



UTILITIES CO.

A Subsidiary of MDU Resources Group, Inc.

400 North Fourth Street
Bismarck, ND 58501
701-222-7900

March 12, 2021

Executive Secretary
North Dakota Public Service Commission
State Capitol Building
Bismarck, ND 58505-0480

Re: Gas Meter Test Results

Montana-Dakota Utilities Co. (Montana-Dakota) herewith electronically submits the results of its gas meter testing program for the period July 1, 2019 through June 30, 2020. The test results included herein reflect the gas meter testing performed in accordance with the Company's Gas Meter Testing Program Rate 105 tariff, as authorized on February 24, 2016, in Case No. PU-13-585, by the North Dakota Public Service Commission.

Montana-Dakota's meter testing program consists of the following three categories:

1. New Test - New meters purchased were tested and found to be satisfactory prior to release. 100% of new meters were tested at the factory. Montana-Dakota tested 828 meters during the period July 1, 2019 through June 30, 2020 resulting in an average accuracy of 99.8% at an open test (100% of meter rating) and 99.94% accuracy at a check test (20% of meter rating).
2. Periodic Test – Meters with ratings of greater than 650 cubic feet per hour are tested at a periodic interval of at least once in ten years.
3. Random Test - All other active meters with ratings of 650 cubic feet per hour or less are assigned to lots and are selected for testing via a computer generated random selection process and meters pulled from customers' premises in correlation with service technicians being on site for other service-related work.

All damaged or non-registering meters are incapable of measuring gas accurately due to damaged indexes, mechanical malfunctions, or break(s) in the

meter body and are either retired or given a complete overhaul and re-tested before being placed back in service.

Test calculations of all lots in the Random Sample Program are made in accordance with the program detailed in Department of Defense Bulletin dated June 11, 1957, entitled "Military Standard Sampling Procedure & Tables for Inspections by Variable for Percent Defective," as approved in Case No. I-5083.

The Random Test results are provided in Attachment A. With the exception of those meter lots identified herein, all lots were below the maximum allowable defective percentage for this test period. Montana-Dakota previously identified two meter lot groups that failed in the last test cycle. A sub-group of meters within one of those groups was further identified as defective. The Company previously noted that:

- 29 meters from Meter Lot S400 with install dates of 2000 through 2004 would be removed, and
- 390 meters from Meter Lot 415 with install dates of 2005 through 2008 would be removed.

The replacement of these 419 meters is expected to be complete in the near future. Meter Lot 415, excluding the 390 meters being replaced above, was re-sampled in this test cycle and the results were outside the maximum allowable percentages. The Company will be removing the remaining meters in this set.

The Company also identified four meter lot groups that had populations of under ten meters and therefore prudent to remove the meters from the following sub groups:

- Meter Lot 175 – install date of 1980 through 1984.
- Meter Lot 250 – install date of 1975 through 1979.
- Meter Lot R200 & R275 – install date of 1980 through 1984.
- Meter Lot S400 – install date of 2005 through 2009.

The Periodic test results are provided in Attachment B. As shown, 693 meters were tested during this review period resulting in an average accuracy of 99.08%

at an open test (100% of meter rating) and 99.53% accuracy at a check test (20% of meter rating).

Please contact me if you have questions regarding the gas meter testing results.

Montana-Dakota respectfully requests that this filing be accepted as being in full compliance with the filing requirements of this Commission.

Sincerely,

/s/ Travis R. Jacobson

Travis R. Jacobson
Director of Regulatory Affairs

Attachments

**MONTANA - DAKOTA UTILITIES CO.
ND, SD, WY - 2020 TEST YEAR
RANDOM SAMPLE TEST RESULTS**

Lot Type	Size (in CIS)	Install Year	Count	Minimum Sample*	Defective [%]	Allowable [%]
AC-250	AC250	90-94	280	20	8.98	24.53
		95-99	7,770	50	6.50	22.00
		00-04	24,832	100	12.34	20.66
		05-09	30,593	100	7.02	20.66
AL-425	AL425	95-99	16	4	26.33	27.57
		00-04	447	25	16.13	23.97
		05-09	579	30	8.05	23.58
AC-630	AC630	00-04	25	4	27.33	36.90
		05-09	463	25	18.20	23.97
AS02	AL175, AL225 & AI250	75-79	177	15	2.27	25.61
		80-84	83	10	0.00	27.57
		85-89	259	20	0.01	24.53
		90-94	1,012	35	8.05	22.91
		95-99	1,713	40	11.54	22.86
		00-04	599	30	4.69	23.58
		05-09	343	25	1.13	23.97
ER01	175	85-89	71	10	13.83	27.57
		90-94	321	25	15.97	23.97
		95-99	565	30	17.93	23.58
		00-04	97	10	0.00	27.57
ER02	250	80-84	30	5	32.80	33.99
		85-89	848	35	1.49	22.91
		90-94	4,352	50	12.27	22.00
		95-99	7,093	50	17.36	22.00
		00-04	2,041	40	1.07	22.86
		05-09	138	15	0.63	25.61

**MONTANA - DAKOTA UTILITIES CO.
ND, SD, WY - 2020 TEST YEAR
RANDOM SAMPLE TEST RESULTS**

Lot Type	Size (in CIS)	Install Year	Count	Minimum Sample*	Defective [%]	Allowable [%]
ER03	R200 & R275	85-89	642	30	4.106	23.58
		90-94	3,697	50	12.98	22.00
		95-99	6,749	50	2.57	22.00
		00-04	8,726	75	9.95	21.11
		05-09	2,968	40	0.67	22.86
NL-250	NL-250	90-94	45	7	8.72	30.50
		95-99	35	5	0.00	33.99
		00-04	87	10	23.72	27.57
		05-09	235	20	5.32	24.53
S250	S250	90-94	1,176	35	0.11	22.91
		95-99	991	35	0.42	22.91
		00-04	638	30	0.28	23.58
		05-09	573	30	0.32	23.58
SL250	SL250	95-99	930	35	0.07	22.91
		00-04	227	20	0.09	24.53
		05-09	266	20	0.42	24.53
S400A	S400A	95-99	25	4	26.67	36.90
		05-09	35	5	0.00	33.99
415	415	05-09	2,153	40	28.18	22.86

* - Military Standard No. 414, Inspection Level IV with specification limit of $\pm 2\%$

Note: Includes the Wahpeton service area for Great Plains Natural Gas Company, a division of Montana-Dakota Utilities Company.

**Montana-Dakota Utilities Co.
North Dakota, South Dakota, and Wyoming
July 1, 2019 through June 30, 2020
Periodic Test Results**

Accuracy by Size			
Meter Size	Quantity Tested	Open Accuracy	Check Accuracy
		[%]	[%]
R1000	155	99.08	100.07
AL1000	72	100.51	101.12
R1600	54	99.33	100.31
3000	10	97.90	98.2
5000	6	97.29	98.17
10000	3	99.10	97.83
R750	226	99.49	100.4
AL800	167	99.73	100.1
	693	99.05	99.53