BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of The Empire District Gas Company's Purchased Gas Adjustment Tariff Filing	)))	Case No. GR-2015-0109

STAFF RECOMMENDATION REGARDING THE EMPIRE DISTRICT GAS COMPANY'S 2013-2014 ACTUAL COST ADJUSTMENT FILING

COMES NOW the Staff of the Missouri Public Service Commission in the above-captioned matter and files its Actual Cost Adjustment ("ACA") Recommendation in this case concerning The Empire District Gas Company's ("Empire" or "Company") 2013-2014 ACA filing as set forth in the accompanying Staff Recommendation Memorandum (Appendix A), and further states as follows:

1. On October 31, 2014, Empire filed its ACA for the 2013-2014 period in Case No. GR-2015-0109. This filing revised the Company's ACA rates based upon the Company's calculations of the ACA balance for the 2013-2014 period.

2. The Procurement Analysis Unit ("Staff") has reviewed Empire's filing and submits its recommendation as further explained in the accompanying Staff Recommendation Memorandum marked Appendix A (which is incorporated herein by reference). As a part of its review, the Staff conducted an analysis of Empire's gas purchasing practices to evaluate the prudence of the Company's purchasing decisions for this ACA period; a reliability analysis, including a review of estimated peak-day requirements and the capacity levels needed to meet those requirements; a review of supply plans for various weather conditions; and a hedging review to evaluate the reasonableness of the Company's hedging practices for this ACA period. Staff's review also included a comparison of the Company's billed revenues and its actual gas costs to

determine whether there exists an over-recovery or under-recovery of the ACA balance. An over-recovery by the Company is shown in the accompanying Staff Recommendation Memorandum as a negative ACA balance that must be returned to customers; an under-recovery is shown in the accompanying Staff Recommendation Memorandum as a positive ACA balance that must be collected from customers.

3. Based on its review, as discussed in detail in the accompanying Staff Recommendation Memorandum, Staff recommends certain monetary adjustments to the Company's filed ACA balances as shown in the table contained in "Section V Recommendations" of the Staff Recommendation Memorandum.

4. In addition to the monetary adjustments referenced above, based on its review Staff has certain comments, concerns and recommendations as reflected in the accompanying Staff Recommendation Memorandum in the sections addressing the Company's Billed Revenue and Actual Gas Costs; Reliability Analysis and Gas Supply Planning; and Hedging. Staff recommends the Commission order Empire to respond to these comments, concerns and recommendations within forty-five (45) days.

WHEREFORE, for the reasons stated above and discussed in detail in the accompanying Staff Recommendation Memorandum, Staff recommends the Commission issue an order requiring Empire to respond within 45 days to Staff's comments, concerns and recommendations discussed in Sections II through IV of Staff's Recommendation Memorandum, and to reflect the Staff adjustments shown in the "Staff Adjustments for 2013-2014 ACA" column and to reflect its ending (over)/under recovery balances for its ACA, TOP, TC, and Refund accounts as shown in the "8-31-14 Staff Recommended Ending Balances" column of the table in Section V of the Staff

Recommendation Memorandum for the Company's South System, North System, and Northwest System.

Respectfully submitted,

/s/ Jeffrey A. Keevil
Jeffrey A. Keevil
Missouri Bar No. 33825
Attorney for the Staff of the
Missouri Public Service Commission
P. O. Box 360
Jefferson City, MO 65102
(573) 526-4887 (Telephone)
(573) 751-9285 (Fax)
Email: jeff.keevil@psc.mo.gov

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing have been mailed, hand-delivered, or transmitted by facsimile or electronic mail to counsel of record this 16th day of December, 2015.

/s/ Jeffrey A. Keevil

MEMORANDUM

TO: Missouri Public Service Commission Official Case File
Case No. GR-2015-0109, The Empire District Gas Company

FROM: Phil S. Lock, Regulatory Auditor – Procurement Analysis
Kwang Y. Choe, Ph.D., Regulatory Economist – Procurement Analysis
Kathleen A. McNelis, P.E., Regulatory Engineer I – Procurement Analysis

/s/ David M. Sommerer 12/16/15
Project Coordinator / Date

/s/ Jeffrey A. Keevil 12/16/15
Staff Counsel's Office / Date

/s/ Lesa Jenkins P.E, 12/16/15
Utility Regulatory Engineer II/ Date

SUBJECT: Staff Recommendation in Case No. GR-2015-0109,
The Empire District Gas Company 2013-2014 Actual Cost Adjustment Filing

DATE: December 16, 2015

EXECUTIVE SUMMARY

On October 31, 2014, The Empire District Gas Company ("Empire" or "Company") filed its Actual Cost Adjustment (ACA) for the 2013-2014 annual period for rates to become effective November 17, 2014. This filing revised the ACA rates based upon the Company's calculations of the ACA balance for the 2013-2014 period.

The Procurement Analysis Unit ("Staff") of the Missouri Public Service Commission has reviewed the Company's ACA filing. A comparison of billed revenue recovery with actual gas costs will yield either an over-recovery or under-recovery of the ACA balance. An over-recovery, represented by a negative ACA balance, must be returned to the Company's customers; an under-recovery, represented by a positive ACA balance, must be recovered from customers.

Staff conducted the following analyses:

- a review of billed revenue compared with actual gas costs
- a reliability analysis including a review of estimated peak day requirements and the capacity levels needed to meet these requirements
- a review of the Company's gas purchasing practices to evaluate the prudence of the Company's purchasing decisions for this ACA period
- a hedging review to evaluate the reasonableness of the Company's hedging practices for this ACA period

Based on its review, Staff recommends the following adjustments to the Company's filed ACA balances:

Description + Under-recovery (-) Over-recovery	8-31-14 Ending Balances Per Filing	Commission Approved Adjustments prior to 2013-2014 ACA	Staff Adjustments For 2013-2014 ACA	8-31-14 Staff Recommended Ending Balances
South System: Firm ACA	**($585,762)**	**$164,292**	**$35,486**	**($385,984)**
Interruptible ACA	**$0**	**$0**	**$0**	**$0**
Take-or-Pay (TOP)	**$0**	**$0**	**$0**	**$0**
Transition Cost (TC)	**$0**	**$0**	**$0**	**$0**
Refund	**$0**	**$0**	**$0**	**$0**
North System: Firm ACA	**$401,781**	**($158,316)**	**($48,970)**	**$194,495**
Interruptible ACA	**$0**	**$0**	**$0**	**$0**
Take-or-Pay (TOP)	**$0**	**$0**	**$0**	**$0**
Transition Cost (TC)	**$0**	**$0**	**$0**	**$0**
Refund	**$0**	**$0**	**$0**	**$0**
Northwest System: Firm ACA	**($82,921)**	**($118,308)**	**($789)**	**($202,018)**
Interruptible ACA	**$0**	**$0**	**$0**	**$0**
Take-or-Pay (TOP)	**$0**	**$0**	**$0**	**$0**
Transition Cost (TC)	**$0**	**$0**	**$0**	**$0**
Refund	**$0**	**$0**	**$0**	**$0**

The individual adjustments recommended by Staff are discussed in greater detail in the sections below. Additionally, Staff makes recommendations which are discussed in the Billed Revenue and Actual Gas Costs section, Reliability Analysis and Gas Supply Planning section, and the Hedging section of the memorandum.

STAFF'S TECHNICAL DISCUSSION AND ANALYSIS

Staff's discussion of its findings is organized into the following five sections:

Each section explains Staff's concerns and recommendations.

I. OVERVIEW

Empire separates its gas operations into a South System, a North System, and a Northwest (NW) System.

The larger communities served on the South System include Sedalia, Marshall, Nevada, Clinton, Higginsville, Lexington, and Richmond in southwest and central Missouri and Platte City near Kansas City.

On the North System, the larger communities include Chillicothe, Brookfield, Marceline and Trenton in north-central Missouri.

The largest community on the NW System is Maryville, in northwestern Missouri.

Southern Star Central Gas Pipeline (SSCGP) serves customers on the South System. Panhandle Eastern Pipeline Company ("PEPL") serves customers on the North System while ANR Pipeline (ANR) serves customers on the NW System. In addition, Cheyenne Plains Gas Pipeline Company ("CPGP") delivers gas from the Cheyenne Hub located south of Cheyenne, Wyoming to Greensburg, Kansas. CPGP can deliver gas to each of the interstate pipelines systems (SSCGP, PEPL and ANR) that serve Empire's customers.

During this ACA period there was an average of 28,082 firm sales customers on the South System, 9,094 on the North System, and 5,395 on the NW System. There were no interruptible sales customers during this ACA period.

II. BILLED REVENUE AND ACTUAL GAS COSTS

1. <u>Transportation Service – Balancing and Pooling Fees</u>

Staff presented questions to the Company regarding Balancing and Pooling fees that the Company charges to its Transportation customers (in tariff sheets 41-42, 45-46). The Company provided a gas revenue summary report for Balancing and Pooling fees that tied to the Company's filing, however, details of the Balancing and Pooling fees were insufficient. After further review and discussions with the Company, Staff was able to quantify the Balancing and Pooling fees that support the Company's filing. The Company indicated that it has implemented new software that provides additional details of transactions that are used in the billing of its transportation customers (i.e. adjusting entries). Staff recommends, in future filings, that the Company provide the details necessary to support the revenue recovery of its Balancing and Pooling service rendered to its transportation customers.

2. Cash-Out Adjustments – Large Volume (LV) Transportation + Pool Aggregation

There are 3 cash-out adjustments that impact all service areas during this ACA period.

Cash-out adjustments:

A) Adjustment for Incorrect Cash-out Charges in ACA filing,
B) Adjustment for Incorrect *Natural Gas Week* low index prices, and
C) Adjustment for Fuel Percent Error.

The Adjustments for A and B are combined in the Cash-Out Summary table below. Cash-Out Adjustment C is the result of a fuel percentage error and included separately in the Cash-Out Summary table below. The adjustments are described below:

(A) Adjustment for Incorrect Cash-out Charges in ACA Filing:

Staff noted discrepancies in the Company's filed cash-out charges during certain months of the ACA (9/13 LV, 10/13 LV, 5/14 Pool, 7/14 LV and 8/14 LV). In each case Empire billed the customers correctly, as reflected in Empire's cash-out summary, but the cash-out amounts were not properly reflected in the 2013-2014 ACA filing (See Cash-Out Summary – Data Request No. 0035 response). Staff, therefore, will adjust for these changes in this ACA filing. The resulting changes are included in Staff's Cash-Out Summary table below.

(B) Adjustment for Incorrect *Natural Gas Week* low index prices:

During January and February 2014, Empire's cash-out calculations did not include *Natural Gas Week* index prices from 1-28-14 to 2-3-14. As a result, the *Natural Gas Week* low index price (used to cash-out monthly imbalances for Large Volume and Pool Aggregation customers) was misstated in the Company's filing for the North, South and NW Systems. Because the time period overlapped between January and February 2014, the Company's tariffs were not supportive of which month the index prices should apply. Staff included the index prices from 1-28-14 to 2-3-14 in the month of February 2014, instead of January 2014, because the cash-out adjustment had less impact on its customers. Staff updated the February cash-out charges to include *Natural Gas Week* index prices from 1-28-14 to 2-3-14. Staff will adjust for these changes in this ACA filing and recommends that Empire make the appropriate adjustments to its Large Volume Transportation and Pool Aggregation customers. The resulting changes, along with the ones previously described in Adjustment A, **are combined** and included in Staff's Cash-Out Summary table below.

In cases where the time period overlaps between months, Staff recommends that the "Monthly Cash-out Charge" section of the Company's tariffs (Sheet 42) be modified in the Company's next general rate case to include criteria to determine which month the index prices should apply.

(C) Adjustment for Fuel Percentage Error

Cash-out reports on the Company's NW System had an incorrect fuel percentage resulting in an error in the Company's filing. The billings, however, included the correct fuel percentage of 0.96%. The error impacted the transportation and pool cash-out customers from November 2013 to January 2014. To reflect the proper billed amounts, the Company's ACA balance should be adjusted by $3,426 ($2,828 Large Volume Transportation + $598 Pool Aggregation) to reflect an additional amount owed to Empire (by Transportation/Pool customers). The cost of gas should be reduced by $3,426 for firm sales customers on the NW System (see Staff's Cash-Out Summary table below).

Cash-Out Summary Table

Description	South	North	Northwest	Total
Large Volume Transportation Adjustments A & B	($1,625)	($7,256)	($296)	($9,177)
Pool Aggregation Adjustments A & B	($179)	($71)	($92)	($342)
Subtotal Adjustments - A & B	($1,804)	($7,327)	($388)	($9,519)
Large Volume Transportation Adjustment C	$0	$0	($2,828)	($2,828)
Pool Aggregation Adjustment C	$0	$0	($598)	($598)
Subtotal Adjustment C	$0	$0	($3,426)	($3,426)
Total Cash-Out Adjustments	**($1,804)**	**($7,327)**	**($3,814)**	**($12,945)**

In summary, the total cost of gas should be reduced by $1,804 for firm sales customers on the South System; reduced by $7,327 for firm sales customers on the North System and reduced by $3,814 ($388+$3,426) for firm sales customers on the NW System.

3. Daily Swing Purchase Volumes - NW System

During the month of February 2014, the company entered into an agreement with Tenaska to purchase gas at the ANR/Oklahoma *Gas Daily* price plus $.0075. The agreement stated that Tenaska would deliver 5,000 Dth per day from February 1, 2014 through February 3, 2014. The published *Gas Daily* price for this period was $5.39/Dth. The contract price would be $5.3975 ($5.39 + $.0075). The Company, however, paid $5.4875/Dth on the 14,752 Dth of gas that was actually delivered to the Company. In summary, the commodity cost of gas should be reduced by $1,328 ([$5.4875-$5.3975] * 14,752) for sales customers on the Company's NW System.

III. RELIABILITY ANALYSIS AND GAS SUPPLY PLANNING

As a gas corporation providing natural gas service to Missouri customers, Empire is responsible for conducting reasonable long-range supply planning to meet its customer needs. Empire must make prudent decisions based on that planning. One purpose of the ACA process is to examine the reliability of the Local Distribution Company's (LDC) gas supply, transportation, and storage capabilities. For this analysis, Staff reviews the LDCs' plans and decisions regarding estimated peak day requirements and the LDC's pipeline capacity levels to meet those requirements, the peak day reserve margin, and the rationale for this reserve margin, and the natural gas supply plans for various weather conditions.

Staff has the following comments and concerns regarding the reliability analysis:

1. Cheyenne Plains Gas Pipeline Company Charges Allocation

Empire has transportation and storage contracts specific to each system. SSCGP contracts are applicable to the South System, PEPL contracts are applicable to the North System and ANR contracts are applicable to the NW System. Empire also has a transportation contract on Cheyenne Plains Gas Pipeline (CPGP) that provides Empire with the flexibility to deliver natural gas supply into any of the three interstate pipeline systems (SSCGP, PEPL and ANR) that feed its South, North and/or NW Systems respectively.

Staff recommended an adjustment to reallocate the CPGP reservation and volumetric charges in the 2011/2012 ACA (Case GR-2013-0250) and in the 2012/2013 ACA (Case GR-2014-0108). There is a similar issue in the 2013/2014 ACA. Staff's process to reallocate CPGP charges is similar to those of the 2011/2012 and 2012/2013 ACA cases. Based on Staff's analysis, there is no change to the overall cost, but Staff recommends that the Company make a reallocation to each service area as shown below.

Staff Recommended Reallocation of Cheyenne Plains Gas Pipeline Company Charges				
Cheyenne Plains Reservation	South - SSC	North - PEPL	Northwest - ANR	Total
Empire Allocation	$751,724	$306,138	$180,726	$1,238,588
Staff Allocation	$789,014	$264,495	$185,079	$1,238,588
Difference (Staff minus Empire)	**$37,290**	**($41,643)**	**$4,353**	**$0**

Staff's allocation of the reservation charge is based on Empire's budget estimates for total monthly retail sales for each system. Empire had no capacity releases and no gas flow on this contract during the 2013/2014 ACA period.

2. <u>Consideration of Peak Day Estimate Variability in Determination of Future Capacity Needs</u>

The Company's transportation contracts with SSCGP and PEPL, serving respectively the Company's South and North Systems, will expire in 2018. In case GR-2013-0250[1], Staff's recommendation stated that:

> Empire's peak day estimates for each system do not include any estimate for variability such as standard error or estimates based on the upper 95% confidence interval factors that would result in a larger peak day estimate. Consideration of variability in the peak day estimate is appropriate because actual usage varies around the line predicted by a regression equation.
>
> The peak day estimate and estimates of customer growth are used by the Company when planning for future transportation capacity requirements. The Company peak day estimate and contracted capacity are not concerns for this ACA period. However, as Empire considers the peak day estimates and appropriate transportation contract volumes moving forward, especially when it is planning for extension or revision of expiring contracts, Staff recommends Empire consider variability in its peak day estimates.

Empire's response[2] stated that:

> The Company agrees to continue to refine its peak day requirement forecasts for all three operating systems in advance of the expiration of the pipeline contracts it currently has in place to serve the systems.

In the peak day analyses provided for the 2013/2014 ACA, the Company has not yet included consideration of variability in its peak day estimates. Staff reminds the Company that it should consider the variability of the peak day estimates in advance of the expiration of the pipeline contracts.

IV. HEDGING

Empire has individual gas supply portfolios for each of its three service areas. Staff's comments are provided for each.

Empire's hedging planned target was at 70% - 90% of normal winter requirements while actual overall coverage was 68% based on the 2013/2014 normal winter volumes.

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[1] File date December 18, 2013.
[2] File date January 29, 2014.

For the South System, Empire hedged about 55% of the normal winter requirements through a combination of storage (36%), and financial instruments (19%). Empire purchased the financial instruments between January 2012 and October 2013.

For the North and NW Systems, Empire depended on storage for its hedging strategies. For the North System, Empire hedged about 95% of the normal winter requirements by using storage, while about 83% of the NW System's normal winter requirements came from storage.

The Staff reviews the prudence of a Company's decision-making based on what the Company knew, or reasonable could have known, at the time it made its hedging decisions. The Company's hedging planning should be flexible enough to incorporate changing market circumstances. The Company should continue to evaluate its hedging strategy in response to changing market dynamics as to how much the existing hedging strategy actually benefits its customers while balancing market price risk. For example, the Company should evaluate more cost-effective financial instruments under the current market where the market prices have become relatively less volatile.

Recent Empire hedging updates incorporate call options in its hedging program to supplement the use of swap instruments. Financial swaps are a type of financial instrument that allow the conversion of a floating or variable gas price arrangement into a fixed price arrangement. Since many of Empire's supply contracts are tied to a floating or variable index price, a swap allows Empire to set a known price for a particular quantity of gas. Call options put a ceiling on prices while allowing participation in downward price movements albeit at the cost of a premium for the option. For example, out-of-the-money calls may have a strike price that still affords significant protection near current market prices but at a reduced premium cost. The Company utilized both swaps and call options for the winter period of November 2013 through March 2014 and should continue to evaluate the appropriate volumes associated with them going forward.

Finally, the Staff recommends the Company continue to assess and document the effectiveness of its hedges for the 2014-2015 ACA period and beyond. The analysis should include identifying the benefits/costs based on the outcomes from the hedging strategy; and evaluating any potential improvements on the future hedging plan and its implementation. For example, the Company should provide a summary of how the Company's financial hedges have performed against market pricing. This would be useful for understanding the impact of purchases without the hedges. This hedge performance or mark-to-market summary conducted over an extensive historical period is helpful in seeing the long term financial impact of the hedge program. Because of the need to better understand the impact of the hedging program, the Staff recommends that Empire develop this summary in future ACA periods.

V. RECOMMENDATIONS

The Staff recommends that the Commission issue an order requiring Empire to:

1. Adjust the balances in its 2013-2014 ACA filing to reflect the ending (over)/under recovery balances for the ACA, TOP, TC, and Refund accounts per the following table:

TABLE 1

Description + Under-recovery (-) Over-recovery	8-31-14 Ending Balances Per Filing **(A)**	Commission Approved Adjustments **prior** to 2013-2014 ACA **(A-1)**	Staff Adjustments For 2013-2014 ACA	8-31-14 Staff Recommended Ending Balances
South System: Firm ACA	($585,762)	$164,292	**(B)** ($1,804) **(C)** $37,290	($385,984)
Interruptible ACA	$0	$0	$0	$0
Take-or-Pay (TOP)	$0	$0	$0	$0
Transition Cost (TC)	$0	$0	$0	$0
Refund	$0	$0	$0	$0
North System: Firm ACA	$401,781	($158,316)	**(B)** ($7,327) **(C)** ($41,643)	$194,495
Interruptible ACA	$0	$0	$0	$0
Take-or-Pay (TOP)	$0	$0	$0	$0
Transition Cost (TC)	$0	$0	$0	$0
Refund	$0	$0	$0	$0
Northwest System: Firm ACA	($82,921)	($118,308)	**(B)** ($3,814) **(C)** $4,353 **(D)** ($1,328)	($202,018)
Interruptible ACA	$0	$0	$0	$0
Take-or-Pay (TOP)	$0	$0	$0	$0
Transition Cost (TC)	$0	$0	$0	$0
Refund	$0	$0	$0	$0

A) Includes 2011-2012 ACA adjustments per Commission order.

A-1) Commission order issued February 25, 2015 on Case GR-2014-0108 approving adjusted amounts from 2012-2013 ACA. Due to the timing of Commission's order, Empire has not included these adjustments in its 2013-2014 ACA filing.

B) Cash-out – Large Volume/Pool Aggregation (Sum of Items A-C in Cash-Out Summary table)

C) Cheyenne Plains Pipeline Reservation Charges Re-Allocation

D) Daily Swing Purchase Volumes

2. Respond to Staff's recommendations in the Billed Revenue and Actual Gas Costs section.
3. Respond to Staff's recommendations in the Hedging section.
4. Respond to Staff's recommendations in the Reliability Analysis and Gas Supply Planning section.
5. Respond to recommendations included herein within 45 days.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of The Empire District Gas Company's Purchased Gas Adjustment Tariff Filing	)))	Case No. GR-2015-0109

AFFIDAVIT OF PHIL S. LOCK

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW Phil S. Lock and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing Staff Recommendation in Memorandum form; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

Phil S. Lock
PHIL S. LOCK

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 16th day of December 2015.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2016
Commission Number: 12412070

D Suzie Mankin
Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of The Empire District Gas Company's Purchased Gas Adjustment Tariff Filing	)))	Case No. GR-2015-0109

AFFIDAVIT OF KWANG Y. CHOE, PhD

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW Kwang Y. Choe, PhD and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing Staff Recommendation in Memorandum form; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

Kwang Y. Choe

KWANG Y. CHOE, PhD

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 16th day of December 2015.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2016
Commission Number: 12412070

D. Suzie Mankin
Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of The Empire District Gas Company's Purchased Gas Adjustment Tariff Filing	)))	Case No. GR-2015-0109

AFFIDAVIT OF KATHLEEN McNELIS

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW Kathleen McNelis and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing Staff Recommendation in Memorandum form; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Kathleen McNelis

KATHLEEN McNELIS

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 16th day of December 2015.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2016
Commission Number: 12412070

D Suzie Mankin

Notary Public