

City of Nashua: Taking of Pennichuck Water Works, Inc.

DW 04-048

Pennichuck Water Works, Inc. and Pennichuck Corporation's Responses to
Staff's Fourth Set of Data Requests

Date of Request: February 27, 2006
Data Request No.: Staff 4-19

Date of Response: March 20, 2006
Witness: Donald L. Ware

REQUEST: For purposes of evaluating PWW and Nashua on equal tasks, please answer the following hypothetical:

Please indicate the cost to perform each of the following hypothetical tasks, including all contractor, subcontractor, material, equipment, labor or personnel, overhead and other associated costs:

- a) Repair longitudinal break in 16-inch cast iron main in paved downtown street in Nashua.
- b) Repair longitudinal break in 16-inch cast iron main in paved major street in Merrimack.
- c) Replace 1500 feet of 8-inch cast iron main with 12-inch ductile iron main including reconnection of 20 residential services (10 each side of street) in paved residential street in Nashua.
- d) Replace 1500 feet of 8-inch cast iron main with 12-inch ductile iron main including reconnection of 20 residential services (10 each side of street) in paved residential street in Amherst.
- e) Design, permitting and construction of a pump station to serve 75 single family homes on land owned by company using existing wells that meet the two times NH DES design flow criterion, including disinfection and any treatment considered appropriate for 1.0 mg/l iron, in a town outside Nashua.

RESPONSE: a) First, the cost of certain of the items required to repair a longitudinal break in a 16" cast iron main in a paved downtown street in Nashua are assumed to be the same, whether performed by PWW or Nashua. Those costs that are the same consist of: i) the materials cost; ii) the paving cost; iii) the cost of police protection (required on a downtown street)(note that Pennichuck would pay for police protection directly while the City would have to incur the cost of police protection itself). The difference between PWW and Nashua cost comes from differences in the labor rates incurred by PWW and those charged by Veolia. A break on a 16" water main could take from 8 to 24 hours to repair from start to finish (dependent upon the location, the nature of the break and the time of year) and would involve a crew consisting of a foreman, two

backhoe operators, two dump trucks with drivers (who would also provide labor) and a laborer. Additionally an engineer would be on site to decide on the best way to shut down the leak and then to evaluate the cause of the leak and based on the cause of the leak provide an assessment of how to repair the leak. A Company supervisor would be available to order materials, coordinate communications and traffic control with police, rescue and fire crews and well as seeing that all the needs of the crew are met so that they can focused on the job. Please see the attached spread sheet for a cost comparison of PWW labor versus Veolia labor to perform the required repair. Assuming a 12 hour repair, the Veolia cost is 40 percent higher. Assuming a 16 hour repair, the Veolia cost is 37 percent higher.

b) The cost comparison of the repair outside of Nashua would be the same as inside of Nashua, with the primary difference between Pennichuck completing the work and Veolia completing the work being the hourly rates that are charged. The cost differential for each party would be as identified above.

c) and d) PWW assumes that the cost of the actual construction work for the replacement of 1500 LF of existing 8" water main within or without the City would be the same, since both PWW and Nashua would bid out this work to a third party. PWW assumes that PWW or Nashua would get similar bids from contractors to perform the same work. The difference in the total cost of these projects under Pennichuck's jurisdiction versus the City's comes in the area of engineering design, construction administration, resident inspection and creation of as-built plans. A project of this size would be drawn on a 20 scale and would require a cover sheet, at least two sheets of details and three to four sheets for vertical and horizontal layout. PWW assumes that the base survey work for this project would be the same for either PWW or the City. The estimated time to design the required project would be about 8 hours per sheet for the design engineer and 8 hours per sheet for the CAD technician. The cover sheet and standard details would take about 12 hours to complete by the CAD technician with about 4 hours of involvement from the engineer. Development of the specifications would take the engineer about 16 hours. The cost of preparing the plans and specs would be covered by contractor payments. The engineer would have about 20 hours in contract administration based on one prebid meeting, the issuance of one addenda, the receipt and processing of bids, the issuance of the notice of award and notice to proceed, and the processing of three payment requisitions. A total of about 35 days would be expected on site, resulting in about 280 hours of inspection time on this project. Lastly, as-builts would be expected to take about 32 hours of a CAD tech's time to complete. A spread sheet detailing this time based on Pennichuck and City rates (Rates for engineering for the City are based on the Veolia/Beck contracts with Nashua) is attached. The Veolia cost is 71 percent higher.

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e) The design and permitting of a new community water system outside of Nashua would be paid for entirely by the Developer and would be the same for Pennichuck or the City of Nashua. The difference in cost between this project with Pennichuck versus the City would be in the cost of engineering involved in reviewing the submitted design plans and inspecting the construction in the field. Review time of the plans would be expected to be about 4 to 8 hours and inspection in the field would probably involve about 40 hours of inspector time and an additional 12 hours of start up time by an engineer and about 4 hours of a CAD technicians time to set up electronic drawings provided by developer and create stored as-builts. A spread sheet detailing this time based on Pennichuck and City rates (Rates for engineering for the City are based on the Veolia/Beck contracts with Nashua) is attached. The Veolia cost is 64 percent higher.

16" Water Main Break - 12 Hour Repair
18-Mar-06

Description	Quantity	Number of units (Hours)	PWW Hourly Rate*	Veolia Hourly Rate***	PWW Extension	Veolia Extension
Foreman -	1	12	\$ 35.25	\$ 45.96	\$ 493.50	\$ 643.44
Service Truck -	1	12	\$ 6.00	\$ 17.00	\$ 72.00	\$ 204.00
Dump Truck-	2	12	\$ 23.00	\$ 27.00	\$ 552.00	\$ 648.00
Laborer -	3	12	\$ 32.48	\$ 38.95	\$ 1,363.95	\$ 1,635.90
Backhoe Operator -	1	12	\$ 33.32	\$ 43.33	\$ 466.41	\$ 606.62
Backhoe -	2	12	\$ 18.00	\$ 27.00	\$ 432.00	\$ 648.00
Engineer -	1	4 In Company OH		\$ 90.00	\$ -	\$ 360.00
Supervisor -	1	6 In Company OH		In Base Fee	\$ -	\$ -
Total repair costs** -					\$ 3,379.86	\$ 4,745.96

*PWW labor rates are benefitted @ 50%, rates are based on 2006 labor and equipment rates.

**Does not include pavement repair, material used (pipe, gravel, fittings etc) or traffic control as these are assumed to be the same for both parties.

***Veolia Rates are from proposed Nashua Contract

All hours over 8 are at a premium rate

PW 020557

**16" Water Main Break - 16 hour repair
18-Mar-06**

Description	Quantity	Number of Units (Hours)	PWW Hourly Rate*	Veolia Hourly Rate***	PWW Extension	Veolia Extension
Foreman -	1	16	\$ 35.25	\$ 45.96	\$ 705.00	\$ 919.20
Service Truck -	1	16	\$ 6.00	\$ 17.00	\$ 96.00	\$ 272.00
Dump Truck-	2	16	\$ 23.00	\$ 27.00	\$ 736.00	\$ 864.00
Laborer -	3	16	\$ 32.48	\$ 38.95	\$ 1,948.50	\$ 2,337.00
Backhoe Operator -	1	16	\$ 33.32	\$ 43.33	\$ 666.30	\$ 866.60
Backhoe -	2	16	\$ 18.00	\$ 27.00	\$ 576.00	\$ 864.00
Engineer -	1	4	In Company OH	\$ 90.00	\$ -	\$ 360.00
Supervisor -	1	6	In Company OH	In Base Fee	\$ -	\$ -
Total repair costs** -					\$ 4,727.80	\$ 6,482.80

*PWW labor rates are benefitted @ 50%, rates are based on 2006 labor and equipment rates.

**Does not include pavement repair, material used (pipe, gravel, fittings etc) or traffic control as these are assumed to be the same for both parties.

***Veolia Rates are from proposed Nashua Contract

All hours over 8 are at a premium rate

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**1500 LF 8" Water Main Replacement
18-Mar-06**

Description	Quantity	Number of units (Hours)	PWW Hourly Rate*	Veolia Hourly Rate**	PWW Extension	Veolia Extension
Design Engineer -	1	72	\$ 68.51	\$ 90.00	\$ 4,932.72	\$ 6,480.00
CAD Technician	1	76	\$ 36.00	\$ 62.00	\$ 2,736.00	\$ 4,712.00
Field Inspector -	1	280	\$ 39.66	\$ 75.00	\$ 11,104.80	\$ 21,000.00
Total repair costs** -					\$ 18,773.52	\$ 32,192.00

*PWW labor rates are benefitted @ 50%, rates are based on 2006 labor and equipment rates.

**Veolia Rates are from proposed Nashua Contract

PW 020559

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CWS Developer Built System
18-Mar-06

Description	Quantity	Number of units (Hours)	PWW Hourly Rate*	Veolia Hourly Rate**	PWW Extension	Veolia Extension
Design Engineer -	1	18	\$ 68.51	\$ 90.00	\$ 1,233.18	\$ 1,620.00
CAD Technician	1	4	\$ 36.00	\$ 62.00	\$ 144.00	\$ 248.00
Field Inspector -	1	40	\$ 39.66	\$ 75.00	\$ 1,586.40	\$ 3,000.00
Total repair costs** -					\$ 2,963.58	\$ 4,868.00

*PWW labor rates are benefitted @ 50%, rates are based on 2006 labor and equipment rates.

**Veolia Rates are from proposed Nashua Contract

PW 020560