

Exhibit No.:
Issues: Call Center and Shared
Service Center Costs
Witness: A. Joseph Van den Berg
Exhibit Type: Rebuttal Testimony
Sponsoring Party: Missouri-American Water Company

Case No.: WR-2003-0500
Date Filed: November 10, 2003

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. WR-2003-0500

**REBUTTAL TESTIMONY
OF
A. JOSEPH VAN DEN BERG**

**ON BEHALF OF
MISSOURI-AMERICAN WATER COMPANY**

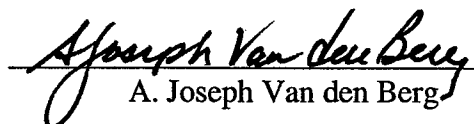
JEFFERSON CITY, MISSOURI

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

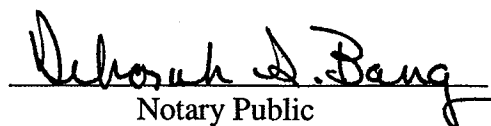
IN THE MATTER OF MISSOURI-AMERICAN	)	CASE NO. WR-2003-0500
WATER COMPANY FOR AUTHORITY TO FILE	)	
TARIFFS REFLECTING INCREASED RATES	)	
FOR WATER SERVICE	)	
	)	

AFFIDAVIT OF A. JOSEPH VAN DEN BERG

A. Joseph Van den Berg, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying rebuttal testimony entitled "Rebuttal Testimony of A. Joseph Van den Berg"; that said rebuttal testimony and schedule(s) were prepared by him and/or under his direction and supervision; that if inquires were made as to the facts in said rebuttal testimony, he would respond as therein set forth; and that the aforesaid rebuttal testimony and schedule(s) are true and correct to the best of his knowledge.


A. Joseph Van den Berg

Washington, DC
SUBSCRIBED and sworn to
before me this 7th day of November 2003.


Notary Public

My commission expires: 3/14/2005

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A. JOSEPH VAN DEN BERG

**DELOITTE CONSULTING
On Behalf of Missouri-American Water Company**

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REBUTTAL TESTIMONY

A. Joseph Van den Berg

INTRODUCTION

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

2

3 A. MY NAME IS A. JOSEPH VAN DEN BERG. MY BUSINESS ADDRESS IS
4 555 12TH STREET, SUITE 450, WASHINGTON, DC 20004.

5

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

7

8 A. I AM A PARTNER AT DELOITTE CONSULTING ("DELOITTE"), A
9 DELAWARE LIMITED LIABILITY CORPORATION.

10

11 **Q. WOULD YOU BRIEFLY SUMMARIZE YOUR ACADEMIC AND**
12 **PROFESSIONAL BACKGROUND?**

13

14 A. I HOLD A BACHELOR OF SCIENCES DEGREE IN MECHANICAL
15 ENGINEERING FROM THE VIRGINIA POLYTECHNIC INSTITUTE AND
16 STATE UNIVERSITY AND A MASTERS OF BUSINESS ADMINISTRATION
17 IN FINANCE AND INVESTMENTS FROM GEORGE WASHINGTON
18 UNIVERSITY. POST GRADUATION, I WORKED FOR POTOMAC
19 ELECTRIC POWER COMPANY BEFORE JOINING THE EDISON
20 ELECTRIC INSTITUTE WHERE, AS A DIRECTOR, I WAS RESPONSIBLE

1 FOR REGULATORY AND MARKETING ACTIVITIES RELATED TO THE
2 USE OF ENERGY. IN THAT CAPACITY, I DIRECTED ACTIVITIES
3 RELATED TO LEAST-COST PLANNING, DEMAND-SIDE MANAGEMENT,
4 NEW TECHNOLOGY INVESTMENTS, AND ENVIRONMENTAL
5 EXTERNALITIES. I HAVE MADE PRESENTATIONS TO, AND HAVE BEEN
6 ACTIVE WITH, THE NATIONAL ASSOCIATION OF REGULATORY UTILITY
7 COMMISSIONERS. I HAVE TESTIFIED BEFORE THE U.S. DEPARTMENT
8 OF ENERGY ON A NUMBER OF MATTERS INCLUDING ENERGY
9 REGULATION, ENERGY ECONOMIES, ENVIRONMENTAL IMPACTS, AND
10 TECHNOLOGY COMMUNICATIONS.

11 SINCE JOINING DELOITTE CONSULTING, I HAVE DIRECTED SEVERAL
12 ENGAGEMENTS FOCUSED ON DEVELOPING A CUSTOMER CARE AND
13 OPERATIONS STRATEGY RESULTING IN IMPROVED COST
14 PERFORMANCE FROM THE BOTTOM QUARTILE TO THE TOP
15 QUARTILE. STRATEGIES IMPLEMENTED INCLUDE STANDARDIZING
16 BUSINESS PROCESSES, SIMPLIFYING GOVERNANCE AND WORK
17 ACTIVITIES, AND IMPLEMENTING TECHNOLOGY ENABLERS.
18 ADDITIONAL SCOPE HAS INCLUDED LEADING STRATEGY
19 DEVELOPMENT FOR THE POTENTIAL OUTSOURCING OF THE
20 CUSTOMER CARE FUNCTIONS. ROLES HAVE INCLUDED SCOPE
21 DEFINITION, NEGOTIATION PREPARATION AND STRATEGY,
22 CONTRACT STRUCTURING, VALUE PROPOSITION DETERMINATION
23 AND BUSINESS REQUIREMENTS CREATION.

1 I HAVE ALSO BEEN INVOLVED IN OPTIMIZING PROCESSES FOR
2 RETAIL AND DELIVERY SEGMENTS. ACTIVITIES HAVE INCLUDED
3 MANAGEMENT OF MARKETING, SALES AND SERVICE TECHNOLOGY
4 INTEGRATION PLATFORMS WITH THE APPROPRIATE DESIGN OF
5 BUSINESS INTELLIGENCE TRANSFER PROTOCOLS, COST
6 ALLOCATION REQUIREMENTS, PROCESS HANDOFFS AND
7 INTERFACES, AND ROLES AND RESPONSIBILITIES OF MARKETING
8 AND SALES FUNCTIONS. I AM THE CUSTOMER RELATIONSHIP
9 MANAGEMENT LEAD PARTNER FOR UTILITIES WITHIN DELOITTE.

10 IN ADDITION, I HAVE PARTICIPATED IN NUMEROUS OTHER UTILITY
11 CONSULTING ENGAGEMENTS IN THE AREA OF MERGER AND
12 ACQUISITIONS, CORPORATE GROWTH, DIVERSIFICATION,
13 RESTRUCTURING, ORGANIZATIONAL ANALYSIS, BUSINESS PROCESS
14 REENGINEERING, STRATEGIC PLANNING AND STRATEGIC
15 MARKETING. I HAVE BEEN THE JOINT WITNESS FOR MERGER
16 APPLICANTS IN STATE PROCEEDINGS.

17
18 **Q. WOULD YOU PLEASE DESCRIBE YOUR FIRM'S EXPERIENCE IN**
19 **UTILITY CALL CENTER OPERATIONS?**

20
21 **A.** DELOITTE HAS PERFORMED OVER 3,000 CONSULTING
22 ENGAGEMENTS FOR OUR UTILITY CLIENTS. OUR UTILITY PRACTICE
23 INCLUDES ELECTRIC, GAS AND WATER UTILITIES, AND THE

1 PROJECTS HAVE INCLUDED STRATEGY, BUSINESS PROCESS,
2 OPERATIONS AND INFORMATION TECHNOLOGY. WE HAVE
3 EXTENSIVE EXPERIENCE IN PROJECT MANAGEMENT, SYSTEMS
4 INTEGRATION AND OPERATIONAL SUPPORT OF MISSION CRITICAL
5 APPLICATIONS SUCH AS CUSTOMER INFORMATION AND BILLING
6 SYSTEMS (CIS) AND CONTACT CENTER TECHNOLOGIES AT UTILITY
7 COMPANIES AND HAVE SUCCESSFULLY IMPLEMENTED NEW
8 PROCESSES AND TECHNOLOGY TO IMPROVE CUSTOMER SERVICE
9 AND BILLING FUNCTIONS WITHIN UTILITY COMPANIES.

10 THE CUSTOMER RELATIONSHIP MANAGEMENT (CRM) SERVICE AREA,
11 INCLUDING CONTACT CENTER, WITHIN DELOITTE HAS MORE THAN
12 1,500 PRACTITIONERS AROUND THE WORLD WHO ARE PROVIDING
13 CRM AND CONTACT CENTER SERVICES TO CLIENTS. WE PROVIDE
14 SERVICES IN ALL INDUSTRIES IN WHICH THE FIRM OPERATES,
15 INCLUDING ENERGY, AND HAVE COMPLETED OVER 1,000 CRM
16 PROJECTS IN THE PAST FOUR YEARS ALONE. WE HAVE
17 IMPLEMENTED MOST OF THE INDUSTRY LEADING CIS AND CONTACT
18 CENTER SOLUTIONS AND HAVE DONE A WIDE VARIETY OF CONTACT
19 CENTER CONSULTING INCLUDING CONTACT CENTER ASSESSMENTS,
20 RECOMMENDATIONS, CHANNEL STRATEGIES AND GENERAL
21 STRATEGIES FOR IMPROVING CONTACT CENTERS, DESIGN,
22 DEVELOPMENT AND IMPLEMENTATION OF CONTACT CENTERS, AS

1 WELL AS SITE SELECTION AND CONSOLIDATION OF CONTACT
2 CENTERS.

3 DELOITTE HAS A WELL-BUILT FOUNDATION IN FINANCIAL AND
4 ACCOUNTING SYSTEMS AND PROCESSES WITH MORE THAN 9,800
5 PROFESSIONALS DEDICATED TO THE MOST POPULAR ENTERPRISE
6 APPLICATIONS AND MORE THAN 850 FINANCE AND ACCOUNTING
7 PROJECTS COMPLETED. DELOITTE CONTROLS A 25% MARKET
8 SHARE OF ALL CRM/ERP IMPLEMENTATIONS IN THE NORTH
9 AMERICAN UTILITY INDUSTRY COVERING ALL THE MAJOR VENDORS,
10 SUCH AS SIEBEL, SAP, ORACLE, PEOPLESFT, J. D. EDWARDS AND
11 SCT.

12
13 **Q. WHAT ASPECTS OF THE STAFF'S DIRECT TESTIMONY ARE YOU**
14 **REBUTTING?**

15
16 **A. I AM ADDRESSING THE RECOMMENDED ALLOWANCES AND**
17 **DISALLOWANCES BY MR. CASSIDY SUMMARIZED ON PAGE 26 AND**
18 **PAGE 27 OF HIS DIRECT TESTIMONY¹ WITH RESPECT TO TRANSITION**
19 **COSTS AND O&M COSTS FOR THE NATIONAL CUSTOMER CALL**
20 **CENTER AND THE TRANSITION COSTS OF THE NATIONAL SHARED**
21 **SERVICES CENTER.**

1 **Q. WHAT IS MR. CASSIDY'S STATED REASON FOR DISALLOWING O&M**
2 **COSTS OF THE NATIONAL CUSTOMER CALL CENTER AND THE**
3 **TRANSITION COSTS OF THE NATIONAL CUSTOMER CALL CENTER**
4 **AND NATIONAL SHARED SERVICES CENTER?**

5
6 A. HIS STATED REASON APPEARS TO BE BASED ON THE PREMISE THAT
7 THE "CALL CENTER HAS RESULTED IN AN OVERALL INCREASE IN
8 EXPENSE OF NEARLY \$1.6 MILLION ON AN ANNUAL, ONGOING
9 BASIS."² THE TRANSITION COSTS TO THE NATIONAL CALL CENTER
10 AND THE NATIONAL SHARED SERVICES CENTERS ARE
11 RECOMMENDED FOR DISALLOWANCE BECAUSE OF MR. CASSIDY'S
12 STATEMENT THAT THE ASSETS DO NOT RESIDE ON MAWC'S BOOKS
13 AND HE HAS CLASSIFIED THEM AS NON-RECURRING.

14
15 **Q. IS HIS STATEMENT REGARDING THE \$1.6 MILLION INCREASE**
16 **CORRECT?**

17
18 A. NO, IT IS INCORRECT AND MISLEADING. TO DETERMINE BOTH THE
19 EXTENT OF ANY INCREASE IN OPERATING COSTS AND THE
20 PROPRIETY AND REASONABLENESS OF THOSE COSTS GOING
21 FORWARD, IT IS CRITICAL TO HAVE THE PROPER STARTING POINT.
22 THE CORRECT STARTING POINT NEEDS TO COMPARE THE COSTS OF
23 OPERATING THE LEGACY CUSTOMER SERVICE FUNCTION AT THE

1 SAME LEVEL THAT THE ALTON CALL CENTER IS OPERATING. THIS
2 REQUIRES THAT THE SAME NUMBER OF CUSTOMERS AND CALLS
3 ARE TAKEN INTO ACCOUNT TO DETERMINE THE COSTS OF WHAT
4 WOULD HAVE BEEN IN THE LEGACY CUSTOMER SERVICE FUNCTION.
5

6 **Q. MR. VAN DEN BERG, ARE YOU SPONSORING ANY SCHEDULES?**
7

8 A. YES. PLEASE REFER TO SCHEDULES AJV-1, AJV-2, AJV-3, AJV-4, AJV-5
9 and AJV-6.
10

11 **Q. WERE THESE SCHEDULES PREPARED UNDER YOUR SUPERVISION?**
12

13 A. YES, THEY WERE.
14

15 **O&M COSTS FOR CALL CENTER**

16 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY RELATED**
17 **TO THE ONGOING O&M COSTS FOR THE ALTON CUSTOMER CARE?**
18

19 A. MR. CASSIDY HAS PROPOSED ALLOWING ONLY \$3,261,840³ OF
20 ONGOING O&M COSTS ASSOCIATED WITH THE NATIONAL CALL
21 CENTER. HIS STATED REASON IS THAT THE CONSUMERS SHOULD
22 NOT HAVE TO BEAR ANY INCREASES RESULTING FROM THE USE OF
23 THE NATIONAL CALL CENTER. HOWEVER, MR. CASSIDY BASED HIS

1 ANALYSIS ON THE PREMISE THAT CUSTOMERS WOULD HAVE ONLY
2 BEEN PAYING FOR THE "AS-WAS" COSTS AS OUTLINED IN STAFF
3 DATA REQUEST NO. 110, REQUESTED MAY 7, 2003.
4

5 **Q. IS THE COMPARISON OF THE "AS-WAS" TO "AS-IS" OUTLINED IN DR**
6 **110 THE APPROPRIATE COMPARISON?**
7

8 A. NO, THE PROPOSED ALLOWANCE IS BASED ON THE INCORRECT
9 ASSUMPTION THAT THE LEGACY CUSTOMER CARE OPERATION
10 COULD HAVE PROVIDED THE LEVEL OF CUSTOMER SERVICE THE
11 NEW CALL CENTER IS PROVIDING FOR \$3,261,840 ANNUALLY.
12

13 **Q. WHY IS THIS INVALID?**
14

15 A. THE \$3,261,840 ASSUMED NO CUSTOMER GROWTH OR INCREASE IN
16 CALL VOLUME THAT HAS OCCURRED IN MAWC SERVICE TERRITORY.
17

18 **Q. HOW MUCH GROWTH IN CUSTOMERS HAS OCCURRED?**
19

20 A. THE \$3,261,840 ASSUMED A BASE OF APPROXIMATELY 415,000
21 CUSTOMERS; THE TEST PERIOD CUSTOMER COUNT IS 442,904, AN
22 INCREASE OF APPROXIMATELY 28,000 CUSTOMERS.
23

1 **Q. WHAT OTHER MODIFICATIONS TO THE “AS-WAS” CASE OF DR110**
2 **SHOULD BE CONSIDERED?**

3
4 A. THE LARGEST ASSUMPTION THAT MUST BE CHANGED RELATES TO
5 MAWC CALL VOLUME. THE CALL VOLUME HAS INCREASED FROM
6 386,415 CALLS PER YEAR IN 2000⁴ TO AN EXPECTED 521,529 CALLS
7 PER YEAR IN 2003⁵. THIS AMOUNTS TO AN INCREASE FROM 0.93
8 CALLS PER CUSTOMER PER YEAR TO 1.18 CALLS PER CUSTOMER
9 PER YEAR.

10
11 **Q. HOW DOES THE NUMBER OF CALLS PER CUSTOMER COMPARE TO**
12 **INDUSTRY AVERAGES?**

13
14 A. THE UTILITY INDUSTRY REALIZES AN AVERAGE OF 2.0-2.5 CALLS PER
15 YEAR PER CUSTOMER. A COMPARABLE SIZED MUNICIPAL WATER
16 UTILITY YIELDS 1.8 CALLS PER YEAR PER CUSTOMER.⁶ FOR THE
17 AMERICAN WATER SYSTEM, THE AVERAGE IS EXPECTED TO BE 1.34
18 CALLS PER CUSTOMER PER YEAR.⁷

19
20 **Q. WHAT VOLUME OF CALLS HAS RESULTED FROM THE NEW CALL**
21 **CENTER BEING AVAILABLE 24 HOURS PER DAY?**

1 A. JUST UNDER 20% OF THE CALLS ARE BEING RECEIVED DURING THE
2 HOURS OF 1700 TO 0800 CENTRAL.⁸

3
4 **Q. WHAT IS THE IMPLICATION OF THE INCREASE OF CUSTOMERS AND**
5 **CALL VOLUME IN THE “AS-WAS” ESTIMATE?**

6
7 A. THE “AS-WAS” ESTIMATE BECOMES \$4,401,704 OF ONGOING O&M
8 COSTS FOR THE TEST YEAR.⁹

9
10 **Q. ARE THERE ANY OTHER INACCURACIES IN THE COMPARISON MADE**
11 **AS OUTLINED IN STAFF DATA REQUEST NO. 110?**

12
13 A. YES, THE ONGOING COST OF THE CALL CENTER (“AS-IS” CASE) WAS
14 BASED ON A PRO FORMA ESTIMATE OF \$3,992,495.¹⁰ AS A RESULT OF
15 RECEIVING BILLS FOR THE ALTON CALL CENTER, THE NEW “AS-IS”
16 CALL CENTER ONGOING COST HAS BEEN LOWERED TO \$3,223,228.¹¹

17
18 **Q. WHAT IS THE IMPLICATION OF THESE CHANGES?**

19
20 A. THE TOTAL ONGOING COSTS ARE EXPECTED TO BE \$4,102,145 PER
21 YEAR.¹²

1 Q. MR. CASSIDY HAS INDICATED HE BELIEVES THAT "THE COMPANY'S
2 DECISION TO JOIN THE CALL CENTER HAS RESULTED IN AN
3 OVERALL INCREASE IN EXPENSE OF NEARLY \$1.6 MILLION ON AN
4 ANNUAL, ONGOING BASIS."¹³ IS THIS AN ACCURATE
5 INTERPRETATION OF THE "APPLES-TO-APPLES" COMPARISON YOU
6 HAVE COMPLETED?
7

8 A. NO. AS PREVIOUSLY OUTLINED, THE ONGOING ANNUAL COST OF
9 REMAINING ON THE LEGACY MAWC CALL CENTER WOULD HAVE
10 BEEN \$4,401,704. THE ONGOING COSTS USING THE NATIONAL CALL
11 CENTER IS \$4,102,145. THIS AMOUNTS TO A SAVINGS OF \$299,559
12 PER YEAR.
13

14 Q. HOW DO THE ONGOING COSTS COMPARE TO INDUSTRY AVERAGES?
15

16 A. THE ONGOING COSTS TO MAWC EQUATE TO \$9.28 PER CUSTOMER
17 PER YEAR. THIS IS IN LINE WITH INDUSTRY NORMS WHICH RANGE
18 FROM \$6.28 TO \$15.92 PER CUSTOMER PER YEAR AND IS BELOW THE
19 INDUSTRY AVERAGE OF \$10.80 PER CUSTOMER PER YEAR.¹⁴
20

21 Q. IF MAWC HAD NOT MOVED ALL OF ITS CUSTOMER CARE AND
22 SHARED SERVICE APPLICATIONS TO THE SERVICE COMPANY

1 **WOULD THERE HAVE BEEN ANY IMPLICATIONS TO THE GOING-**
2 **FORWARD COSTS?**

3
4 A. IF MAWC HAD NOT TRANSFERRED ALL CALL CENTER AND SHARED
5 SERVICES APPLICATIONS TO THE SERVICE COMPANY THERE WOULD
6 HAVE BEEN DUPLICATE FUNCTIONS REMAINING AT THE OPERATING
7 COMPANY TO SUPPORT A SMALL SUITE OF APPLICATIONS. THIS
8 WOULD HAVE CREATED DUPLICATIVE COSTS FOR THE SERVICE
9 COMPANY AND OPERATING COMPANY. FOR EXAMPLE, IF THE
10 CUSTOMER CALL CENTER FACILITIES REMAINED AT THE OPERATING
11 COMPANY, IT WOULD HAVE BEEN NECESSARY TO RETAIN STAFF TO
12 MAINTAIN THE DATA SYSTEMS, REPORT GENERATION, SYSTEM
13 INTEGRATION, INTERFACE MANAGEMENT AND OTHER SUPPORT
14 SERVICES. THE RESULT WOULD BE TO NEGATE THE OPERATING
15 SAVINGS ATTRIBUTABLE TO THE SHARED SERVICES CENTER THAT
16 THE STAFF SUPPORTED IN STAFF DATA INFORMATION REQUEST NO.
17 181.

18
19 **CALL CENTER TRANSITION COSTS**

20 Q. **WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY ON CALL**
21 **CENTER TRANSITION COSTS?**

1 A. MR. CASSIDY HAS PROPOSED DISALLOWING THE CAPITALIZED
2 TRANSITION COSTS ASSOCIATED WITH THE ESTABLISHMENT OF THE
3 NATIONAL CALL CENTER. HIS STATED REASON IS THAT THE ASSETS
4 OF THE CALL CENTER ARE ON THE BOOKS OF THE SERVICE
5 COMPANY AND THAT THE COSTS ARE ONE-TIME, NON-RECURRING
6 EXPENSES AND SHOULD BE REFLECTED IN MAWC'S ONGOING COST
7 OF SERVICE. THE STAFF CONTENDS THAT SINCE NO TANGIBLE
8 ASSET WAS CREATED FOR MAWC, IT IS INAPPROPRIATE FOR MAWC
9 TO CAPITALIZE THESE ONE-TIME TRANSITION EXPENSES RELATED
10 TO ASSETS THAT IT DOES NOT OWN AND BUSINESS PROCESSES
11 THAT ARE NOT UNDER ITS CONTROL.

12
13 **Q. DO YOU BELIEVE THAT THIS DISALLOWANCE IS APPROPRIATE?**

14
15 A. NO. THESE TRANSITION COSTS SHOULD BE RECOVERABLE TO THE
16 SAME EXTENT THAT THEY SHOULD BE RECOVERABLE HAD MAWC
17 DIRECTLY INVESTED TO PROVIDE FACILITIES WITHIN THE COMPANY
18 ITSELF THAT RESULTED IN THE SAME LEVELS OF INCREASED
19 SERVICES AND EFFICIENCIES ACHIEVED AT THE ALTON CALL
20 CENTER. AS I WILL EXPLAIN, THE LEVEL OF SERVICE INCREASE IS
21 SIGNIFICANT AND CONSISTENT WITH THE LEVEL OF SERVICE BEING
22 DEMANDED BY THE CUSTOMER. RECOVERY OF THESE VERY
23 REASONABLE TRANSITION COSTS IS NOT ONLY APPROPRIATE, BUT

1 TO DO OTHERWISE WOULD DISCOURAGE SUCH UNDERTAKINGS IN
2 THE FUTURE BY THIS COMPANY AND OTHER REGULATED ENTITIES IN
3 MISSOURI. THE COMMISSION HAS FOLLOWED THIS RATIONAL IN THE
4 PAST WHEN THEY REQUIRED CAPITALIZATION OF CERTAIN A&G
5 EXPENSES (WR-89-246).
6

7 **Q. HAS THE STAFF PROPOSED RECOVERY OF THE TRANSITION COSTS**
8 **IN THE PAST?**
9

10 A. YES, IN THE STAFF'S RESPONSE TO MAWC DATA REQUEST 25, MR.
11 CASSIDY INDICATED THAT, "IF THESE COSTS HAVE RESULTED IN
12 ONGOING SAVINGS..., THE STAFF HAS PREVIOUSLY PROPOSED AN
13 AMORTIZATION OF THE COST OVER 10 TO 20 YEARS."¹⁵
14

15 **Q. HAVE YOU HAD AN OPPORTUNITY TO VISIT THE NATIONAL CALL**
16 **CENTER IN ALTON?**
17

18 A. YES, I HAVE.
19

20 **Q. HOW DOES THE ALTON CALL CENTER COMPARE TO OTHER**
21 **INDUSTRY CALL CENTERS?**
22

1 A. TODAY'S CUSTOMERS HAVE EXPECTATIONS THAT ARE DRIVEN BY
2 INDUSTRY STANDARDS FOR CUSTOMER SERVICE. THE ALTON CALL
3 CENTER MEETS THESE STANDARDS.

4
5 **Q. WHAT ARE SOME EXAMPLES OF CUSTOMER EXPECTATIONS THAT**
6 **THE ALTON CENTER PROVIDES?**

7
8 A. TODAY'S CUSTOMERS REQUIRE FLEXIBILITY IN WHEN AND HOW
9 THEY ACCESS CUSTOMER SERVICE AGENTS. WHEN A CUSTOMER
10 SPEAKS TO AN AGENT, THEY EXPECT THE CALLS TO BE ANSWERED
11 QUICKLY AND ALL OF THEIR ISSUES HANDLED EFFICIENTLY. THE
12 ALTON CENTER IS USING TECHNOLOGY THAT ENABLES THEM TO
13 SATISFY THE DEMANDS OF TODAY'S CUSTOMERS.

14
15 **Q. WHAT OTHER ASPECTS OF THE ALTON CALL CENTER ENABLE THE**
16 **CUSTOMER TO EXPERIENCE THE APPROPRIATE LEVEL OF SERVICE?**

17
18 A. THE ALTON CENTER OPERATES 24-HOURS PER DAY ALLOWING
19 CUSTOMERS ACCESS ON THEIR TERMS. WHEN A CUSTOMER CALLS,
20 AN INTERACTIVE VOICE RESPONSE SYSTEM (IVR) ALLOWS
21 CUSTOMERS TO DETERMINE THE LEVEL OF SELF SERVICE THEY
22 WANT TO HANDLE ROUTINE TRANSACTIONS/QUERIES. THIS IS AN
23 IMPORTANT TECHNOLOGY IN THAT IT NOT ONLY ALLOWS THE

1 CUSTOMER AN ALTERNATE CHANNEL OF COMMUNICATION, BUT AS
2 THE ADOPTION OF THE TECHNOLOGY INCREASES, THE OPERATING
3 COSTS OF THE CALL CENTER IS EXPECTED TO DECREASE ON A PER
4 CALL BASIS, WITH ALL OTHER VARIABLES BEING EQUAL. FINALLY,
5 ONCE THE CUSTOMER DECIDES TO SPEAK TO A LIVE AGENT,
6 COMPUTER-TELEPHONY INTEGRATION IS AVAILABLE SO THAT THE
7 AGENT IS ABLE TO ACCESS THE EXACT ACCOUNT INFORMATION
8 THAT THE CUSTOMER HAS ENABLING THE REPRESENTATIVE TO
9 SATISFY THE CUSTOMER'S REQUEST QUICKLY AND EFFECTIVELY.
10

11 **Q. ARE CUSTOMERS TAKING ADVANTAGE OF THE EXPANDED**
12 **SERVICES?**
13

14 **A.** YES, FOR EXAMPLE, CLOSE TO 20% OF THE CALLS COMING INTO THE
15 ALTON CALL CENTER OCCUR AFTER HOURS, BETWEEN 1700 AND
16 0800 CENTRAL.
17

18 **Q. WHAT IMPROVEMENTS IN THE CUSTOMER CARE EXPERIENCE HAVE**
19 **RESULTED FROM MAWC'S MOVE TO THE ALTON CALL CENTER?**
20

21 **A.** NOT ONLY HAS CUSTOMER CARE IMPROVED THROUGH THE USE OF
22 THE TECHNOLOGY DESCRIBED PREVIOUSLY, BUT IMPROVEMENTS IN
23 THE CUSTOMER INFORMATION SYSTEM (CIS) WILL ALLOW MORE

1 DETAILED AND FLEXIBLE ACCOUNT MANAGEMENT, MORE ACCURATE
2 BILL MANAGEMENT, AND AN INCREASED LEVEL OF SOPHISTICATION
3 IN MANAGEMENT REPORTING. THIS WILL RESULT IN IMPROVED
4 CUSTOMER CARE. FURTHERMORE, IMPROVEMENTS IN THE CALL
5 MONITORING AND TRAINING SYSTEMS WILL HELP MAINTAIN THE
6 REQUIRED LEVEL OF CUSTOMER CARE.
7

8 **Q. WHAT OTHER INDIRECT BENEFITS WILL BE ACHIEVED WITH THE**
9 **CENTRAL CALL CENTER?**
10

11 A. THE CONSOLIDATION OF THE CALL CENTER HAS ALLOWED FOR AN
12 INCREASE IN THE MANAGEMENT BREADTH OVER TECHNOLOGY SO
13 THAT ANY AND ALL TECHNOLOGY ISSUES CAN BE HANDLED MORE
14 EFFICIENTLY. IN ADDITION, WITH A DISASTER RECOVERY SYSTEM
15 THAT IS IN LINE WITH INDUSTRY STANDARDS, MAWC CUSTOMERS
16 CAN FEEL CONFIDENT THEY WILL CONTINUE TO BE SERVED EVEN IN
17 EMERGENCY SITUATIONS.
18

19 **Q. HOW WILL THE NEW TECHNOLOGY HELP MANAGEMENT AND THE**
20 **COMMISSION TRACK THE LEVEL OF CUSTOMER SATISFACTION?**
21

22 A. A MAJOR IMPROVEMENT FOUND IN THE ALTON CALL CENTER
23 VERSUS THE LEGACY CENTER IS THE LEVEL OF REPORTING

1 AVAILABLE TO MAWC AND THE COMMISSION. AS PART OF THE
2 STIPULATION AND AGREEMENT FILED ON 9/7/01, A DETAILED SET OF
3 REPORTING REQUIREMENTS WAS AGREED TO BY STAFF, OPC,
4 MAWC, ET AL. THESE REPORTS WERE DESIGNED TO PROVIDE THE
5 PUC A VEHICLE TO MONITOR THE LEVEL OF CUSTOMER CARE MAWC
6 PROVIDED TO ITS CUSTOMER BASE. WITH A VEHICLE SUCH AS THIS,
7 A STANDARD OF PERFORMANCE WAS DEVELOPED FOR THE FIRST
8 TIME IN MAWC HISTORY, AND CAN BE TRACKED. THIS, TOO, WILL
9 HELP ENSURE MAWC CUSTOMERS CONTINUE TO RECEIVE THE HIGH
10 LEVEL OF SERVICE THAT NOT ONLY THEY EXPECT, BUT THAT THE
11 COMMISSION REQUIRES.

12
13 **Q. ARE THESE IMPROVEMENTS REQUIRED IN TODAY'S MARKET?**

14
15 **A. YES. IN TODAY'S MARKET, CUSTOMERS ARE INCREASINGLY**
16 **DEMANDING ACCESS TO INFORMATION BASED ON THEIR OWN**
17 **SCHEDULE AND THROUGH THEIR CHANNEL OF CHOICE. THEY**
18 **REQUIRE ISSUE RESOLUTION IN ABBREVIATED TIME SCHEDULES**
19 **AND THEY REQUIRE AND DESERVE AN ACCURATE BILL ON EACH AND**
20 **EVERY STATEMENT.**

21 IT SHOULD BE NOTED THAT WITH THE EXPANSION OF TECHNOLOGY
22 IN OTHER INDUSTRIES, CUSTOMER HAVE MANDATED AND REALIZED
23 AN INCREASED LEVEL OF CUSTOMER CARE. AS A RESULT,

1 CUSTOMERS INCREASE THEIR DEMANDS FROM ALL OTHER SERVICE
2 PROVIDERS, INCLUDING THE WATER UTILITY. IN OTHER WORDS, AS
3 OTHER SERVICE PROVIDERS INCREASE THEIR LEVEL OF SERVICE,
4 THE CUSTOMER BEGINS TO EXPECT THAT LEVEL OF SERVICE FROM
5 THEIR WATER COMPANY AS WELL.

6
7 **Q. WHAT METRICS ARE COMMONLY USED TO MEASURE THE QUALITY**
8 **OF CUSTOMER EXPERIENCE?**

9
10 A. THE METRICS DETAILED IN THE STIPULATION AND AGREEMENT FILED
11 ON 9/7/01 ARE AN EXCELLENT MEASURE AND ARE INDUSTRY
12 ACCEPTED MEASUREMENTS OF QUALITY OF SERVICE IN A CALL
13 CENTER OPERATION. THESE METRICS INCLUDE: AVERAGE
14 ABANDONED CALL RATE, AVERAGE SPEED TO ANSWER, FIRST CALL
15 EFFECTIVENESS AND AVERAGE CUSTOMER INQUIRY RESPONSE
16 TIME.

17
18 **Q. HOW DO THE METRICS COMPARE BEFORE AND AFTER THE**
19 **TRANSITION FOR MAWC?**

20
21 A. THE LEGACY CALL CENTER WAS NOT CAPABLE OF TRACKING THESE
22 METRICS. PLEASE REFER TO MS. BERNSEN'S TESTIMONY ON THE

1 CURRENT PERFORMANCE LEVELS ACHIEVED IN THE NEW CALL
2 CENTER.

3 MS. BERNSEN HAS FOUND THE REPORTING OF SERVICE INDICATORS
4 SO VALUABLE THAT SHE HAS REQUESTED THAT THE TIME
5 REQUIREMENT FOR SUCH REPORTING IS EXTENDED BEYOND THE
6 ORIGINAL TIME FRAME AND THAT THE CONTENT OF THE REPORTS IS
7 EXPANDED.

8
9 **Q. WAS THERE A BUSINESS NEED TO MAKE IMPROVEMENTS TO THE**
10 **PREVIOUS CALL CENTER?**

11
12 **A.** YES. AS PREVIOUSLY STATED, THE LEGACY CALL CENTER SYSTEMS
13 WERE UNABLE TO SUPPORT PROPER BUSINESS MANAGEMENT
14 REPORTING MAKING IT DIFFICULT TO MONITOR THE ACTIVITY IN THE
15 CALL CENTER AND SUBSEQUENTLY, UNDERSTAND HOW TO
16 OPERATE THE CALL CENTER AT OPTIMAL EFFICIENCY.

17 IN ADDITION, MAINTAINING A SYSTEM THAT WAS AT THE END OF ITS
18 USEFUL LIFE - THE SYSTEM WAS MAINFRAME/TERMINAL BASED, NOT
19 PC BASED - BECOMES A COST AND COMPETENCY ISSUE. FINDING
20 RESOURCES TO MAINTAIN A MAINFRAME AND CRT SYSTEM IS
21 DIFFICULT.

22 FURTHERMORE, THE LEGACY SYSTEMS DID NOT ALLOW FOR THE
23 PROPER MANAGEMENT MONITORING WHICH REDUCED THE

1 EFFECTIVENESS OF TRAINING AND SCHEDULING OF PERSONNEL.
2 THIS HAS A DIRECT AFFECT ON THE QUALITY OF CUSTOMER CARE
3 PROVIDED.
4

5 **Q. WAS THE ISSUE OF IMPROVING CUSTOMER SERVICE DISCUSSED IN**
6 **A PREVIOUS COMMISSION FINDING?**
7

8 A. YES. THE STIPULATION AND AGREEMENT SUBMITTED 9/7/01
9 ENCOURAGED THE CONTINUED MIGRATION TO THE NATIONAL CALL
10 CENTER. AS A RESULT OF THAT AGREEMENT IN CASE NO. WM-2001-
11 309, DEFINED REPORTS WERE TO BE FILED ON A REGULAR BASIS TO
12 MONITOR THE QUALITY OF CUSTOMER CARE OFFERED BY THE
13 ALTON CALL CENTER AND THE CONTINUED IMPROVEMENT OF THE
14 CUSTOMER EXPERIENCE.
15

16 **Q. DID MAWC FILE ALL THE REPORTS REQUIRED UNDER THAT**
17 **AGREEMENT?**
18

19 A. YES. PLEASE REFER TO MS. BERSEN'S TESTIMONY REGARDING THE
20 REPORTS AND STATUS OF IMPROVEMENTS AROUND ALL THE
21 METRICS DEFINED. AGAIN, IT SHOULD BE NOTED THAT THE
22 REPORTING OF OPERATIONAL METRICS AROUND THE CALL CENTER
23 WAS NOT POSSIBLE WITHIN THE LEGACY CALL CENTER, AND THESE

1 REPORTS AND DATA CONTAINED THEREIN PROVIDE STAFF AND THE
2 COMMISSION VALUABLE INFORMATION FOR NOT ONLY THE
3 CONTINUED MONITORING OF MAWC CUSTOMER CARE
4 PERFORMANCE, BUT ALSO THE BENCHMARKS UPON WHICH TO
5 MEASURE OTHER COMPANIES CURRENTLY REGULATED BY THE
6 COMMISSION.

7
8 **Q. YOU HAVE STATED THAT MAWC'S CUSTOMERS WOULD BENEFIT BY**
9 **UPGRADING THE PREVIOUS CUSTOMER EXPERIENCE. HOW DO THE**
10 **TRANSITION COSTS SUBMITTED BY MAWC COMPARE TO THE COSTS**
11 **THAT WOULD HAVE BEEN INCURRED BY MAWC TO BRING THEIR**
12 **PREVIOUS TECHNOLOGY UP TO INDUSTRY STANDARDS?**

13
14 **A. THE COSTS INCURRED AND SUBMITTED BY MAWC (\$5.3 MILLION¹⁶)**
15 **FOR THE TRANSITION TO THE ALTON CALL CENTER ARE IN LINE WITH**
16 **OR LOWER THAN WHAT MISSOURI AMERICAN WOULD HAVE SPENT IN**
17 **A STANDALONE COMPANY TO INSTALL THE SAME LEVEL OF**
18 **CUSTOMER SERVICE ACHIEVED IN THE ALTON CENTER.**

19
20 **Q. WHAT UPGRADES AND ASSOCIATED COSTS WOULD HAVE BEEN**
21 **REQUIRED FOR MAWC TO ACHIEVE THE REQUIRED LEVEL OF**
22 **CUSTOMER SERVICE?**

1 A. IN ORDER TO MAKE THE IMPROVEMENTS THAT HAVE BEEN
2 DISCUSSED EARLIER, UPGRADES TO THE IVR, CTI AND SWITCHES
3 (THE TECHNOLOGY THAT DIRECTS A CUSTOMER'S CALL BASED ON
4 PREDEFINED CRITERIA) WOULD BE REQUIRED. THE COSTS OF
5 SUCH UPGRADES WOULD HAVE BEEN EXPECTED TO RESULT IN A
6 **CAPITAL EXPENSE** IN THE RANGE OF \$3-5 MILLION DOLLARS.¹⁷ THIS
7 TAKES INTO ACCOUNT THE TECHNOLOGY UPGRADES, THE NUMBER
8 OF CUSTOMERS THE CENTER WOULD BE REQUIRED TO HANDLE AND
9 THE ASSOCIATED REDESIGN OF THE MAJOR OPERATING
10 PROCESSES.

11
12 **Q. WHAT OTHER COSTS WOULD HAVE BEEN INCURRED?**

13
14 A. MAWC WOULD HAVE INCURRED ADDITIONAL COSTS ASSOCIATED
15 WITH THE IMPLEMENTATION OF A NEW CIS. THE LEGACY CIS WAS
16 ANTIQUATED AND HANDICAPPED IN TERMS OF FUNCTIONALITY AND
17 FLEXIBILITY AND ABILITY TO TAKE ADVANTAGE OF THE ABOVE
18 OUTLINED TECHNOLOGIES. THE CIS IS CRITICAL TO MANAGEMENT
19 OF CUSTOMER INFORMATION, REPORTING OF MANAGEMENT
20 INFORMATION AND PROVIDING ACCURATE BILLS TO THE
21 CUSTOMERS. GIVEN THE AGE AND LIMITATIONS OF THE LEGACY
22 SYSTEM, IT IS EXPECTED THAT THE SYSTEM WOULD NEED TO BE
23 REPLACED. THE EXPECTED COST TO IMPLEMENT A NEW CIS FOR A

1 COMPANY THE SIZE OF MAWC WOULD BE IN THE RANGE OF \$7-22
2 MILLION DEPENDING ON THE LEVEL OF DATA CLEANSING,
3 INTEGRATION AND MARKET MODEL REQUIREMENTS.¹⁸
4

5 **Q. ARE THE COSTS SUBMITTED BY MAWC IN LINE WITH INDUSTRY**
6 **STANDARDS FOR SUCH IMPROVEMENTS?**
7

8 **A. YES. THE TRANSITION COSTS SUBMITTED BY MAWC ARE WELL**
9 **WITHIN STANDARDS OF THE INDUSTRY GIVEN THE SELECTED**
10 **SOLUTION WOULD HAVE INVOLVED BOTH A NEW CIS SYSTEM AND**
11 **THE OTHER FRONT OFFICE TECHNOLOGIES AS DESCRIBED EARLIER.**
12 **THE TOTAL ESTIMATED INDUSTRY BENCHMARK WOULD BE BETWEEN**
13 **\$10-27 MILLION.¹⁹ WHILE THIS IS A LARGE RANGE, MAWC TRANSITION**
14 **COSTS ARE BELOW EVEN THE LOWER END OF THE RANGE.**
15

16 **SHARED SERVICES TRANSITION COSTS**

17 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY ON THIS**
18 **POINT?**
19

20 **A. MR. CASSIDY HAS DISALLOWED \$4.5 MILLION IN CAPITALIZED**
21 **TRANSITION COSTS ASSOCIATED WITH NATIONAL SHARED**
22 **SERVICES. HIS STATED REASON IS THAT THE COSTS ARE ONE-TIME,**
23 **NON-RECURRING EXPENSES AND SHOULD NOT BE REFLECTED IN**

1 MAWC'S ONGOING COST OF SERVICE.²⁰ THE STAFF CONTENDS THAT
2 SINCE NO TANGIBLE ASSET WAS CREATED FOR MAWC, IT IS
3 INAPPROPRIATE FOR MAWC TO CAPITALIZE THESE ONE-TIME
4 TRANSITION EXPENSES RELATED TO ASSETS THAT IT DOES NOT
5 OWN AND BUSINESS PROCESSES THAT ARE NOT UNDER ITS
6 CONTROL.

7
8 **Q. MAWC HAS DECIDED TO UTILIZE THE NATIONAL SHARED SERVICES**
9 **ORGANIZATION FOR CERTAIN FINANCIAL AND ACCOUNTING**
10 **FUNCTIONS. IS THIS A CURRENT PRACTICE IN THE INDUSTRY?**

11
12 **A. YES. IT IS A STANDARD BUSINESS PRACTICE IN INDUSTRY TODAY TO**
13 **CAREFULLY EVALUATE THE BUSINESS MODEL AND EMPLOY SHARED**
14 **SERVICES AS MUCH AS POSSIBLE. WHILE THERE WERE NO**
15 **SIGNIFICANT OPERATIONAL ISSUES AROUND THESE FUNCTIONS**
16 **OTHER THAN THE NEED TO INTEGRATE PROCESSES, ACCOUNTS,**
17 **BENEFITS, ETC. BETWEEN ST. LOUIS AND MAWC, THE DECISION TO**
18 **UTILIZE THE NATIONAL SHARED SERVICES ORGANIZATION HAS**
19 **RESULTED IN O&M SAVINGS SUFFICIENT TO SATISFY THE BUSINESS**
20 **CASE REQUIREMENTS ESTABLISHED BY AWWC. AGAIN, BASED UPON**
21 **MY EARLIER TESTIMONY, THE REDUCTION IN O&M COSTS COULD**
22 **NOT HAVE BEEN REALIZED HAD MAWC NOT UTILIZED THE CALL**
23 **CENTER AND SHARED SERVICES FUNCTIONS.**

1
2 **Q. ARE THE TRANSITION COSTS SUBMITTED BY MAWC IN LINE WITH**
3 **INDUSTRY STANDARDS?**

4
5 A. YES. FOR COMPARISON PURPOSES, I LOOKED AT THE COSTS
6 ASSOCIATED WITH THE DESIGN, DEVELOPMENT AND DEPLOYMENT
7 OF A NEW FINANCIAL AND ACCOUNTING SYSTEM THAT INCLUDED
8 THE FUNCTIONS PROVIDED BY THE NATIONAL SHARED SERVICES
9 CENTER.

10 TO ACQUIRE, CONFIGURE, INSTALL AND TEST A NEW ACCOUNTING
11 AND FINANCIAL SYSTEM FOR A COMPANY WITH AN EMPLOYEE BASE
12 OF ~650, I ESTIMATED A TOTAL COST OF APPROXIMATELY \$4.5-7.5M
13 DEPENDING ON THE COMPLEXITY OF THE ORGANIZED LABOR
14 CONTRACTS, LEVEL OF SELF SERVICE, REPORTING REQUIREMENTS,
15 NUMBER OF LEDGERS, ETC.²¹ AGAIN, WHILE THE RANGE OF COSTS
16 IS LARGE, THE SUBMITTED TRANSITION COST OF \$4.5 IS BELOW THE
17 LOWER END OF THE RANGE OF INDUSTRY EXPECTATIONS.

18
19 **Q. HOW WOULD THESE TRANSITION COSTS HAVE BEEN RECOVERED IF**
20 **MAWC HAD INSTALLED THE SYSTEM AS A STAND ALONE ENTITY?**

1 A. THE COSTS OF THE APPLICATION AND ASSOCIATED HARDWARE,
2 SOFTWARE AND IMPLEMENTATION WOULD BE RECOVERED
3 PRIMARILY AS A CAPITAL EXPENSE.
4

5 **Q. WHAT IS THE LOGIC FOR MAWC RECOVERING THE TRANSITION**
6 **COSTS AS CAPITAL EXPENDITURES?**
7

8 A. THE TRANSITION COSTS HAVE BEEN DEMONSTRATED TO BE
9 PRUDENT INVESTMENTS. TO BE CONSISTENT, MAWC HAS
10 REQUESTED REGULATORY TREATMENT TO MATCH THE TREATMENT
11 THAT WOULD HAVE OCCURRED HAD THE CUSTOMER AND SHARED
12 SERVICES APPLICATIONS AND ENABLING TECHNOLOGY BEEN
13 INSTALLED BY MAWC ON A STAND ALONE BASIS.
14

15 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**
16

17 A. YES, THIS DOES.

¹ Direct Testimony of John P. Cassidy, Missouri Public Service Commission – Utility Services Division. Missouri-American Water Company, Case Nos. WR-2003-0500 and WC-2004-0168. Jefferson City, Missouri; October 2003.

² IBID; page 27, lines 28 and 29.

³ IBID; page 25, line 5. (The figure is a result of Staff Adjustments S-14.8 and S-13.4)

⁴ Refer to Missouri American Water, Case No. WR-2003-0500, Staff Data Request No. 110, Requested May 7, 2003

⁵ Refer to Schedule AJV-1

⁶ Refer to Schedule AJV-6

⁷ Refer to Schedule AJV-6

⁸ Refer to Schedule AJV-4

⁹ Refer to Schedule AJV-2

¹⁰ Refer to Missouri American Water, Case No. WR-2003-0500, Staff Data Request No. 110, Requested May 7, 2003

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- ¹¹ Refer to Schedule AJV-3
- ¹² Refer to Schedule AJV-3
- ¹³ Direct Testimony of John P. Cassidy. Missouri-American Water Company, Case Nos. WR-2003-0500 and WC-2004-0168; page 27, lines 28 and 29.
- ¹⁴ Refer to Schedule AJV-6
- ¹⁵ Refer to Missouri American Water, Case No. WR-2003-0500, MAWC'S fourth set of Data Request to Staff, Data Request No. 25.
- ¹⁶ Company provided a schedule to Staff witness John Cassidy on identifying the cost of the Call Center Costs in the amount of \$5.3 million.
- ¹⁷ Refer to Schedule AJV-5
- ¹⁸ Refer to Schedule AJV-5
- ¹⁹ Refer to Schedule AJV-5
- ²⁰ Direct Testimony of John P. Cassidy. Missouri-American Water Company, Case Nos. WR-2003-0500 and WC-2004-0168; page 28, lines 3 through 5. (The removal of this capitalized cost is reflected in Staff Plant Adjustment P-87.1)
- ²¹ Refer to Schedule AJV-5

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Schedule AJV - 1: Estimated "As-Was" Call Volumes for MAWC

(1)	Total Calls Offered to Reps from May 2003 to October 2003 ¹	225,131
(2)	2003 Adjusted Calls Offered to Reps ²	450,262
(3)	IVR Handled Calls ³	71,267
(4)	Total Incoming Call Volume	521,529

1. Actual MO calls offered to Reps over the 6-month period from May 2003 to June 2003. May represents the beginning of steady state.

2. 6-month call volume extrapolated out to 1 year.

3. Based on an IVR Take Rate of 15.8% for MO in 2003. Calculated by using data from "steady-state" in 2002 and 2003 (first four months).

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Schedule AJV - 2: "As-Was" Call Center O&M Expense for MAWC

(1)	Total Incoming Call Volume	521,529
(2)	Cost Per Call ¹	\$8.44
(3)	Call Center O&M Expense on a Cost Per Call Basis	\$4,401,704

1. Refer to Staff Data Request No. 110 for cost per call value

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Schedule AJV - 3: As-Is Call Center Costs

(1)	May - October 2003 Call Center Charges (Actual) ¹	\$ 1,611,614
(2)	Annualized Charges	\$ 3,223,228
(3)	Local Call Center Costs ²	\$ 878,917
(4)	TOTAL Call Center As-Is Costs	\$ 4,102,145

1. Actual Service Company charges billed to MOAW

2. Refer to Staff Data Request No. 110 for local cost value

Schedule AJV - 4: Off-Peak Call Center Calls

Intervals	Avg Calls between May - Oct 2003
12:00 am-12:30 am	260
12:30 am- 1:00 am	210
1:00 am -1:30 am	156
1:30 am -2:00 am	136
2:00 am-2:30 am	106
2:30 am -3:00 am	85
3:00 am - 3:30 am	96
3:30 am - 4:00 am	103
4:00 am - 4:30 am	127
4:30 am - 5:00 am	176
5:00 am - 5:30 am	308
5:30 am - 6:00 am	536
6:00 am - 6:30 am	1,048
6:30 am - 7:00 am	1,863
7:00 am - 7:30 am	4,091
7:30 am - 8:00 am	5,308
8:00 am - 8:30 am	7,846
8:30 am-9:00 am	9,217
9:00 am - 9:30 am	10,035
9:30 am - 10:00 am	11,042
10:00 am - 10:30 am	10,793
10:30 am - 11:00 am	11,793
11:00 am -11:30 am	10,576
11:30am - 12:00pm	11,383
12:00 pm - 12:30 pm	10,092
12:30 pm - 1:00 pm	10,209
1:00 pm - 1:30 pm	10,140
1:30 pm - 2:00 pm	10,151
2:00 pm - 2:30 pm	10,059
2:30 pm - 3:00 pm	9,862
3:00 pm - 3:30 pm	9,634
3:30 pm - 4:00 pm	8,853
4:00 pm - 4:30 pm	8,101
4:30 pm -5:00 pm	6,090
5:00 pm - 5:30 pm	4,762
5:30 pm - 6:00 pm	3,841
6:00 pm - 6:30 pm	3,287
6:30 pm - 7:00 pm	2,968
7:00 pm - 7:30 pm	2,381
7:30 pm - 8:00 pm	2,009
8:00 pm - 8:30 pm	1,764
8:30 pm - 9:00 pm	1,515
9:00 pm - 9:30 pm	1,369
9:30 pm - 10:00 pm	1,061
10:00 pm - 10:30 pm	804
10:30 pm - 11:00 pm	623
11:00 pm - 11:30 pm	481
11:30 pm - 12:00 am	347
TOTAL Calls	217,693
Calls During Off-Peak Hours (1700 - 0800)	41,819
% of Total Calls Received During Off-Peak Hours (Hours Previously Not Serviced by MOAW)	19.2%

Schedule AJV - 5: Industry Benchmark Transition Costs

Call Center Technology

	Implementation Costs		
	Low	Average	High
Technology ¹	\$ 1,500,000	\$ 1,850,000	\$ 2,200,000
Professional Svcs	\$ 880,000	\$ 1,740,000	\$ 2,600,000
Internal Labor	\$ 500,000	\$ 625,000	\$ 750,000
Total	\$ 2,880,000	\$ 4,215,000	\$ 5,550,000

Customer Information System

	Implementation Costs		
	Low	Average	High
Technology ²	\$ 2,500,000	\$ 4,000,000	\$ 5,500,000
Professional Svcs	\$ 4,900,000	\$ 10,700,000	\$ 16,500,000
Internal Labor	\$ 500,000	\$ 2,250,000	\$ 4,000,000
Total ³	\$ 7,900,000	\$ 16,950,000	\$ 26,000,000

Financial Systems

	Implementation Costs		
	Low	Average	High
Technology	\$ 1,500,000	\$ 2,000,000	\$ 2,500,000
Professional Svcs	\$ 2,500,000	\$ 3,250,000	\$ 4,000,000
Internal Labor	\$ 500,000	\$ 750,000	\$ 1,000,000
Total	\$ 4,500,000	\$ 6,000,000	\$ 7,500,000

1. Technologies include IVR, CTI, ACD and Workforce Mgt and all required hardware and software. Does not include CIS.
2. Technologies include primary CIS only and do not include bill print, bill storage and other ancillary and/or bolt on technologies.
3. Total cost in highly driven by level of integration to enterprise applications, degree of custom reporting and degree of customization within the operating software (market and business rules).

General Notes

1. The above are one-time external costs
2. Does not include typical 15-20% per year for 'maintenance' of the SW.
3. All costs are characteristic of the industry and based on Call Center upgrade work performed by Deloitte Consulting for clients with comparable customer and employee bases and proprietary knowledge of non-client costs as well as internally estimated "proposal quality" costs.
4. Professional Services include all vendor services and system integration services required to design, build, test, deploy the systems and train the users.

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Schedule AJV - 6: Industry Benchmark Call Center Operations

Calls per Customer per Year

	Average
Deloitte Internal Research ¹	2.2
Comparable Water Utility ²	1.80
American Water ³	1.34
Purdue Study ⁴	2.94
MAWC⁵	1.18

Cost per Customer per Year

	Low	Average	High
Deloitte Internatl Research ¹	\$ 6.28	\$ 10.80	\$ 15.92
MAWC		\$ 9.28	

1. Primary research by Deloitte within utility sector
2. A direct comparison to a water utility with similar size cust base
3. Based on expected call volume of 3,895,136 and customer base served of 2,896,028
4. Research study by Dr. Jon Anton of Purdue University Center for Customer Driven Quality cross industry call center study
5. Based on expected call volume of 521,529 and customer base served of 442,409