

Kentucky-American Water Company

Revised 2001 IP 01-02

Clays Mill 3 MG Ground Storage Tank

Project No. 11106

September 21, 2001

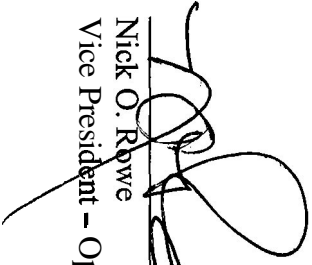
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Design is scheduled for completion in 2001, with minor construction activities to begin in 2002 and completion in 2003. The cost estimate was based on the design engineer's estimate and will vary based upon contractor installation prices. This estimate is projected to be accurate within plus ten to minus twenty-five percent.

  
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Richard C. Swindland, P.E.

Senior Operations Engineer

  
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Nick O. Rowe

Vice President – Operations

NOR/rcs

**KENTUCKY-AMERICAN WATER COMPANY**

**REVISED CAPITAL INVESTMENT PLAN PROJECT 01-02**

**CLAYS MILL 3 MG GROUND STORAGE TANK**

ITEM	RESPONSIBLE ENTITY	TOTAL ESTIMATED COST
Preliminary Design	KAWC / Consultant	\$ 15,000
Final Design	Consultant	\$ 75,000
Construction Admin. / Inspection	KAWC / Consultant	\$ 50,000
Materials	KAWC	\$ 150,000
Construction	Contractor	\$ 1,030,480
Misc. Company Labor	KAWC	\$ 4,520
	Sub-Total	\$ 1,325,000
O&C (+/- 5%)		\$ 64,380
Engineering Overhead (+/- 2%)		\$ 26,540
	Sub-Total	\$ 1,415,920
AFUDC		\$ 79,180
	Total	\$ 1,495,100
	Estimate	\$ 1,500,000

## CLAYS MILL 3 MG GROUND STORAGE TANK

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**KENTUCKY-AMERICAN WATER COMPANY**  
**REVISED CAPITAL INVESTMENT PLAN PROJECT 01-02**  
**CLAYS MILL 3 MG GROUND STORAGE TANK**

DESCRIPTION OF ACTIVITY	ENTITY RESPONSIBLE	2001 & 02 Canyover	2003												TOTAL 2003
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Preliminary Design	KAWC / Consultant	\$ 15,000													\$ -
Final Design	Consultant	\$ 75,000													\$ -
Const. Admin. / Inspection	KAWC / Consultant	\$ 5,000													\$ 45,000
Materials	KAWC	\$ 40,000													\$ 110,000
Construction	Contractor	\$ 37,000													\$ 993,480
Misc. Company Labor	KAWC	\$ 4,520													\$ -
SUB-TOTAL		\$ 176,520	\$ 156,540	\$ 126,540	\$ 86,540	\$ 86,540	\$ 86,540	\$ 86,540	\$ 86,540	\$ 86,540	\$ 86,540	\$ 86,540	\$ 86,540	\$ 86,540	\$ 1,148,480
O&C (+/- 5%)		\$ 6,920	\$ 7,830	\$ 6,330	\$ 4,330	\$ 4,330	\$ 4,330	\$ 4,330	\$ 4,330	\$ 4,330	\$ 4,330	\$ 4,330	\$ 4,330	\$ 4,330	\$ 57,460
Overhead (+/- 2%)		\$ 3,580	\$ 3,130	\$ 2,530	\$ 1,730	\$ 1,730	\$ 1,730	\$ 1,730	\$ 1,730	\$ 1,730	\$ 1,730	\$ 1,730	\$ 1,730	\$ 1,730	\$ 22,960
AFUDC		\$ 12,160	2,570	3,270	3,680	4,220	4,770	5,310	5,850	6,390	6,930	7,470	8,010	8,550	\$ 67,020
CASH FORECAST		\$ 199,180	\$ 170,070	\$ 138,670	\$ 96,280	\$ 96,820	\$ 97,370	\$ 97,910	\$ 98,450	\$ 98,990	\$ 99,530	\$ 100,070	\$ 100,610	\$ 101,150	\$ 1,295,920

**KENTUCKY-AMERICAN WATER COMPANY  
ECONOMIC ANALYSIS OF THE IMPACT OF CAPITAL  
SPENDING PROPOSAL  
CLAYS MILL 3 MG GROUND STORAGE TANK**

<u>Determination of Revenue Requirement</u>		
Authorized Rate of Return on Common Equity		11.00%
Federal Income Tax Rate		35.00%
Return on Common Equity before FIT		16.92%
State Income Tax Rate		8.25%
Required Rate of Return on CE for Project		18.44%
Common Equity Ratio for Project		40.00%
Weighted Cost of Common Equity before Tax		7.38%
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Long Term Debt Ratio for Project		60.00%
Estimated Cost Rate for New Debt		8.00%
Weighted Cost of Debt		4.80%
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Total Pre-Tax Cost of Capital		12.18%
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Total Estimated Cost of Project		\$ 1,500,000
Investment by Others		0
Net Investment Financed by Company		<u>\$ 1,500,000</u>
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New Common Equity	\$ 600,000	
New Long Term Debt	900,000	
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<u>Total Revenue Requirement</u>		
Required Pre-Tax Operating Income		\$ 182,700
Depreciation Rate	1.180%	12.18%
Property Tax Rate	0.7037%	1.18%
Change in Operation & Maint. Expense	0	0.70%
Revenue from New Customers	0	0.00%
Total Net Revenue Requirement		0
Revenue Tax Rate	0.14537%	0.00%
Total Revenue Requirement		\$ 210,956
		14.06%
		307
		0.02%
		<u>\$ 211,263</u>
		14.08%
		<hr/>
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Latest 12 Months Revenue - 06/30/2001		\$ 40,071,359
Required Price Increase		<u>0.53%</u>
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# American Water Works & Service Company, Inc.

Approved at Board of  
Directors' Meeting  
December 11, 2001

1025 Laurel Oak Road • P.O. Box 1770 • Voorhees, New Jersey 08043 • (856) 346-8201 • Fax (856) 346-8360

October 1, 2001  
File No. 380-8362

## KENTUCKY-AMERICAN WATER COMPANY REVISED INVESTMENT PROJECT 01-03 DISTRIBUTED CONTROL SYSTEM IMPROVEMENTS

**Reference:** Investment Project Memorandum dated September 13, 2000; 2000 and 2001 Strategic Business Plans.

Previous Estimated Cost	\$94,000
Budget 2001 Expenditures	94,000
Revised Estimated Cost	\$650,000
Revised 2001 Expenditure	94,000
Proposed 2002 Expenditure	100,000
Proposed 2003 Expenditure	456,000

An upward revision of the investment project budget is recommended to allocate funding for design/build system integration. The approved budget is only for the preliminary design and bidding phase, which is complete. The requested funding reflects actual bid pricing from system integrators.



INVESTMENT PROJECT REVIEW	
DEPARTMENT	BY DATE
ENGINEERING	 11-20-01
WATER QUALITY	
INFO. SYSTEMS	
OTHERS	
RECOMMENDED FOR APPROVAL:	
12-06-01	
PRESIDENT	

Kentucky-American Water Company  
Revised IP 01-03  
Distributed Control System Improvements  
October 1, 2001

The proposed expenditures are to complete an upgrade of the existing distributed control system (DCS) at Kentucky-American Water Company. This system currently monitors and controls the Kentucky River Station and Richmond Road Station treatment plants, as well as the remote distribution storage tanks and booster stations. The existing system was installed in the mid-1980s and has been expanded several times. Much of the hardware and software is obsolete and no longer supported by the manufacturers. Additionally, the system has grown to a point that cannot be reliably supported by the existing hardware and software resulting in down time and loss of data.

The proposed improvements consist of minor hardware upgrades to the RTUs and data concentrators, replacement of the workstation hardware, installation of all new software, and improvements to the control logic, alarming strategies, and reporting capabilities. The upgraded system will include expanded remote access capabilities, which will improve response time to alarm events and allow for efficient and secure supervisory access to the system. The proposed improvements will be adequate to handle current needs as well as future expansion without concern for compromising the reliability and integrity of the system.

The total project cost estimate is accurate to within -20 to +0 percent given the fact that it reflects actual pricing from system integrators based on the detailed preliminary design.

  
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David M. Reeves, P.E.  
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Richard E. Nibel, P.E.  
Director - Design

**KENTUCKY-AMERICAN WATER COMPANY  
REVISED INVESTMENT PROJECT 01-03  
DISTRIBUTED CONTROL SYSTEM IMPROVEMENTS**

**Detailed Cost Estimate**

	September 2000	October 2001
Preliminary Engineering	\$80,000	\$65,000
Bidding	10,000	5,000
Construction Engineering & Management		45,000
<b>Utility Plant Construction</b>		
Acct # 346 – Communication Equipment		<u>460,000</u>
Electrical & Controls		\$575,000
Omissions & Contingencies		<u>50,000</u>
AFUDC	<u>\$90,000</u>	\$625,000
	4,000	<u>25,000</u>
TOTAL	\$94,000	\$650,000



**KENTUCKY-AMERICAN WATER COMPANY**

## DISTRIBUTED CONTROL SYSTEM IMPROVEMENTS

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**KENTUCKY-AMERICAN WATER COMPANY**

## DISTRIBUTED CONTROL SYSTEM IMPROVEMENTS

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## DISTRIBUTED CONTROL SYSTEM IMPROVEMENTS

## CASH FORECAST



# American Water Works Service Company, Inc.

1025 Laurel Oak Road • P.O. Box 1770 • Voorhees, New Jersey 08043 • (856) 346-8201 • Fax (856) 346-8360

October 2, 2001  
File No. 380-8362

## KENTUCKY-AMERICAN WATER COMPANY REVISED INVESTMENT PROJECT 01-10 RICHMOND ROAD STATION HYDRAULIC AND CHEMICAL FEED IMPROVEMENTS

**Reference:** Investment Project Memorandum dated March 2, 2001; 2001 Strategic Business Plans.

Previous Estimated Cost	\$140,000
Budget 2001 Expenditures	\$140,000
Revised Estimated Cost	\$1,600,000
Revised 2001 Expenditure	\$125,000
Proposed 2002 Expenditure	\$1,475,000

An upward revision of the investment project budget is recommended to allocate funding for construction. The approved budget is for design and bidding only. The requested funding will allow the Richmond Road Station to operate at higher production rates which will be necessary to meet projected maximum day demands.

INVESTMENT PROJECT REVIEW		
DEPARTMENT	BY	DATE
ENGINEERING		01
WATER QUALITY		10/9/01
INFO. SYSTEMS		
OTHERS		
RECOMMENDED FOR APPROVAL:		
		10.10.01
PRESIDENT		

Kentucky-American Water Company  
Revised IP 01-10  
Richmond Road Station Hydraulic and Chemical Feed Improvements  
October 2, 2001

The proposed expenditures are to implement hydraulic and flow metering improvements, modifications to the caustic soda, powdered activated carbon, and chlorine feed systems, and new filter to waste capabilities. These proposed improvements will ensure that the plant can operate adequately and efficiently at a 30 MGD production rate. The current rated capacity of the Richmond Road Station is only 25 MGD. Combined with a production capacity of 50 MGD at the Kentucky River Station, which has previously been approved by the Kentucky Division of Water, the total production capacity for the Kentucky-American system will be 80 MGD. This capacity will be adequate to meet short term (5-year) production needs based on current demand projections. A long term solution to the production deficit will be determined after solidifying a source of supply solution which continues to be pursued.

The total project cost estimate is considered accurate to within -10% to +15% given the need to solicit construction bids. The current estimate reflects the engineer's construction cost estimate which is based on a 70% completed design.



David M. Reyes, P.E.



Richard E. Hubel, P.E.

Director - Design