ORIGINAL

BEFORE THE ARIZONA CORPORATION COM

COMMISSIONERS

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS PARADISE VALLEY DISTRICT	DOCKET NO. W-01303A-05-0405 **ARIZONA-AMERICAN'S NOTICE OF FILING REJOINDER TESTIMONY**

Arizona-American Water Company hereby files in the above-referenced matter its Rejoinder Testimony for each of the following witnesses:

- Paul G. Townsley;
- Brian K. Biesemeyer;
- Joel M. Reiker; and
- A. Lawrence Kolbe.

Please note that each testimony includes an executive summary, which is intended to satisfy the requirement contained in the August 15, 2005, Procedural Order that each party prepare and file a brief written summary of the prefiled testimony of each witness.

RESPECTFULLY SUBMITTED on March 16, 2006.

Craig A. Marks
Corporate Counsel
Arizona-American Water
19820 N. 7th Street
Suite 201
Phoenix, Arizona 85024
(623) 445-2442
Craig.Marks@amwater.com

Original and 13 copies filed
on March 16, 2006, with:

Docket Control
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

Copies of the foregoing delivered
on March 16, 2006, to:

Dwight D. Nodes
Assistant Chief Hearing Officer
Hearing Division
Arizona Corporation Commission
1200 West Washington St.
Phoenix, Arizona 85007

Maureen Scott
Legal Division
Arizona Corporation Commission
1200 West Washington St.
Phoenix, Arizona 85007

Daniel W. Pozefsky
Residential Utility Consumer Office
1110 West Washington Street
Suite 220
Phoenix, Arizona 85007

Copies of the foregoing mailed
on March 16, 2006, to:

Robert J. Metli
Snell & Wilmer LLP
One Arizona Center
400 E. Van Buren
Phoenix, Arizona 8500-20224
Attorneys for Paradise Valley Country Club

By: Courtney Appelhans

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS PARADISE VALLEY DISTRICT

DOCKET NO. W-01303A-05-0405

REJOINDER TESTIMONY
OF
PAUL G. TOWNSLEY
ON BEHALF OF
ARIZONA-AMERICAN WATER COMPANY
MARCH 16, 2006

REJOINDER TESTIMONY
OF
PAUL G. TOWNSLEY
ON BEHALF OF
ARIZONA AMERICAN WATER COMPANY
MARCH 16, 2006

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Paul Townsley testifies that, because Commission Staff's surrebuttal testimony continues to recommend denial of the Public Safety Surcharge, Arizona-American has unfortunately had to postpone this summer's planned construction of fire-flow improvement projects on Lincoln Drive and Tatum Boulevards in Paradise Valley until at least summer 2007. If the Commission follows the Staff's recommendation to fund fire-flow solely from revenues from the high block surcharge these projects will likely be delayed until summer 2008.

Mr. Townsley testifies that the testimony of RUCO's witness, Ms. Diaz Cortez, is inconsistent with how the fire-flow projects in Paradise Valley and Sun City/Youngtown actually began and mischaracterizes Arizona-American's motivations and intentions. It was actually the Commission that ordered the Company to investigate fire-flow projects in Sun City/Youngtown and the Commission has openly supported the Paradise Valley fire-flow project.

Finally, Mr. Townsley testifies, in response to RUCO's witness Mr. Moore, that the Company's Annual Incentive Plan allows it to compete for employees in a tight Arizona labor market. If this plan were eliminated the Company would need to raise base salaries to be competitive in the market.

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND TELEPHONE NUMBER.

A. My name is Paul G. Townsley. My business address is 303 H Street, Suite 205, Chula Vista, California 91910. My telephone number is (619) 409-7700.

Q. ARE YOU THE SAME PAUL G. TOWNSLEY WHO PROVIDED DIRECT AND REBUTTAL TESTIMONY IN THIS CASE ON BEHALF OF ARIZONA-AMERICAN WATER COMPANY?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY?

A. On behalf of Arizona-American Water Company ("Arizona-American" or the "Company"), I explain the immediate consequence of Commission Staff continuing to recommend denial of the Company's request for a Public Safety Surcharge to fund the Paradise Valley Fire-flow Improvement Program. I also correct some of the inaccuracies and mischaracterizations of this Program contained in the testimony of RUCO witness Marylee Diaz Cortez. Finally, I discuss, in response to RUCO witness Rodney Moore, why the Company's Annual Incentive Program is necessary to attract and retain qualified employees in the tight Phoenix-area labor market.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. I have included an Executive Summary at the beginning of my testimony.

II. PARADISE VALLEY FIRE-FLOW IMPROVEMENT PROGRAM

A. Response to Staff

Q. COMMISSION STAFF WITNESS CARLSON RECOMMENDS DENIAL OF THE COMPANY'S REVISED REQUEST FOR A TWO-STEP PUBLIC SAFETY

SURCHARGE TO FUND FIRE-FLOW PROJECTS IN PARADISE VALLEY. HAVE THERE BEEN ANY CONSEQUENCES AS A RESULT OF THIS RECOMMENDATION?

A. Unfortunately, yes. The Company was preparing to commence and complete two major fire-flow projects on Lincoln Drive and Tatum Boulevard. Please see Rejoinder Exhibit PGT-1 for a brief project description. These projects are critical to completing any remaining fire-flow projects in the Town, because they will provide the backbone pressure and capacity trunk mains for the smaller projects to follow.

The Town of Paradise Valley requires that we schedule all construction on these two major roads during the summer months to reduce traffic disruption, so work must be completed by October 2006. Consequently, the Company needed to immediately send bid requests to contractors to meet this schedule. However, Staff's recommendation to fund fire-flow projects solely from high-block surcharge revenue meant that funds would likely not be timely available for these projects. Therefore, we have postponed the Lincoln and Tatum fire-flow projects until at least 2007, which will in turn push back all other projects for at least another year. We have informed the Town of this outcome.

Q. WHAT HAPPENS IF THE COMMISSION APPROVES THE PUBLIC SAFETY SURCHARGE?

A. If the Commission does decide to approve the Public Safety Surcharge, we will be able to undertake the Lincoln and Tatum projects in 2007. Without the surcharge, the earliest we will have funds available for these projects will be 2008. Later this year, as part of its annual capital planning process, the Company will recast its overall multi-year plans and schedules for fire-flow improvements in Paradise Valley based on the Commission's decision whether to allow the Company to collect a Public Safety Surcharge or to fund fire-flow projects only from high-block-surcharge revenues.

B. Response to RUCO

Q. AMONG OTHER THINGS MS. DIAZ CORTEZ CLAIMED THAT ARIZONA-AMERICAN IS PROMOTING FIRE-FLOW PROJECTS THROUGHOUT ITS TERRITORY FOR BUSINESS GAIN. IS THIS TRUE?

A. Hardly; we only reluctantly undertake fire-flow improvement projects. Our position is that we will undertake these projects only if there is strong community support and the Commission approves a mechanism so that we can timely recover our investments in these discretionary projects. The fire-flow improvement effort in Paradise Valley is underway because of a grass-roots campaign to improve fire-flows Town-wide. And, as I testified in my rebuttal testimony, the Town is asking its other water providers, Berneil Water and the City of Phoenix, to make exactly the same type of investments. If funds will only be available from the high-block surcharge, then the Company will re-cast its plans to align with available revenue. These funds will be treated as contributions; thus, the Company will not earn any return at all on future fire-flow projects.

Q. WHAT ABOUT FIRE-FLOW PROJECTS FOR SUN CITY/YOUNGTOWN AND BULLHEAD CITY?

A. The Sun City/Youngtown fire-flow task force was created in response to Commission Decision No. 67093. During the task-force process, we learned that when a house fire occurs in Sun City/Youngtown, fatalities are four times more likely than the national average, most likely due to the extra difficulty an elderly person may have to escape a burning structure. As with Paradise Valley, Arizona-American is willing to undertake discretionary fire-flow/public-safety projects, but not without Commission assurance that we will promptly be compensated for our investment.

Unfortunately, while there is strong support for this project among key local leaders, Sun City/Youngtown lacks a single governance structure that can speak with authority and clarity for its residents. Therefore, the Company removed this nearly $4 million project, which would have required a 6% rate increase, from last year's capital plan. It is not even being considered as part of this year's plan. This task force process cost the Company $193,000, which has not yet been recovered from customers. Finally, as required by the Commission, the Company undertook, completed, and filed its fire-flow task-force report in the summer of 2005.

Concerning Bullhead City's new request, we have just received it and have made no commitments, not even to undertake a study. We have just filed a new rate case for Mohave Water district and it does not contain any request for pre-approval or funding of fire-flow projects in that community.

Q. DOES THE COMMISSION SUPPORT FIRE-FLOW INVESTMENTS IN PARADISE VALLEY?

A. I think so, but, of course, only the Commission can definitively say so. Certainly, in June 2004, the Commission discussed and ordered the Sun City/Youngtown task force. More recently, the Commission approved the Company's accounting order concerning the Paradise Valley fire flow project. Based on those actions and statements, the Company continued to undertake fire-flow improvement projects in Paradise Valley. However, for now, the Company has slowed the pace of these projects until the Commission's wishes are more clearly stated.

Q. MS. DIAZ CORTEZ MAINTAINS THERE IS NO LOGICAL RELATIONSHIP BETWEEN FIRE FLOW PROJECTS AND HIGH BLOCK SURCHARGES. WHAT IS THE RELATIONSHIP?

A. Fire-flow improvement protects life and property. Those residents with the highest property values to protect are often those with the highest water usage. Hence, the high block water surcharge will link those who benefit the most from fire-flow related property protection to paying relatively more. Clearly, all residents of Paradise Valley benefit from these projects and all customers will pay a portion of the costs in permanent rates as well.

III. ANNUAL INCENTIVE PLAN

Q. RUCO WITNESS MOORE RECOMMENDS DENIAL OF A PORTION OF THE COMPANY'S ANNUAL INCENTIVE PLAN COSTS. DO YOU AGREE WITH HIS RECOMMENDATION?

A. No. As I clearly stated in my rebuttal testimony, the Company's Annual Incentive Plan benefits customers, both short term and long term. Rather than re-arguing all of these reasons once again, let me simply say that the Company's Annual Incentive Plan is a component of its overall employee compensation, which allows it to compete for employees in a tight Arizona labor market. If this plan were eliminated the Company would need to raise base salaries in order to be competitive in the market. Basically, RUCO witness Moore argues that he would rather include these costs in rates as base salaries instead of using the same dollars to provide additional benefits to customers by clearly focusing employees on goals that improve the utility's ability to deliver high quality customer service. This makes no sense to me, nor should it to this Commission. I strongly urge the Commission to include the Annual Incentive Plan costs in our rates.

Q. DOES THIS CONCLUDE YOUR REJOINDER TESTIMONY?

A. Yes it does.

PV Fire Flow Improvement Program – 2006 Projects

The proposed capital expenditure plan for 2006 involves the construction of two projects in the Paradise Valley Water District for a total of $3 million. These projects, described as follows, were originally identified in the fire flow assessment completed in March 2004:

- Approximately 4,500 linear feet of water main, 16-inch in diameter, in Lincoln Drive from east of Tatum Boulevard to west of 43rd Place.
- Approximately 1,800 linear feet of water main, 8-inch in diameter, in Tatum Boulevard, from the intersection at Lincoln Drive to Joshua Tree Lane.

Based on numerous discussions with Town officials and residents, these projects were given the highest priority. The reason for the high priority is that these projects will provide the backbone pressure and capacity trunk mains for the smaller projects to follow. That is, the overall program cannot proceed without these critical projects in place. Current fire flow capacity, in both of the above sections, is less than 500 gallons per minute. The new ductile iron water mains will be connected to existing service lines and a total of six new fire hydrants will be installed. The intended outcome, upon completion of these initial projects, is 1500 gallons per minute in fire flow capacity. Less expensive, follow-on projects can then be constructed in future years.

Both of these projects have completed designs and are currently awaiting bidding for construction. Because the intersection of Tatum Boulevard and Lincoln Drive is the major intersection in the Town, there is a limited window of opportunity for construction. Due to increased traffic flows during the winter months, the Town will not allow construction activity of any sort on these major arterials from November to May.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS PARADISE VALLEY DISTRICT	DOCKET NO. W-01303A-05-0405

REJOINDER TESTIMONY
OF
BRIAN K. BIESEMEYER
ON BEHALF OF
ARIZONA-AMERICAN WATER COMPANY
MARCH 16, 2006

REJOINDER TESTIMONY OF BRIAN K. BIESEMEYER ON BEHALF OF ARIZONA-AMERICAN WATER COMPANY MARCH 16, 2006

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Brian K. Biesemeyer testifies that:

Lawn maintenance expenses of $9,137 rejected by RUCO witness Rodney Moore are for legitimate maintenance of desert landscape at the Company's Sun City office. There is no lawn as alleged by Mr. Moore

Expenses of $1,989 for ice are legitimate and essential for field personnel. This ice is delivered to a central freezer on Company premises.

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND TELEPHONE NUMBER.

A. My name is Brian K. Biesemeyer. My business address is, 15626 N. Del Webb Blvd, Sun City, Arizona, 85351, and my telephone number is 623-815-3125.

Q. ARE YOU THE SAME BRIAN K. BIESEMEYER WHO PREVIOUSLY SUBMITTED TESTIMONY IN THIS DOCKET?

A. Yes.

Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.

A. I have included an Executive Summary at the beginning of my rebuttal testimony.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. I testify about legitimate expenses for "lawn" maintenance and for ice, which were rejected by RUCO witness Rodney Moore.

II. RESPONSE TO RUCO

Q. DO YOU AGREE WITH MR. MOORE'S DISALLOWANCE OF THE LAWN MAINTENANCE EXPENSE?

A. No. Mr. Moore rejected the "lawn maintenance" expense because he believed we were wastefully watering lawn on the one hand and urging conservation by others on the other hand. This is not correct. Although the description is for "lawn" maintenance, there is no lawn or grass at the Sun City office. The Sun City Office, our state operations office, has almost two acre of desert landscaping with 150 trees and shrubs on drip irrigation on a gravel base. As vegetation matures, even low-water-use varieties, it requires more extensive maintenance, such as trimming of shrubs and trees (including large palm trees) and the occasional replacement of a tree, scrub, or cactus after storm damage. The community in which the office resides prides itself on keeping landscape maintained. To be a responsible neighbor, Arizona-American must also keep its desert landscaping well maintained.

I have included as Rejoinder Exhibit BKB-1 several photographs of the desert landscape around the Sun City Office to demonstrate the existing large desert and low-water-use landscape. The lawn maintenance expenses for the Sun City office are legitimate expenses that would be required for any office of its size and location.

Q. WHAT ABOUT THE ICE EXPENSE?

Mr. Moore attempts to co-mingle expenses for ice with other products such as bagels, donuts, smoothies, etc. However, our ice is delivered to a central freezer and is distinct from these other unrelated products. It is unreasonable to expect field employees to work in the Arizona sun without ice to cool thermos water or to refrigerate lab samples. This is a legitimate operating expense.

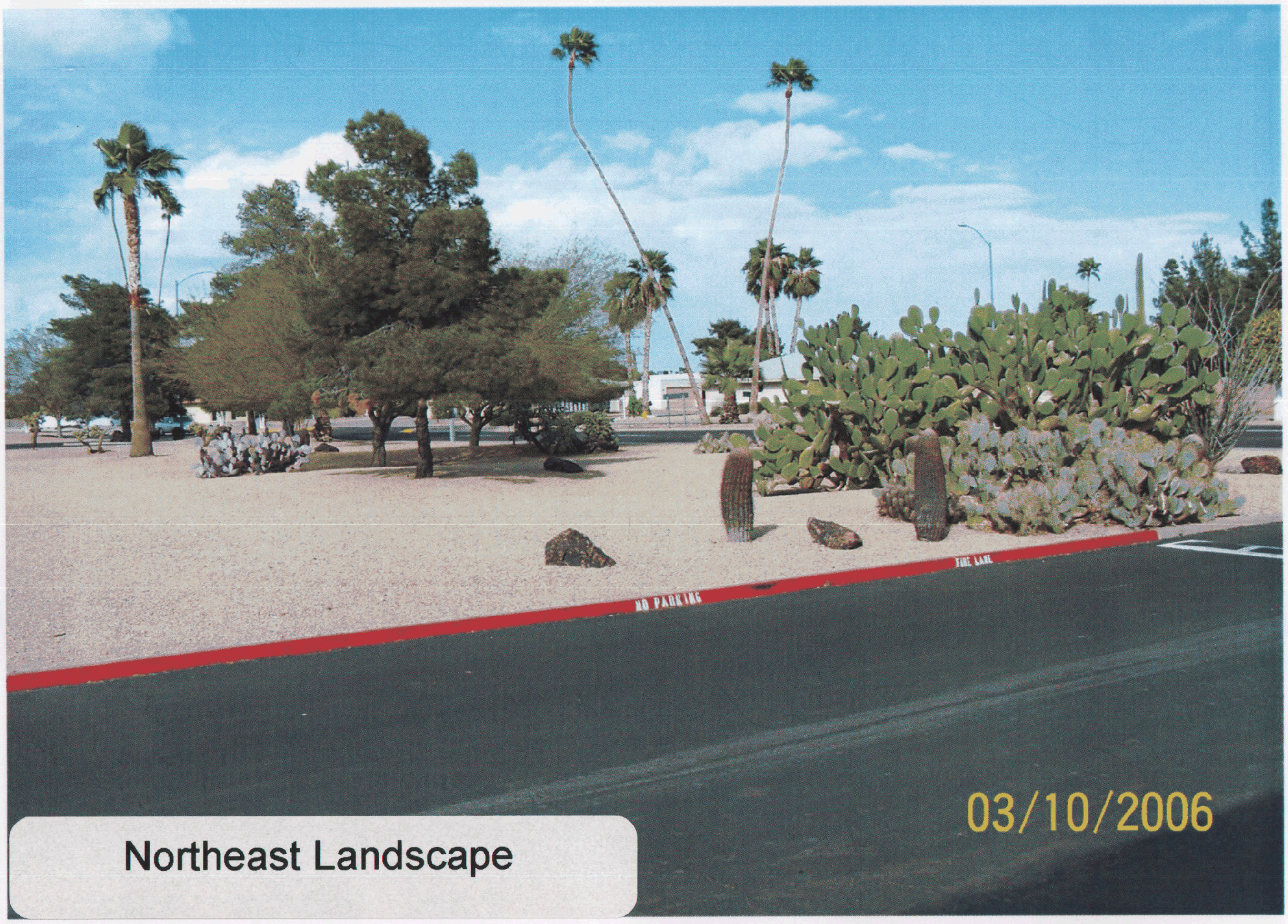
Q. DOES THIS CONCLUDE YOUR REJOINDER TESTIMONY?

A. Yes.

Sun City Office

Landscaping Photographs (Following Pages)

East Center Landscape



Northeast Landscape

Northwest Landscape

Southeast Landscape

Southwest Landscape

West Center Landscape

Customer Entrance Landscape

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS PARADISE VALLEY DISTRICT.	DOCKET NO. WS-01303A-05-0405

REJOINDER TESTIMONY
OF
JOEL M. REIKER
ON BEHALF OF
ARIZONA-AMERICAN WATER COMPANY
MARCH 16, 2006

REJOINDER TESTIMONY
OF
JOEL M. REIKER
ON BEHALF OF
ARIZONA-AMERICAN WATER COMPANY
MARCH 16, 2006

TABLE OF CONTENTS

EXHIBITS

EXECUTIVE SUMMARY

The direct testimony of Company witness Joel M. Reiker addresses the following issues:

Mr. Reiker responds to Staff's surrebuttal testimony regarding post test year public safety/fire flow plant additions and clarifies that the $105,164 in additional amounts the Company proposes are commingled and indistinguishable from the projects Staff has already recommended be included in rate base. Mr. Reiker also requests that the Commission recognize the purpose of the November 2005 accounting order by including amounts related to deferred depreciation expense and post-in service AFUDC on the these same Jackrabbit/Invergordon and McDonald Main projects.

Mr. Reiker accepts Staff's recommendation to share the gain on sale of land over three years as recommended by Staff.

Mr. Reiker responds to Staff's recommendation to exclude all costs related to the Company's 401k plan, as well as motor vehicle leases, fuel, vehicle maintenance costs, lab supplies, uniforms, and numerous other legitimate items, as doing so would knowingly set rates below the cost of service – a result that is most certainly unfair.

Mr. Reiker responds to RUCO's testimony regarding property taxes and makes clear that no adjustment is necessary because the Company's and Staff's test year property tax calculation excludes all amounts related to Motorola, the Miller Road Treatment Facility, and all other non-regulated activities.

Mr. Reiker responds to RUCO's testimony regarding working cash and explains how RUCO's approach to estimating working cash understates the actual investment in rate base. Mr. Reiker also responds to RUCO's belief that because the Company is unable to pay a cash dividend, there is no cost associated with its equity – the company has a cost associated with its equity regardless of whether it recovers that cost.

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND TELEPHONE NUMBER.

A. My name is Joel M. Reiker. My business address is 19820 North 7th Street, Suite 201, Phoenix, Arizona 85024-1694. My telephone number is (623) 445-2490.

Q. ARE YOU THE SAME JOEL M. REIKER WHO PROVIDED REBUTTAL TESTIMONY IN THIS CASE ON BEHALF OF ARIZONA-AMERICAN WATER COMPANY?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY?

A. I respond to the surrebuttal testimony of the Arizona Corporation Commission ("ACC") Staff and the Residential Utility Consumer Office ("RUCO").

II. RESPONSE TO STAFF

A. Response to the Surrebuttal Testimony of Staff Witness Dorf

1. *Public Safety/Fire Flow Plant Additions*

Q. DOES STAFF ACCEPT COMPANY RATE BASE ADJUSTMENT AAW-2, TO INCREASE RATE BASE BY $105,164 RELATED TO ADDITIONAL AMOUNTS WHICH HAVE CLOSED TO THE JACKRABBIT/INVERGORDON AND MCDONALD MAIN PROJECTS?

A. No. According to the surrebuttal testimony of Staff witness James J. Dorf at pages 3 – 4:

> Company witness Joel M. Reiker did not provide an in service date for the Jackrabbit/Invergordon mains work order... Staff does not agree with the increase since both projects were placed into service not only after the Company's filing but also after Staff Engineer's inspection of the system.

Staff witness Dorf goes on to cite the Commission decision from Paradise Valley's previous rate case in which the Commission directed the Company to limit its adjustments for post-test year plant to include only plant added within ninety days of sufficiency.

Q. STAFF RECOMMENDS THAT $3,018,867 RELATED TO THE JACKRABBIT/INVERGORDON AND MCDONALD MAIN PROJECTS BE INCLUDED AS POST TEST YEAR PLANT IN THIS CASE. ARE THESE ADDITIONAL AMOUNTS TOTALING $105,164 DISTINGUISHABLE FROM THAT PROJECT?

A. No, they are not. The $105,164 represents additional amounts that closed to the Jackrabbit/Invergordon and McDonald main work orders (which Staff recommends be included in rate base) in the weeks after those projects were placed in service on October 6, 2005. These projects were placed into service on the same day the Staff Engineering witness inspected the Company's facilities.

Q. DOES THE COMMISSION DECISION CITED BY STAFF PRECUDES THE INCLUSION OF THESE ADDITIONAL AMOUNTS ($105.164)?

A. No. That decision directed the Company to limit its adjustments for post-test year plant and the Company complied with that decision. Staff has recommended that public safety/fire flow improvement projects completed to date be included in rate base and these additional amounts ($105,164) are part of the projects Staff already included.

Q. HOW DOES THE COMPANY RESPOND TO STAFF'S TESTIMONY THAT IT "HAS NOT HAD SUFFICIENT TIME TO REVIEW AND AUDIT THE

JACKRABBIT/INVERGORDON MAINS." (SEE SURREBUTTAL TESTIMONY OF JAMES J. DORF, P. 4 AT 21 – 22.)

A. I must assume Staff has found these projects to be reasonable and prudent given their recommendation to include $3,018,867 in rate base. The additional amounts ($105,164) simply represent items such as AFUDC and invoices for contractual services that were settled and charged to the Jackrabbit/Invergordon and McDonald Main work orders subsequent to the improvements being placed into service. All supporting documentation related to these additional amounts was attached to my rebuttal testimony as Exhibit JMR-RB2.

Q. DOES THE COMPANY STILL PROPOSE TO INCLUDE IN RATE BASE DEFERRED DEPRECIATION EXPENSE AND ACCRUED POST-IN SERVICE AFUDC ON THE JACKRABBIT/INVERGORDON AND MCDONALD MAIN PROJECTS?

A. Yes. The purpose of the November 2005 accounting order (Decision No. 68303) was to allow the Company an opportunity to be made whole through the deferral of depreciation expense and accrual of post-in service AFUDC on these projects. Under Staff's and the Company's current recommendation/proposal, costs related to the Jackrabbit/Invergordon and McDonald main projects will not be recovered until at least September 2006 (based on the current time clock). Consistent with the purpose of the accounting order, we ask the Commission to include those deferred amounts in rate base at this time.

Q. WHAT IS THE AMOUNT OF DEFERRED DEPRECIATION EXPENSE AND ACCRUED POST-IN-SERVICE AFUDC RELATED TO THE JACKRABBIT/INVERGORDON AND MCDONALD MAIN PROJECTS?

A. The total amount, not including amounts related to the Nauni Valley Drive improvements discussed on page 20 of my rebuttal testimony, is $154,532. The calculations in support of this amount are attached hereto as Exhibit JMR-RJ1.

2. *Working Cash Requirement*

Q. DOES STAFF CONTINUE TO RECOMMEND NO WORKING CASH REQUIREMENT?

A. Yes. According to the testimony, Staff has concerns regarding the Company's updated lead/lag study (see surrebuttal testimony of James J. Dorf, p. 6 at 1 – 25). Those concerns include the use of 175.5 rather than 212 lag days for property taxes, and other errors discussed in the direct testimony of RUCO witness Timothy J. Coley.

Q. WILL THE COMPANY ACCEPT THE USE OF 212 LAG DAYS FOR PROPERTY TAXES IN ESTIMATING THE WORKING CASH REQUIREMENT IN THIS CASE?

A. Yes, and as stated by Staff witness Dorf on page 6 of his surrebuttal testimony, doing so reduces the working cash requirement by approximately $20,000. After making this adjustment the Company's revised working cash requirement is $94,745, shown on Exhibit JMR-RJ2.

Q. HAS THE COMPANY ACCEPTED AND/OR CORRECTED THE OTHER ISSUES RELATED TO WORKING CASH DISCUSSED BY RUCO WITNESS COLEY IN HIS DIRECT TESTIMONY?

A. Yes. I will address the topic again when I respond to the surrebuttal testimony of RUCO witness Coley. As stated in the previous Q&A, the Company requests a working cash allowance of $94,745.

3. *Gain on Sale of Land*

Q. DOES THE COMPANY ACCEPT STAFF'S RECOMMENDATION THAT ARIZONA-AMERICAN SHARE THE AFTER-TAX GAIN ON THE SALE OF LAND WITH CUSTOMERS IN THE FORM OF A MONTHLY FIXED CHARGE SURCREDIT OVER THREE YEARS INSTEAD OF FIVE YEARS?

A. Yes. The Company will accept Staff's recommendation regarding this issue. The detail related to Staff's and the Company's recommended/proposed surcredit is attached hereto as Exhibit JMR-RJ3.

Q. DOES THIS CONCLUDE YOUR RESPONSE TO THE SURREBUTTAL TESTIMONY OF STAFF WITNESS DORF?

A. Yes, it does.

B. <u>Response to the Surrebuttal Testimony of Staff Witness Carlson</u>

1. *Allocated Corporate Miscellaneous Expenses*

Q. WHY DOES STAFF CONTINUE TO RECOMMEND AN ADJUSTMENT TO REDUCE OPERATING EXPENSES BY $145,648, THE ENTIRE AMOUNT OF ALLOCATED CORPORATE MISCELLANEOUS EXPENSES?

A. Staff witness Carlson discusses why Staff believes the Commission should remove all costs related to the Company's 401k plan, as well as costs for motor vehicle leases, fuel, vehicle maintenance, lab supplies, uniforms, and numerous other legitimate items on pages 3 – 4 of his surrebuttal testimony. The reasons provided by Staff are summarized below:

- Given the late date in this proceeding, it would be difficult for Staff to verify the Company's statement that many/all of the cited invoices provided to RUCO were actually directly allocated and were provided only because they were on the same invoices and credit card statements as a number of items that these invoices were meant to document.

And;

- Staff is concerned that the Company's application contained very few of the "necessary or required adjustments" to this account which would include the removal of various expenses that the Commission routinely excludes. Finally, Staff explains that by disallowing the entire amount of the account, the Commission will be "sending a signal" to the Company that it should consider the Commission's prior treatment of certain expenses when justifying that its test year expenses are reasonable and appropriate.

Q. HOW DO YOU RESPOND TO THE REASONS SUMMARIZED ABOVE?

A. It would not be difficult for Staff to verify the statement that virtually all 21 of the miscellaneous plant items listed on page 28 of my rebuttal testimony were actually charged directly to the operating districts. On page 29, lines 12 – 14 of my rebuttal testimony, I explained how the P-card statements list the exact business unit and account to which each item was charged. My statement can be verified in a minimal amount of time by examining the first four digits to the right of each charge shown on the P-card statements.[1] Alternatively, one can search the Arizona corporate and Central Division corporate account ledgers (using the spreadsheet's search function) for the amounts in question to verify that they were not charged to those accounts.

With regard to the second reason summarized above; I would note that the original basis provided for Staff's adjustment was what Staff believed to be a lack of proper allocation of many of the charges in this account. (See direct testimony of Staff witness Alexander Ibhade Igwe, pp. 12 -14.) Staff witness Carlson now cites a lack of "necessary and required adjustments", such as the removal of all lobbying portions of annual dues for various organizations, as a basis for Staff's removal of these charges. We are currently eight months into this proceeding and up to this point, the Company has not been made aware of any operating expense adjustments that are "required" as a prerequisite to Staff conducting its audit. Regardless of the fact that we have accepted many of the individual adjustments RUCO has made to this account (including the elimination of the lobbying portions of dues), it doesn't seem fair that a company should be prohibited from seeking recovery of any item that the Commission routinely excludes.[2] I need only to point to the Arizona utility that continually seeks recovery of flotation costs, or the company that inflates its cost-of-equity estimates to reflect non-market related risks. In each case, Staff undertakes an extensive and time consuming analysis to confirm the appropriateness of

[1] This information appears as a number beginning with 23 to the right of the amount of the charge. 2301 and 2320 are the Arizona corporate and Central Division corporate business units.
[2] I note that the Company and RUCO have compromised on many of the specific charges to this account that RUCO originally adjusted on grounds of legitimacy, and the remaining charges in dispute are limited to relatively minor amounts related to ice and grounds keeping.

the company's request. With respect to fairness the instant case is no different. The fact that the account in question contains legitimate utility operating expenses is not in dispute, and the Company's "failure" to anticipate what Staff believes to be the disposition of many of the charges in this account should not be reason to knowingly set rates below the cost of service by eliminating the entire amount.

Q. HAS THE COMPANY RESPONDED TO THE DATA REQUEST MENTIONED ON PAGE 4, LINES 21 – 22 OF STAFF WITNESS CARLSON'S TESTIMONY?

A. The data request asks for copies of supporting documentation for over 4,500 account entries. Depending on the type of transaction, supporting documentation is either imaged within the Company's accounting system, or held in hard copy at either the Company's Phoenix or Sun City Office. Preparing hard copies of imaged supporting documentation for each entry in this account would be a monumental task. For this reason, Staff and RUCO have either conducted on-site audits, or have requested copies of supporting documentation for representative samples of transactions. In response to Staff's data request, we have provided supporting documentation for all transactions in excess of $1,000 and have invited Staff to return to our office at their convenience to substantiate all other transactions.

Q. DOES THIS CONCLUDE YOUR RESPONSE TO THE SURREBUTTAL TESTIMONY OF STAFF WITNESS CARLSON?

A Yes, it does.

II. RESPONSES TO RUCO

A. Response to the Surrebuttal Testimony of RUCO Witness Moore

1. *Property Taxes*

Q. HAVE YOU REVIEWED RUCO'S TESTIMONY REGARDING PROPERTY TAXES RELATED TO THE MILLER ROAD TREATMENT FACILITY ("MRTF")? (SURREBUTTAL TESTIMONY OF RODNEY L. MOORE. PP. 15 – 17.)

A. Yes, and based on RUCO's surrebuttal testimony, it is clear that additional explanation is necessary in order to provide a clear understanding of this issue.

Q. ON PAGE 15, LINES 11 – 15 OF RUCO WITNESS MOORE'S SURREBUTTAL TESTIMONY, HE CLAIMS THAT YOU HAVE TESTIFIED THAT MOTOROLA'S TEST-YEAR PROPERTY TAXES WERE $14,000 AND THIS IS REFLECTED IN PARADISE VALLEY'S ADJUSTED PROPERTY TAX EXPENSE OF $213,241. IS THIS ACCURATE?

A. No, that is not an accurate summary of my testimony. In fact, the opposite is true – the Company's and Staff's test-year property tax calculation does not include any amount related to Motorola, the MRTF, or any other non-regulated activity. It would be inappropriate to reduce test year property taxes for amounts that are not there to begin with, as RUCO proposes.

Q. WHAT DOES THE $14,000 DISCUSSED BY RUCO REPRESENT?

A. The $14,000 represents the best estimate of the property taxes that would be attributable to the MRTF using ADOR's methodology if the MRTF were individually assessed. This amount is not included in the Company's or Staff's test year property taxes and that is why no adjustment is necessary.

Q. WHAT DOES THE $56,844 DISSCUSSED BY RUCO REPRESENT?

A. The $56,844 is what the Company has accrued for the MRTF and, on its face, is clearly not a reasonable estimate of property taxes.[3] My understanding is that the accrual was set up by American Water's tax department several years ago and for the reasons stated on page 29, lines 13 – 20 of my rebuttal testimony, it has never been trued-up or otherwise compared to what the property taxes related to the MRTF would actually be. In light of RUCO's testimony on this issue, the Company is currently working to have the amount of this accrual significantly reduced. The company has never been reimbursed by Motorola for any property taxes and may not be reimbursed in the future.

Q. DOES THIS CONCLUDE YOUR RESPONSE TO THE SURREBUTTAL TESTIMONY OF RUCO WITNESS MOORE?

A. Yes, it does.

B. Response to the Surrebuttal Testimony of RUCO Witness Coley

1. *Working Capital*

Q. WILL THE COMPANY ACCEPT THE USE OF 212 PROPERTY TAX LAG DAYS IN THE COMPUTATION OF WORKING CASH?

A. Yes. As previously explained in my response to Staff, the Company will accept 212 days.

[3] The $56,844 implies a 34% property tax rate compared to the actual 8.24%.

Q. HOW DOES THE COMPANY RESPOND TO RUCO'S DISCUSSION OF WHY IT BELIEVES DEPRECIATION EXPENSE SHOULD NOT BE CONSIDERED IN A LEAD/LAG STUDY?

A. RUCO witness Coley testifies on page 10, lines 4 – 8 of his surrebuttal testimony, that depreciation is non-cash account and therefore should not be included in the calculation of working cash. He goes on to cite a previous rate decision for Paradise Valley in which the Commission agreed with that basis. However, the fact that depreciation is a non-cash account is irrelevant to the time-value of the funds due and payable to investors at the time depreciation is simultaneously recorded as an expense and deducted from rate base. Absent some sort of adjustment, investors will *never* be compensated for this portion of their investment. If the Commission does not wish to recognize depreciation expense in the working cash requirement, then the test year balance of accumulated depreciation should be adjusted to reflect the actual investment in rate base.

Q. HOW DOES THE COMPANY RESPOND TO RUCO'S TESTIMONY THAT BECAUSE ARIZONA-AMERICAN WATER HAS NOT PAID A CASH DIVIDEND SINCE 2003, IT DOES NOT HAVE A COST ASSOCIATED WITH ITS EQUITY, AND IT IS THEREFORE A NON-CASH EXPENSE AND SHOULD NOT BE RECOGNIZED IN THE WORKING CASH REQUIREMENT? (SURREBUTTAL TESTIMONY OF TIMOTHY J. COLEY. P. 11 AT 8 – 20.)

A. The Company has a cost associated with equity regardless of whether it recovers that cost and is able to pay a dividend – RUCO even estimates the cost of Arizona-American Water's equity. The regular payment of a cash dividend would simply create a payment lag associated with a portion of the equity cost, and a net working capital requirement would likely remain. Further, compensation related to the cost of equity is due the Company when service is rendered. Absent recognition in the working cash requirement, the Company will never be compensated for the implicit additional investment related to the time it must wait to be compensated for that cost.

Q. DOES THIS CONCLUDE YOU RESPONSE TO THE SURREBUTTAL TESTIMONY OF RUCO WITNESS COLEY?

A. Yes, it does.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes, it does.

ARIZONA-AMERICAN WATER COMPANY
PARADISE VALLEY WATER DISTRICT
Docket No. WS-01303A-05-0405
Accounting Order (Dec. 68303) Deferral Related to Jackrabbit/Invergordon and McDonald Main Projects

Line No.	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]
1	Asset No.	Description	Date in Svc.	Amount	Depr Rate	October	November	December	January	February	March	April	May	June	July	Total
2																
3	30087568	Jackrabbit/Invergordon Main	Oct. 2005	$ 2,081,567	2.34%	$ 2,030	$ 4,059	$ 4,059	$ 4,059	$ 4,059	$ 4,059	$ 4,059	$ 4,059	$ 4,059	$ 4,059	$ 34,502
4	30101100	McDonald Main Extension	Oct. 2005	821,283	2.34%	801	1,602	1,602	1,602	1,602	1,602	1,602	1,602	1,602	1,602	13,617
5	30069173	Fire Hydrants	Oct. 2005	235,204	2.10%	206	412	412	412	412	412	412	412	412	412	3,502
6		Total Deferral		3,138,054												51,621
7																
8																
9					AFUDC											
10	Asset No.	Description	Date in Svc.	Amount	Debt Rate	October	November	December	January	February	March	April	May	June	July	Total
11																
12	30087568	Jackrabbit/Invergordon Main	Oct. 2005	$ 2,081,567	4.77%	$ 2,069	$ 8,274	$ 8,274	$ 8,274	$ 8,274	$ 8,274	$ 8,274	$ 8,274	$ 8,274	$ 8,274	$ 68,261
13	30101100	McDonald Main Extension	Oct. 2005	821,283	4.77%	816	3,265	3,265	3,265	3,265	3,265	3,265	3,265	3,265	3,265	26,936
14	30069173	Fire Hydrants	Oct. 2005	235,204	4.77%	234	935	935	935	935	935	935	935	935	935	7,714
15		Total Deferral														102,911

Line No.	Description	Total
16		
17		
18		
19	Subtotal Deferral - 10-inch & Above Mains	143,316
20	Subtotal Deferral - Hydrants	11,216
21	Subtotal Deferral - Jackrabbit/Invergordon & McDonald Mains & Hydrants	154,532
22		
23		
24		
25		
26	Accumulated Depreciation Adjustment	51,621
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		

Arizona American Water Company
Test Year Ended December 10, 2004
Lead/Lag Study - Working Cash Requirement

Exhibit JMR-RJ2
Schedule
Page 1 of 1
Witness: Reiker

PARADISE VALLEY

Line No.		Test Year Adjusted Results	Revenue Lag Days[3]	Expense Lag Days	Net Lag Days	Lead/ Lag Factor	Cash Working Capital Required
1	OPERATING EXPENSES						
2	Labor	$ 527,708	38.3000	12.0000	26.3000	0.0721	$ 38,024
3	Fuel & Power	827,908	38.3000	38.1148	0.1852	0.0005	420
4	Chemicals	16,499	38.3000	30.0000	8.3000	0.0227	375
5	Management Fees	554,302	38.3000	(3.8800)	42.1800	0.1156	64,056
6	Group Insurance	117,720	38.3000	(4.6445)	42.9445	0.1177	13,850
7	Pensions	26,625	38.3000	45.0000	(6.7000)	(0.0184)	(489)
8	Insurance Other Than Group	48,923	38.3000	45.0000	(6.7000)	(0.0184)	(898)
10	Rents	64,878	38.3000	(10.6818)	48.9818	0.1342	8,706
11	Depreciation & Amortization	799,234	38.3000	-	38.3000	0.1049	83,865
12	Other Operating Expnses[1]	655,707	38.3000	30.0000	8.3000	0.0227	14,911
13	TAXES						
14	Taxes Other than Income	42,405	38.3000	26.3188	11.9812	0.0328	1,392
15	Property Taxes[5]	216,214	38.3000	212.0000	(173.7000)	(0.4759)	(102,894)
16	Income Tax[2]	420,233	38.3000	37.0000	1.3000	0.0036	1,497
17	RETURN						
18	Interest on Debt[4]	520,071	38.3000	107.2300	(68.9300)	(0.1888)	(98,215)
19	Return on Equity	668,485	38.3000	-	38.3000	0.1049	70,145
20							
21							
22							
23							
24	WORKING CASH REQUIREMENT						$ 94,745
25							
26							
27	[1]All other Operating Expenses are assumed to be paid by the 15th of the month following the receipt of goods and services.						
28	[2]At proposed rates.						
29	[3]Per direct testimony of RUCO witness Coley.						
30	[4]Expense lag days per direct testimony of RUCO witness Coley.						

[5]Property tax lag days per Dorf surrebuttal testimony at p. 6.

Arizona American Water Company
Docket No. W-01303A-05-0405
Paradise Valley Water District
Proposed Sur-credit Related to Gain on Sale of Land

Total amount to be Refunded to Customers	$240,840.42
Years to be recovered over	3
Annual Recovery	$80,280
Monthly Recovery	$6,690

MONTHLY MINIMUM SURCHARGE CALCULATION

Meter Size	Monthly Minimum	Minimum Multiples	2004 Avg. Customers	Equivalent Meters	Meter Monthly	Annual Total
5/8 - inch		1.0	2390	2,390	0.90	$ 25,812
3/4 - inch		1.0	17	17	0.90	$ 184
1 - inch		1.7	1957	3,327	1.53	$ 35,931
1.5 - inch		3.3	-	-	2.97	$ -
2 - inch		5.2	267	1,388	4.68	$ 14,995
3 - inch		10.0	12	120	9.00	$ 1,296
4 - inch		16.6	1	17	14.94	$ 179
6 - inch		33.0	5	165	29.70	$ 1,782
Total			4,649	7,423.84		
Times 12 Months				89,086.12		
Minimum Surcharge					$ 0.90	$ 80,178

5/8 - inch	$0.90
3/4 - inch	$0.90
1 - inch	$1.53
1.5 - inch	$2.97
2 - inch	$4.68
3 - inch	$9.00
4 - inch	$14.94
6 - inch	$29.70

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, INC., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS PARADISE VALLEY WATER DISTRICT.	DOCKET NO. WS-01303A-05-0405

REJOINDER TESTIMONY
OF
A. LAWRENCE KOLBE
ON BEHALF OF
ARIZONA-AMERICAN WATER COMPANY
MARCH 16, 2006

TABLE OF CONTENTS

I. INTRODUCTION AND SUMMARY

Q1. Please state your name and address for the record.

A1. My name is A. Lawrence Kolbe. My business address is The Brattle Group, 44 Brattle Street, Cambridge, Massachusetts, 02138.

Q2. Did you prepare direct and rebuttal testimony earlier in this proceeding?

A2. Yes.

Q3. What is the purpose of your rejoinder testimony?

A3. I have been asked by Arizona-American Water Company ("Arizona-American") to review the Surrebuttal Testimony of Dennis R. Rogers ("Rogers Surrebuttal") on behalf of the Staff of the Arizona Corporation Commission and the Surrebuttal Testimony of William A. Rigsby ("Rigsby Surrebuttal") on behalf of the Residential Utility Consumer Office, and, if necessary, to respond to statements made in those documents related to areas covered in my rebuttal testimony.

Q4. Before you turn to your review, are there any changes to the various recommended allowed rates of return on equity for Paradise Valley, as you understand them?

A4. Yes. My rebuttal testimony reported a range for Staff of 10.2 percent to 10.6 percent, with a recommendation of 10.4 percent, citing the Executive Summary in Mr. Rogers's direct testimony. However, the Rogers Surrebuttal's Executive Summary reports that the Staff's range is 10.0 to 10.6 percent and that Staff is recommending the midpoint, 10.3 percent.

Q5. Please summarize the results of your review.

A5. Both Mr. Rogers and Mr. Rigsby address my comments on the use of market-value capital structures to assess the sample's degree of financial risk, for the purpose of adjusting for the different level of financial risk at Paradise Valley's ratemaking capital structure. Mr. Rogers states that the regulatory commissions I cite as using market-value capital structures are a "small portion of the regulatory universe." I would agree that this is true in North America, but they are a huge portion of the regulatory universe that has instituted rate regulation with the benefit of access to the modern financial literature. In fact, I am unaware of any recently instituted regulatory system that uses anything other than market-value weights. Regulatory procedures should, and do, evolve as economic knowledge advances.

Mr. Rogers also argues that simplicity and consistency suggest that book-value sample weights should be used with book-value regulatory weights. However, the ratemaking process itself uses both market and book values. That is, nearly half a century of research has concluded that the level of financial risk in the measured cost of equity depends on the sample's *market*-value capital structure. But the ratemaking capital structure is based on *book* value, not market value. True consistency takes account of this difference explicitly, by calculating the level of financial risk that goes with the ratemaking capital structure, starting from the actual, market-value capital structure that determines the measured cost of equity.

Mr. Rigsby focuses on why he believes it to be inappropriate to view a regulated utility in the same light as competitive companies. By way of example, he compares utilities' risks to those faced by pizza parlors and airline companies, enterprises with a high risk of bankruptcy. This discussion is misplaced, in two ways.

First, the principles in my testimony do not rely on the risk of bankruptcy. They instead focus on how changes in the level of debt affect the value of cash flows received by equity. In particular, the magnification of the variability of equity returns and equity value due to the addition of debt happens even if there is no risk of bankruptcy at all. In fact, the initial papers in this literature assumed away bankruptcy risk entirely, yet they still concluded that debt magnifies equity's risk.

Second, it is double-counting to use a utility's low business risk to argue that a full adjustment for financial risk differences is unwarranted. There is no dispute among the parties that utilities have materially less business risk than the typical company. That is why all parties start with utility sample groups. Use of a utility sample *automatically* takes care of the fact that utilities have unusually low business risk. It double-counts that risk to use it again to avoid a full adjustment for the difference in financial risk between the sample's actual, market-value capital structure and the utility's ratemaking capital structure.

Q6. What about your rebuttal's comments on the market-to-book test?

A6. Only Mr. Rogers addresses this topic. He states that I have been inconsistent in giving some weight to one cost of equity estimate based on the DCF model, which assumes the validity of the present value formula, while at the same time saying that the present value formula does not explain stock prices well enough to permit reliance on the market-to-book test. He also stresses the present value formula's widespread use for valuing stock prices and other investments, and states that it would be wrong to drop a widely recognized model in favor of my personal interpretation.

Q7. Please summarize your response.

A7. First, Dr. Vilbert's direct testimony clearly states our concerns over the present value formula that underlies the DCF model. But estimation of the cost of equity is hard, and the profession is nowhere close to an agreed methodology for how to perform the task. In my view, giving *some* weight to a DCF estimate without any problems other than that with the formula itself is still warranted.

However, the market-to-book test goes far beyond the mere giving of some weight to one of several methods of estimating the cost of capital. The market-to-book test for a pure-play utility with a book-value rate base purports to be an absolute test of whether shareholders expect to earn more or less than the cost of capital. My direct testimony, and my rebuttal, explored the implications of accepting that test at face value. These implications (for example, utility costs of equity that are below the risk-free interest rate or even negative) go far beyond my "personal interpretation."[1] I do not find discussions of these points in the Rogers Surrebuttal.

I agree with Mr. Rogers that the present value formula is a standard tool. I believe that it is a tool for which there is no ready substitute in many applications. But that does *not* mean that regulators can rely on the market-to-book test. Whatever the true underlying model or models that eventually will be found to explain stock prices, the evidence cited in my earlier testimony demonstrates that they will be more complicated than the simple present value formula. No absolute test of value can be solidly grounded if it assumes that the present value formula completely explains stock prices.

---

[1] Additionally, as noted in footnotes 22 and 24 of my direct testimony, some very well respected economists also believe that stock price formation is more complicated than our simple models admit.

Q8. How is the remainder of your testimony organized?

A8. My testimony is organized by topic. *Section II* provides my comments on criticisms of the use of market-value capital structures to interpret sample evidence on appropriate rates of return for utilities. *Section III* addresses the comments on the market-to-book test.

II. MARKET-VALUE CAPITAL STRUCTURE

Q9. How is this section organized?

A9. It addresses first Mr. Rogers's surrebuttal and then Mr. Rigsby's.

A. THE ROGERS SURREBUTTAL

Q10. What does Mr. Rogers say about the comments in your rebuttal testimony on use of market-value capital structure weights?

A10. I read his surrebuttal testimony as making three points:

- The examples of regulatory use of market-value capital structures that my rebuttal cites are "a small portion of the rate regulated universe," which implies use of market-value capital structures is not a widely accepted methodology. (Rogers Surrebuttal, p. 5)
- The cost of equity when using market-value capital structures is dependent on the cost of debt, which (1) is "inappropriate" and (2) leads to problems because "a utility's cost of equity decreases if it uses low cost debt." (Rogers Surrebuttal, pp. 5-6)
- While Staff acknowledges that the its financial risk adjustment uses book-value weights rather than the market-value weights used in the actual Hamada procedure Staff cites, Staff "prefers to use the book values" for their ease of estimation and consistency with other parts of the calculation. (Rogers Surrebuttal, p. 6) Additionally, had Staff used market-value weights for Paradise Valley and for its sample, based on an assumed market-to-book ratio for Paradise Valley, it would have made a lower financial risk adjustment than it did. (Rogers Surrebuttal, p. 7)

Q11. Please respond to the first of these points.

A11. In my experience, rate regulation is like an oil supertanker. Even when economics discovers clearly superior methods and techniques, it can take a long time for regulation to change prior approaches, just as it takes a long time to change the course of a supertanker. I cited the experience of Australia, New Zealand and the United Kingdom in my rebuttal testimony because those countries had the advantage of initiating rate regulation with access to the modern economics literature. In effect, those countries launched their own "supertankers" on a heading that took advantage of this modern literature, and they uniformly adopted market-value capital structures in analyzing the cost of capital.

North America, which has a much longer history of rate regulation, started off on a different course, and the fact that North American rate regulation has not yet fully incorporated the modern economic understanding of the effects of capital structure on the cost of equity is not surprising. At one time, rate regulation in the United States relied on "fair value" rate bases derived from engineers' estimates of reproduction cost, and solely on "comparable earnings" estimates of the cost of capital. Original cost rate bases and discounted cash flow or capital asset pricing model estimates of the cost of capital were once controversial and only "a small portion of the rate regulated universe." That gradually changed, as regulatory commissions grew to understand and adopt the results of more modern research. That process of change is underway for use of market-value capital structures, as well. But if the mere fact that an advance in technique has not yet been incorporated were to prevent its adoption by regulators, there would be no changes in regulatory procedures in the U.S.

Q12. Please respond to the second point, regarding how a dependence of the cost of equity on the cost of debt is "inappropriate" and how a lower cost of debt leads to a lower cost of equity.

A12. Modern finance teaches that the most basic measure of the required rate of return on an investment is the after-tax weighted-average cost of capital ("ATWACC"), calculated with market-value weights. The research shows the ATWACC is insensitive to capital structure over a broad middle range, which varies from industry to industry. A constant ATWACC implies that all else equal, the cost of equity *must* vary with the cost of debt.

Additionally, if the ATWACC is constant, a company with a lower cost of debt has to have a *higher* cost of equity, not a lower one, all else held equal.[2] If both the cost of equity and cost of debt went down (or up), the ATWACC would also, so that the ATWACC would no longer be constant.

Q13. Please respond to the third point, regarding Staff's preference for book values and the results if a market-value capital structure were imputed to Paradise Valley.

A13. Ease of calculation is desirable, but not if it produces an incorrect answer. Nor is consistency of book with book or market with market appropriate if the result is incorrect.

The after-tax rate of return required on an investment is like water in a pitcher. It can be poured into glasses labeled "return on equity" or "[after-tax] return on debt," but within a

2 Surrebuttal Schedule DRR-9 in the Rogers Surrebuttal, cited and discussed at p. 6, appears to lead to the opposite conclusion. However, the schedule does not conform to the principles that underlie my testimony. I have been informed by Arizona-American that Staff has acknowledged that this Schedule contains calculation errors. Additionally, I would note that since regulatory practice is to use the *current* cost of equity and the *embedded* cost of debt, there is no inconsistency in *calculating* the allowed return on equity using the current cost of debt and the current ATWACC, and then allowing the embedded cost of debt in rates.

broad middle range of capital structures, the total amount of water is unchanged by the names on the glasses into which it is poured.[3] The modern way to measure the amount of water in the pitcher is to analyze a sample's ATWACC, calculated with market-value weights. If, after pouring water into ratemaking glasses labeled "return on equity" and "return on debt," the overall regulatory rate of return ends up with water left in the pitcher, the return is inadequate.[4]

Unfortunately, this is the outcome that Staff's recommendation produces. The Staff recommendation starts with an estimated cost of equity that reflects a low level of financial risk because of the high *market*-value capital structures of the sample, but adjusts that rate of return only for the financial risk difference between the sample's and Paradise Valley's *book*-value capital structures. This would be correct only if the sample's market-value capital structure had been equal to its book-value capital structure.

Q14. What about Staff's calculation of the financial risk adjustment that would have resulted at the market-value capital structure it imputes to Paradise Valley?

A14. This alternative procedure, of imputing a market-value capital structure to Paradise Valley and adjusting only for differences in that and the sample's market-value capital structure, also leaves water in the pitcher. That return would be correct only if Paradise Valley's imputed market-value capital structure were to be used to set Paradise Valley's rates.

---

3 Not to strain the analogy too far, the glass labeled "return on debt" cannot hold all the water, although the one labeled "return on equity" could.

4 This analogy abstracts from the regulatory use of embedded instead of current interest rates. If that difference is thought of as a separate element of the revenue requirement, the analogy works as stated.

Q15. But does not consistency require that both calculations be either book-based or market-based?

A15. No, that would not be in accord with the current proceeding's facts. Here, the amount of financial risk in the estimated cost of equity is based on the samples' market-value capital structures, yet Paradise Valley's revenue requirement is based on book-value weights. True consistency requires that this difference be recognized in the analysis, not ignored. Given that there is in fact a distinction between (1) the sample's *market*-value-based level of financial risk and (2) Paradise Valley's *book*-value-based regulatory capital structure, it is the use of the same weights, whether based on market or book values, that would be inconsistent.

B. THE RIGSBY SURREBUTTAL

Q16. Please turn to the comments on market-value capital structure contained in the Rigsby Surrebuttal. What does Mr. Rigsby say on this issue?

A16. Part of his surrebuttal suggests that my own rebuttal may not have been as clear as I had hoped,[5] but the main thrust of his comments addresses why he believes it is inappropriate to view a regulated utility "in the same light as companies that operate in a purely competitive environment."[6] Much of his testimony on this point consists of an extended comparison between risks such as bankruptcy facing a utility and a local pizza parlor, or the airline

---

[5] For example, I was not offended by Mr. Rigsby's comments on the capital structure literature, merely puzzled. Nor did I say that he failed to quantify the basis of his 50 basis point adjustment for financial risk, merely that it, unlike Staff's, was not based on an analysis that used any financial model at all.

[6] Rigsby Surrebuttal, p. 8.

industry.[7] At the end, he adds some other comments and quotations regarding Arizona-American's and the water industry's relative risk.[8]

Q17. Please comment on Mr. Rigsby's discussion.

A17. Unfortunately, the discussion is not relevant to the question of whether market-value or book-value weights determine the level of financial risk measured in the cost of equity. Mr. Rigsby highlights bankruptcy risk, but bankruptcy risk at most affects how *fast* the cost of equity changes with market-value capital structure, not *whether* it changes with market-value capital structure.[9] The clearest possible illustration of this point is that the original papers by Profs. Modigliani and Miller, as well as the work by Prof. Hamada, assumed *risk-free debt.*[10] That is, the papers developed their theories on the interaction between capital structure and firm value, and hence between capital structure and the cost of equity, on the assumption that the company faced no risk of bankruptcy at all.

Q18. If the issue isn't bankruptcy, what is it?

A18. The issue is the way the addition of debt loads the variability in the firm's cash flows and value onto equity. Please recall Figure 9 in my direct testimony, which showed how the value of

---

[7] Rigsby Surrebuttal, pp. 8-11.

[8] Rigsby Surrebuttal, pp. 11-14.

[9] See Appendix B of my direct testimony.

[10] Appendix B of the my direct testimony and my rebuttal testimony give citations to these papers. For convenience, I reproduce them here: Franco Modigliani and Merton H. Miller, "The Cost of Capital, Corporation Finance and the Theory of Investment," *American Economic Review*, 48:261-297 (June 1958); Franco Modigliani and Merton H. Miller, "Corporate Income Taxes and the Cost of Capital: A Correction," *American Economic Review*, 53:433-443 (June 1963); and Robert S. Hamada, "Portfolio Analysis, Market Equilibrium and Corporation Finance, *The Journal of Finance* 24:13-31 (March 1969).

equity in a dwelling becomes ever more sensitive to fluctuations in the market price of housing as the size of the mortgage goes up. That example works just as well for utilities' assets and equities as for dwellings. Moreover, while the details would differ, the outcome would be the same in all material respects whether the debt is guaranteed by the government or supported only by the dwelling (or utility assets). In fact, since the Figure 9 illustration shows literally all of the fluctuation in asset values falling on the equity, instead of merely the vast majority of the value fluctuation, the Figure example effectively assumes risk-free debt, too.

Q19. Putting aside the irrelevance of Mr. Rigsby's discussion for the issue of whether to use market-value capital structures to analyze the level of financial risk in the estimated cost of equity, do you have any comments on the discussion in and of itself?

A19. Yes, I have two comments.

First, I would note that the comparison of bankruptcy risk between a retail proprietorship, such as a pizza parlor, and a utility is about as extreme as one could make. Retail proprietorships are extraordinarily risky in part because they have little or no access to capital markets. Many things could be true of a retail proprietorship that would be untrue not only of utilities, but of the vast majority of publicly traded companies.

Mr. Rigsby subsequently invokes airlines, but that is hardly a typical industry, either. Airlines are a business in which the short-run marginal cost of a seat is often far below average cost, leading to an unusual potential for price wars. Added to that are the ease of repossession of and high fungibility of airplanes, which permit the use of large amounts of debt in their financing (either directly or through leasing). The result is another industry that is atypically prone to bankruptcy.

Q20. What is your second comment on Mr. Rigsby's risk discussion?

A20. To the best of my knowledge, there is no disagreement among Mr. Rogers, Mr. Rigsby, and myself that utilities are less risky than most industries. But that fact is *automatically* taken into account when utility-based samples are used to estimate the cost of equity. It would be double-counting to use that fact again to argue against taking account of the actual amount of financial risk embodied in the sample's measured cost of equity.

Q21. Please explain this comment in more detail.

A21. All parties' cost of capital estimates use utility samples. The estimated costs of equity from those samples reflect both business and financial risk. All parties agree, I believe, that utilities' business risk is below that of the average company. The issue in dispute is how to consider the financial risk that debt adds to a stock's business risk.

Nearly half a century of economic research leads to the conclusion that the level of financial risk in the *measured* cost of equity depends on *market*-value capital structures. Mr. Rigsby's argument is that this research should be ignored because utilities have low business risks. He thus double-counts utilities' low business risks, once by selecting utilities as a sample group, and a second time by arguing that utilities' low risks mean the Commission should not adjust for the difference between the sample's actual level of financial risk, at its actual, market-value capital structure, and that which the sample would have had if its market-value capital structure were instead equal to Paradise Valley's ratemaking capital structure.

I disagree with Mr. Rigsby's recommendation. I think utilities' low business risk should be counted once and only once.

III. MARKET-TO-BOOK TEST

Q22. What comments do Mr. Rogers and Mr. Rigsby make concerning the market-to-book ratio discussion in your rebuttal?

A22. I can find explicit comments only in Mr. Rogers's surrbuttal, at pp. 3-4. He states that the present value concept is widely recognized for pricing stocks among other investments, that I myself rely on it when I give some weight to Dr. Vilbert's DCF results for one of his samples, and that I advocate "disregarding a widely recognized financial concept in favor of [my] personal interpretation."

Q23. Do you have any comments on these statements?

A23. Yes. I would start by noting that concerns about the merits of the present value formula in analyzing stock prices were mentioned explicitly by Dr. Vilbert in his discussion of the merits of the DCF model:[11]

> The DCF model only works for companies for which the standard present value formula works. The standard formula does *not* work for options (*e.g.*, puts and calls on common stocks), and so it will not work for companies whose stocks behave as options do. . . . In recent years even the most basic DCF assumption, that the market price of a stock in the absence of growth options is given by the standard present value formula . . . , has been called into question by a literature on market volatility as well as the issue of the meaning of the market to book ratio discussed in Dr. Kolbe's testimony. In any case, it is still too early to throw out the standard formula, if for no other reasons than that the evidence is still controversial and no one has offered a good replacement. But the evidence suggests that it must be viewed with more caution than financial analysts have traditionally applied. Simple models of stock prices may not be consistent with the available evidence on stock market volatility.

---

[11] Direct Testimony of Michael J. Vilbert, Appendix C, pp. C-4 to C-5.

Estimation of the cost of equity is hard. The economics profession has nothing close to an agreed-upon model for how to do the job. In my opinion, giving *some* weight to a DCF estimate, when the other assumptions of the DCF model (i.e., those in addition to acceptance of the present value formula for the price of a stock) seem to be met, is still warranted.

Q24. Why does this logic not apply equally well to the market-to-book test?

A24. The market-to-book test goes far beyond the mere giving of some weight to one of several methods of estimating the cost of capital. The market-to-book test for a pure-play utility with a book-value rate base purports to be an absolute test of whether shareholders expect to earn more or less than the cost of capital. My direct testimony, and my rebuttal, explored the implications of accepting that test at face value. These implications go far beyond my "personal interpretation."

For example, one implication, discussed in my direct testimony, is that the kind of dramatic stock price movements seen in 1987 or 2000 could not have happened if the market-to-book test were valid; yet they did happen. Another implication is that if the market-to-book test were valid, utilities' current cost of equity is at or below the risk-free interest rate, or even negative; I would submit that such a finding is plainly unreasonable. Additionally, my direct testimony cited statements by very well respected economists that suggest that I am far from alone in believing that simple models such as the present value formula do not adequately explain stock prices.[12]

I do not find discussions of these points in the Rogers Surrebuttal. I agree with Mr. Rogers that the present value formula is a standard tool. I believe that it is a tool for which

---

[12] See footnotes 22 and 24 of my direct testimony.

there is no ready substitute in many applications. But that does *not* mean that regulators can rely on the market-to-book test. Whatever the true underlying model or models that eventually will be found to explain stock prices, the evidence cited above demonstrates that they will be more complicated than the simple present value formula.

Q25. Does this complete your rejoinder testimony?

A25. Yes, it does.