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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 WATER DISTRICT	DOCKET NO. W-01303A-05-0405
IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, INC., AN ARIZONA CORPORATION, FOR APPROVAL OF AN AGREEMENT WITH THE PARADISE VALLEY COUNTRY CLUB	DOCKET NO. W-01303A-05-0910 **REPLY BRIEF OF COMMISSION STAFF**

I. INTRODUCTION

Following is Staff's Reply to the Initial Briefs filed by the Arizona-American Water Company, Inc. - Paradise Valley Water District ("AZ-American - PV" or "Company") and the Residential Utility Consumer's Office ("RUCO"). In its Reply Brief, Staff has focused on the major issues in dispute between Staff and the other parties. These issues include: 1) the appropriate treatment of fire-flow investment by the Company, 2) the appropriate rate of return on equity, 3) the allowed level of rate case expense, and 4) plant held for future use.

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II. DISCUSSION

A. Fire Flow Investment

1. RUCO's argument that the Town is not legally prohibited from funding private utility investment is contrary to the evidence and case law.

In its initial brief, Staff cited a letter to the docket from Town Manager Martinsen, with the Town's legal position that the Town cannot legally fund the Company's fire flow investment. Staff is confident that the Town Attorney relied on appropriate case law in reaching this conclusion.

RUCO disagrees with the Town Attorney's position relying on *Town of Gila Bend v. Walled Lake Door Company*, 107 Ariz. 545, 490 P.2d 551 (1971). RUCO also argues that the Commission should reject the Town's claim that A.R.S. § 9-514 and the Gift Clause in the Arizona Constitution prohibit it from funding the investment.[1]

RUCO narrowly interpreted *Town of Gila Bend*, *supra*, to hold that "A.R.S. § 9-514 (through 9-516) [only] deals with the power of municipalities to engage in *competition* with businesses of a public nature." [2] RUCO also broadly interpreted *Town of Gila Bend* to hold that the Gift Clause is not violated if public funds are spent for public purposes. Based on its interpretations, RUCO concluded that neither A.R.S. § 9-514 nor the Gift Clause prohibits a municipality from funding private utility investment.

RUCO's application of *Town of Gila Bend*, *supra*, to the facts of this case misconstrues the court's holdings. Not only are the facts of *Town of Gila Bend* distinguishable from the facts in this case, but RUCO also misinterprets the legal holdings. In *Town of Gila Bend*, *supra*, a municipality entered into a contract with a private company to construct a water main to the company's plant to provide fire flow.[3] The municipality refused to perform under the contract and the company sued for specific performance.[4]

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[1] RUCO's Br. at 6.
[2] *Id.* (emphasis in the original).
[3] *Town of Gila Bend*, 107 Ariz. at 547, 490 P.2d at 553.
[4] *Id.* at 548, 490 P.2d at 554.

The court addressed two separate legal arguments. First, the court examined whether the agreement violated Article 9, Section 7 (the Gift Clause) of the Arizona Constitution.[5] Second, the court examined whether the agreement violated A.R.S. §§ 9-514 through 9-516. Below, Staff applies the two holdings of *Town of Gila Bend* to the instant case and rebuts RUCO's arguments.

With respect to the first issue, the court explained the purpose of the Gift Clause stating that:

> This section provides, in essence, that a town may not make gifts, donations or grant subsidies to private enterprises, nor may it pledge its credit *or invest public funds in any such private enterprise.*[6]

The court rejected the town's argument that the agreement violated the Gift Clause because the water main would only benefit the private company. The court's first and primary reason was "ownership and control over the water line are to remain in the Town."[7] The court's second reason was that, even though the private company benefited from the water line, the public at large also directly benefited.[8]

One of the primary distinguishing factors in this case which completely sets it apart from the *Town of Gila Bend* case is that the Company will ultimately own and control the plant. Thus, the issue is not as RUCO believes who benefits from fire flow investment, but rather who will own and control the plant.

RUCO argues that the Town "was and is fully aware that it is not prohibited by law from funding fire flow improvements."[9] To support its position RUCO points to a Town Water Committee agenda which addressed "the issue of payment regarding the emergency fire flow connection between the City of Scottsdale and the Berneil Water Systems."[10] RUCO argues that "[t]he Town's attorney, Andrew Miller, stated that there was '...no legal impediment to the Town paying the costs of installing the connection because the expenditure is clearly for public purposes.'"[11] RUCO concluded Mr. Miller's statement supported RUCO's interpretation of *Town of Gila Bend.* This is unlikely. The *Town of Gila Bend Court* distinguished cases where ownership and control of an asset

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[5] Ariz. Const. art. 9 § 7.
[6] *Town of Gila Bend*, 107 Ariz. at 549, 490 P.2d at 555 (emphasis added).
[7] *Id.* at p. 549, 490 P.2d at 555.
[8] *Id.*
[9] RUCO's Br. at 8.
[10] *Id.*
[11] *Id.*

remain with a public entity from cases where a private enterprise becomes the owner. RUCO did not provide any evidence that Berneil Water Systems owns and controls the interconnection. Because no evidence was presented to the Commission, it is equally likely that the interconnection is owned and operated by the City of Scottsdale.

Nevertheless, it is undisputed that the fire flow investments in this case will be owned and controlled by the Company. Moreover, RUCO argues that the Town should "provide the fire flow-related mains to the Company as a contribution in aid of construction."[12] In other words, RUCO concedes that the Company will own and control the fire flow plant. Therefore, *Town of Gila Bend* supports the Town's position and does not support RUCO's position.

For its second determination, the court addressed the town's argument that A.R.S. §§ 9-514 through 9-516 "require the Town to purchase the whole of the existing waterworks before it can lawfully begin construction of the water line."[13] In *Town of Gila Bend*, the agreement required the town to construct a water line from a water tank owned by the Southern Pacific Railroad Company to the plant.[14] Apparently, the town of Gila Bend argued that the agreement violated the statutes because it did not include purchase of the water tank.

The court rejected the town's argument, explaining that a "*brief reading* of these sections discloses that they deal with the power of municipalities to engage in competition with businesses of a public nature."[15] The court concluded that the statutes were inapplicable because the town did not seek to compete "with the existing waterworks."[16] Therefore, the agreement could require construction of the water line, but not purchase of the water tank, without violating the statutes.

Relying on the holding, RUCO argues that the Town is not prohibited by A.R.S. § 9-514 from funding the Company's fire flow investments because the Town is not competing with the Company.[17] Again, that misconstrues the holding of the Court and fails to account for the significant factual differences between this case and *Town of Gila Bend*.

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[12] *Id.*
[13] *Town of Gila Bend*, 107 Ariz. at 549, 490 P.2d at 555.
[14] *Id.* at 547, 490 at 553.
[15] *Id.* at 549, 490 P.2d at 555 (emphasis added).
[16] *Id.*
[17] RUCO's Br. at 6.

Unlike the *Town of Gila Bend*, the Town will not own the fire flow plant. The court's brief reasoning does not even address the issue raised in this case which is whether a municipality may invest public funds in a private utility without violating Arizona law. Moreover, it is unreasonable to assume that the court would reach such a conclusion because it would be contrary to the court's holdings on the Gift Clause.

2. RUCO's argument that the Company may not invest ratepayer funds in fire flow plant is contrary to law.

RUCO makes several arguments about whether the Company may invest ratepayer funds in fire flow plant. RUCO's arguments are: 1) advances or contributions are required for fire flow improvements because the plant is discretionary;[18] 2) no regulatory rate making principal requires or supports a fire flow standard;[19] and 3) the Town's fire flow ordinance does not require the Company to fund fire flow improvements.[20] Each argument is addressed below.

First, RUCO claims that the Commission "requires" an Advance in Aid of Construction ("AIAC") or a Contribution in Aid of Construction ("CIAC") "when a third party requests the construction of additional water infrastructure from a regulated utility."[21] RUCO explains that the Town, as a third party, requested the Company to invest in fire flow improvements. In determining who should fund the improvements, RUCO asks the Commission to consider this and the benefits to all Arizona ratepayers.[22]

RUCO cited no law or regulation requiring AIAC or CIAC for new infrastructure. Instead, RUCO cited testimony from Company witness Brian K. Biesemeyer. RUCO states that Mr. Biesenmeyer admitted that the Commission requires AIAC or CIAC if a third party requests infrastructure improvements. RUCO's representation of Mr. Biesenmeyer's testimony and Commission requirements is wrong.

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18 *Id.* at 3.
19 *Id.*
20 *Id.* at 9.
21 *Id.* at 3.
22 *Id.* at 4.

RUCO cited Mr. Biesemeyer's testimony at page 159 of the transcript.[23] The transcript reveals the following:

> Q. Typically in this sort situation, Mr. Biesemeyer, where a third party requests that the Company front the cost for what the Company admits is a discretionary expenditure, doesn't the Company require a contribution?
>
> A. If it was a developer, that would normally be the case.
>
> Q. And the Company looks at this request as being a request different than the situation where there's a developer?
>
> A. It was the Town of Paradise Valley, which is different than a developer. And as we discussed, the Town made the presentation that there was no legal means to make that contribution.[24]

Mr. Biesenmeyer never admitted that the Commission requires AIAC or CIAC when a third party requests infrastructure improvements.

Even if he made such an admission, the admission would be contrary to Commission practice in all cases. Staff also believes that the Town is requesting the Company to invest in fire flow improvements on behalf of the Company's ratepayers who live in its service territory. It is, therefore, nothing like a developer requesting infrastructure improvements.

RUCO's legal argument appears to reference Commission regulations regarding main extension agreements. Arizona Administrative Code § R14-2-406 provides "[a]n applicant for the extension of mains *may* be required to pay to the Company, as a refundable advance in aid of construction, before construction is commenced, the estimated reasonable cost of all mains, including all valves and fittings." (Emphasis added). The language is obviously discretionary and not mandatory. It has also been the practice of this Commission to limit CIAC for new development, and require utility investment when necessary to maintain balanced capital structures.

RUCO next asks the Commission to consider the benefits to all Arizona ratepayers in making its decision of whether the Company may use ratepayer funds for fire flow improvements. RUCO states:

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[23] *Id.* at 3.
[24] Tr. at159:7-21.

> While ratepayers in the Paradise Valley service area may be able to absorb increased rates associated with discretionary expenditures, many, if not the majority of people in other communities are on fixed incomes. The Commission should not burden ratepayers with discretionary investment that could in the long run jeopardize the affordability of water service in Arizona.[25]

RUCO also asked Staff witness Steven Olea about Staff's position regarding policy and applicability of this case to future cases.

Staff recommends that the Commission decide each case based on the facts and evidence presented in the case. Mr. Olea testified as follows:

> Q. Has any other water utility made any inquiry to Staff regarding the fire flow improvements?
>
> A. The fire flow improvements for Paradise Valley?
>
> Q. No, no, for fire flow improvements that may be considered in their districts.
>
> A. Every water company that has a fire hydrant has fire flow included in rates.
>
> Q. Mr. Olea, is Staff recommending the Commission develop a fire flow policy in this case?
>
> A. Is Staff recommending that?
>
> Q. Yes.
>
> A. No.[26]
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> . . . . .
>
> Q. Okay. Mr. Olea, let's, hypothetically, let's assume that the company makes the same request regarding the fire flow in [future] rate cases as it did here. Does Staff intend to make the same recommendation?
>
> A. We take every case on its own merits. But fire flow is not unusual for a water company to include in its service or rates or rate base.
>
> Q. What factors might be different in that case which would lead to a different recommendation by Staff?
>
> . . . .

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[25] RUCO's Br. at 5.
[26] Tr. at 537:5-16.

> A. Hard to say other than the same factors that would apply to any plant. If the plant is overbuilt or if it is not necessary for service . . . .[27]

RUCO's second issue is "no regulatory rate making principal requires or supports a fire flow standard."[28] In support of its argument, RUCO states:

> Arizona Administrative Code ("A.A.C.") R14-2-407 (E) requires a minimum standard delivery pressure of 20 pounds per square inch gauged at the customer's meter or point of delivery. There is no other Commission Rule, policy or statute that governs or sets a fire flow standard.[29]

RUCO's citation of the regulation for minimum delivery pressure is simply irrelevant. Although there is no specific Commission Rule, policy or standard that directly addresses fire flow, there are two statutes that support investments for public health and safety.

Arizona Revised Statute ("A.R.S.") Section 40-336 provides that "[t]he commission may by order, rule or regulation, require every public service corporation to maintain and operate its line, plant, system, equipment, and premises in a manner which will promote and safeguard the health and safety of its employees, passengers, customers and the public. . . . " A.R.S. § 40-361.B also provides "[e]very public service corporation shall furnish and maintain such service, equipment and facilities as will promote the safety, health, comfort and convenience of its patrons, employees and the public, as will be in all respects adequate, efficient and reasonable." Staff believes these two statutes give the Commission discretion to approve use of ratepayer funds for fire flow improvements.

Finally, RUCO argues "the Town's fire code [does not place] the cost burden of the fire flow improvements on the Company . . . ."[30] Apparently, RUCO argues that the Town's fire code is irrelevant to the Commission's decision because it does not address funding. RUCO's argument is misleading at best.

The Town's fire code is obviously a code that addresses public health and safety. The Commission should consider all evidence relevant to such an important public issue. As stated

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[27] *Id.* at 535:9 – 536:1.
[28] *Id.* at 3.
[29] *Id.*
[30] RUCO's Br. at 9.

above, Staff believes that A.R.S. §§ 40-336 and 40-361(B) give the Commission discretion to approve rate base treatment for fire flow plant. A.A.C. § R14-2-406(H) also provides further support.

Although it deals with main extension agreements, its purpose is also relevant to existing mains. A.A.C. § R14-2-406(H) provides "[t]he Company *may* install main extensions of any diameter meeting the requirements of the Commission or any other public agencies having authority over the construction and operation of the water system and mains . . . ." (Emphasis added). Staff believes that the Company has discretion to upgrade its existing system to meet fire flow requirements. As long as the Company exercises its discretion consistent with Mr. Olea's testimony, Staff supports the Company's exercise of such discretion.[31]

B. Return on Equity

1. The Company's methodology for computing cost of equity has not been accepted or has been rejected by almost all regulatory bodies it has been presented to.

As the Company notes in its Brief, the parties are in agreement on use of the existing capital structure of the Company. The Company's capital structure is composed of 63.3% debt and 36.7% equity. The parties are also in agreement on the cost of debt at 5.4%. The only disagreement relates to determining the cost of equity. The Company is requesting a 12.0% return on equity in this proceeding using a methodology that they term the equitable leverage compensation model. Far from being an "equitable leverage" compensation model, the results produced from the model are inflated and would require the Company's customers to overcompensate its investors.

Moreover, even the Missouri Public Service Commission ("Missouri Commission") decision[32] which the Company claims adopts its particular methodology, may adopt an approach with some theoretical similarities, but it actually appears to have some significant differences from the approach urged by the Company. The witness on behalf of Empire District Electric Company before the Missouri Commission was Dr. James Vander Weide. Dr. Vander Weide makes no reference to

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[31] Note that RUCO characterized the Company's application for fire flow improvements as "a joint proposal of Staff and the Company." RUCO's Closing Brief at p. 1. Staff did not make a proposal. It simply recommended approval of the Company's request to include certain fire flow plant in rate base.

[32] *Re The Empire District Electric Company*, Case No. ER-2004-0570, 2005 WL 579061 (March 10, 2005).

either the empirical capital asset pricing model ("ECAPM") or Dr. Kolbe's after-tax weighted average cost of equity ("ATWACC").

2. There is no reason in the record for departing from the methodologies the Commission has traditionally used for several decades.

The record contains no justification for the Commission to depart from the well-recognized models it has used for years, in favor of a methodology that has not been adopted by any state commission to-date. There is absolutely no evidence in the record that the Applicant's proposals produce a better and fairer result than the long-standing methodologies which the Commission has relied upon in the past. In fact, there is considerable evidence to suggest that the Applicant's methodologies would result in rates that were not just or reasonable.

This Commission, and other state commissions, have traditionally used the discounted cash flow model ("DCF") and the capital asset pricing model ("CAPM") to determine a fair rate of return on equity in rate cases in the past. "Staff chose to use the DCF and CAPM models because they are widely recognized as appropriate models and have been used extensively to estimate the cost of equity."[33] Indeed, the Commission stated the following in a recent decision:

> The Commission typically has relied upon the DCF and CAPM models to calculate the cost of equity. The risk of operating a water company, including those Bella Vista claims are unique, are largely reflected in the market analysis. We find that making specific adjustment to the cost of equity as suggested by the Company, difficult to quantify and potentially arbitrary. Furthermore, the challenges this Company faces are born by all water utilities in some form.[34]

And, again in another recent case, the Commission stated:

> The DCF and CAPM are respected, sound and oft relied upon models for determining a firm's cost of equity. We believe that the analyses performed by Staff and RUCO relying upon these models are

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[33] Ex. 3 at 13.

[34] *In the Matter of the Application of Bella Vista Water Co., Inc. an Arizona Corporation to Determine the Fair Value of its Properties for Rate Making Purposes, to Fix a Just and Reasonable Rate of Return thereon and to Approve Rate Schedules and Tariffs Designed to Develop such Return,* Docket No. W-02465A-01-0776, Opinion and Order, Decision No. 65350 (Rel. November 1, 2002).

> comprehensive and produce reasonable estimates of Rio Rico's cost of equity.[35]

Staff's approach was also utilized by the Commission in Arizona-American's last rate case:

> We further agree that because the DCF method and the CAPM estimate the cost of equity by quantifying the anticipated dividends and capital gains investors expect to earn by purchasing shares of stock with comparable risk, their results meet the Hope comparable risk standard.

Both Staff and the Company (initially) used the DCF model and the CAPM models to estimate the cost of equity. The Company then went on, however, to incorporate an adjustment into the CAPM model (called ECAPM) to correct for perceived deficiencies in that model and also used what it terms ATWACC to develop its final cost of equity estimates.

Underlying the DCF model, is the principle that the cost of equity is the rate that future expected cash flows (primarily dividends) must be discounted to equal a given market price.[36] Staff and the Company (sample with over 70% revenues from regulated operations) chose publicly-traded water companies currently analyzed by *The Value Line Investment Survey Small and Mid Cap Edition* ("*Value Line Small Cap*") and *The Value Line Investment Survey* ("*Value Line*").[37] Staff's constant growth DCF estimate, which assumes that an entity will grow indefinitely at the same rate, was 9.7%.[38] This was derived by using the dividend yield (2.8%) based on the current market stock price, and the average (6.9%) of six different estimates of dividend growth including 1) historical and projected growth estimates on dividend-per-share, 2) historical and projected growth estimates on earnings-per-share ("EPS") and 3) historical and projected retention growth (the growth in dividends due to the retention of earnings). Staff obtained retention growth projections from *Value Line*.[39] Its multi-stage DCF model, which incorporates both a near term growth rate and a long term growth rate was 9.4%.[40]

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[35] *In the Matter of the Application of Rio Rico Utilities, Inc. for Permanent Increases for Water and Wastewater Utility Service*, Docket No. WS-02676A-03-0434, Opinion and Order, Decision No. 67279 (Rel. October 5, 2004).

[36] Ex. S- 3 at 14.

[37] *Id.* at 13.

[38] *Id.* at 24.

[39] *Id.* at 18.

[40] *Id.* at 26.

The Company's comparable constant growth DCF estimate was 10.8% for the sample water companies.[41] The Company's comparable multi-stage growth DCF estimate average was 9.0% for the sample water companies.[42] The Company's average cost of equity using the simple DCF model for gas LDC sample companies was 9.6%[43] and 9.4% using the multi-stage DCF.[44] The Company discounts the DCF results for its water company sample, stating that the results achieved for the sample gas companies are more reliable.[45]

There were differences between the Companies calculations and Staff's as discussed below. The Company did not use any historical growth rates since it believes that they are not relevant as forecasts of current investor expectations for its sample.[46] In addition, the Company did not examine forecasts of dividend growth claiming they were not available, and therefore used forecasted earnings growth rates from Institutional Brokers' Estimate System and *Value Line*.[47] The Company's witness Vilbert stated that the earnings forecasts it was able to obtain were too short (5 years) in the Company's estimation, and produced too much variability between the sample companies in the short-term, especially for the water sample companies. It, however, found that the variability between gas companies was not as great, and therefore, more reliable.[48] Despite these differences, the results obtained by Staff and by Company witness Vilbert on which he does place some reliance (the sample gas company analysis) are very close.

Despite the similarity between Staff's DCF results for its sample water companies and the Company's results for its sample gas companies, the Company's sole reliance on analysis' forecasts of future growth is inappropriate and results in inflated cost of equity estimates. In addition, Company witness Vilbert did not consider DPS growth in his DCF analysis despite the fact that this

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41 Ex. A-9 at MJV-7.
42 *Id.*
43 *Id.* at Table No. MJV-18, Panel A.
44 *Id.* at Table No. MJV-18, Panel B.
45 Tr. at 217, 231; Ex. A-9 at 35:20 – 36:8.
46 Ex. A-9 at 47.
47 *Id.* .
48 *Id.* at 48.

is a fundamental component of a constant-growth DCF method. The Commission recognized this flaw in the Company's DCF calculations in its last rate case before the Commission:

> "We agree with Staff that dividend growth should be included in the DCF model because the DCF formula is predicated on dividend growth, and that the omission of dividend per share growth from the DCF model moves the model's result away from and not toward a reliable estimation, which works only to inflate the estimate to the detriment of ratepayers."[49]

Further, it is undisputed that earnings estimates or forecasts are much less accurate in nature. The Commission has previously recognized that analysts' forecasts are overstated.[50]

The second methodology used by both Staff and the Company is known as CAPM, which looks at the relationship between a security's investment risk and its market rate of return.[51] Under CAPM, the expected return is the product of the risk free rate of interest plus beta (where beta represents the riskiness of the investment relative to the market) times the market risk premium. Staff's overall CAPM estimate was 10.0% which represents the average of the historical market risk premium CAPM of 9.7% and the current market risk premium CAPM of 10.2%.[52] Staff obtained its risk-free rate of interest by averaging three intermediate-term U.S. Treasury securities' spot rates[53] as published in the November 2, 2005 edition of the *Wall Street Journal*.[54] Staff averaged the Value Line betas of the sample water companies as the proxy for the Company's beta.[55] Staff then used two approaches to calculate the expected market risk premium: the historical market risk premium approach and the current market risk premium approach.[56]

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49 Decision No. 67093 at 30.
50 Ex. S-3 at 27.
51 *Id.*
52 *Id.* at 31.
53 While Dr. Vilbert criticizes Staff's use of Treasury securities, the time to maturity approximates the investor's holding period, and assumes most investors consider the intermediate time frame (5-10 years) a more appropriate investment horizon. *See* Reilly, Frank K., and Keith C. Brown. *Investment Analysis and Portfolio Management.* 2003. South-Western. Mason, OH. Pp. 438-39. U.S. Treasury spot rates represent a good estimate of a risk free rate because they have virtually no chance of default and are backed by the U.S. Government. They are verifiable, objective and readily available, and oftentimes used for this purpose. (Ex. S- 3 at 29).
54 Ex. A- 3 at 29.
55 *Id.*
56 *Id.* at 30.

Staff's average DCF estimate (9.6%) and its average CAPM estimate (10.0%) result in an overall average ROE of 9.8%. Staff added a 60 basis point upward adjustment[57] for financial risk since the capital structure of the Applicant was more leveraged than the sample companies. This brought Staff's overall ROE recommendation to 10.4%

The Company's comparable average CAPM estimate was 7.2% (short-term rate) and 8.2% (long-term rate).[58] These were obtained as follows. The Company used the current rates from the constant maturity U.S. Government bond yield data available from the St. Louis Federal Reserve Bank.[59] The Company then adjusted the current interests based upon unnamed forecasts that interest rates are likely to increase in the future as the Federal Reserve acts against inflation.[60] The Company thus uses 3.0 percent for the short-term rate and 5.0 percent for the long term rate.[61] Dr. Vilbert ascribes no value to the risk positioning estimates based upon the short-term risk-free rate.[62] Dr. Vilbert used Value Line reports betas that are adjusted by a process that is very similar to that used by Merrill Lynch. According to Dr. Vilbert, however, because neither of the two samples in this proceeding display significant sensitivity to interest rate changes, he reverses the adjustment process to get "unadjusted" beta values.[63] After calculating the market risk premium, Company witness Vilbert then utilizes ATWACC to determine the cost of equity for a particular capital structure within a broad range of capital structures.[64]

Using the Company's "unadjusted" average DCF results for gas of 9.5% and its "unadjusted" average CAPM results using long-term risk free rates of 8.5%,[65] result in an average "unadjusted" cost of equity of 9.0%. With all of its additional machinations and adjustments, the Company ultimately claims, however, that it is entitled to 12.0% return on equity.

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57 Staff used the methodology developed by Professor Robert Hamada of the University of Chicago which incorporates capital structure theory with the CAPM, to estimate the effect of Paradise Valley's capital structure on its cost of equity. (Ex. S-3 at 34).
58 Ex. A-9 at Table No. MJV-9, Panel A and Panel B.
59 *Id.* at 40.
60 *Id.*.
61 *Id.*
62 *Id.*
63 *Id.* at 42.
64 *Id.* at 43.
65 *Id at* MJV-21, Panel A.

3. The Company's use of market value capital structures, the ECAPM and ATWACC methodology results in an inflated cost of equity.

The Applicant utilizes a variation of CAPM called the empirical capital asset pricing model ("ECAPM"), which it claims is intended to account for a perceived problem with the CAPM.[66] Dr. Vilbert testified that the ECAPM adjustment is needed for the following reason:

> Empirical tests of the CAPM have repeatedly shown that an investment's return is related to systematic risk, but that the increase in return for an increase in risk is less than is predicted. The empirical tests have also shown that the theoretical intercept, as measured by the return on Treasury bills, is too low to fit the data. In other words, the empirical tests indicate that the slope of the CAPM is too steep and the intercept is too low. The empirical data support for the ECAPM. The ECAPM recognizes the consistent empirical observation that the CAPM underestimates (overestimates) the cost of capital for low (high) beta stocks. The ECAPM corrects the predictions of the CAPM to more closely match the results of the empirical tests.[67]

The adjustment used in the ECAPM has the effect of flattening the risk return relationship which supposedly brings the results more in line with empirical findings.[68] However, the effect of this flattening of the risk return relationship is to raise the estimated cost of equity for companies with betas below 1.0 and lower the estimated cost of equity for companies with betas above 1.0[69] Thus the effect of the adjustment is almost always going to produce higher results for utility companies which typically have betas below 1.0. In this case, Staff witness Rogers testified that he averaged the Value Line betas of the sample water utilities and used this average as a proxy for the Company's beta. Staff's estimated beta for the Company is 0.71.

In addition, the betas published by *Value Line* are already adjusted.[70] There is nothing in the record to indicate that Dr. Vilbert's adjustment under ECAPM is a better method than currently utilized by the Commission now, and thus the Commission should reject Dr. Vilbert's methodology. The Company has not produced evidence that the empirical tests of the CAPM are representative of the risk/return relationship for utility investments.

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[66] *Id.* at 26.
[67] *Id.* at 27.
[68] *Id.* at 28.
[69] *Id.*
[70] *Id.*at 42.

Company witness Vilbert also utilized a range of ECAPM adjustments from .5% to 1.5% (l-t) and 1%-3% (s-t), without providing a firm basis for any of them. A comparison of Dr. Vilbert's CAPM and ECAPM show the impact of the ECAPM adjustment:

Dr. Vilbert's CAPM Results

LONG-TERM	CAPM	ECAPM a=(.5%)	ECAPM a=(1.5%)		Average
Water Companies	8.2%	8.4%	8.9%		
Gas Companies	8.5%	8.7%	9.2%		

SHORT-TERM	CAPM	ECAPM a=(1.0%)	ECAPM a=(2.0%)	ECAPM a=(3.0%)	Average
Water Companies	7.2%	7.7%	8.1%	8.6%	
Gas Companies	7.7%	8.1%	8.5%	8.9%	

The Indiana Utility Regulatory Commission rejected the ECAPM model for the following reasons:

> With respect to the ECAPM analysis performed by Dr. Morin we note that the Commission rejected this model in Cause No. 40003, and found that: 'the Empirical CAPM is not sufficiently reliable for ratemaking purposes.' Cause No. 40003 at 32. We went on to conclude that the ECAPM "...would adjust, in essence, future expectations with regard to investor perceptions of relative risks for further change which may occur years hence." The Commission concluded that '...we do not believe exercises in approximating future cost of capital are conducive to such precise estimation as the Empirical CAPM would suggest. Id. We find that nothing presented in this Cause has changed our prior determination that ECAPM is not sufficiently reliable for ratemaking purposes and hereby reject the model in this proceeding.'[71]

The Company's particular procedure takes an extreme departure from well-recognized methodologies used to determine ROE by its "explicit evaluation of the market-value capital

[71] *Petition of PSI Energy, Inc. for Authority to Increase It's Rates and Charges for Electric Service,* 234 P.U.R. 4th 1, 2004 WL 1493966 (Ind. U.R.C., May 18, 2004).

structures of the sample companies [which it believes] is vital for a correct interpretation of the market evidence on the return on equity."[72] This requires estimates of the market values of common stock, preferred equity and debt, and the current market costs of preferred equity and debt.[73] Dr. Vilbert estimates the capital structure for each sample company by estimating the market values of common equity, preferred equity and debt from the most recent publicly available data.[74] He states in this regard:

> Briefly, the market value of common equity is the price per share times the number of shares outstanding.
>
> . . . .
>
> The market value of debt is estimated at its book value, because market and book values of debt do not differ much in the U.S. at this time. The market value of preferred stock for the samples is also set equal to its book value because the market values and book values do not differ much and because the percent of preferred stock in the capital structures of the sample companies is relatively small compared to the debt and common equity components.[75]

The ATWACC methodology employed by Company witness Vilbert utilizes these market value capital structures in the determination of the Company's ROE:

> The costs of equity of the sample companies at their actual market-value capital structures do not necessarily correspond to the financial risk faced by equity holders in the regulated company, and thus could lead to an unfair rate of return. I avoid this problem by calculating each sample company's ATWACC using its market value capital structure.[76]

However, the Company's use of market value capital structures has no relation to the actual book value capital structure of the Company and their use produces an ROE for the Company that is conjecture and speculative in nature. Staff witness Rogers addressed the perils of utilizing a market value capital structure in the following passage from his testimony:

> Use of a market value capital structure to estimate the cost of equity is predicated on the underlying erroneous logic that the Commission is obligated to maintain stock prices and perpetuate an ongoing rising

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[72] Ex. A-9 at 17.
[73] *Id.*
[74] *Id.*
[75] *Id.* at 19.
[76] *Id.* at 13.

> spiral between revenues and stock prices.[77] As previously discussed, expected returns in excess of the cost of equity cause market values to exceed book values. Increasing revenues, in turn, increases market values resulting in a perpetual upward cycle. Use of a market value capital structure overstates the ROR when the market-to-book ratio exceeds 1.0. [78]

Further the Company's implementation of the ATWACC or equitable leverage compensation method is not directly applicable to AZ-American-PV. The market values exceed book values for the sample companies used in the equitable leverage compensation method. The Company's equitable leverage compensation method assumes that the market value of Az-American –PV's stock equals its book value since its stock is not publicly traded. This unparalleled treatment of market-to-book ratios is illogical and results in an overstated ROE estimate.

To put this whole discussion into perspective, all of the Company's adjustments result in an upward adjustment of 360 basis points as compared to Staff's proposed upward adjustment of 60 basis points.[79] This is not within the zone of reasonableness and the Commission should reject it.

4. The reasons given by the Company to support its inflated cost of equity are not well founded.

The Company claims that it will be unable to attract capital unless it receives its inflated ROE of 12%. Yet, the ROE of 11% authorized by the Commission for Arizona-American PV back in 1999 is still one of the highest of any of its other operating subsidiaries. In addition the ROE of 10.4% proposed by Staff is at the high-end of the range of its authorized ROEs for its other operating subsidiaries.

In addition, the Company is seeking recovery of practically all of its major investments in the next 5 years or so through surcharges. The Commission recognized the importance of this fact in its cost of capital discussion in Decision No. 66849:

> Finally, the risks associated with arsenic treatment costs have been mitigated by the Commission's approval in both the Northern Group case (See ACRM Discussion below), and in this proceeding, of an arsenic cost recovery mechanism that enables the Company to seek expedited approval of capital costs and a significant portion of

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[77] Ex. S-3 at 37.

[78] *Id.* at 37.

[79] Ex. A-11 at 14, Table R-4 (12.5% - 8.4% = 410 basis points. The Company asked for 12.0% resulting in 360 basis points).

operating costs associated with arsenic treatment for its affected systems.[80]

In the Missouri Commission case relied upon by the Company, the Missouri Commission reduced the upward adjustment of 60 basis points recommended by Empire to reflect Empire's more leveraged capital structure, in part, because of the surcharges it had approved in the case. The Missouri Commission found that because of the specific facts of that case, which included the authorization of surcharge mechanisms, the Company's risk was not as great overall:

> "The level of risk that Empire presents to investors will be reduced by two other aspects of this case. First, the parties have stipulated to an Interim Energy Charge ("IEC") mechanism, which goes far to reduce the risk over the short term that Empire will not recover its fuel and purchased power expenses. Second, as shall also be discussed later in this order, the Commission has found for Empire on the Net Salvage issue. This decision also significantly reduces a risk element often cited by analysts in connection with Empire. For these reasons, the Commission is of the opinion that Vander Weide's results does not require an upward adjustment of 60 basis points. Instead, the Commission will reduce the upward adjustment to only 30 basis points..."[81]

In addition, the Company also argues that it has been unable to earn its authorized rate of return because of the regulatory process, and therefore, that "[f]air treatment of investors in such a case requires either changes to the regulatory mechanism so the company does expect to earn its allowed rate of return on average, or an allowed rate of return set enough above the cost of capital to make up for the expected shortfall between the cost of capital and the rate of return the company actually expects to earn".[82] The Company's position is belied by the continuous stream of requests for new CC&Ns in Arizona and by the absence of any showing that all regulated utilities in Arizona

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[80] *In the Matter of the Application of Arizona Water Company, An Arizona Corporation, for Adjustments to its Rates and Charges for Utility Service Furnished by its Eastern Group and for Certain Related Approvals,* Docket No. W-01445A-02-0619, Opinion and Order, Decision No. 66849 at 24 (March 19, 2004).

[81] *Re The Empire District Electric Company*, Case No. ER-2004-0570, 2005 WL 579061 at 25 (March 10, 2005).

[82] Ex. A-10 at 25.

fail to generate their authorized rate of returns.[83] Further as Staff witness Rogers pointed out "[t]he authorized return affords the Company an opportunity to earn its authorized ROE, not guarantee it.[84]

5. The Company's comparison to other utilities is misplaced.

On page 25 of its Initial Brief, the Company compares the proposals of the parties in this case with what the Commission has approved for other utilities including electric, gas and water companies in Arizona, and erroneously concludes that it is being treated unfairly under any scenario. Even with the 12% ROE it is requesting the Company claims that it is "at the extreme low end of the range" of what other utilities are receiving.[85]

These comparisons should be given little weight by the Commission since there is absolutely no evidence in the record which compares the business and financial risk faced by electric utilities with that faced by water utilities in Arizona. However, just given the nature of the businesses and the fact that electric utilities are regulated at both the federal and state levels and face much greater competition in portions of their business than water utilities, comparisons of this nature are not of great value.

6. In the final analysis, the end result of the Company's methodology is outside the zone of reasonableness.

The Commission is required under Article 15, Section 3 of the Arizona Constitution to

> "...prescribe just and reasonable classification to be used and just and reasonable rates and just and reasonable rates and charges to be made and collected, by public service corporations within the State for service rendered therein, and make reasonable rules, regulations, and orders, by which such corporations shall be governed in the transaction of business within the State..."

The Arizona Court of Appeals discussed the concept of reasonableness as applied to ratemaking determinations in *Litchfield Park Service Company v. ACC*, 874 P.2d 988 (April 21, 1994).

> "There is no required formula for this determination. E.g., *United Railways & Electric Company of Baltimore v. West*, 280 U.S. 234, 249-50, 251, 50 S.Ct 123, 125, 125-26, 74 L.Ed. 390 (1930); *Simms v. Round Valley Light & Power Company*, 80 Ariz. 145, 154, 294 P.2d 378, 384 (1956). The Commission simply considers all relevant factors, including:

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[83] Ex. S-3 at 38.
[84] *Id.* at 38.
[85] Company's Br. at 26.

> (1) comparisons with other companies having corresponding risks, (2) the attraction of capital, (3) current financial and economic conditions, (4) the cost of capital, (5) the risks of the enterprise, (6) the financial policy and capital structure of the utility, (7) the competence of management, and (8) the company's financial history. C.F. Phillips, Jr., *The Regulation of Public Utilities* at 377 (3d ed. 1993), discussing *Bluefield Waterworks*, 262 U.S. 679, 43 S.Ct. 675, and *Smyth v. Ames*, 169 U.S. 466, 18 S.Ct. 418, 42 L.Ed. 819 (1898)."

Simply put, the Company urges the Commission to adopt a ROE which is outside the zone of reasonableness when the evidence in the record is weighed and when compared to the results of the long-standing, well-established methodologies utilized by the Commission in the past. Moreover, even if the Commission were to depart from the well-established methodologies it has utilized in the past which Staff urges it not to, the ROE recommended by Staff for Paradise Valley is well within the range of ROEs for AZ American's other subsidiaries with similar capital structures.[86]

The end result in this case is that what the Staff has proposed is reasonable when compared to the authorized rate of return on all of Arizona American's other operating subsidiaries. The Staff's proposal is at the high end of the range of authorized ROEs of the Company's other subsidiaries. A 12% ROE has only been authorized for the Company's Texas subsidiary, whose capital structure is much different than any of the Company's other subsidiaries, including Paradise Valley's.

C. Rate Case Expense

In its initial brief, the Company states that it only has two differences with Staff regarding rate case expense. Both issues are related to expenses for outside consultants. The Company failed to mitigate costs for both consultants. It also reversed its position on a 50/50 sharing of costs for its cost of capital witnesses. Staff addresses both issues below. Staff further disagrees with the Company's representation that there are only two differences. Staff presented a table of its adjustments for rate case expenses in Schedule AII-9 of Exhibit S-6. Staff made 10 different adjustments.[87]

First, the Company argues that it had no choice but to hire outside consultants for cost of capital testimony "because of the importance of the ROE issue."[88] The consultants presented a methodology for calculating ROE that differs substantially from long-standing Commission practice.

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[86] Ex. A-35.

[87] Note that three adjustments were positive, including adding some additional expenses for cost of service and rate design which were identified by the Company as differences with Staff.

[88] Company's Br. at 8.

The Company explained that "because this was *an issue of first impression*, and one that has implications for all future Commission rate cases, the Company retained *the foremost experts in the field* of how to properly adjust returns on equity for differences in capital structures."[89] The Company conceded that retaining "the foremost experts in the field" is expensive.[90]

In Decision No. 67093, the Commission noted RUCO's argument that the company chose to "mount legal arguments for a deviation from this Commission's long-standing formula for determining revenue requirement."[91] Citing Decision No. 66849, the Commission held that even though it is not "unreasonable *per se* for a company to retain outside counsel or consultants to prepare and litigate its rate case filings, at some point the utility must mitigate the costs associated with retaining those services."[92] The Commission allowed only 58.5% of the company's requested allowance in part because of the failure to mitigate.[93]

In Decision No. 66849, the Commission allowed 75.8% of the company's requested allowance in part based on the above reasoning.[94] The Commission noted that "[t]he largest expenditures...are for outside legal counsel ($182,808) [and] an outside consultant to perform a cost of capital study ($68,000)..."[95] Based on the reasons below, Staff recommends that the Commission allow 69.1% of the Company's requested allowance because it failed to mitigate its costs.

Staff urges the Commission to apply the rationale of Decision Nos. 67093 and 66849 to the instant case. The Company requests recovery of $158,767 which far exceeds the $68,000 at issue in Decision No. 66849. Not only did the Company fail to mitigate the costs, it sought the "foremost experts in the field." Staff believes that the Company far exceeded the point where it should have mitigated such costs.

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89 *Id.* (Emphasis added).

90 *Id.*

91 *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 Sun City West Water and Wastewater Districts,* Docket No. WS-01303A-02-0867 et al., Decision No. 67093 at 18 (June 30, 2004).

92 *Id.* at 20.

93 *Id.* (The company requested $715,000 and the Commission allowed $418,941.).

94 *Re Arizona Water Company*, Docket No. W-01445A-02-0619, Decision No. 66849 at 10.

95 *Id.* at 9. (The company requested $329,550 and the Commission allowed $250,000.).

Staff further believes that the Company failed to mitigate expenses for its cost of service and rate-design witness. The Company originally requested $14,985, but added $27,692 for this witness. In its initial brief, the Company simply stated "[c]learly there are significant costs associated with preparing the cost-of-service and rate-design schedules-the most extensive schedules in a rate case-and associated testimony."[96] Staff allowed the original request and then analyzed the request for the additional amount. It allowed an additional $13,677, but disallowed the remainder because "the Company's expert witness [had already] completed the majority of his assigned responsibilities, such as…cost of service analysis and rate design."[97] Finally, the witness' oral testimony was brief because there were no cross-examination questions for him.

In addition to failing to mitigate costs for its cost of capital consultants, the Commission should reduce the Company's costs for two additional reasons. First, the Company presented a methodology that deviates from the Commission's long-standing practice. The Company claims "the Commission has been using a flawed method to adjust returns on equity for differences in capital structure."[98]

Staff believes that the Company's primary purpose was to propose a new methodology which would result in a higher ROE in this case and higher ROEs in future cases.[99] Moreover, the Company's consultants have presented their methodology in a number of regulatory forums which have rejected it or failed to implement it.[100] Therefore, the Company's claim that the Commission's method is flawed has not been supported in any other regulatory forum. Staff urges the Commission to reduce the Company's requested rate case expense for is cost of capital consultants using the rationale in Decision No. 67093.

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96 Company's Br. at 8.

97 Ex. S-6 at 11. But note that Mr. Kozoman testified that he changed his cost of service study "because the cost of service study that I performed for the company had the wrong analysis." Tr. at 280: 9-14. Staff believes that the Company should mitigate the costs for this additional time.

98 *Id.* at. 7.

99 *See e.g.* Ex. A-1 at 10:12-17 ("The Company's requested revenues are based on a 12% authorized return on equity. The return on equity currently approved in Paradise Valley is 11%. However, in the most recent series of rate cases involving a large number of the Company's other water and waste water districts, the Commission approved a disappointingly low 9% return on equity.").

100 *See* Staff's Br. at 15.

The second reason for reducing these expenses is that both investors and ratepayers benefit from testimony on cost of capital. The Company originally proposed a 50/50 sharing of expenses for the cost of capital consultants, but then reversed its position.[101] Staff also testified that both investors and ratepayers benefit from the cost of capital portion of the rate case and should share equally in the expenses.[102] Use of a 50/50 sharing for rate case expense is not unprecedented. The New Jersey Board of Public Utilities ("NJBPU" or "Board")) routinely requires a 50/50 sharing.

In *Re Pennsgrove Water Company*, 194 P.U.R. 4th 333, 1999 WL 6418933 (N.J.B.P.U.), staff of the NJBPU noted "in Keansburg, the Board opined that the issue of sharing of rate case expenses would continue 'on a case by case basis.'"[103] In addition to investors and ratepayers benefiting from a rate case, the staff noted that the company failed to mitigate its rate case expenses.[104] The NJBPU held as follows:

> In recognition of the argument that stockholders benefit from a rate proceeding, it has been the policy of the Board to utilize 50-50 sharing of rate case expenses for larger utilities, including water utilities. In addition, the Board notes that, in this case, since Petitioner's revenues have exceeded one million dollars in each of the last three years (companies with revenues of million dollars or more are generally classified as Class A water companies), the Board FINDS a 50-50 sharing to be appropriate in this matter.[105]

In *Re Environmental Disposal Corporation*, 2000 WL 1471742 (N.J.B.P.U.), the Board's staff further explained the Board's position:

> The Board policy is to share rate case expense equally between the shareholders and the ratepayers. Staff noted that the need for a base rate filing is initiated by a utility. Staff noted that the achievement of a rate increase creates a benefit to the ratepayers through the continuation by the utility to provide safe, adequate and proper service, but that the final result of a rate case also produces benefits to the shareholders of the Company. Staff asserted that this sharing of benefits can best be recognized through equal sharing of rate case expenses between the shareholders and ratepayers.[106]

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[101] *Id.* at 18-19.
[102] *Id.* at 19.
[103] *Re Pennsgrove Water Company*, 194 P.U.R. 4th 333, 1999 WL 6418933 at 14 (N.J.B.P.U.).
[104] *Id.*
[105] *Id.* at 15.
[106] *Re Environmental Disposal Corporation*, 2000 WL 1471742 at 29 (N.J.B.P.U.).

In the instant case, the Company originally proposed a 50/50 sharing for only the cost of capital consultants. Staff agreed. ROE is clearly a benefit to both investors and ratepayers. Furthermore, the Company failed to mitigate its costs. Accordingly, Staff urges the Commission to adopt its recommended amount of rate case expense.

D. Plant Held for Future Use

In its initial brief, RUCO stated "[b]oth RUCO and Staff recommend the Commission disallow [Plant Held for Future Use] PHFFU."[107] RUCO also stated "PHFFU is not used and useful in serving current ratepayers and should be disallowed."[108] Although RUCO acknowledged that Company witness Mr. Cooley testified that the backup pumps at issue were used during the test year[109], RUCO did not recommend making an adjustment to rate base.

Staff's position is different than RUCO's position. Staff witness Steve Olea testified that the pumping equipment is used and useful.[110] As a result, Staff witness James Dorf recommended removing the equipment from PHFFU and then including it in rate base in an appropriate plant account.[111]

III. CONCLUSION

The Commission should allow recovery by the Company of its investment in fire flow as long as it is prudently incurred and used and useful. The Company's methodology for determining cost of equity produces an unreasonable and inflated result, which the Commission should reject. The methodology urged by the Company has been rejected or not accepted by practically every regulatory body that it has been presented to. Finally, the Company's rate case expenses for which it seeks recovery are too high and the Commission should adopt the Company's original proposal to split the cost of capital portion of rate case expense between investors and ratepayers.

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[107] RUCO's Br. at 28.
[108] *Id.*
[109] *Id.* at footnote 25.
[110] Staff's Br. at 10.
[111] *Id.*

RESPECTFULLY SUBMITTED this 26th day of May 2006.

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