BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Summit Natural Gas of Missouri Inc., for a Variance from the Provisions of Commission Rule 4 CSR 240-10.030(19).	))))	File No. GE-2018-0193

NON-UNANIMOUS STIPULATION AND AGREEMENT

COME NOW Summit Natural Gas of Missouri, Inc. ("SNGMO") and the Staff of the Missouri Public Service Commission ("Staff"), (collectively the "Parties"), by and through counsel, and respectfully state to the Missouri Public Service Commission ("Commission") that, as a result of negotiations, the Parties have reached the stipulations and agreements contained herein.

1. SNGMO filed an *Application for Variance* on January 15, 2018, requesting the Commission order a variance from 4 CSR 240-10.030(19), regarding gas meter inspection and testing procedures to ensure compliance with the requirements of section 18 of the same rule. The Commission ordered Staff to review the *Application* and file a recommendation or an alternative pleading, which Staff filed April 12, 2018. In its *Recommendation,* Staff recommended rejecting the *Application* as filed, but permitting the Parties to work towards an agreement. This Stipulation and Agreement results from the Parties' discussions.

2. This Stipulation and Agreement is intended to settle all issues in the above-captioned Application. The Parties recommend that the Commission accept this Stipulation and Agreement as a fair compromise of their respective positions.

3. Unless otherwise explicitly provided herein, none of the Parties shall be deemed to have approved or acquiesced in any ratemaking or procedural principle,

including, without limitation, any method of cost of service or valuation determination or cost allocation, rate design, revenue recovery, or revenue-related methodology. Except as explicitly provided herein, none of the Parties shall be prejudiced or bound in any manner by the terms of this Stipulation in this or any other proceeding.

4. This Stipulation has resulted from negotiations among the Parties, and the terms hereof are interdependent and non-severable. If the Commission does not approve this Stipulation unconditionally and without modification, or if the Commission approves the Stipulation with modifications or conditions to which a party objects, then this Stipulation shall be void and none of the Parties shall be bound by any of the agreements or provisions hereof.

5. In the event the Commission accepts the specific terms of this Stipulation without condition or modification, the Parties waive their respective rights to present oral argument and written briefs pursuant to RSMo. §536.080.1,[1] their respective rights to the reading of the transcript by the Commission pursuant to §536.080.2, their respective rights to seek rehearing pursuant to §386.500, and their respective rights to judicial review pursuant to §386.510. These waivers apply only to a Commission order approving this Stipulation without condition or modification issued in this proceeding and only to the issues that are resolved hereby. These waivers do not apply to any issues not explicitly addressed by this Stipulation. The Parties agree that any and all discussions, suggestions, or memoranda reviewed or discussed, related to this Stipulation shall be privileged and shall not be subject to discovery, admissible in evidence, or in any way used, described or discussed.

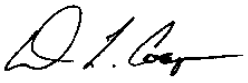
[1] Unless otherwise noted all statutory references are to the Revised Statutes of Missouri 2016, as currently supplemented.

STIPULATION

6. The Parties agree that SNGMO should be granted a variance from 4 CSR 240-10.030(19) as set forth in Appendix A, regarding gas meter inspection and testing for the purpose of implementing a meter sampling program. SNGMO's meter sampling program will address American AC-250 gas meters. Other meter sizes, models and manufacturers are not included in the sampling plan. The American AC-250 meters will be analyzed statistically as described in detail in **Appendix A**.

WHEREFORE, the Parties respectfully request that the Commission issue its Order approving the specific terms and conditions of this Stipulation and Agreement.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I do hereby certify that a true and correct copy of the foregoing document has been sent by electronic mail this 17th day of August, 2018, to:

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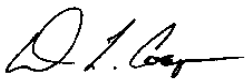

APPENDIX A

METER SAMPLING TEST PROGRAM

1. INTRODUCTION

Summit Natural Gas of Missouri, Inc. ("SNGMO") will implement a Meter Sampling Test Program, using quality control standards, principles and rules, to test in-service American AC-250 gas meters during a four year test period beginning on January 1, 2019.

The standards, principles and rules for testing may be found in standard texts and statistical sampling tables. Details of the method are described in ANSI/ASQC Z1.4-2003(R 2013), which is the "attributes sampling technique." Proper sample testing is an economical substitute for one hundred percent (100%) testing.

2. DEFINITIONS

A. **Acceptable Quality Limit (AQL)** – a statistically based acceptance criteria for the maximum percentage or proportion of nonconforming units in a lot that can be considered satisfactory as a process average. (See ANSI/ASQC Z1.4-2003(R 2013)

B. **Check Flow** – the measured flow rate at twenty percent (20%) to forty percent (40%) of the meter's rated nameplate capacity.

C. **Check Test** – the test of a gas meter at the Check Flow rate

D. **Group** – Meters of a similar manufacturer and model.

E. **Intest** – The test results obtained when testing a gas meter as it was received in the testing facility from the field. These are the test results before any repairs or adjustments have been made.

F. **Lot** – Meters of the Group with the same set year.

G. **Meter** – a device used to measure the flow of gas.

H. **Meter Code** – a SNGMO unique identifier used to specify a meter's size as determined by the manufacturer.

I. **Open Flow** – the measured flow rate at eighty percent (80%) to one hundred twenty percent (120%) of the meter's rated nameplate capacity.

J. **Open Test** – The test of a gas meter at the Open Flow rate.

K. **Percent Accuracy** – the ratio comparison of the registered volume of a meter under test to the registered volume of a standard.

L. **Random** – a statistical method of sampling that ensures that each member of a population has the same probability of being selected as any other member.

M. **Set Year** – the calendar year during which a meter was installed for a customer.

N. **Specification Limits** – limits that define the conformance boundaries for the registration accuracy of individual meters. These limits are plus or minus two percent (±2%) of one hundred percent (100%) accuracy.

O. Sub-Lot – a subset of a Lot consisting of meters with a common characteristic such as a manufacturer's defect or similar geographic location.

P. **Year of Purchase** – the calendar year in which a meter was purchased from a manufacturer.

Q. **Years in Service** - the number of years between the year a meter was set and the year it was removed.

3. PURPOSE

The purpose of the SNGMO gas meter sample testing plan is:

A. To determine the quality level of each meter lot by providing a reliable percentage estimate of the meters in each lot lying outside the specification limits for registration accuracy.

B. To provide information relating to the performance of various meter lots when meter accuracy does not meet the specified quality level and thus provide the basis for repair and recalibration or planned retirement of those meters that are nonconforming.

4. PROGRAM

A. The meter sampling test program will use the guidelines set forth in ANSI/ASQC Z1.4 (inspection for attributes) Single Sampling Plans for

Normal Inspection. The AQL will be not more than 6.5% of meters in the sample deviating from 100% accuracy by more than +/- 2%.

B. The Meter Sampling Test Program will begin January 1, 2019, and end on December 31, 2022 ("Test Period"). During the test program, only one meter group is proposed: American AC-250 meters. The size of this group is 9,250 meters.[2] This meter group is further divided into lots as follows:

i. Lot 2000
ii. Lot 2001
iii. Lot 2004
iv. Lot 2005
v. Lot 2006
vi. Lot 2007
vii. Lot 2008
viii. Lot 2009
ix. Lot 2010
x. Lot 2011
xi. Lot 2012

C. Based on currently available meter data, the proposed number of meters to be tested each year during the sampling program based on the sampling principles of ANSI/ASQC Z1.4 are:

i. 2019: 133 American AC-250 meters.
ii. 2020: 211 American AC-250 meters.
iii. 2021: 218 American AC-250 meters.
iv. 2022: 164 American AC-250 meters.

D. During the Test Period, the Company will continue to remove and test the other meter groups in an effort to be in full compliance with Missouri Public Service Commission Rule 4 CSR 240-10.030(19) by December 31, 2022. SNGMO will target the following number of non- American AC-250 meters during the referenced period:

[2] It is recognized that this number will fluctuate as SNGMO installs new meters and removes old ones.

i. 2019: 2,499.

ii. 2020: 2,421.

iii. 2021: 2,414.

iv. 2022: 2,468.

5. GENERAL METER TESTING PROCEDURES

Meters will be tested in accordance with the following:

A. With the exception of those meters removed from service specifically for known leakage, damage, tampering, noise, or non-registration, and meters that have been selected for retirement, all meters removed from service shall be tested for intest accuracy at both check flow and open flow prior to any adjustment or repair. The meter accuracy will be determined by the check flow test accuracy; this shall be referred to as the intest accuracy. The Company will maintain data associated with those meters which have been removed from service specifically for known leakage or non-registration so that any potential problems with certain meter types can be identified, even though the accuracy rate is acceptable.

B. Meters shall be repaired as necessary and adjusted such that:

- The Check test Accuracy is within ±1%
- The Check test for Accuracy shall be made with at least 2 consecutive test runs being made which agree within ±½%
- The Open test Accuracy is within ±1%
- The differential between the Open test Accuracy result and the Check test Accuracy result is within ±1% Accuracy

Records shall be maintained showing intest accuracy for each calendar year. When calculating the above accuracy categories, all fractions shall be rounded to the nearest tenth (0.05 and greater to be rounded up).

6. PERIODIC SAMPLING PROCEDURES

Meters shall be sample tested in accordance with the procedure described herein.

A. The Group in this program will be the American AC-250. The Group will be stratified into lots by set year such that beginning in the 10th year after installation, each lot in every group will be sample tested annually.

B. Sampling will be in accordance with standard sampling plans as set forth in recognized statistical quality control standards. The size of the sample will depend on the size of the lot it will represent. An additional percentage of the meters needed for the sample shall be selected on a random basis as substitutes for damaged, non-registering, inaccessible, or otherwise invalid meters in the sample. All meters in the sample will be tested for their accuracy of registration, where test results are rounded to the nearest whole number (0.5 and greater to be rounded up).

C. The AQL selected for this sampling plan will be six and one half percent (6.5%). For a sample group to pass, not more than six and one half percent (6.5%) of the sampled meters may deviate from one hundred percent (100%) accuracy of registration by more than plus or minus two percent (±2%).

D. If a lot fails the AQL, SNGMO will take the following steps to address the meter group:.

   i. If a lot fails the AQL, SNGMO will remove all meters in that lot over a period not to exceed 4 years and it will replace or repair and recalibrate the meters before they can be reused. However, within a lot of meters, if a particular sub-lot can be identified for evaluation of test results that indicates an untimely performance degradation due to possible manufacturer's defect or geographical location, and is clearly not a condition brought on by age as compared to other members of the lot, the following action will be taken:

      1. The particular sub-lot will be further sampled as appropriate to verify above indications.
      2. If confirmed, an accelerated removal program of this particular sub-lot will be implemented within a time period not to exceed four years, which will include the replacement

or repair and recalibration of the meters before they can be reused.

3. In this instance the sub-lot is not indicative of the overall meter lot so the in-test accuracy data will be excluded from the analysis.

E. For each lot, the maximum permissible sampling period will be limited to thirty (30) years.

7. RANDOM SAMPLING

SNGMO will select meters for testing utilizing the selection tools available in the Customer Information System.[3] In the event that additional meters need to be selected due to the lack of availability of certain meters, or meters are discovered to be unsuitable for the test lot, SNGMO will utilize the selection tools available in its CIS system to select additional meters, as necessary, to provide an adequate number of meters to complete a sample lot.

8. PLAN TO FIELD VERIFY METERS

SNGMO will develop a 4-year plan to insure the Company's system correctly identifies the meters located in the field. The Company is deploying resources to field verify meter data in conjunction with collecting GPS data on some meters and services. Meter data being verified includes meter manufacturer and model, number of dials, and meter serial number. This project is expected to be completed by December 31, 2022.

9. REPORTING

During the four-year test period, SNGMO will report its test results for the previous calendar year to Staff and OPC each year by the following March 15. Such report will also include a progress update for the field verification 4-year program.

[3] The CIS system pulls meters for selection by meter ID order. Since meters are not generally installed in meter ID order, the Company believes this will generate a geographically representative sample.