

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

July 2, 2015

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), a Division of MDU Resources Group, Inc., herewith submits the results of its gas meter testing program for the period April 1, 2014 through March 31, 2015.

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 462 meters during the period April 1, 2014 through March 31, 2015 resulting in an average accuracy of 99.8% at an open test (100% of meter rating) and 99.9% accuracy at a check test (20% of meter rating).
2. Periodic Test – Meters with ratings of 630 cubic feet per hour or greater are tested at a periodic interval of at least once in eight years.
3. Random Test - All other active meters, with ratings of 630 cubic feet per hour or less, are assigned to lots and are randomly computer selected for test each year.

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. These damaged meters are either retired or given a complete overhaul and re-tested before being placed back in service.

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.

Two groups experienced first year failures in this test cycle. A description of the group and the plan for the groups are identified below:

- Meter Lot S400A – install date of 2000 through 2004: This is a first time failure for this group and the group will be re-sampled for the 2015 random program.
- Meter Lot S400A – install date of 2005 through 2008: This is a first time failure for this group and the group will be re-sampled for the 2015 random program.

The Periodic test results are provided in Attachment B. As shown, 188 meters were tested during this review period resulting in an average accuracy of 99.1% at an open test (100% of meter rating) and 100.1% accuracy at a check test (20% of meter rating).

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

Please acknowledge receipt by stamping or initialing the duplicate copy of this letter attached hereto and returning the same in the enclosed self-addressed, stamped envelope.

Sincerely,



Tamie A. Aberle
Director of Regulatory Affairs

Attachments

| <p style="text-align: center;">Montana-Dakota Utilities Co. North Dakota April 1, 2014 through March 31, 2015 Random Sample Test Results</p> | | | | | | |
|---|---------------------------------|---------------------|--------------|------------------------|----------------------|----------------------|
| Lot Type | Size (in CIS) | Install Year | Count | Minimum Sample* | Defective [%] | Allowable [%] |
| 415 | 415 | 05-09 | 1,711 | 40 | 12.69 | 22.86 |
| | | | | | | |
| AC-250 | AC250 | 90-94 | 24 | 4 | 0.00 | 36.90 |
| | | 95-99 | 1,666 | 40 | 1.31 | 22.86 |
| | | 00-04 | 10,953 | 75 | 1.53 | 21.11 |
| | | 05-09 | 14,276 | 75 | 8.51 | 21.11 |
| | | | | | | |
| AL-425 | AL425 | | | | | |
| | | 95-99 | 38 | 5 | 0.00 | 33.99 |
| | | 00-04 | 268 | 20 | 5.26 | 24.53 |
| | | 05-09 | 235 | 20 | 3.05 | 24.53 |
| | | | | | | |
| AS02 | AL175, AL225 & AL250 | 85-89 | 118 | 15 | 8.27 | 25.61 |
| | | 90-94 | 1,009 | 35 | 4.88 | 22.91 |
| | | 95-99 | 1,362 | 40 | 18.89 | 22.86 |
| | | 00-04 | 766 | 30 | 1.83 | 23.58 |
| | | 05-09 | 394 | 25 | 7.68 | 23.97 |
| | | | | | | |
| ER01 | 175 | 95-99 | 81 | 10 | 0.00 | 27.57 |
| | | 00-04 | 189 | 20 | 7.41 | 24.53 |
| | | 05-09 | 13 | 3 | 0.00 | 40.47 |
| | | | | | | |
| ER02 | 250 | 76-79 | 28 | 5 | 0.00 | 33.99 |
| | | 85-89 | 637 | 30 | 21.15 | 23.58 |
| | | 90-94 | 3,707 | 50 | 12.35 | 22.00 |
| | | 95-99 | 5,605 | 50 | 10.60 | 22.00 |
| | | 00-04 | 2,274 | 40 | 2.19 | 22.86 |
| | | 05-09 | 254 | 20 | 3.74 | 24.53 |
| | | | | | | |
| ER03 | R200 & R275 | 85-89 | 1,040 | 35 | 19.32 | 22.91 |
| | | 90-94 | 3,077 | 40 | 9.70 | 22.86 |
| | | 95-99 | 7,048 | 50 | 17.68 | 22.00 |
| | | 00-04 | 8,625 | 75 | 0.56 | 21.11 |
| | | 05-09 | 5,298 | 50 | 1.13 | 22.00 |
| | | | | | | |
| NL-250 | NL-250 | 90-94 | 116 | 15 | 8.87 | 25.61 |
| | | 95-99 | 80 | 10 | 9.02 | 27.57 |
| | | 00-04 | 171 | 15 | 12.15 | 25.61 |
| | | 05-09 | 228 | 15 | 2.64 | 25.61 |
| | | | | | | |

| <p style="text-align: center;">Montana-Dakota Utilities Co. North Dakota April 1, 2014 through March 31, 2015 Random Sample Test Results</p> | | | | | | |
|---|--------------------------|-------------------------|--------------|----------------------------|--------------------------|--------------------------|
| Lot Type | Size (in CIS) | Install Year | Count | Minimum Sample* | Defective [%] | Allowable [%] |
| S250 | S250 | 85-89 | 8 | 3 | 0.00 | 40.47 |
| | | 90-94 | 883 | 35 | 0.19 | 22.91 |
| | | 95-99 | 645 | 30 | 0.90 | 23.58 |
| | | 00-04 | 756 | 30 | 0.02 | 23.58 |
| | | 05-09 | 598 | 30 | 0.00 | 23.58 |
| SL250 | SL250 | 95-99 | 253 | 20 | 0.00 | 24.53 |
| | | 00-04 | 320 | 25 | 0.01 | 23.97 |
| | | 05-09 | 285 | 20 | 0.00 | 24.53 |
| S400 | S400 | 00-04 | 14 | 3 | 0.00 | 40.47 |
| | | 05-09 | 23 | 4 | 34.62 | 36.90 |
| S400A | S400A | 00-04 | 55 | 7 | 41.07 | 30.50 |
| | | 05-09 | 42 | 7 | 35.62 | 30.50 |

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

| Montana-Dakota Utilities Co. North Dakota April 1, 2014 through March 31, 2015 Periodic Test Results | | | |
|---|-----------------|------------------------|-------------------------|
| Accuracy by Size | | | |
| Meter Size | Quantity | Open Accuracy % | Check Accuracy % |
| AL-1000 | 17 | 99.2% | 99.7% |
| AL-800 | 30 | 99.0% | 99.5% |
| R-1000 | 72 | 98.6% | 99.9% |
| R-1600 | 24 | 98.6% | 100.4% |
| R-750 | 45 | 98.7% | 100.2% |
| | | | |
| Total | 188 | 98.7% | 99.9% |