

Exhibit No.:
Issue: Depreciation
Witness: Guy C. Gilbert
Type of Exhibit: Direct Testimony
Sponsoring Party: MO PSC Staff
Case No.: WR-95-145

MISSOURI PUBLIC SERVICE COMMISSION
UTILITY OPERATIONS DIVISION

COPY

ST. LOUIS COUNTY WATER COMPANY

CASE NO. WR-95-145

FILED

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DIRECT TESTIMONY

OF

Missouri Public
Service Commission

GUY C. GILBERT

JEFFERSON CITY, MISSOURI

APRIL 1995

Exhibit No. 136
Case No(s) EL-2004-0570
Date 12-16-04 Rptr KF

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1 DIRECT TESTIMONY

2 OF

3 GUY C. GILBERT

4 ST. LOUIS COUNTY WATER COMPANY

5 CASE NO. WR-95-145

6 Q. Please state your name and business address.

7 A. Guy C. Gilbert, P.O. Box 360, Jefferson City,
8 Missouri 65102.

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

11 A. I am employed by the Missouri Public Service
12 Commission (Commission) as an Engineer IV in the
13 Depreciation Department.

14 Q. What is the purpose of your testimony in this
15 docket?

16 A. To present the Commission Staff's (Staff's)
17 position and methods supporting the depreciation rate
18 schedule for St. Louis County Water Company (SLCWC or
19 Company) in this docket attached as Schedule 1 to this
20 testimony. In addition, I will address the amortization
21 issue involving the theoretical reserve difference currently
22 affecting the accumulated reserve balances of SLCWC.

23 WITNESS INTRODUCTION

24 Q. Would you please state briefly your
25 qualifications, educational background and experience.

26 A. I received a Bachelor of Science degree in
27 Mining Engineering and a Bachelor of Science degree in

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1 Economics, both from the University of Missouri - Rolla.

2 Since my graduation I have held numerous titles in private
3 industry and government as Mining Engineer, Assistant
4 Superintendent, Economic Analyst, Management Analyst,
5 Mechanical Engineer, Project Engineer and Environmental
6 Consultant. In addition I hold and have held federal and
7 state certifications: in wastewater treatment, both public
8 and industrial; refuse impoundments; high, medium and low
9 voltage electrical cards, both, surface and underground;
10 noise, dust, hoisting engineer; mine manager; mine examiner;
11 mine rescue and emergency medical technician.

12 I have been employed as a Depreciation Department
13 engineer since joining the Staff in 1994. My
14 responsibilities in this position cover all assigned
15 depreciation related matters which the Staff must address,
16 including: submission of evidence as an expert witness; the
17 preparation of depreciation, life and salvage studies;
18 examination of plant property records; and review of
19 property sales.

20 DEPRECIATION SCHEDULE SUPPORT .

21 Q. What process was employed to calculate
22 depreciation rates for SLCWC?

23 A. The depreciation rates I am recommending were
24 formulated on the basis of traditional depreciation methods.

25 Q. Are you recommending that the Commission
26 approve the depreciation rates reflected in your attached

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1 Schedule 1?

2 A. Yes.

3 Q. Why are you recommending that the Commission
4 approve these depreciation rates?

5 A. I believe that certain useful life and
6 salvage factors are in need of updating. The new factors
7 are reasonable in light of construction experience unique to
8 the Company's service area. This recent history has proven
9 a need for revised depreciation factors and rates.

10 Q. Mr. Gilbert, in your opinion, what is the
11 purpose of depreciation?

12 A. To recover the original cost of fixed capital
13 assets, less net salvage, from the consumers over the useful
14 life of the property.

15 Q. How is the annual accrual for depreciation
16 calculated?

17 A. The original cost of the Company's assets are
18 maintained in plant accounts according to the Uniform System
19 of Accounts for Class A Water Utilities as defined by the
20 National Association of Regulatory Utility Commissioners.
21 Depreciation rates are approved by the Commission for each
22 plant account. The rates, when applied to the average plant
23 balance for each account in a period, result in depreciation
24 expense for the period. The sum of this expense for a year
25 is the annual accrual for depreciation.

26 Q. Mr. Gilbert, on what basis were the

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1 depreciation rates shown on Schedule 1 determined?

2 A. The straight line broad group whole life
3 procedure was employed, which is also the basis of the
4 currently approved rates. Under this method, the
5 depreciation rate for each account is calculated by
6 subtracting the average net salvage percent from one (1.0)
7 and dividing the result by the calculated average service
8 life.

9 **SCHEDULE 1 EXPLANATION**

10 Q. Please discuss the account items displayed in
11 bold type on Schedule 1.

12 A. The plant accounts in bold type are those
13 with depreciation rates revised from those currently
14 approved. Non-bolded accounts have no recommended changes
15 from the existing rates.

16 **NET SALVAGE DISCUSSION**

17 Q. In general, how is the net salvage determined
18 for each plant account?

19 A. Net salvage simply means the salvage value of
20 the retired property after deducting the cost of retiring
21 and removing it from service. It is also expressed as the
22 gross salvage less cost of removal.

23 Net salvage may be positive, such as in the case
24 of vehicles, for example. Companies such as SLCWC
25 reasonably expect to be able to sell nearly all of its
26 vehicle fleet for some dollar amount with little to no cost

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1 of removing them from service.

2 Net salvage can also be negative, as in the case
3 of water mains. Mains are usually abandoned in place, yet
4 the Company experiences costs to disconnect the sections
5 from service.

6 Q. How is the net salvage percent, discussed in
7 the aforementioned depreciation rate formula, derived?

8 A. The net salvage dollars realized due to
9 retirements of plant items, positive or negative, are
10 divided by the original plant cost of those same items.

11 Q. On what information did you base your net
12 salvage percent calculations?

13 A. For each plant account, SLCWC furnished
14 approximately 30 years of historical data through year end
15 1993. The data enumerates plant retirements, gross salvage
16 and cost of removal for each retirement year. Five, seven,
17 ten and twenty year band analyses were conducted to identify
18 trends and exclude anomalies in percent salvage over time.
19 Details of these analyses by account are discussed later in
20 my testimony.

21 AVERAGE SERVICE LIFE DISCUSSION

22 Q. How are the average service lives determined
23 that you use in your depreciation rate calculations?

24 A. The survivor curve method.

25 Q. To which accounts is this method applicable?

26 A. This method is applicable to most of the

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1 plant consisting of many relatively small but easily
2 identifiable items. While these "mass" property units are
3 similar to one another, the life of each item is not
4 dependent upon the lives of the others.

5 Any "mass" property accounts for which sufficient
6 vintage accounting records are available may be studied
7 using the survivor curve method. The data available must
8 include the original cost of plant additions by vintage;
9 and, either all subsequent retirement amounts for every
10 vintage by year, or surviving dollar amounts for every
11 vintage by year to the current time.

12 The survivor curve method is typically applied to
13 all general plant accounts.

14 Q. Please discuss the application of the
15 survivor curve method.

16 A. The survivor curve method is a study of
17 mortality data by using actuarial methods. It is a
18 statistical method in which the underlying assumption is
19 that if history does tend to repeat itself, the service life
20 of the new unit will be reflected in the history of the
21 retired units.

22 Historical mortality data for an account is
23 plotted and the resultant curve representing dollars
24 surviving is compared to the known shape of a set of Iowa
25 curves. Survivor curve models, such as the Iowa curves, are
26 widely used to simplify life analysis and forecasting. The

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1 purpose of this study is to generalize the attrition of
2 units of physical property into curves representing expected
3 trends by the Iowa curves.

4 The area calculated under the chosen Iowa curve is
5 the average service life.

6 Q. For those accounts for which you employed the
7 survivor curve method, on what information did you base your
8 average service life calculations?

9 A. SLCWC furnished historical data through year
10 end 1993 which enumerates plant additions, retirements and
11 adjustments for each vintage by plant account.

12 ACCOUNT 311

13 Q. Please describe what may be found in Account
14 311.

15 A. Plant contained in Account 311, Source of
16 Supply, Structures and Improvements is that plant which is
17 used to intake water to the mains which supply the water
18 treatment facilities.

19 Q. Mr. Gilbert, please explain your approach to
20 the determination of depreciation and salvage rates for
21 Account 311.

22 A. The survivor curve method was used against
23 the available data to choose an appropriate Iowa curve and
24 I have adopted the most recent five year band analysis for
25 determination of the salvage rate.
26

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ACCOUNTS 321.1, 321.2 & 341

Q. Please describe and explain what is in accounts 321.1, 321.2 and 341.

A. Account 321.1, Pumping Plant, Structures and Improvements-Plants, Account 321.2 Pumping Plant, Structures and Improvements-Boosters and Account 341, Transmission and Distribution Structures and Improvements, are all quite similar in that they are accounts that contain the buildings and improvements that are used to house pumps and equipment associated with dispersion of water throughout the SLCWC water system.

Q. Please describe your review of these accounts.

A. In these three accounts, the survivor curve method was used against the available data to choose an appropriate Iowa curve.

Q. How did you determine the net salvage percent for these accounts?

A. The most recent 30 years of retirements, gross salvage and cost of removal were studied for each account in moving band analyses. These bands group the salvage experience into a significant number of years for study. By studying the moving bands, trends in salvage are identified.

I have adopted the most recent five year band analysis for determination of the salvage rate.

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ACCOUNTS 342.11 & 342.12

Q. Please describe and explain what is in accounts 342.11 and 342.12.

A. Account 342.11, Distribution Reservoirs and Standpipes-ground level and Account 342.12, Distribution Reservoirs and Standpipes-elevated are both quite similar. Both accounts contain the distribution reservoirs that are used to maintain supply to meet peak system demand throughout the SLCWC water system.

Q. Please describe your review of these accounts.

A. In these two accounts, the survivor curve method was used against the available data to choose an appropriate Iowa curve.

Q. How did you determine the net salvage percent for these accounts?

A. The most recent 30 years of retirements, gross salvage and cost of removal were studied for each account in moving band analyses.

These bands group the salvage experience into a significant number of years for study. By studying moving bands, trends in salvage are identified.

GENERAL PLANT ACCOUNTS 390 THROUGH 398, EXCEPT 396

Q. How did you calculate the recommended depreciation rates for accounts 390 through 398, except Account 396?

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1 A. In all but one instance the Iowa curve
2 representing the average service life which best fits the
3 historical data and net salvage from a band analysis were
4 used. The one exception is the net salvage determination
5 for Account 394.1, Shop Equipment. In this instance there
6 had been some recent environmental remediation expense. It
7 is expected that this account will not experience such a
8 large cost of removal for the foreseeable future. I have
9 removed this one time event from consideration and have made
10 my recommendation accordingly.

11 DEPRECIATION RESERVE

12 Q. What is the purpose of the depreciation
13 reserve and its objectives?

14 A. The depreciation reserve is a requirement of
15 the Uniform System of Accounts adopted by rulemaking by the
16 Commission and is opposite to the plant accounts. Simply
17 stated, additions to the depreciation reserve are deductions
18 from rate base. The objective of the depreciation reserve
19 is to provide to the company a measure of investment
20 recovered through cost of service and provides a measure of
21 consumed usefulness. Lastly, observation of the
22 depreciation reserve provides a system of checks and
23 balances regarding under or over accrual of the depreciation
24 expense.

25 In whole life studies, significant deficiencies in
26 the reserve accrual may be recovered through an amortization

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1 over some period where recovery is deemed appropriate.
2 These deficiencies are caused by incorrect life estimation
3 or misjudged salvage rates in the past.

4 Q. What is the theoretical reserve for
5 depreciation?

6 A. The theoretical reserve for depreciation is
7 the result of a test to determine the historical adequacy of
8 the reserve for depreciation, part of the checks and
9 balances as mentioned in response to the previous question.

10 Q. How was the theoretical reserve deficiency
11 calculated?

12 A. The prospective method for determining the
13 reserve requirement was used. In this method the reserve
14 requirement as of the date of study is equal to the net
15 plant balance minus the future accruals (at current or
16 projected depreciation rates) minus the future net salvage.
17 This method involved the tabulation of investment balances
18 by plant account. The average life, remaining life
19 expectancy, retirement dispersion and net salvage values by
20 plant account were used to determine the theoretical
21 reserve. Finally, the book depreciation by plant account at
22 the date of study was compared to the computed theoretical
23 reserve. The resultant summation of the differences between
24 the book amount of depreciation and the computed theoretical
25 reserve for depreciation yields a \$36.3 million existing
26 reserve difference. The attached Schedule 2 details a

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breakdown by account of the theoretical reserve differences.

Q. How do you recommend that this deficiency in the theoretical reserve be recovered?

A. I recognize the Company's desire to avoid rate shock by implementation of a phased amortization. The Company and I agree that the identified reserve deficiency should be recovered over a ten year period, and that the amount should be phased in.

Q. How do you recommend the annual amortization amounts be calculated?

A. A straight line ten year amortization would be \$3.63 million annually. Instead, the Company and I agree that the first year amount should be phased in at 50 percent and the second year amount at 75 percent of the straight line level. The amount remaining to recover would then be collected evenly over the remaining eight years.

The following table provides the amortization amount by year:

<u>Year</u>	<u>Amortization</u>
1	\$1.815 million
2	\$2.723 million
3-10	\$3.970 million

These amounts would be applied to each account identified on Schedule 2 according to the percent deficiency of each account to the total deficiency.

Q. Why was a reserve deficiency of this magnitude not addressed earlier?

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1 A. It has only recently come to Staff's and
2 SLCWC's attention the impact of environmental and other
3 regulatory mandates associated with proper disposal of
4 various types of water plant. In some instances retired
5 plant will have asbestos, lead or petrochemical remediation
6 costs associated with the retirement. In other instances,
7 such as very large mains now running under Interstate
8 highways, filling the abandoned pipe is required. As these
9 costs have become known and escalated recently the Company
10 has focused more closely on estimating costs of removal.

11 Q. Do you have a recommendation regarding how
12 the Company may better prepare for currently unforeseen
13 retirement costs?

14 A. Yes, I recommend that SLCWC garner the
15 expertise to facilitate determination of environmental and
16 other regulatory remediation requirements that are likely to
17 affect SLCWC salvage costs in the future. In addition this
18 facilitator should also possess the ability to determine
19 future disposal of assets that may prove beneficial to both
20 ratepayers and equity holders of SLCWC. An example of this
21 may be to use retired transmission and distribution pipe as
22 conduits for fiber optic cable. The objective of this
23 recommendation is for SLCWC to properly consider all
24 identifiable costs of removal and potential remediation
25 costs as practicable so such costs can be borne by the
26 appropriate customer group receiving service and benefit

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1 from those plant items.

2 SUMMARY

3 Q. Would you please summarize your testimony?

4 A. I recommend the depreciation rates on my
5 Schedule 1 be approved by the Commission. My testimony
6 describes the methods used to arrive at the depreciation
7 rates and underlying life and salvage parameters.

8 I also recommend that the Commission approve a 10
9 year phased amortization for recovery of the \$36.3 million
10 theoretical reserve difference to become effective as of the
11 effective date of the Commission's Report and Order in this
12 docket.

13 Q. Does this conclude your testimony?

14 A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of the application of)
St. Louis County Water Company's)
tariff revisions designed to)
increase rates for water service) CASE NO. WR-95-145
provided to customers in the)
Missouri service area of the)
company.)

AFFIDAVIT OF GUY C. GILBERT

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Guy C. Gilbert, of lawful age, on his oath states: that he has participated in the preparation of the foregoing written testimony in question and answer form; consisting of 14 pages and two schedules to be presented in this case; that the answers in the foregoing testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

Guy C. Gilbert
Guy C. Gilbert

Subscribed and sworn to before me this 11th day of
April, 1995.

ROSEMARIE REED Rosemarie Reed
NOTARY PUBLIC STATE OF MISSOURI Notary Public
COLE COUNTY
MY COMMISSION EXPIRES JUNE 1, 1997

My commission expires _____

ST. LOUIS COUNTY WATER COMPANY
SUMMARY OF ANNUAL AVERAGE LIFE DEPRECIATION RATES
CASE NO. WR-95-145

Account Number	DESCRIPTION	Curve Type	% Net Salvage	Average Life	Average Life Rate
<u>Intangible Plant</u>					
301	Organization				
302	Franchises & Consents				
<u>Source of Supply Plant</u>					
310	Land & Rights				
311	Structures & Improvements	R3-45	-35	45.0	3.00%
316.1	Supply Mains - North Plant	SQ-100	-25	T/D	3.00%
316.2	Supply Mains - Central Plant	L4-45	-25	T/D	3.14%
316.3	Supply Mains - South Plant	L 2-150	-25	T/D	2.23%
316.4	Supply Mains - Meramec Plant	L 2-150	-25	T/D	2.31%
<u>Pumping Plant</u>					
320	Land & Land Rights				0.00%
321.1	Structures & Improvements-Plant	R3-75	-46	75.0	1.95%
321.2	Structures & Improvements-Boosters	R2-75	-36	75.0	1.81%
325.1	Electric Pumping Equipment-Prior 1-1-46	Fully Depreciated			
325.2	Electric Pumping Equipment-Post 1-1-46	R1.5-40	-12	40.0	2.80%
325.3	Electric Pumping Equipment-Boosters	L 1-24	-4	24.0	4.33%
326.1	Diesel Pumping (Stratmann & Lackland)	Fully Depreciated			
326.2	Diesel Pumping (Central Plant)	SQ-100	0	28.6	3.50%
<u>Water Treatment</u>					
330	Land & Land Rights				
331.1	Structures & Improvements - North Plant	L 2-150	-45	T/D	2.66%
331.2	Structures & Improvements - Central 1 & 2	R 3-70	-45	T/D	4.64%
331.3	Structures & Improvements - Central 3	L 3-100	-45	T/D	3.06%
331.4	Structures & Improvements - South Plant	L 2-150	-45	T/D	3.42%
331.5	Structures & Improvements - Meramec Plant	L 2-150	-45	T/D	2.74%
332.1	Water Treatment Equipment - North Plant	R 2-50	-22	T/D	3.34%
332.2	Water Treatment Equipment - Central 1&2	R 0.5-65	-22	T/D	3.50%
332.3	Water Treatment Equipment - Central 3	R 2-40	-22	T/D	3.47%
332.4	Water Treatment Equipment - South Plant	R 2-50	-22	T/D	3.43%
332.5	Water Treatment Equipment - Meramec Plant	R 3-40	-22	T/D	3.09%

T/D - Termination date established for this group of plant in service

SCHEDULE 1-1

ST. LOUIS COUNTY WATER COMPANY
SUMMARY OF ANNUAL AVERAGE LIFE DEPRECIATION RATES
CASE NO. WR-95-145

Account Number	DESCRIPTION	Curve Type	% Net Salvage	Average Life	Average Life Rate
<u>Transmission & Distribution</u>					
340	Land & Land Rights				
341	Structures & Improvements	R4-30	-18	30.0	3.93%
342.11	Dist. Reservoirs & Standpipes (ground)	S1.5-45	-24	45.0	2.76%
342.12	Dist. Reservoirs & Standpipes (elevated)	S0.5-55	-24	55.0	2.25%
343.11	Transmission Mains - Ductile (Wrap & Unwrap)	L0.5-80	-2	80.0	1.28%
→ 343.12	Transmission Mains - Lock Joint	R1-125	-410	125.0	4.08%
343.13	Transmission Mains - Cast Iron	L1.5-95	-13	95.0	1.19%
→ 343.21	Distr. Mains - Cast Iron <=10" (1900-1928)	L 2 -155	-314	155.0	2.67%
→ 343.22	Distr. Mians - Cast Iron <=10" (1929-1956)	R 3-80	-154	80.0	3.18%
343.23	Distr. Mains - Cast Iron <=10" (1957-1993)	R 3-85	-70	85.0	2.00%
→ 343.24	Distr. Mains - Asbestos Cement	R 2-90	-185	90.0	3.17%
343.25	Distr. Mains - Duct/Pltc (Wrap & Unwrap) <=10"	L 2-45	-21	45.0	2.69%
343.26	Distr. Mains - 12" Ductile Iron (Wrap & Unwrap)	L 0.5-50	-9	50.0	2.18%
343.27	Distr. Mains 12" Cast Iron	R1.5-105	-21	105.0	1.15%
343.03	Distr. Mains-Galv	L1-43	-15	44.1	2.61%
345	Services	R3-55	-15	55.5	2.07%
346.1	Meters	S4-50	22	50.0	1.56%
346.2	Meters-ARB Equipment	SQ-20	0	20.0	5.00%
347.1	Meter Installation	S4-50	0	50.0	2.00%
347.2	Meter Installations-ARB Equipment	SQ-20	0	20.0	5.00%
348	Fire Hydrants	R2-60	-52	60.0	2.53%
<u>General Plant</u>					
390	Structures & Improvements	S2-50	0	50.0	2.00%
391.11	Office Furniture	SC-45	3	45.0	2.16%
391.12	Office Equipment	L1-17	1	17.0	5.86%
392.01	Transportation Equipment-Autos	R4-3.5	37	3.5	17.98%
392.02	Transportation Equipment-Trucks	L1.5-7	17	7.0	11.86%
393	Stores Equipment	L1-33	0	33.0	3.03%
394.1	Shop Equipment	L0-25	- 54	25.0	6.16%
394.2	Tools	L0.5-14	4	14.0	6.86%
395.1	Laboratory Furniture	R5-39	0	39.0	2.56%
395.2	Laboratory Equipment	L0.5-19	-1	19.0	5.32%
396	Power Operated Equipment				***
397	Communication Equipment	L2-16	-2	16.0	6.38%
398	Miscellaneous Equipment	L1-30	0	30.0	3.33%
399	Other Tangible Property				4.75%

*** - To be determined annually based on equipment hours of use.

SCHEDULE 1-2

ST. LOUIS COUNTY WATER COMPANY
SUMMARY OF RESERVE BALANCES BY ACTIVE ACCOUNT
CASE NO. WR-95-145

Account Number	Description	Plant Balance	Actual	Theoretical Reserve	Reserve Difference (d=b-c)	Difference as
			Balance			% of Actual
			a			b
<u>Source of Supply Plant</u>						
311	Structures & Improvements	4,598,706	486,070	919,895	(433,825)	89.25%
316.1	Supply Mains - North Plant	247,379	34,417	68,794	(34,377)	99.88%
316.2	Supply Mains - Central Plant	3,865,232	396,655	794,918	(398,263)	100.41%
316.3	Supply Mains - South Plant	354,511	138,068	276,969	(138,901)	100.60%
316.4	Supply Mains - Meramec Plant	1,298,778	137,106	274,769	(137,663)	100.41%
<u>Pumping Plant</u>						
321.1	Structures & Improvements-Plant	5,034,803	1,109,009	1,403,027	(294,018)	26.51%
321.2	Structures & Improvements-Boosters	690,425	348,935	152,551	196,384	-56.28%
325.2	Electric Pumping Equipment-Post 1-1-46	18,886,065	6,386,025	5,077,442	1,308,583	-20.49%
325.3	Electric Pumping Equipment-Boosters	836,596	198,902	179,059	19,843	-9.98%
<u>Water Treatment</u>						
331.1	Structures & Improvements - North Plant	2,168,221	985,394	1,574,078	(588,684)	59.74%
331.2	Structures & Improvements - Central 1 & 2	2,724,360	1,448,904	2,314,493	(865,589)	59.74%
331.3	Structures & Improvements - Central 3	14,248,745	2,342,918	3,742,599	(1,399,681)	59.74%
331.4	Structures & Improvements - South Plant	1,172,972	423,573	676,619	(253,046)	59.74%
331.5	Structures & Improvements - Meramec Plant	7,085,982	1,118,737	1,787,080	(668,343)	59.74%
332.1	Water Treatment Equipment - North Plant	4,037,347	1,314,817	1,276,877	37,940	-2.89%
332.2	Water Treatment Equipment - Central 1&2	2,737,672	2,282,415	2,216,553	65,862	-2.89%
332.3	Water Treatment Equipment - Central 3	13,728,555	1,802,440	1,750,429	52,011	-2.89%
332.4	Water Treatment Equipment - South Plant	1,923,542	798,972	775,917	23,055	-2.89%
332.5	Water Treatment Equipment - Meramec Plant	6,877,644	1,833,178	1,780,280	52,898	-2.89%

ST. LOUIS COUNTY WATER COMPANY
SUMMARY OF RESERVE BALANCES BY ACTIVE ACCOUNT
CASE NO. WR-95-145

Account Number	Description	Actual				Difference as
		Plant	Reserve	Theoretical	Reserve	% of Actual
		Balance	Balance	Reserve	Difference	Reserve
		a	b	c	(d=b-c)	(e=-d/b)
Transmission & Distribution						
341	Structures & Improvements	2,356,997	598,361	1,336,291	(737,930)	123.33%
342.11	Dist. Reservoirs & Standpipes (ground)	6,284,027	2,221,132	2,768,768	(547,636)	24.66%
342.12	Dist. Reservoirs & Standpipes (elevated)	719,862	(11,032)	122,954	(133,986)	-1214.52%
343.11	Transmission Mains - Ductile (Wrap & Unwrap)	50,919,302	2,806,944	3,771,207	(964,263)	34.35%
343.12	Transmission Mains - Lock Joint	3,770,420	3,059,249	4,110,186	(1,050,937)	34.35%
343.13	Transmission Mains - Cast Iron	16,319,832	3,919,870	5,266,453	(1,346,583)	34.35%
343.21	Distr. Mains - Cast Iron <=10" (1900-1928)	1,706,417	1,296,033	2,894,289	(1,598,256)	123.32%
343.22	Distr. Mains - Cast Iron <=10" (1929-1956)	10,958,619	6,216,976	13,883,692	(7,666,716)	123.32%
343.23	Distr. Mains - Cast Iron <=10" (1957-1993)	41,913,038	8,357,878	18,664,733	(10,306,855)	123.32%
343.24	Distr. Mains - Asbestos Cement	1,029,076	467,967	1,045,060	(577,093)	123.32%
343.25	Distr. Mains - Duct/Ptic (Wrap & Unwrap) <=10"	62,669,691	4,199,904	9,379,185	(5,179,281)	123.32%
343.26	Distr. Mains - 12" Ductile Iron (Wrap & Unwrap)	19,237,025	941,876	2,103,388	(1,161,512)	123.32%
343.27	Distr. Mains 12" Cast Iron	10,667,021	1,243,016	2,775,891	(1,532,875)	123.32%
343.03	Distr. Mains-Galv	56,047	(84,966)	N/A	(84,966)	-100.00%
345	Services	62,644	48,311	N/A	48,311	-100.00%
346.1	Meters	8,449,320	3,665,162	2,602,294	1,062,868	-29.00%
346.2	Meters-ARB Equipment	1,769,105	626,016	588,104	37,912	-6.06%
347.1	Meter Installation	2,300,005	980,120	858,323	121,797	-12.43%
347.2	Meter Installations-ARB Equipment	2,899,319	945,782	805,339	140,443	-14.85%
348	Fire Hydrants	21,664,683	5,097,509	6,902,984	(1,805,475)	35.42%
General Plant						
390	Structures & Improvements	172,637	(21,315)	47,525	(68,840)	-322.97%
391.11	Office Furniture	853,730	384,727	96,777	287,950	-74.85%
391.12	Office Equipment	124,780	(32,894)	39,876	(72,770)	-221.23%
392.01	Transportation Equipment-Autos	378,682	178,077	101,794	76,283	-42.84%
392.02	Transportation Equipment-Trucks	2,841,745	1,021,434	864,496	156,938	-15.36%
393	Stores Equipment	64,973	(537,874)	17,083	(554,957)	-103.18%
394.1	Shop Equipment	592,260	661,979	148,565	513,414	-77.56%
394.2	Tools	1,588,332	220,002	343,840	(123,838)	56.29%
395.1	Laboratory Furniture	277,621	75,202	53,412	21,790	-28.98%
395.2	Laboratory Equipment	508,562	125,545	96,663	28,882	-23.01%
396	Power Operated Equipment	1,383,292	671,992	N/A	N/A	N/A
397	Communication Equipment	281,646	134,484	61,747	72,737	-54.09%
398	Miscellaneous Equipment	21,334	29,777	4,904	24,873	-83.53%
399	Other Tangible Property	36,140	27,517	N/A	27,517	-100.00%
TOTAL					(\$36,348,868)	

SCHEDULE 2-2