COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:	**)**	
	)	
THE APPLICATION OF KENTUCKY-AMERICAN	**)**	
WATER COMPANY FOR A CERTIFICATE OF	**)**	**CASE NO. 2014-00258**
CONVENIENCE AND NECESSITY AUTHORIZING	**)**	
THE CONSTRUCTION OF RICHMOND ROAD	**)**	
STATION FILTER IMPROVEMENTS	**)**	

DIRECT TESTIMONY OF BRENT E. O'NEILL, P.E.

July 31, 2014

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

A. My name is Brent E. O'Neill and my business address is 2300 Richmond Road, Lexington, Kentucky 40502.

2. Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the American Water Works Service Company ("Service Company") as Director of Engineering for, Kentucky-American Water Company ("KAW" or "Company") and Tennessee-American Water Company ("TAW").

3. Q. HAVE YOU PREVIOUSLY FILED TESTIMONY BEFORE THIS COMMISSION?

A. No. I have assisted in the preparation of written testimony to the Kentucky Public Service Commission in prior filings and have assisted in the preparation of written testimony in proceedings before the Illinois Commerce Commission including rate cases, special investigations, and applications for a Certificate of Public Convenience and Necessity. I have provided direct written testimony to the Tennessee Regulatory Authority.

4. Q. PLEASE STATE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I received a B.S. degree in Civil Engineering from the University of Illinois in Urbana, Illinois in 1991. I completed a Masters of Business Administration from Eastern Illinois University in Charleston, Illinois in 2002. I am a registered Professional Engineer in the State of Illinois, State of Iowa, State of Tennessee, and Commonwealth of Kentucky.

I have been employed by American Water Works Company ("AWW") or one of its subsidiaries since 1996. I began as a Staff Engineer for Northern Illinois Water Company ("NIWC") until 1999 when I was promoted to Engineering Manager for Illinois American Water Company ("ILAWC"). In July 2004, I accepted the position of Network Operations Manager for the Champaign County District of ILAWC. In June 2005, I accepted the position of Senior Asset Manager with AWW and worked in Reading, England in a joint project with Thames Water. In 2006, I became the ILAWC Project Manager for the construction of a new 15 million gallons per day ("MGD") ground water softening treatment plant, wells, and transmission main in Champaign, Illinois. In March 2008, I became the Engineering Manager Capital Delivery with ILAWC with responsibilities for the delivery of capital projects for the Central and Southern portions Illinois. In April 2013, I accepted my current position as Director of Engineering for KAW and TAW with the Service Company. I am an active member of the American Water Works Association (AWWA).

5. Q. WHAT ARE YOUR DUTIES AS DIRECTOR OF ENGINEERING?

A. I am responsible for the coordination of the Engineering Departments for both KAW and TAW, which includes the planning, development, and implementation of all aspects of construction projects. This includes working with all new main extensions and developers, replacement mains, water treatment plant upgrades, new construction and network facilities improvements. I coordinate technical assistance to all other company departments as needed and I oversee the capital

budget development and implementation. I report to the Presidents of KAW and TAW.

6. Q. WHAT WILL YOU BE ADDRESSING IN YOUR TESTIMONY?

A. My testimony will cover why the improvements are needed to the existing filter building at Richmond Road Station ("RRS") and provide a description of steps KAW has taken in the planning process. Lastly, I will describe the current stage of design, bidding process and the anticipated construction cost.

7. Q. HOW MANY WATER TREATMENT PLANTS HAVE YOU PERSONALLY WORKED ON AS AN ENGINEER?

A. I have provided engineering services on a variety of projects over the 18 years I have worked with AWW. A few specific projects for improvements at existing water treatment plants I had the opportunity to manage include: a new 15 MGD Ground Water Softening Plant with a total cost of $42 Million in improvements in Champaign, Illinois; the installation of new filters and ultra-violet ("UV") disinfection facilities with a total cost of $23 million in Peoria, Illinois; the retrofit of filters and a new clearwell with a total cost of $14 million in Granite City, Illinois; and the installation of a new filter and additional improvements to Streator water treatment facility with a total cost of $5.4 million.

8. Q. WHY ARE IMPROVEMENTS NEEDED FOR RRS FILTER BUILDING?

A. During a regular review of the facilities, concerns were raised of the severe continued deterioration of the concrete support beams of the operating floor located above the pipe gallery. Following further investigation it was determined

that a significant loss of the concrete from the beams and subsequent exposure of the rebar to the corrosive atmosphere of the filter gallery posed a tremendous and potentially catastrophic risk to the structure, and remedial measures were installed to provide temporary support of the operating floor during June 2013 to avoid a likely failure in the building. A long term solution was absolutely critical for the filters and improvements to the filter building were necessary to ensure continued safe and reliable operation.

9. Q. WHAT IS THE HISTORY OF THE FILTER BUILDING?

A. The filter building was originally constructed in 1924 and consisted of four filters. During 1937 six additional filters were added to the structure and further expansion occurred during 1938 and 1953 with the addition of two and four filters respectively. In total the filter building currently houses 16 filters of the same size and shape and each have a capacity of 1.56 million gallons per day (MGD) for an overall capacity of 25 MGD. Beneath the filter building is a 600,000 gallon clearwell of finished water that was constructed during the 1920s and 30s. Improvements over the years have been made to the control valves, chemical feed locations, controls, filter material and the filter bed backwash system, but no major improvements have been undertaken since the last expansion in 1953.

10. Q. HOW DID KENTUCKY AMERICAN IDENTIFY THE IMPROVEMENTS NECESSARY FOR THE FILTER BUILDING?

A. Kentucky American requested proposals to conduct an evaluation of the RRS Filter Building in July 2013. KAW obtained five (5) proposals and selected HDR

Engineering, Inc. of Lexington, Kentucky to conduct the evaluation and provide a report. KAW requested that HDR perform an assessment of the existing structure and determine the best course in returning the filter building to a viable and safe structure. HDR performed their analysis during August and September of 2013 and presented their final report to KAW during September 2013. A copy of the Evaluation Report is attached to KAW's Application in this case.

11. Q. WHAT WAS THE RECOMMENDATION FOR THE EXISTING FILTER BUILDING?

A. HDR's comprehensive assessment indicated that the operating floor was in extremely poor shape and confirmed that the remedial measures to temporarily support the floor were fully justified. HDR further determined that with the 90 year old age of the building, new problems would continue to arise, and it would be increasingly difficult to maintain the structure. HDR concluded that substantial support and corrosion challenges were present in the filter building structure and that the building should be decommissioned from its current process service.

12. Q. WERE THERE OTHER FACTORS THAT CONTRIBUTED TO THE RECOMMENDATION TO DECOMMISSION THE EXISTING FILTER BUILDING?

A. Yes. In addition to the review of the structure and concerns with the stability of the building, HDR also observed that the filter gallery has a lack of space that significantly hinders the KAW maintenance and operations personnel from safely traversing the length of the gallery, accessing most of the equipment in the

gallery, and performing maintenance on equipment. The congested filter gallery space also reduced the ability of proper ventilation within the gallery, leading to the inability to effectively remove the chlorine and water vapor within the gallery. That lack of ventilation was a major contribution to the corrosion issues. In addition, the lack of space within the gallery also reduced the ability to conduct proactive maintenance measures due to the inability to perform targeted replacements.

13. Q. ARE THERE ANY OTHER FACTORS THAT CONTRIBUTED TO THE RECOMMENDATION TO DECOMMISSION THE EXISTING FILTER BUILDING?

A. Yes. Between the time when the filters were designed and installed, and today, changes have occurred in the development of filter bed design and filter depths required to ensure efficient operation of the filters. HDR noted that the filter beds are relatively shallow and that adding an additional sand layer would help with filtration of turbidity. Current operational practice at RRS relies on the bulk of turbidity removal occurring within the sedimentation basin through the heavy use of coagulants. This is inefficient and costly, and leads to the primary determination of which raw water source to use at RRS being based on raw water turbidity levels of the different sources available rather than what source is the most economical and which source has the least amount of taste and odor concerns.

14. Q. WHAT WAS THE NEXT STEP AFTER KAW RECEIVED THE RECOMMENDATION FROM HDR TO DECOMMISSION THE FILTER BUILDING?

A. Following HDR's assessment that the operating floor was in poor shape and the filter building should be decommissioned from its current operation, KAW directed HDR to determine the available options and technologies that could be employed at the RRS Facility to replace the filters.

15. Q. HOW WAS KAW INVOLVED IN THE ASSESSMENT OF THE OPTIONS PRESENTED TO ADDRESS THE FILTER BUILDING PROBLEMS?

A. KAW was thoroughly engaged in the development of the Evaluation Report. Members from KAW Engineering group, operations group, water quality and KAW leadership were involved in multiple review meetings and assisted in the evaluation of each option. KAW staff assisted HDR in determining what options would position KAW to meet its current and future water quality and operational needs.

16. Q. WHY SHOULD THE FILTERS BE REPLACED AT RRS?

A. RRS is one of three primary treatment plants for KAW. The three facilities are Kentucky River Station 1 (KRS- 1), Richmond Road Station (RRS) and Kentucky River Station 2 at Hardin's Landing (KRS-2) with rated capacities of 40 mgd, 25 mgd, and 20 mgd, respectively. Thus, the current total rated capacity of the KAW production facilities is 85 mgd with all three facilities. RRS is a significant portion of this capacity accounting for 29% of the total KAW capacity and is absolutely critical to allow KAW to meet customer needs. Because the filters are

located in one building with extensive deterioration throughout the building, there is no feasible option to replace only a portion of the filters.

17. Q. IS THERE ANY OTHER REASON BESIDES THE LOSS OF OVERALL CAPACITY THAT THE FILTERS SHOULD BE REPLACED AT RRS?

A. There are three other reasons for maintaining the RRS facility. First, since the RRS facility was the original facility for the Lexington system, the distribution system developed from and radiated away from this facility. The facility supports a majority of the central portion of Lexington including the downtown area and surrounding neighborhoods through the mains that radiate out from the facility. Removal of this facility would require that extensive distribution system improvements be made to supplement the flow into this area. Second is the redundancy that the RRS provides to the KAW system. The facility is able to obtain its raw water supply from Pool 9 of the Kentucky River, Jacobson Reservoir and Lake Ellerslie. This provides a level of protection to the KAW system if contaminant or emergencies occur on the Kentucky River which is the source of supply for the other two treatment plants. The RRS has more extensive standby power capabilities than KRS-1 and serves as the primary facility during a widespread power outage in the Central Division. Finally, the system controls for all of the remote sites within the distribution system are located at the RRS and operated by the plant operators at the RRS. Eliminating the entire plant from system operation when a treatment process needs to be replaced is simply not an option for KAW.

18. Q. WHAT ALTERNATIVES WERE EXPOLORED AS PART OF THE HDR EVALUATION REPORT?

A. KAW directed HDR to explore all alternatives in finding a solution of how to address the deficiencies found in the review of the existing filter building. HDR was asked to study retrofitting the filters, building new filters and implementing alternative filtration methods. As part of its review, HDR evaluated thirteen options that were broken into four groups. These groups were Sedimentation Basin Retrofit, Membrane Filtration, Ozone Enhanced Biological Filtration and a New Filter Building. After review, HDR suggested that the most cost effective was the construction of a new filter building.

19. Q. WHY WERE THE OTHER ALTERNATIVES DETERMINED TO NOT BE ATTRACTIVE BY HDR?

A. The Sedimentation Basin Retrofit would have involved the installation of plate settlers within the sedimentation basins just upstream of the filters. This would allow for improved turbidity removal within the sedimentation basins while using a smaller footprint of the basins. This alternative would then use the space saved within the basins as an area of outdoor filters. However, it was determined that this option provided minimum benefit for the cost of the improvements, especially when there is more than enough space at the existing RRS site for new filters. Membrane Filtration was reviewed since it would potentially allow for a higher effluent quality than conventional filters. It was determined that since the conventional filtration options allowed for filter effluent quality exceeding current water quality standards, the additional construction and ongoing operating and

maintenance cost for membranes were not justified. Ozone Enhanced Biological Filtration was determined not to be cost effective in both capital and operating costs compared to other alternatives. KAW will continue to review and consider the ability to add ozone in the future in order to meet future regulatory requirements. There was an additional concern with both Membrane Filtration and Ozone Enhanced Biological Filtration that involved the possible need to undertake a one (1) year pilot test since the Kentucky Department of Water would likely consider these alternatives as new technologies, or newer un-tested processes, adding expense and delay in the project.

20. Q. WHAT WAS THE FINAL RECOMMENDATION FROM THE RRS FILTER BUILDING EVALUATION REPORT CONDUCTED BY HDR?

A. HDR recommended, based on a review of the merits of each option and interaction with KAW staff that a new filter building with GAC dual media filters be constructed. The recommended approach included:

- New filter building with twelve filter beds capable of treating 25 MGD;
- Media profile assumed to be 24" of GAC under bedded by 12" of sand to improve turbidity reduction;
- Air/water backwashing capabilities; and
- Adequate space for maintenance and more robust ventilation than current filter building.

21. Q. WHAT DID KAW DO WITH THE RECOMMENDATION FROM THE EVALUATION REPORT?

A. Upon the receipt of the evaluation report from HDR recommendation, KAW further reviewed the report and decided to proceed with the development of a design and construction drawings. During October and November 2013, KAW developed the request for proposal and during December 2013 requested

proposals from three (3) engineering consultants. Because of the critical need for design and construction to move forward in a timely fashion, while controlling costs, KAW opted to use a modified design-build contract approach on this project. In January 2014, KAW selected Hazen and Sawyer led by their office in Lexington, KY, as the engineering consultants for the design of the filter building. Hazen and Sawyer have designed several new treatment plants and renovations for AWW in several states. Hazen and Sawyer is a nationally-recognized environmental engineering and consulting firm and was uniquely qualified to deliver the design of this improvement project based on an evaluation of the proposals submitted.

22. Q. WHAT IS THE MODIFIED DESIGN-BUILD CONTRACT APPROACH?

A. KAW selected the modified design-build contract approach for this project to allow for a compressed design and construction schedule but to also allow for the selection of both the design consultant and improvements contractor separately. In a traditional design-build contract, KAW would have requested design-build teams where contractors and consultants form a team and submit as the team on the project. KAW and AWW have used this model successfully in several projects, however, the disadvantage of this type of model is that the team is selected as a whole and one member of the team (consultant or contractor) can be detrimental to the overall team during the selection process. By using the modified design-build approach, or in this case a “Contractor at Risk” contract, KAW was able to separately select a consultant through a request for proposal

process and a contractor through a separate proposal process. This differs in a traditional design-bid-build method due to the ability to proceed with contractor selection during the design process rather than waiting for a full set of design drawings. This allows for the contractor to be a part of the final portions of design and be instrumental in bringing savings and knowledge of constructability to the planned improvements during the design change rather than during construction.

23. Q. WHAT HAS OCCURRED SINCE THE SELECTION OF HAZEN AND SAWYER AS THE DESIGN CONSULTANT?

A. With the Notice of Award provided during January 2014, Hazen and Sawyer commenced with the design of the RRS Water Treatment Plant Improvements. To date there have been several key milestones that have been accomplished to allow the project to proceed in an expedited fashion. Hazen and Sawyer prepared a preliminary Basis of Design Memorandum for review by KAW during March 2014. Following the review of the memorandum and confirmation of the design criteria by KAW, Hazen and Sawyer incorporated the design review comments into the drawings and preliminary drawings and submitted a 30% drawing set for review by April 2014. The 30% design meeting was held on April 22, 2014, which discussed the process design and site/civil coordination for the project and further confirmed the design criteria by KAW.

Following the 30% meeting, drawings and specifications were updated and submitted to Kentucky Department of Water ("DOW") on May 9, 2014 for its

review and acceptance. A 60% Design Review Package was submitted to KAW in June 2014 and has been reviewed by KAW staff.

24. Q. WHO HAS BEEN INVOLVED IN THE DESIGN OF THE FILTER IMPROVMENT PROJECT?

A. The facility has been primarily designed by Hazen and Sawyer, with significant input throughout the process by KAW and AWW. AWW and KAW take pride in the fact that they as active owners are involved in every step of the design process.

25. Q. WHY DID KAW MEET WITH KY DOW SO EARLY IN THE PROJECT AND APPLY FOR A DOW PERMIT BEFORE THE PLANS WERE COMPLETE?

A. KAW and Hazen and Sawyer had numerous conversations with the Kentucky DOW leading up to the permit application on May 9, 2014. The conversations occurred to discuss what items were needed from a permitting standpoint, to clarify certain design elements, and to request assistance on coordination of all DOW issues. KAW requested this meeting for the purpose of identifying items that may impact the schedule and to insure that the ultimate decision made by KAW would not present significant DOW permitting problems. The major item that came out of the conversations was that DOW would accept 30% drawings for permit review, provided the treatment process was “conventional” and the process was adequately identified for review purposes. KAW received the approval from the DOW on the proposed improvements on June 27, 2014. A copy of the DOW

approval of the project for construction is attached to KAW's Application in this case.

26. Q. WHAT OTHER PERMITS ARE REQUIRED AND WHEN WILL THEY BE OBTAINED?

A. The improvements are expected to need four additional permits. First, a Building Permit is required by the LFUCG Division of Building Inspections and includes an architectural, structural, electrical, HVAC and site plan review prior to start of construction. This permit will be applied for in 2014 with the expectation that it will be obtained prior to the end of the year. Second, just prior to the start of construction in 2015, a Land Disturbance Permit will be required by LFUCG's Division of Engineering prior to site grading. The requirements for this permit include a Grading & Drainage Plan, Erosion Control Plan, and Storm Water Pollution Prevention Plan (SWPPP). Third, part of the Land Disturbance Permit process will include KAW issuing a Notice of Intent to disturb the land to the Kentucky Division of Water and the Division of Water's subsequent approval of that disturbance. Fourth and finally, a Demolition/Wrecking Permit is required before any building is demolished either in part or in whole. This permit will be obtained from the LFUCG Division of Building Inspection prior to start of deconstruction of the existing filter building in 2016.

27. Q. DESCRIBE THE PROPOSED IMPROVEMENTS.

A. The proposed facilities consist of a new filter building with eight filters, a chlorine contact basin and backwash tank. Backwash waste and filter-to-waste piping is

provided for each filter and will be connected to the existing solids handling facility. The improvements are considered a conventional water treatment process and enhance the existing conventional water treatment plant at RRS. In the Commonwealth of Kentucky, conventional water treatment plants and the processes within those plants do not require pilot testing. A detailed description of the proposed improvements to the RRS is described in the Basis of Design Report attached to KAW's Application in this case.

28. Q. WHAT WILL THE RRS PLANT CAPACITY BE AFTER THE IMPROVEMENTS AND CAN IT BE INCREASED?

A. The RRS will remain at a 25 MGD capacity with the proposed improvements. The proposed filtration will be provided by eight cast-in-place concrete gravity filter boxes. Each filter box will provide a media surface area of 496 square feet with a flow rate of 3.6 mgd and a filter media loading rate of 5 gpm/ft^2. Seven filters will provide a firm capacity of 25 mgd of treatment with one filter out of service for washing or maintenance. These improvements match the capacity of the existing infrastructure of the facility.

29. Q. WILL THE RRS REMAIN OPERATIONAL DURING CONSTRUCTION?

A. Absolutely. As I've described above, the RRS is a critical component of KAW's system operation and construction is anticipated to last close to a year. The existing building will remain operational throughout construction and will only be taken out of service and demolished once the construction is complete. The proposed Filter Building and Chlorine Contact Basin facilities will be constructed

at the RRS facility site behind the existing Chemical Building on a gentle hillside within the current security perimeter of the existing facility.

30. Q. WHAT PROVISIONS ARE BEING MADE FOR FUTURE WATER TREATMENT REQUIREMENTS?

A. Planning for future changes in water treatment requirements is prudent, but should be carefully done to avoid incurring unnecessary costs. Where it made sense and where practical, KAW has included provisions for future water treatment changes. For example, space has been designed in the improvements and additional headloss through the filters has been allowed for, to support the addition of UV treatment. Further, ozone could be added at a later date should regulations continue to push water utilities in that direction. Also, KAW has allowed for additional headloss through the filters in case another process component is needed. Finally, KAW has also allowed for the future possibility of an increased flow through the filters if regulations become acceptable to a new filter load rate or if KAW decides to pilot a higher filter rate. KAW has made reasonable accommodations for possible future requirements.

31. Q. WILL THE IMPROVEMENTS CHANGE ANNUAL OPERATING COST?

A. The proposed improvements will have little effect on the current operating costs of the facility. The filter building will be located at an elevation higher than the current building and will require pumps for backwash water to the filters instead of using existing backwash tank and gravity flow during filter backwash operations. This change will potentially increase the annual electric cost to

operate the facility, although this should be partially offset with newer and more efficient electric controls, lighting, dehumidifying and heating in the new building. KAW believes that with the newer filters and advances in underdrains and construction techniques that some chemical cost will be reduced providing an offset to the additional electrical cost. Finally, KAW spends a majority of its maintenance labor in the RRS filter building due to the difficulty in accessing the equipment and high corrosion in the filter piping gallery. While those labor costs are not anticipated to be eliminated from KAW's overall operations by replacing the filter building, the RRS maintenance staff will be able to address more preventative maintenance items at the entire plant.

32. Q. IF THE BACKWASH PUMPS WILL ADD TO THE ANNUAL OPERATING COST, WHY ARE THEY NEEDED?

A. As discussed in the attached the Basis of Design Report, the existing filters are backwashed using a 50,000 gallon ground storage tank on higher ground and a parallel 1000-gpm backwash pump. The plant also has an emergency backwash supply connection to the existing high service pump discharge. The proposed filters have a larger surface area which will result in more efficient filtration than the existing filters and, therefore, new backwash pumps are recommended to properly fluidize and expand the filter media bed the replacement pumps are necessary to accommodate both the higher elevation and the larger beds. Two pumps will be provided, each sized to fluidize the media during the warmest water conditions.

33. Q. WHAT ARE THE ESTIMATED MAINTENANCE COSTS?

A. The new improvements are expected to reduce the amount of maintenance that was necessary to maintain the existing filters and filter building. The new filters are being designed so that they do not require a lot of maintenance, but there will be maintenance costs for cleaning, equipment repair and preventative maintenance and maintenance of the grounds. Please refer to Linda C. Bridwell's testimony on this topic.

34. Q. WHEN WILL CONSTRUCTION COMMENCE AND WHEN WILL IT BE COMPLETED?

A. Construction will commence as soon as all required approvals have been obtained. KAW requested proposals from contractors in June 2014 and received proposals from three contractors on June 26, 2014. KAW awarded a construction contract in July 2014 contingent upon final PSC approval of a Certificate of Convenience and Necessity prior to initiating construction. KAW anticipates issuing a Notice-To-Proceed in April 2015. The estimated time needed to Final completion is 340 calendar days. It is important to system operations that the project be substantially completed by April 2016.

35. Q. WHO WAS HIRED TO CONSTRUCT THE PROPOSED IMPROVEMENTS?

A. KAW requested proposals from three (3) pre-qualified contractors to build this project. KAW received the bids on June 26, 2014 based on 60% design of the new facilities. Following review of the bids, W. Rogers Company of Lexington, Kentucky was selected as the contractor.

36. Q. HOW WAS W. ROGERS COMPANY SELECTED?

A. With a traditional Design-Bid-Build project, the evaluation of the proposals provided by the three (3) bidders would have followed an analysis of the financial proposals of each bidder and come down to the bidder with the least cost. This is because a majority of the design for the facility is complete and each bidder is working from the same plan sheets and specifications.

However, since KAW chose to utilize a Contractor at Risk approach, a more detailed evaluation of the proposals was utilized to account for the fact that the bidders were developing their costs on a partial design concept and proposing different solutions to meet the requirements of the project based on 60% design drawings. It was recognized that, upon selection of the successful contractor, the design is further refined and chances for value-engineering the facility is possible through the collaboration of the owner, designer and contractor.

The three (3) Contractor at Risk proposals were evaluated by a team of four KAW individuals representing Operations and Engineering and representatives of Hazen and Sawyer. The evaluations considered various aspects of the proposals including: supervision and Superintendent fees, suitability of the technical submission, adequacy of the proposed schedule, qualifications of the contractor team, and project management and construction resources.

A scoring criterion was developed for various categories of the proposals. The following categories were used to score each proposal:

Commercial	35%
Technical Merit	15%
Schedule	20%

Qualifications and Experience	10%
Resources	20%

Proposers were given scores reflecting the adequacy with which they fulfilled each of these categories.

The results of the scores given to each proposer were as follows:

W Rogers Company, Lexington, KY	64.7
Layne Christensen, Orleans, IN	59.6
Bowen Engineering, Indianapolis, IN	57.9

With respect to the Commercial Category (fees and fixed), review of the Construction Supervision and Superintendence Fees – indicates that W. Rogers Supervision and Superintendence Fee and Fixed Fees was the least cost proposer. These values from the proposal are the most significant since they were not impacted greatly by the bidder's solution to the design concept for the new facility.

As a result of this detailed evaluations, W. Rogers Company was selected as the preferred contractor for the project.

37. Q. WHAT IS THE COST OF PROJECT?

A. The estimated cost of project for the proposed improvements using 2014 dollars is $15,600,000.

38. Q. WHAT IS INCLUDED IN THE PROJECT COSTS?

A. The estimated cost of the project of $15,600,000 is broken down into these activities and work groups:

Preliminary ($477,027)		
KAW Labor	$	8,374
Preliminary Engineering and Filter Study	$	36,312
Detailed Design, Bidding, and Award	$	311,738
Preliminary Project Costs (Capitalized Clearing, AFUDC)	$	120,603
Construction ($15,122,973)		
KAW Labor	$	66,150
Construction Costs	$	13,568,055
Construction Project Costs (Capitalized Clearing, AFUDC)	$	1,488,768

39. Q. WOULD YOU RECOMMEND THAT THE COMMISSION APPROVE THIS CERTIFICATE?

A. Yes. It is my opinion that KAW has designed a least reasonable cost solution to replace the RRS Filter Building that is structurally deficient and poses a safety concern. The proposed improvements will allow for RRS Facility to be an important component in KAW meeting the demands of its customers now and into the future.

40. Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

Brent E. O'Neill, P.E., M.B.A.

Qualifications

Professional Engineer with 22 years of experience in demonstrated roles of leadership and authority. Qualified to lead and manage staff to implement multidisciplinary projects. Demonstrated success leading the implementation of improvements of major capital projects involving water production and distribution facilities. Performed analytical review and strategic planning of improvements to facility and distribution system assets. Developed and established process reviews and participated in system acquisitions.

Professional Experience

Director of Engineering
Kentucky and Tennessee American Water Companies, Lexington, KY **May 2013 – Present**
Supervised projects and staff for the Kentucky and Tennessee Engineering Departments Development of strategic planning and project coordination for both Kentucky and Tennessee American Water Companies. Development and oversight of Capital Spending Plans for both Kentucky and Tennessee. Designed, coordinated, and managed the construction and commission of water main extensions, water storage facilities, pumping facilities and production facilities.

Engineering Manager Capital Delivery
Illinois-American Water Company, Belleville, Illinois **March 2008 – May 2013**
Supervised projects and staff for the Illinois Engineering Department with responsibility for capital projects in several districts within Sothern and Central Illinois, as well as Iowa. Participated in the development of strategic planning and project coordination for several divisions of ILAWC. Designed, coordinated, and managed the construction and commission of water main extensions, water storage facilities, pumping facilities and production facilities.
Key Contributions:

- Led staff through development, design and construction of 14 major facility improvements and numerous additional projects valued at $157.6 million over the past 4 years.
- Managed and coordinated the integration of the recurring new and replacement mains programs into the Engineering Department during 2012. Staff initiated, designed and completed approximately 6 miles of main replacements throughout Alton, Interurban, Cairo, Lincoln and Champaign with a value of $6.9 million during 2012...

Project Manager
Illinois-American Water Company, Champaign, Illinois **March 2006 – February 2008**
Supervised distribution functions and forty staff for the Champaign County Region, serving more than 141,000 residents. Developed strategic plans and served as project manager for $52 million lime softening ground water treatment facility. Ensured projects met regulatory requirements for numerous agencies.
Key Contributions:

- Managed $6.5 million capital investment program of new services, replacement mains and replacement meters.
- Managed Water Distribution Operations totaling 585 miles and 49,632 meters.
- Coordinated district development of new treatment facility, including planning, acquisition of forty acre tract, well field development, communication, hydrology investigation, development of well mitigation program. Project meet planned inservice date of December 2008 and was complete within 1% of budget.

Senior Asset Manager
American Water Company/Thames, Reading, United Kingdom **June 2005 – March 2006**
Provided technical assistance and reviewed the development of GIS Foundation Project for Thames Water. Managed the development of the View Tool.

Network Operations Manager
Illinois-American Water Company, Champaign, Illinois **August 2004 – June 2005**
Supervised distribution functions and forty staff for the Champaign County District. Developed strategic and business plan for the district. Ensured coordination and communication for five communities and seven large wholesale customers served by the district.

Engineering Manager
Illinois-American Water Company, Champaign, Illinois **September 1999 – August 2004**
Supervised projects and staff for the Champaign Engineering Department with responsibility for capital projects in several districts within Central Illinois. Participated in the development of strategic planning and project coordination for several divisions of ILAWC. Designed, coordinated, managed and observed the construction and commission of water main extensions, water storage facilities, pumping facilities and production facilities. Oversaw development of developer installed distribution extensions, specifications and procedures.

Education and Licenses

Masters in Business Administration
Lumpkin College of Business, Eastern Illinois University, May 2002

Bachelor of Science in Civil Engineering
College of Engineering, University of Illinois at Urbana-Champaign, May 1991

Illinois Professional Engineer, License Number 0062-052154
Iowa Professional Engineer, License Number 016756
Kentucky Professional Engineer, License Number 29752
Tennessee Professional Engineer, License Number 117050

Additional Employment

Staff Engineer
Northern Illinois Water Corporation, Champaign, Illinois **August 1996 – September 1999**

Civil Engineer I
Town of Normal, Normal, Illinois **December 1994 – August 1996**

Civil Engineer
Berns, Clancy and Associates, P.C., Urbana, Illinois **June 1991 – December 1994**

Selected Technical Skills

- Hydraulic Model Development utilizing Haestad WaterCAD
- AutoCAD 2007
- ArcView
- Microsoft Office, Word, PowerPoint, Project, Excel, Access and Visio

Professional Associations

- Chairman, East Central Regional Water Supply Planning Committee, 2007
- Mahomet Aquifer Consortium, 2004 – 2007
- Illinois Society of Professional Engineers, 1991-2007; Chapter Representative, 1998-2000
- American Water Works Association, 1996-2007
- Guest Lecturer, University of Illinois at Urbana-Champaign, Civil Engineering Department
- Champaign Rotary, 2006 - 2007

Community Involvement

Explorium of Lexington, 2014-Present
Board member for a non-profit Lexington Children's Museum. Our mission is to create a fun and dynamic hands-on learning environment that inspires imagination and curiosity.

Champaign-Urbana Theatre Company, 1992-2007
Founding board member, past board president and production chair responsible for $150,000 annual production season for a non-profit community theater organization.