-foot long suction main. When asked if valving around the booster pumps would be installed to allow water to flow from the discharge side of the pumps (i.e. the storage tank, if installed) to the suction side of the pumps to fight fires or other emergencies, the Company responded "no useful purpose could be served by flowing water back to the system or origin. Moreover, the Washington system has sufficient distribution storage to meet fire flows and other emergencies."

Q. DO YOU HAVE ANY COMMENTS REGARDING MR. HANKEY'S DISCUSSION ABOUT AIR-VALVES?

A. Yes. A properly designed Combination Air Valve (having all the operating features of both an Air & Vacuum Valve and an Air Release Valve) located near the entrance to the tank site would handle the air problems in a manner similar to a tank. Any other places needing air valves would need the valves with or without the installation of the water storage tank.

Q. WHAT IS MR. HANKEY'S POSITION ON THE CAPACITY OF THE GRETNA BOOSTER PUMPING STATION?

A. Mr. Hankey states that the Gretna Booster was designed "to meet the instantaneous demand of approximately 200 customers plus the fire flow requirements for the Chartiers' system" (p. 3). He further states that serving the instantaneous demand of Mount Pleasant Township would exceed the design flow of the booster pumps.

Q. CONSIDERING MR. HANKEY'S TESTIMONY, WHAT IS YOUR OPINION ON THE CAPACITY OF THE GRETNA BOOSTER PUMPING STATION?

A. Mr. Hankey's opinion is based on providing fire service during the instantaneous demand of the water system. PaDEP requires providing fire service during the peak hourly demand. Based on the Company's responses to OCA Set II, No. 14 and OCA Set IV, Nos. 9 and 11, the pumping station has adequate capacity to serve the Chartiers Township customers and the initial Mount Pleasant customers. Assuming a 750 gpm fire in Chartiers Township and the peak hourly flow per customer from the Company's response to OCA Set II, No. 14, approximately 1,250 customers could be served by the 1,000 gpm pumping station.

Q. DOES THIS COMPLETE YOUR WRITTEN SURREBUTTAL TESTIMONY?

A. Yes.

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Cindy Parks, *et al.*

v.

Pennsylvania-American Water Company

Docket No. C-00015337, *et al.*

Appendix A

Interrogatory Responses

PAWC Response to OCA Set II-14

PAWC Response to OCA Set II-17

PAWC Response to OCA Set IV-9

PAWC Response to OCA Set IV-11

PAWC Response to OCA Set IV-12

Cindy Parks v. Pennsylvania-American Water Company
Docket No. C-00015377
Interrogatories of Office of Consumer Advocate
Interrogatories, Set I

OCA-14

What is the estimated peak hour water demand for the 362 customers for the proposed water main extension?

Response:

The estimated peak hour demand for the 362 customers is 4,335 gph.

RESPONSIBLE WITNESS: Jerry Hankey, Engineering Manager

Cindy Parks v. Pennsylvania-American Water Company
Docket No. C-00015377
Interrogatories of Office of Consumer Advocate
Interrogatories, Set II

OCA-17

Based on the latest hydrant flow test, what fire flow (at 20 psig residual) is available at the fire hydrant nearest the intersection of State Route 519 and Sabo Road? If this hydrant has never been tested, what is the estimated fire flow?

Response:

The fire flow (at 20 psig residual) at the fire hydrant nearest the intersection of State Route 519 and Sabo Road is approximately 700 gpm.

RESPONSIBLE WITNESS: Jerry Hankey, Engineering Manager

Cindy Parks v. Pennsylvania-American Water Company
Docket No. C-00015377
Interrogatories of Office of Consumer Advocate
Interrogatories, Set IV

OCA-9

What is the capacity of the proposed Chartiers Township Booster Station?

Response:

The capacity of the proposed booster station is approximately 1,000 gallons per minute. The booster station was designed to pump into a closed system.

RESPONSIBLE WITNESS: Jay Lucas, Operations Manager

Cindy Parks v. Pennsylvania-American Water Company
Docket No. C-00015377
Interrogatories of Office of Consumer Advocate
Interrogatories, Set IV

OCA-11

How many potential customers in Chartiers Township will be served by the Chartiers Township Booster Station?

Response:

There are approximately 233 potential customers in Chartiers Township who will be served by the booster station.

RESPONSIBLE WITNESS: Jay Lucas, Operations Manager

Cindy Parks v. Pennsylvania-American Water Company
Docket No. C-00015377
Interrogatories of Office of Consumer Advocate
Interrogatories, Set IV

OCA-12

Will piping and valving be provided at or near the Chartiers Township Booster Station such that water from the higher pressure system can be automatically released to the lower pressure system when needed to fight fires or other emergencies?

Response:

Because the lower pressure Washington System is the source of water for Chartiers Township (the higher pressure system), no useful purpose could be served by flowing water back to the system of origin. Moreover, the Washington system has sufficient distribution storage to meet fire flows and other contingencies.

RESPONSIBLE WITNESS: Jay Lucas, Operations Manager

OCA STATEMENT 2A

12/3/02
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Jan

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Cindy Parks, Richard Minutello, and Irwin A. Popowsky, Consumer Advocate	:	C-00015377
V.	:	Docket Nos. ~~C-00015337,~~ C-20028177 and C-20028361
Pennsylvania-American Water Company	:	

SUPPLEMENTAL DIRECT TESTIMONY

OF

MARILYN J. KRAUS

ON BEHALF OF

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

SEPTEMBER 27, 2002

INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS AND OCCUPATION.

A. My name is Marilyn J. Kraus. My business address is 555 Walnut Street, Forum Place, 5th Floor, Harrisburg, PA 17101. I am a certified public accountant currently employed by the Office of Consumer Advocate (OCA) as a Senior Regulatory Analyst.

Q. HAVE YOU FILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes. I filed direct testimony in this proceeding on December 7, 2001 in OCA Statement 2.

Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL DIRECT TESTIMONY?

A. The purpose of my supplemental direct testimony is to revise testimony that was presented in OCA Statement 2 to incorporate new and updated information related to this case that has become available since December of last year. This case now concerns three Complaints, the first two by individual customers and the third by the OCA. These Complaints filed against Pennsylvania-American Water Company (PAWC or Company) seek an extension of water utility service to the community of Hickory in Mt. Pleasant Township, Washington County, Pennsylvania is being requested. New and updated information that has become available in this case include the following:

1. The project "footprint" and total estimated construction cost, as recommended by

OCA witness Terry L. Fought, has been modified.

2. The estimated number of customers that would initially take service from the extension has been updated.

3. The "justified Company investment per customer" per Rule 27 of PAWC's tariff has changed.

4. Evidentiary hearings were held on September 9, 2002, during which many of the potential customers in the Hickory area presented testimony regarding the public need for the extension of water utility service in this case.

In the following testimony, I will address the impacts of the information outlined above on this case.

ESTIMATED PROJECT COSTS

Q. WHAT IS THE ESTIMATED COST OF THIS PROJECT AS RECOMMENDED BY OCA WITNESS TERRY L. FOUGHT IN HIS SUPPLEMENTAL DIRECT TESTIMONY?

A. As shown on Exhibit TLF-2A and explained in OCA Statement 1A, the estimated cost of the main extension project as recommended by Mr. Fought is $5,303,352. This amount reflects the revised project "footprint" as outlined by Mr. Fought on Exhibit TLF-1A.

Q. DOES THE PROJECT PROPOSED BY MR. FOUGHT REFLECT AN ADJUSTMENT TO THE PROJECT PROPOSED BY PAWC RELATED TO FACILITIES WHICH HE

HAS DETERMINED ARE LARGER THAN NEEDED TO SERVE THE HICKORY AREA RESIDENTS?

A. Yes. As outlined on page 8 of OCA Statement 1A, Mr. Fought indicates that the project proposed by PAWC includes the cost of twelve inch mains in sections of the footprint where he has determined eight inch mains are sufficient to provide service. He states further, that PAWC has, in its proposal, reflected, in part, costs related to installation of facilities larger than those needed to serve Hickory area residents in order to accommodate future growth. Pursuant to the Company's tariff, the cost of those facilities required to provide adequate service to a particular applicant or group of applicants for service should be used in determining CIAC, if any, that will be charged to the applicant(s) (Tariff Water - PA P.U.C. No. 4, 3rd Revised Page 71, Paragraph 27.1 [B]). Thus, the amount which Mr. Fought has determined to be related to over-sizing facilities for future growth should be removed from the total project cost in this case.

Q. UNDER PAWC'S TARIFF, WHAT HAPPENS IF, IN A REVERSE SITUATION, A SERVICE APPLICANT REQUESTS FACILITIES OTHER THAN THOSE REQUIRED TO PROVIDE ADEQUATE SERVICE?

A. According to the Company's tariff, if an applicant requests facilities other than those that are necessary to provide adequate service, the facilities requested by the applicant "will be installed by, owned by, maintained by, and will become the sole responsibility of the Bona

Fide Service Applicant." (Tariff Water - PA P.U.C. No. 4, 3rd Revised Page 71, Paragraph 27.1 [B].) In keeping with the terms of the tariff, since, in this case, it is PAWC that has opted to install plant larger than necessary to provide adequate service to the Hickory residents, PAWC should be financially responsible for the additional cost that results.

CUSTOMER NUMBER

Q. HAS THE OCA REEVALUATED THE NUMBER OF CUSTOMERS WHO WOULD INITIALLY TAKE SERVICE IF IT WERE AVAILABLE IN THE HICKORY AREA?

A. Yes. Based on additional survey responses received and information provided by customers through their testimony and directly to the OCA, it has been determined that approximately 568 customers would be willing to connect to the new water system if it became available without a "Contribution in Aid of Construction" (CIAC) requirement.

Q. HOW WAS THIS ESTIMATED NUMBER OF CUSTOMERS DETERMINED?

A. As outlined by OCA witness Fought on Exhibit TLF-2A, there are 701 total potential customers within the project footprint that he is recommending. Of this 701, responses were received from 530 customers. Of the 530 customers, 430, or 81% of those who responded, indicated that they would connect to the water system if it became available and no customer contribution was required. On this basis, it is projected that 568, or 81% of the total potential customers within the project footprint, would initially take service.

Q. WHY IS IT REASONABLE TO PROJECT THAT 568, OR 81% OF THE TOTAL POTENTIAL CUSTOMERS WITHIN THE PROJECT FOOTPRINT WOULD INITIALLY TAKE SERVICE?

A. Of the total number of potential customers within the project footprint as recommended by Mr. Fought of 701, 530, or 76%, responded as to whether or not they would initially take service. Based on this large percentage of response, it is reasonable to project that the small portion of customers from whom no responses were received would have responded "yes" or "no" at the same percentages as those who did respond. I should note that, at the meeting held in Mt. Pleasant Township on March 20, 2002 regarding the Hickory project, a Company representative indicated that approximately 600 customers were expected to connect to the new system, even with a smaller project footprint than Mr. Fought is proposing in this case. This also confirms the reasonableness of the projection of 568 customers based upon the OCA survey responses from a larger group.

"JUSTIFIED COMPANY INVESTMENT"

Q. PAWC HAS INDICATED THAT IT WOULD CONSTRUCT THIS PROJECT UNDER THE MAIN EXTENSION PROVISIONS OF ITS TARIFF. PLEASE DESCRIBE THE PROVISIONS OF PAWC'S CURRENT MAIN EXTENSION TARIFF.

A. At the September 9, 2002, hearing, the Company indicated that, under its current main extension tariff, it will invest in the cost of the construction project only to the extent that

such expenditures are justified by the revenues to be generated by the project. In making this determination, a "break-even" formula is applied, whereby the justified Company investment equals the average annual revenues to be generated by the potential customers minus the operation and maintenance expenses ("O&M") associated with the new customers, divided by a factor comprised of the depreciation rate on the new facilities plus the weighted cost of debt. (See PAWC tariff, Rule 27.) In this manner, the Company determines how much of the annual O&M, depreciation expense and carrying costs associated with the new construction will be covered by the annual revenues of the new customers. To the extent that the above costs are not covered by the annual revenues, PAWC asks the prospective customers to pay a Contribution in Aid of Construction ("CIAC") as a condition of obtaining service.

Q. HAS THE AMOUNT OF "JUSTIFIED COMPANY INVESTMENT PER CUSTOMER" CHANGED SINCE DECEMBER 2001, WHEN YOU FILED DIRECT TESTIMONY IN THIS CASE?

A. Yes. At the time my direct testimony was filed in this case, the "justified Company investment per customer", calculated using the formula described above, was $5,655. Since that time, PAWC's most recent base rate case was concluded and new rates were implemented on January 25, 2002. Thus, currently, using average annual residential revenues of $424, annual O&M expense per customer of $104, the depreciation rate for mains of 1.08% and the weighted cost of debt of 4.080%, the Company has determined

that its justified investment per customer is $6,200 (Company response to OCA Interrogatory Set IV, No. 22).

Q. WHAT IS THE IMPACT OF THE APPLICATION OF THESE TARIFF PROVISIONS ON THIS CASE?

A. If this project is constructed in the manner recommended by OCA witness Fought (see Exhibit TLF-2A) and the formula applied as PAWC proposes, each customer would be required to pay CIAC of $3,137 as a condition of getting service. This amount is calculated using the total project cost of $5,303,352 as estimated by Mr. Fought, subtracting from that amount the "justified Company investment" of $3,521,600 ($6,200 x 568) and dividing the difference of $1,781,752 by the 568 customers which the OCA has projected would initially connect to the system.

Q. WOULD YOU EXPECT THE SAME NUMBER OF CUSTOMERS TO INITIALLY CONNECT TO THE SYSTEM IF PAWC REQUIRED EACH TO PAY A $3,137 AMOUNT OF CIAC?

A. No. It should be noted that under this scenario, many of the estimated initial customers, who have indicated that they would be unwilling or unable to make this large personal investment, would likely not connect to the system. As such, this would only increase the CIAC required from those customers who did connect. During the course of analyzing

many main extension complaints, I have found that an inverse relationship exists between the amount of CIAC requested and the number of customers willing and able to initially connect to a new system. That is, if asked to pay up front for the costs of receiving service, less customers than the number initially expressing a desire for service would be able to connect.

Q. WHAT IMPACT WOULD FINANCING THE HICKORY AREA MAIN EXTENSION PROJECT, AS RECOMMENDED BY MR. FOUGHT, WITH LOWER COST CAPITAL SUCH AS A PENNVEST LOAN, HAVE ON THE AMOUNT OF CIAC TO BE PAID BY THE HICKORY RESIDENTS?

A. The procurement of a PennVest loan by PAWC for the Hickory area project would eliminate any amount of CIAC to be paid by the Hickory residents. This, in turn, would enable the maximum number of customers in need of service to connect. Customer CIAC would be eliminated because the "justified Company investment per customer" is higher when the PennVest financing rate, currently 1.387% during the first five years of a loan in Washington County, is used in place of the Company's weighted cost of debt in the formula used to calculate Company investment and CIAC.[1]

[1]It should be noted that, currently, the interest rate on a PennVest loan in Washington County would increase to 2.774% in year six of the loan. Given the frequency with which PAWC has filed base rate cases in the past decade, it is assumed that PAWC would file a base rate case within the first five years following the procurement of a PennnVest loan for the Hickory project. At that time, this PennVest loan would be added to the total debt in PAWC's capital structure at the appropriate rate, i.e., either 1.387%, 2.774% or a combination thereof, depending on the loan rate in effect during the period in which rates established in that case will

Q. HOW DOES THE PAWC "JUSTIFIED COMPANY INVESTMENT" CALCULATED USING THE 1.387% PENNVEST RATE COMPARE TO THAT CALCULATED USING THE WEIGHTED COST OF DEBT?

A. As indicated previously, the current "justified Company investment per customer" of $6,200 was calculated by PAWC using average annual residential revenues of $424, annual O&M expense per customer of $104, the depreciation rate for mains of 1.08% and the weighted cost of debt of 4.080% ([$424 - $104] / [1.08% + 4.080%]). If the 1.387% PennVest rate is used in place of the 4.080% weighted cost of debt, the "justified Company investment per customer" increases to $12,971 ([$424- $104] / [1.08% + 1.387%]).

Q. HOW DOES THE USE OF THE PENNVEST RATE ELIMINATE THE CIAC TO BE PAID BY THE HICKORY RESIDENTS IN THIS CASE?

A. Assuming 568 customers would connect to the new system, as discussed above, the "justified Company investment" using the PennVest rate in this case would be $7,367,528 ($12,971 x 568). This is well over the estimated total project cost of $5,303,352, as recommended by Mr. Fought in this case.

Q. DO YOU AGREE THAT PENNVEST FINANCING SHOULD BE SOUGHT IN THIS

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be effective.

CASE?

A. Yes, I do. As discussed in my direct testimony, the PennVest Authority was formed in order to provide Pennsylvania residents with the means to acquire safe and adequate water and wastewater systems at a reasonable cost. PennVest is able to offer low-cost loans for water and sewer projects due to taxpayer-provided funding. Therefore, any opportunity which the Company has to procure this taxpayer-supported PennVest financing should be taken so that its customers can receive the benefits of these low-cost loans instead of being asked to pay for water facilities with their personal funds, which is often not possible. In this case, based on the total project cost as recommended by Mr. Fought, the Hickory residents, who are in great need of a safe and adequate water supply could benefit from such a system without paying CIAC. Furthermore, at the time of the next base rate case, when the net value of the Hickory facilities is included in rate base and the outstanding balance of the PennVest loan is added to the capital structure, the benefits of this low-cost financing would be spread among PAWC's customer base as a whole. I should note that, to my knowledge, PAWC has never been denied a loan by PennVest for any project.

THE PUBLIC NEED FOR WATER SERVICE

Q. WHAT IS THE BASIS FOR YOUR CONCLUSION THAT THERE IS A PUBLIC NEED FOR AN EXTENSION OF WATER SERVICE IN THIS CASE?

A. I was present at the evidentiary hearings held on September 9, 2002 during which sixty-

two witnesses provided testimony regarding the need for a safe and adequate water supply in the Hickory area. These witnesses included residents, business owners, state representatives, and county, township and fire department officials. Every witness who testified confirmed that there is a substantial public need for such a system.

Many of the witnesses described a severe lack of supply, with frequent and long-term outages. The supply that is available is, for many of the witnesses, contaminated such that it is not fit for household use. (See also, pages 2-3 of OCA Statement 1 and Exhibit TLF-1, in which OCA witness Terry L. Fought presents information related to Pennsylvania Department of Environmental Protection (DEP) water quality studies showing contamination of the Hickory area water supply as early as 1987.) Several witnesses testified that they had experienced illnesses due to consumption of the contaminated water. (See, e.g., Lauff Exhibit 1.)

Q. IS THERE ALSO A NEED FOR FIRE PROTECTION SERVICE?

A. Yes. Some witnesses described total losses of homes and other structures, as well as domestic animals and livestock, due the lack of water supplies for fighting fires. (See Lesnick Exhibit 2 and Obenour Exhibit 1.) This situation impacts the availability and cost of property insurance for these residents and business owners.

Q. WHAT IS THE ECONOMIC IMPACT OF THE LACK OF AN ADEQUATE WATER

SUPPLY ON THE HICKORY COMMUNITY?

A. The lack of an adequate water supply has had a seriously detrimental economic impact on the Hickory community. Many of these residents and business owners have invested substantial amounts in equipment, such as cisterns and holding tanks, "coyote" systems, filtration and water softening systems, in attempts to reduce the instances of outages and contamination. Many also rely on costly water hauling services and bottled water in order to have supplies that are fit for consumption and other household uses.

As testified to by several witnesses, residential and commercial development in the community has been non-existent due to the lack of a safe and adequate water supply. People are unable to sell their homes, unable to procure loans to purchase property and unwilling to develop unimproved acreage without a safe and reliable water supply. (See Tr., pages 74-76, 108-111 and 113-114.)

As testified to by Mr. Vic Lescovitz, the State Representative from the 46th Legislative District of which Mt. Pleasant Township is a part, a public water system is needed in the Hickory area in order to foster residential and economic growth and to address concerns related to safety (Tr. at 57). Similarly, Mr. Bracken Burns, a Washington County Commissioner and former Director of Emergency Services for Washington County, indicated that a safe and adequate water supply was needed in the Hickory area to resolve the public health issues (Tr. at 59). Mr. Brian Bell, the president of the Mount Pleasant

Township volunteer fire company, indicated that a public water system was critical in the ability of the department to effectively fight fires and prevent substantial losses in the community (Tr. at 206-209).

The witnesses who testified at the September 9 hearing have all effectively described the many reasons, including compelling health and safety concerns, why a safe and adequate public water system is critically needed in the Hickory area. Many of these witnesses' testimony support the economic detriment to the community that will continue indefinitely without a public water source.

CONCLUSION

Q. PLEASE EXPLAIN YOUR OVERALL RECOMMENDATION IN THIS CASE?

A. It is my overall recommendation in this case that PAWC be required to construct the water system in the Hickory area, as proposed by OCA witness Fought in Exhibit TLF-1A, without customer CIAC.

Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION?

A. The Company has proposed to construct this project only under the strictest possible application of its main extension tariff rules. The application of the "break-even" formula contained in those rules, as described previously in this testimony, results in situations

where service will likely never be available due to the high CIAC that is calculated using this formula. PAWC simply refuses to provide service unless the prospective customers pay up-front for the "uneconomic" portion of the construction costs as determined using a strict application of this break-even formula.

In my opinion, this is not a reasonable approach in this case. I was involved with the promulgation of the main extension regulations in Docket No. L-930089. The Commission regulations which outline the formula to be used to determine the amount of company investment in cases where extensions of service are sought do not *require* that the formula be strictly applied, as PAWC insists, in any case. Rather, the regulations include a formula intended to establish a *minimum* amount of investment that water utilities should make in the extension of service to new customers. In this case, the potential customers in the Hickory area, who are all located within the PAWC franchised service territory, have clearly demonstrated the critical need for a safe and adequate public water system in their community. The substantial public need which has been established in this case outweighs the Company's desire to invest in this project only to the extent that it would be economic to do so under a strict application of its tariff. Thus, the Commission should require PAWC to construct this system without customer CIAC.

Q. WOULD THE CONSTRUCTION OF THE HICKORY AREA PROJECT WITHOUT CUSTOMER CIAC BE UNECONOMIC TO PAWC?

A. No. For several reasons, the construction of the Hickory area project by PAWC without customer CIAC should not be viewed as uneconomic. First, as explained above, the use of PennVest financing and the associated lower debt cost would result in the ability of the Company to construct this project without customer CIAC, even under its current main extension rules. At the time the Commission approved the regulations related to main extensions, PennVest loans had not been granted for mains projects, to the best of my knowledge. Therefore, the Commission had no reason to contemplate other sources of financing for mains which could be lower cost than the Company's overall cost of debt.

Second, the percentage of potential customers within the project footprint who would connect to the system initially or connect within a short period of time after construction of the project is completed may increase once it is confirmed that no CIAC would be required. Additionally, as indicated by several of the witnesses at the September 9, 2002 hearings, new development may occur once a public water system is in place. Both of these situations would result in additional revenues associated with the Hickory project, over and above those estimated to be initially generated.

Finally, it should be considered that the customers in the Hickory area who connect to the new system will not only pay PAWC's current base rates, but will also pay any Distribution System Improvement Charge (DSIC) that is in effect. By paying the DSIC surcharge, the Hickory customers will, effectively, be sharing in the costs of improvements to other portions of PAWC's system. Since the implementation of PAWC's current main

extension tariff preceded the implementation of the DSIC, these revenues are not considered in the development of a CIAC amount to be paid by prospective customers.

It is interesting to note here, that on September 17, 2002, PAWC filed a DSIC surcharge tariff of .73% to become effective on October 1, 2002. Thus, if the Hickory project were completed, the customers who connect would pay .73% over the base rates that are considered in PAWC's break-even formula, for improvements to other areas of the system. In comparison, if no CIAC was paid by the Hickory customers and the "uneconomic" portion of the project cost as calculated by the Company ($1,781,752, as identified previously) was placed in rate base, the impact on the total residential revenues allowed in the last base rate case would be approximately 0.10%. (Project cost in excess of "justified Company investment" per PAWC of $1,781,752, x [depreciation rate of 1.08% plus pre-tax rate of return of 11.5%, or 12.58%] = $224,144; $224,144 / total residential revenues allowed in Docket No. R-00016339 of $215,904,162 = 0.10%.)

For all of these reasons, construction of the Hickory area project by PAWC without customer CIAC should not be viewed as uneconomic.

Q. DOES THAT CONCLUDE YOUR SUPPLEMENTAL DIRECT TESTIMONY?

A. Yes, it does.

OCA STATEMENT 2S

12/3/02
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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Cindy Parks, Richard Minutello, and Irwin A. Popowsky, Consumer Advocate	:	C-00015377
V.	:	Docket Nos. ~~C-00015337~~, C-20028177 and C-20028361
Pennsylvania-American Water Company	:	

SURREBUTTAL TESTIMONY

OF

MARILYN J. KRAUS

ON BEHALF OF

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

NOVEMBER 15, 2002

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Marilyn J. Kraus. My business address is 555 Walnut Street, Forum Place 5th Floor, Harrisburg, PA 17101. I am a certified public accountant currently employed as a Senior Regulatory Analyst by the Office of Consumer Advocate (OCA).

Q. HAVE YOU FILED DIRECT TESTIMONY IN THIS CASE?

A. Yes. I filed direct testimony in this case in OCA Statement 2 and supplemental direct testimony in OCA Statement 2A.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. In this surrebuttal testimony, I will provide comments on the supplemental testimony presented by Mr. Paul T. Diskin in PAWC Statement No. 3.1 and the supplemental testimony presented by Mr. Jay Lucas in PAWC Statement No. 1.1.

Q. MR. DISKIN AND MR. LUCAS HAVE BOTH INDICATED (PAWC STATEMENT NO. 3.1, PAGE 1 AND PAWC STATEMENT NO. 1.1, PAGE 2, RESPECTIVELY) THAT THE OCA'S PROPOSAL THAT PAWC FULLY FUND THE CONSTRUCTION OF THE HICKORY AREA SYSTEM REPRESENTS A DEPARTURE FROM THE COMMISSION'S REGULATIONS. IS THIS TRUE?

A. No it is not. As I indicated on page 14 of my supplemental direct testimony, the Commission's regulations on main extensions do not require that the formula outlined in the regulations for the calculation of company investment be strictly applied in every case. Rather, the formula is intended to establish the minimum amount of investment per customer that water utilities must make in extending service to new customers. Specifically, in its Revised Order regarding line extensions, the Commission stated:

> We note here that the April 8, 1996 comments of the Independent Regulatory Review Commission (IRRC) staff recommend replacing the word "may" with "shall," which would result in the creation of a rule requiring a utility to charge a customer contribution in all circumstances if the formula reveals that the projected annual revenue from the line extension will not exceed the utility's annual line extension costs. In developing this regulation, we intended to create a rule which sets the minimum dollar amount which utilities must pay toward the cost of a line extension. (Docket No. L-930089, Revised Order entered October 7, 1996, page 13. Emphasis in original.)

Thus, if PAWC completes the Hickory area project without requiring the residents to pay contributions in aid of construction ("CIAC"), it would not be a departure from the Commission's regulations, as PAWC witnesses Diskin and Lucas argue.

Q. WHAT ALTERNATIVES DOES MR. DISKIN STATE ARE AVAILABLE TO THE HICKORY AREA RESIDENTS FOR FINANCING THE CIAC WHICH THE COMPANY PROPOSES IN THIS CASE?

A. On pages 6 and 7 of PAWC Statement No. 3.1, Mr. Diskin explains that the Company,

according to its tariff, will collect one-third of the total estimated CIAC prior to commencing construction and finance the balance over thirty-six months at an interest rate equal to the embedded long-term debt cost, currently 7.26%. He states further, that "[s]ince each of the applicants is a homeowner, they could finance the Customer Contribution with a home equity loan or line of credit from a third-party lender." He cites an equity loan rate of 4.75% based on rates offered by lending institutions in Washington County in October 2002.

Q. SHOULD EQUITY LOANS BE CONSIDERED A VIABLE ALTERNATIVE FOR THE HICKORY AREA RESIDENTS TO FINANCE THE COMPANY-PROPOSED CIAC, AS MR. DISKIN STATES?

A. No, they should not. Mr. Diskin has not indicated that he has direct knowledge of the financial standing of any of these residents. Thus, he cannot state with any certainty that these individuals have the competence and the financial wherewithal (e.g., required equity investment in their homes, credit-worthiness, etc.) to qualify for any type of financing, much less equity loans. It should also be pointed out that equity loans are generally based on appraisals of the property being offered as collateral. Homes without a viable water source may not even appraise at a sufficient value to justify such a loan. Thus, the low-rate equity loans referenced by Mr. Diskin cannot be considered alternative financing sources for the residents in the Hickory area.

Q. PLEASE COMMENT ON MR. DISKIN'S TESTIMONY REGARDING THE EXPENSES OF THE HICKORY AREA RESIDENTS THAT WOULD BE ELIMINATED BY HAVING A PUBLIC WATER SYSTEM.

A. On pages 7 through 9 of PAWC Statement No. 3.1, Mr. Diskin states that expenses currently being incurred by these residents, such as bottled water purchases, hauled water delivery, pumping power, chemicals, filters, etc., would be eliminated if a public water system were available. He states further, that if the customer CIAC is financed with an equity loan, the incremental cost of the loan plus the monthly water bill may be eliminated completely for some residents, when considering current monthly expenses associated with their individual systems. For several reasons, Mr. Diskin's statement that the incremental cost would be "negative for many customers" (emphasis in original) should be disregarded. First, he assumes that these residents could obtain equity financing. As explained above, this may not be possible for many of these residents.

Second, the calculation of the Company-proposed CIAC of $2,255 per customer (PAWC Statement No. 3.1, page 6, line 8), which is the amount Mr. Diskin states would need to be financed by each resident, assumes that Mt. Pleasant Township would enact a "mandatory tap-in" ordinance. Under this assumption, the project costs in excess of the Company-required investment would be shared by the 744 total potential customers within the project footprint (resulting in the Company-calculated per-customer CIAC of $2,255), rather than the 568 customers which the OCA has projected would initially connect to the

system (resulting in a per-customer CIAC of $3,137). (See OCA Statement 2A, pages 5 and 7.)[1] It is my understanding that the enactment of a mandatory tap-in ordinance by Mt. Pleasant Township is highly unlikely at this time. Thus, Mr. Diskin has understated the amount of CIAC that would need to be financed by each customer in his calculation of the incremental cost associated with the construction of a public water system under the terms of PAWC's tariff.

Finally, as noted on page 12 of my supplemental direct testimony (OCA Statement 2A), many of the Hickory area residents testified that they have already incurred substantial costs to install equipment such as cisterns, holding tanks, "coyote" systems, filtration systems and water softening systems. To the extent that such expenditures were financed by these residents, this debt would not be eliminated by the installation of a public water system.

For all of these reasons, the net incremental cost of a public water system in the Hickory area, as calculated by PAWC, is understated. There is no concrete evidence that any customer may, as Mr. Diskin states, "experience net savings" with a move from an individual to a public water system. Thus, Mr. Diskin's statement that the incremental

[1] The OCA-calculated CIAC of $3,137 is based on the project costs as recommended by OCA witness Terry Fought. If this calculation was performed using the project cost of $6,290,499, as proposed by PAWC, and the number of customers which the OCA has projected would initially connect to the system of 568, the per-customer CIAC would be $4,875 (total project cost of $6,290,499, less Company investment of $3,521,600 [$6,200 x 568], or $2,768,899, divided by 568 customers.

cost of a public water system "in fact, would be negative for many customers" should be disregarded.

Q. PLEASE COMMENT ON MR. DISKIN'S TESTIMONY ON PAGES 11 AND 12 OF PAWC STATEMENT NO. 3.1 REGARDING THE ADDITION OF PENNVEST LOANS TO THE COMPANY'S CAPITAL STRUCTURE.

A. On pages 11 and 12 of PAWC Statement No. 3.1, Mr. Diskin states that "[i]t is clearly improper to both 'target' a PennVest loan rate to a specific main extension, as if the loan were used solely to finance that project, and also 'add' the favorable PennVest loan rate to Pennsylvania-American's total capital structure in a subsequent base rate case, which assumes the same funds are available to finance PAWC's entire rate base on a pro rata basis." (Emphasis in original.) He indicates further that "[o]bviously, both cannot be true." The fact is both are true.

Q. PLEASE EXPLAIN WHY MR. DISKIN IS INCORRECT.

A. First, PennVest loans are all project-specific, whether they are for mains, storage tanks, filtration plants or any other capital improvement or addition. As indicated in the Company's response to OCA Interrogatory Set III, No. 4 in Docket No. C-00014733, PAWC currently has several outstanding PennVest loans, all of which are now included in the total long-term debt as allowed in the last rate case, as shown on Exhibit No. 3.3

attached to Mr. Diskin's testimony. What Mr. Diskin failed to recognize is that, with respect to all PennVest loans included in the Company's capital structure, the facilities financed with those loans are also included in the Company's rate base. As such, the loans are, in fact, financing a share of PAWC's rate base.

Q. WHY THEN IS IT APPROPRIATE TO TARGET A PENNVEST LOAN RATE TO A SPECIFIC PROJECT BETWEEN RATE CASES?

A. As stated above, all PennVest loans are project specific. As I stated on page 10 of my supplemental direct testimony, if a PennVest loan was used to finance the Hickory area project, at the time of the next rate case, the loan would be added to the total long-term debt in the Company's capital structure and the facilities would be added to rate base. This is exactly what PAWC has done with respect to all of its currently outstanding PennVest loans. That is, for each loan, at the conclusion of the base rate case following the completion of the related project, the loan was added to the Company's capital structure and the related facilities were added to the Company's rate base. What the OCA is suggesting in this case, is that, if PennVest is used to finance the Hickory area project, the residents of this area should be given the benefits of this low-cost financing during the interim period until the next rate case. If the lower cost loan rate is not reflected in the main extension formula, the prospective customers are charged CIAC as if PAWC has had to fund the project with higher cost capital.

Q. WILL THE COMPANY BE "SHORT-CHANGED," AS MR. DISKIN SUGGESTS, IF A PENNVEST LOAN IS LATER ADDED TO THE CAPITAL STRUCTURE AND THE ASSOCIATED FACILITIES ADDED TO RATE BASE?

A. No, it will not. On page 12 of PAWC Statement No. 3.1, Mr. Diskin states that the approach which I propose will "short-change" the Company unless the Commission approves a major change in its ratemaking approach. As I will explain below, this statement is not accurate.

Q. EXPLAIN WHY THE COMPANY IS NOT "SHORT-CHANGED" ON ITS RETURN IF PENNVEST LOANS ARE LATER ADDED TO CAPITAL STRUCTURE AND ASSOCIATED FACILITIES ARE ADDED TO RATE BASE.

A. On page 13 of PAWC Statement No. 3.1, Mr. Diskin indicates that, under my proposal, the Company would not fully recover its return over the term of the PennVest loan. Again, Mr. Diskin ignored the impacts of including the PennVest-funded plant in rate base. While it is true that the return on the PennVest-funded rate base would not be fully recovered over the term of the loan, the Company would continue to receive a return on the PennVest-funded facilities long after the loan is fully repaid. This is true because the PennVest loan terms, normally twenty years, are generally much shorter than the service lives of the plant items which are financed with this debt. This means that, generally, during the first twenty years of the service life of the property funded with PennVest loans,

while the loan is included in the capital structure, the debt ratio is higher and the average cost of debt is lower, resulting in a lower overall rate of return than would be experienced absent the PennVest debt. However, at the end of the twenty-year period, when the loan is fully repaid, the plant which was funded with the loan is not fully depreciated. Thus, all else equal, the debt ratio decreases, the average cost of debt increases and the overall rate of return increases. This rate of return will be applied to the net balance of the plant funded with that PennVest loan throughout the rest of its service life. In this case, the mains have a service life of approximately ninety-two years. Thus, while the loan would be repaid in twenty years, the Company would continue to earn a return on the net balance of the plant for another seventy-two years. Overall, the Company is certainly not "short-changed" with respect to the return on its PennVest-funded plant. Again I will note that this approach is the same as PAWC has taken with respect to all of its currently outstanding PennVest loans.

Q. ON PAGES 12 AND 13 OF PAWC STATEMENT NO. 3.1, MR. DISKIN STATES THAT A CHANGE IN RATEMAKING PROCEDURES IS NEEDED TO ENSURE THAT THE COMPANY WILL RECOVER ITS RETURN ON PENNVEST-FUNDED PLANT OVER THE TERM OF THE LOAN. IS SUCH A RATEMAKING CHANGE NECESSARY?

A. No. There is an existing procedure that effectively allows companies to recover the return on PennVest-funded plant over the term of the loan. On page 13 of PAWC Statement No.

3.1, Mr. Diskin states that, in order to ensure recovery over the term of the loan, the PennVest funded plant should be separated from PAWC's other rate base, the loan should be excluded from the capital structure, and the return on the PennVest-funded plant should be calculated separately at the PennVest rate. This is, effectively, what the Commission does when it allows companies to recover PennVest debt service through a surcharge rather than using the "rate base, rate of return" approach. Since the time that low-cost loans have been offered to water and sewer utilities by PennVest and its predecessor, the Water Facilities Loan Board, the Commission has allowed companies to recover the debt service payments, dollar-for-dollar, through a surcharge. Using the surcharge method, depreciation on the plant is excluded for ratemaking purposes and the loan is excluded from the capital structure. Instead, the principal and interest on the loan are both reflected in a surcharge over the term of the loan. This method was allowed because, generally, the companies that were using this financing had little or no other rate base upon which to earn a return and little or no equity or other debt. As such, these companies could not meet the debt service using the rate base, rate of return approach, which allows for recovery over the service life of the plant. (It is interesting to note that PAWC has a tariff page in place [Fifth Revised Page 12A], which would allow the Company to use this method if it chose.)

The more financially stable companies, however, have recognized the benefits of maintaining the plant funded with PennVest loans in rate base over the service life of that plant, as explained above. This is the method that has been used by PAWC for all of its

PennVest loans and is the method which I have suggested in this case, if the Company uses a PennVest loan for the Hickory area project.

Q. ON PAGE 14 OF PAWC STATEMENT NO. 3.1, MR. DISKIN STATES THAT THE COMMISSION WAS AWARE OF THE DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC) WHEN IT ADOPTED THE MAIN EXTENSION REGULATIONS. WAS THE DSIC CONSIDERED BY THE COMMISSION IN THE MAIN EXTENSION REGULATIONS?

A. No it was not. The DSIC was approved by the Commission Order in August 1996. Although the final Order approving the main extension regulations was not issued until October 1996, the "final-form" rulemaking was approved by the Commission in December 1995. The final-form rulemaking was temporarily withdrawn by the Commission to consider issues raised by the Independent Regulatory Review Commission ("IRRC"), namely, a change in federal income tax laws and some language changes. At no point in time between the approval of the final-form rulemaking in December 1995 and the final Order in October 1996 did the Commission consider the impact of the DSIC on the main extension regulations.

Q. ON PAGE 15 OF PAWC STATEMENT NO. 3.1, MR. DISKIN CALCULATES THE IMPACT OF THE DSIC ON THE REVENUE COMPONENT OF THE COMPANY'S MAIN EXTENSION FORMULA. HAVE YOU SUGGESTED THAT THIS BE DONE

EACH TIME THE COMPANY IMPLEMENTS A CHANGE IN ITS DSIC?

A. No, I have not. On pages 15 and 16 of my supplemental direct testimony I have suggested that the Commission consider that the customers added to PAWC's system through main extensions would be paying this surcharge in addition to the base rates used in the Company's main extension formula and thus, would be contributing to the cost of improvements in other areas of the system.

Q. PLEASE COMMENT ON MR. LUCAS' TESTIMONY ON PAGE 2 OF PAWC STATEMENT NO. 1.1 RELATED TO THE OCA'S PROPOSAL THAT PAWC FULLY FUND THE HICKORY AREA PROJECT.

A. On page 2 of PAWC Statement No. 1.1, Mr. Lucas has correctly stated that OCA witness Terry Fought and I have recommended that PAWC construct the Hickory area project without customer CIAC. He states further, however, that this would only be accomplished by directing the Company to seek PennVest financing for this project and, assuming the loan is granted, requiring the Company to use the PennVest interest rate in the main extension formula to calculate the Company investment per customer. Mr. Lucas has misunderstood my recommendation, as outlined on page 14 of my supplemental direct testimony. As indicated in that testimony, I have recommended that PAWC construct the Hickory area project without customer CIAC whether or not PAWC applies for and is granted a PennVest loan. My recommendation is based on the substantial public need for

a safe and adequate water system in the Hickory area. This public need has been clearly demonstrated by the residents of the Hickory area through their testimony at the hearings of September 9, 2002 and by the Department of Environmental Protection through its water quality studies performed in this community. I have outlined the impacts of PennVest financing on this project to suggest a means by which this project could be constructed in an economically-feasible manner without customer CIAC, even under PAWC's main extension tariff.

Q. DOES THAT CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes, it does at this time. However, it may be necessary to supplement my surrebuttal after the receipt and review of discovery related to the Company's testimony in response to the OCA's direct.

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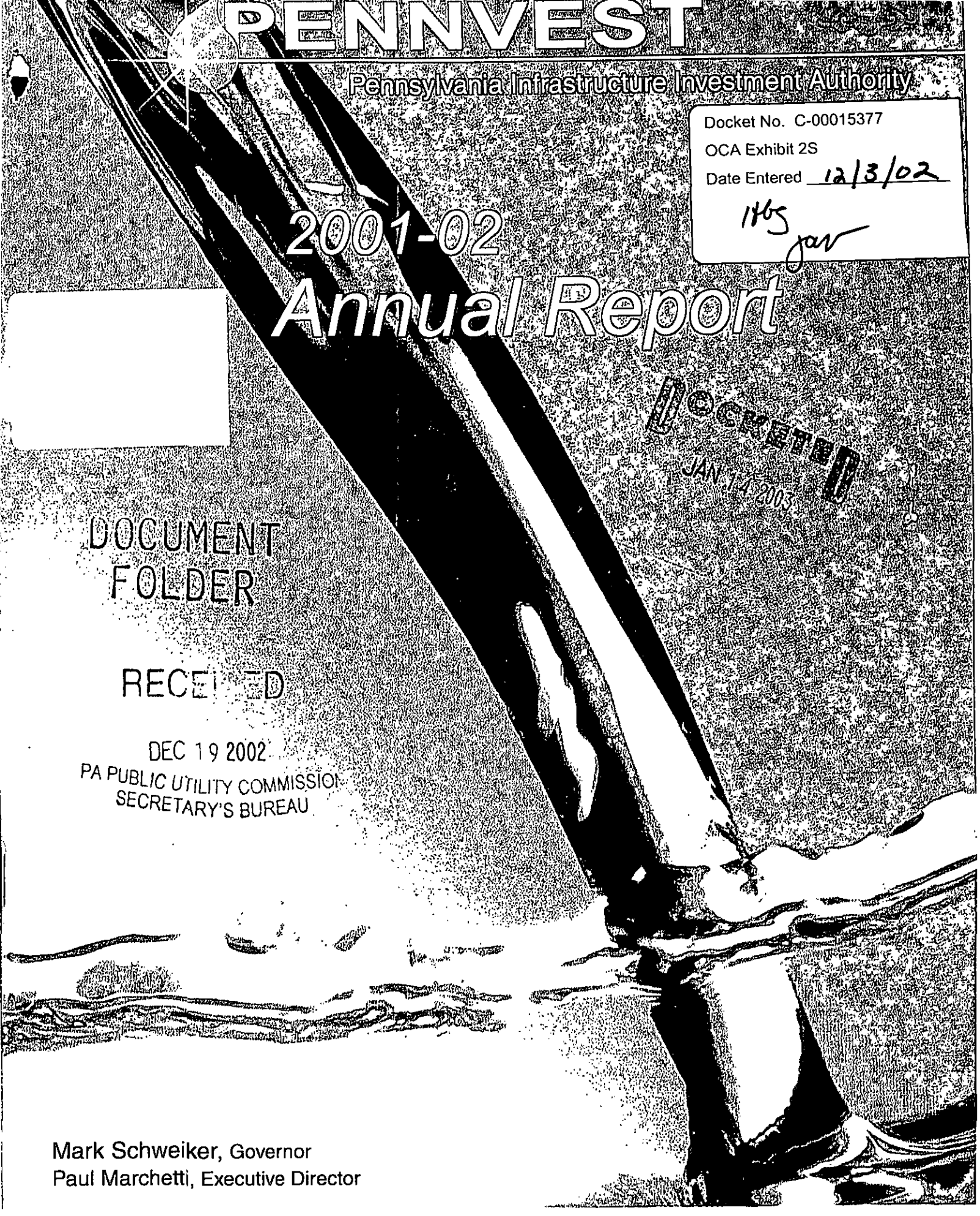
PENNVEST

Pennsylvania Infrastructure Investment Authority

2001-02 Annual Report



Mark Schweiker, Governor
Paul Marchetti, Executive Director

Fiscal Year 2001-2002 Highlights

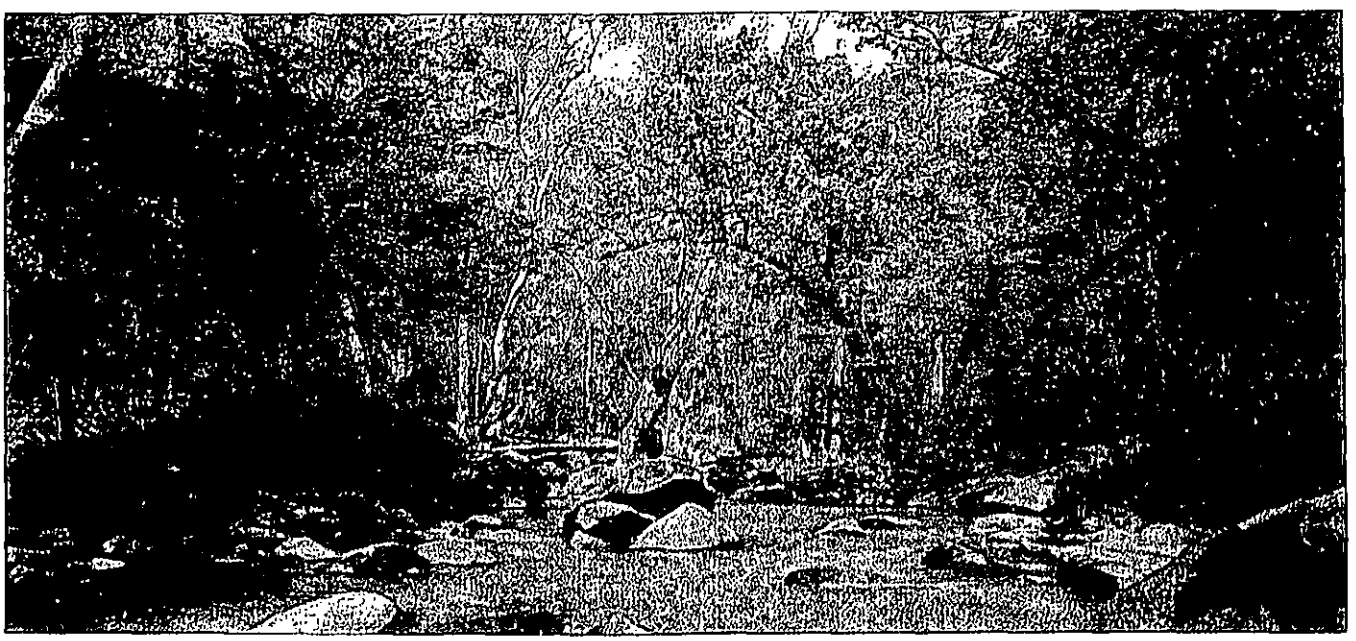
The Commonwealth faced many challenges during the past fiscal year, not the least of which was the decline in revenues that resulted from the national recession. As he did in other respects, particularly the aftermath of last September's tragic events, Governor Schweiker met this challenge head-on. As Chairman of the PENNVEST Board, the Governor continued the leadership and vision of Governor Ridge by overseeing the largest amount of loan and grant funding in the history of the agency. Through prudent fiscal management and planning, the PENNVEST Board was able to continue and expand its commitment to Pennsylvania's communities, who themselves were dealing with difficult economic challenges.

The PENNVEST Board of Directors met three times this fiscal year. At these meetings, the Board approved 140 projects, for a total of $320.2 million in financial assistance. Of this assistance, $38.6 million was in the form of grants made available through the Growing Greener program. The balance of PENNVEST's funding came in the form of low interest loans.

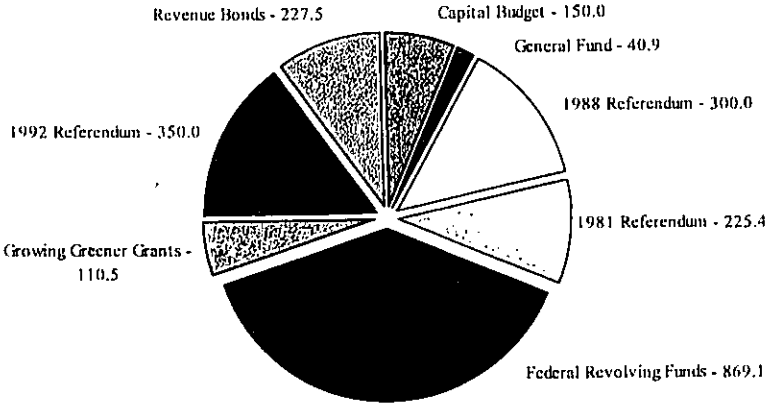
In addition to this assistance to communities, PENNVEST continued to help individual homeowners finance repairs to their on-lot septic systems. As of the end of the fiscal year, 316 loans, totalling $5.1 million in funding, had been approved under this program.

PENNVEST continued in its role as recipient and manager of federal funds for both clean water and safe drinking water project funding. The amounts of federal grants requested from the U.S. Environmental Protection Agency for each purpose during the past fiscal year were $63.9 million and $27.4 million respectively.

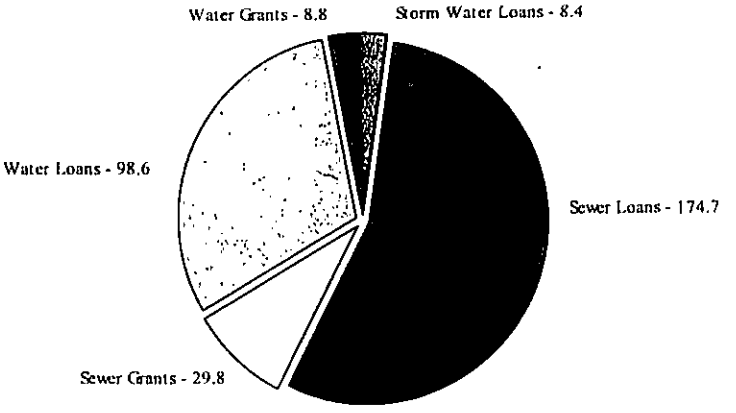
This has been a difficult and challenging year for a number of reasons. In its own way, PENNVEST faced and overcame the challenges presented to it during this year. The Board of Directors not only continued but actually expanded its assistance for affordable clean water and an improved environment. By doing so, the Board, under the leadership of its Chairman, further ensured that Pennsylvania will be a healthy and desirable place to live for today's citizens as well as future generations.



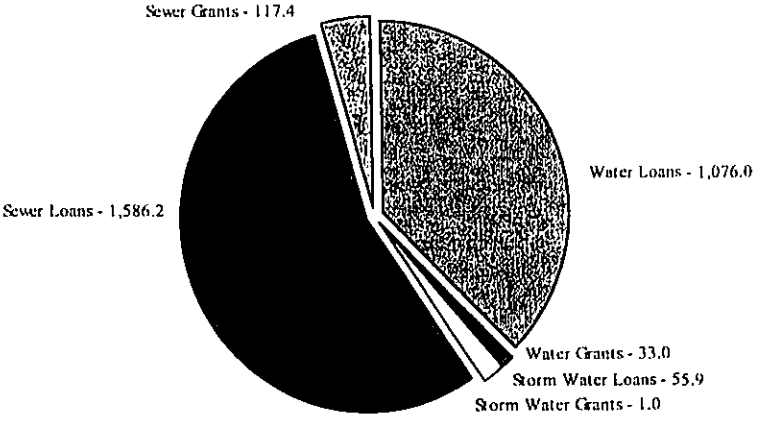
Sources of PENNVEST Funding
(millions of dollars)



2001-2002 PENNVEST Project Funding
(millions of dollars)



Total PENNVEST Funding
(millions of dollars)



PAWC CR Ex. Gn. 1

Cindy Parks, Richard Minutello and Irwin A. Popowsky, Consumer Advocate C-00015337

v.

Pennsylvania-American Water Company
Docket Nos. C-00015337, C-20028177 and C-20028361

12/18/02
1109 jaw

Responses of the Office of Consumer Advocate
To the Interrogatories of the Pennsylvania-American Water Company
Set II

PAWC-3

Re. **OCA Statement No. 1A, pages 7-8.** Provide the design criteria used by Mr. Fought as the basis for his conclusion that a water storage tank is not needed to serve customers he anticipates will attach to the mains he proposes should be installed within the "footprint" of the project he has defined.

Response:

Mr. Fought's conclusion that a water storage tank is not needed is based on the Company's responses to OCA Set I, No. 11; OCA Set II, Nos. 12, 14, and 24; and OCA Set IV, Nos. 9 and 11.

It is Mr. Fought's opinion that if the Chartiers Booster Pump Station has a 1,000 gpm pumping capacity and is properly designed to (1) provide reliable domestic and fire service to 233 customers in Chartiers Township without a tank and (2) fill the proposed tank at the Mount Pleasant Township location, then it can provide reliable domestic and fire service to the proposed customers in Mount Pleasant Township without the tank. Therefore, the cost of the tank should be excluded from the CIAC for the initial Mount Pleasant customers.

Assuming a 750 gpm fire in Chartiers Township and the peak hourly flow per customer from the Company's response to OCA Set II, No. 14, approximately 1,250 customers could be served by the 1,000 gpm pumping station.

It is Mr. Fought's opinion that the proposed tank is desirable, but not necessary, to serve just the 233 customers in Chartiers Township as well as both the Chartiers Township and Mount Pleasant Township customers.

Respondent: Terry L. Fought; Dated October 30, 2002.

PAWC Cr. Ex. Eh. 2
C-00015397

~~OCA STATEMENT NO. 1S~~
12/3/02
Hrg
fax

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Township of Collier.

v. : Docket No. C-20016207

Pennsylvania-American Water Company

SURREBUTTAL TESTIMONY

OF

TERRY L. FOUGHT

ON BEHALF OF

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

NOVEMBER 27, 2002

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

A. Terry L. Fought, 780 Cardinal Drive, Harrisburg, Pennsylvania, 17111.

Q BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am a self-employed consulting engineer under contract with the OCA.

Q. HAVE YOU SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes. I submitted direct testimony on October 23, 2002 in OCA Statement 1.

Q. WHY ARE YOU PROVIDING THIS SURREBUTTAL TESTIMONY?

A. The purpose of this surrebuttal testimony is to respond to the testimony of Jay Lucas, PAWC Statement No. 2.

Q. WHAT ARE THE ISSUES IN MR. LUCAS'S TESTIMONY THAT YOU ARE RESPONDING TO?

A. I am responding to Mr. Lucas's testimony regarding (1) improvements to the existing distribution system by eliminating dead end water mains, (2) the proposed water main extension in the Dorrington Road, Cluxton Road and Spring Street area, and (3) the proposed Boyd's Run water main extension.

Improvements to the Existing Distribution System by Eliminating Dead Ends.

Q. WHAT IS MR. LUCAS'S POSITION ON MAKING IMPROVEMENTS TO THE EXISTING DISTRIBUTION SYSTEM BY ELIMINATING DEAD ENDS?

A. Mr. Lucas stated that my proposed main extensions would create more dead ends and will not provide any material improvement to the existing distribution system (p. 3). He implies that looping lines may not be necessary unless dead end mains contribute to poor water quality (p. 8). Finally, he states "what he (me) and the OCA really hope to accomplish is to get mains installed to serve applicants for new service while by-passing the Customer contribution requirements of the tariff and the Commission's regulations by re-characterizing the mains as "system improvements" for DSIC purposes."

Q. WILL THE MAIN EXTENSIONS THAT YOU PROPOSE CREATE MORE DEAD END MAINS?

A. I am proposing some main extensions forming loops (Dorrington Road area, Steen Hollow Road, and Boyd's Run Road) that according to OCA witness Marilyn J. Kraus are DSIC eligible (OCA St. 2, p. 7 & 8) and some dead end main extensions (Franklin Street/Gregg Station Road area, Scott's Run Road, and Lewis Road) that are not DSIC eligible. The looping main extensions eliminate dead ends while the other extensions create dead ends. All the proposed extensions will create a net gain of two dead ends.

Q. HOW IMPORTANT IS THE NUMBER OF DEAD ENDS?

A. In this case, not very important. As Mr. Lucas states in his testimony, there have been no complaints in these areas about the water quality at dead ends (p. 8).

Q. ARE THERE FACTORS BESIDES WATER QUALITY THAT ARE IMPORTANT ABOUT ELIMINATING DEAD END MAINS?

Yes, the number of customers or residential units on dead ends is important. If there is a break in one of the mains in a loop, the break can be isolated by shutting valves and service can be maintained to the other customers on the remainder of the loop. This is not the case for dead end mains. For example, on Hilltop Road between Forsythe Road and the condominium complex near Hilltop Road, there are approximately 445 residential units (507 when existing developments are completed) on a 1.3 mile long dead end main. A break in that main could affect a considerable number of customers. Upon completion to the Dorrington Road, Cluxton Road and Spring Street main extension looping the mains on Hilltop Road and Noblestown Street, there would only be six customers on two dead ends. If there is a break in one of the looped mains, the only customers affected would be those between the nearest shut-off valves on either side of the break.

The proposed Boyd's Run Road and Steen Hollow Road main extensions eliminate two dead ends affecting approximately 5 or 6 existing customers.

Also, eliminating dead ends by forming loops improves fire flows and system pressures during periods of heavy usage.

Q. ARE YOU HOPING TO ACCOMPLISH GETTING MAINS INSTALLED TO SERVE APPLICANTS FOR NEW SERVICE WHILE BY-PASSING THE CUSTOMER CONTRIBUTION REQUIREMENTS OF THE TARIFF AND THE COMMISSION'S REGULATIONS BY RE-CHARACTERIZING THE MAINS AS "SYSTEM IMPROVEMENTS" FOR DSIC PURPOSES?

A. No. I have recommended providing service to 38 houses and businesses who are in dire need of public water - some of whom have been trying to get service for over 30 years. It does not appear that these potential customers will ever be provided service if the main extensions must be financed under the provisions contained in Rule 27 of the Company's Tariff because of the high CIAC. I have presented testimony that 19 houses and businesses can be served by looping mains in three areas and at the same time improve service to many existing customers. The cost of these three mains is estimated at $947,800, which according to OCA witness Kraus is DSIC eligible. The remaining 19 houses and businesses can be served with three main extensions having an estimated cost of $695,009.

Proposed Water Main Extension in the Dorrington Road, Cluxton Road and Spring Street Area.

Q. WHAT COMMENTS IN MR. LUCAS'S TESTIMONY DO YOU WISH TO ADDRESS CONCERNING THE MAIN EXTENSION IN THE DORRINGTON ROAD, CLUXTON ROAD, AND SPRING STREET AREA?

A. In addition to Mr. Lucas's comments regarding dead ends that I have discussed above, I would like to address his comments on the length and diameter of the proposed Dorrington Road main.

Q. WHAT IS MR. LUCAS'S POSITION ON THE LENGTH OF THE PROPOSED DORRINGTON ROAD MAIN?

A. Mr. Lucas has revised the length of the proposed Dorrington Road main extension from 4,400 feet to 3,650 feet as the correct response to OCA I, No. 8 (p. 7). He has based this on the fact that the additional footage to connect this main to Noblestown Street would not serve any additional customers (p. 7).

Q. WHAT ARE YOUR COMMENTS CONCERNING THE LENGTH OF THE DORRINGTON ROAD MAIN?

A. The length of the main should be 4,400 feet to form a loop with the existing Hilltop Road and Noblestown Street mains as shown on the Company's response to OCA I, No. 8. Of all the cost estimates that the Company provided on September 27, 2002 in response to OCA Set I, No. 8, only the estimate for the Dorrington Road area was based on an "Actual Bid Price". This clearly indicates that if a main is installed in Dorrington Road, the Company intends to extend the main

to Noblestown Street for reasons other than providing service to the residents and businesses along Dorrington Road. Also, it should be noted that the distribution system map the Company furnished at the August 27, 2002 public hearing for locating the areas of testimony showed that the proposed Dorrington Road main extended from Hilltop Road to Noblestown Street.

Q. WHAT IS MR. LUCAS'S POSITION ON THE DIAMETER OF THE PROPOSED DORRINGTON ROAD MAIN?

A. Mr. Lucas believes that the diameter of the Dorrington Road main should be 12-inch to provide fire protection to the homeowners and businesses in that area and because the Hilltop Road main is 12-inch (p. 11).

Q. DOES THE DORRINGTON ROAD MAIN HAVE TO BE A 12-INCHES IN DIAMETER TO PROVIDE FIRE PROTECTION IN THAT AREA?

A. No, a 12-inch main in not necessary to provide fire flow to the area. Even assuming a dead-end line from Hilltop Road, an 8-inch main would provide over 1,185 gallons per minute (gpm) flow at 50 pounds per square inch (psi) residual at the businesses located at the end of the main. The fire flow at 20 psi residual would be greater that 1,185 gpm. Even a greater fire flow would be available with an 8-inch main if the main is looped by extending it to Noblestown Road.

Q. IF THE DORRINGTON ROAD MAIN WAS LOOPED BETWEEN HILLTOP ROAD AND NOBLESTOWN STREET, WHAT SIZE MAIN WOULD IT CONNECT TO NEAR HILLTOP ROAD?

A. According to the distribution system map that Company provided at the August 27, 2002 public hearing, there is already a short length of 8-inch main on Dorrington Road that the proposed extension would connected to.

Proposed Boyd's Run Water Main Extension.

Q. WHAT STATEMENTS IN MR. LUCAS'S TESTIMONY DO YOU WISH TO ADDRESS CONCERNING THE BOYD'S RUN WATER MAIN EXTENSION?

A. I would like to correct the following statements made by Mr. Lucas: "Mr. Fought proposes that the Company be required to install a main in Boyd's Run Road a distance of 2,100 feet at a cost of $105,000 to serve five potential customers. He also proposes that the Commission require the Company to install an additional 2,600 feet of main, beyond the point of the last potential customer, in order to 'eliminate a dead end.'"(p. 5 & 6).

Q. WHAT CORRECTIONS WOULD YOU LIKE TO MAKE TO THOSE STATEMENTS?

A. I did not specifically break down the length of pipe required to serve the five potential customers and the additional length of pipe required to eliminate a dead end. Mr. Lucas must have based these statements on the Company's response to OCA I, No. 8 that 2,100 feet of pipe was required

to serve the five customers. The distribution map that the Company furnished at the public hearing indicates that approximately 3,150 feet of pipe is necessary to provide service to the five customers and approximately 1,550 feet of pipe would be needed to eliminate the dead end. Again, the distribution map the Company furnished at the public hearing shows that the Boyd's Run Road main extension being long enough to eliminate the existing dead end as I have later recommended.

Q. DOES THIS COMPLETE YOUR WRITTEN SURREBUTTAL TESTIMONY?

A. Yes, it does at this time. However, it may be necessary to supplement my surrebuttal after the receipt and review of (1) discovery related to the Company's rebuttal testimony and (2) the final copy of the water well survey performed by the Allegheny County Health Department that should be available in a week or two.

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