KINDER MORGAN, INC.

Gas Meter Statistical Sampling and Testing Program – Diaphragm and Ultrasonic Meters Only

I. Establishing Sample Test Groups

Meter sample test groups will be established in the following manner:

A. Each specific test group will consist of meters of equivalent make (manufacturer) and size.

B. Each specific test group will consist of meters purchased within five (5) consecutive years at a maximum.

C. The maximum and minimum gas meter sample test group populations will be determined by the following table:

Rated Meter Capacity in CFH	Suggested Population	Maximum Population	Minimum Population
800 CFH or less	10,000	15,000	50
More than 800 CFH	1,000	1,500	5

D. If the quantity of any equivalent meters purchased in one (1) year exceeds the maximum established in Section I.C above, that quantity will be broken down into the least number of multiple test groups that will satisfy the population determined by the Company within the above guidelines.

E. If the population of any specific test groups drops below the minimum population as listed in Section I.C hereof, that specific test group will be retired.

F. No sample test group will be depleted except by retirement of meters.

II. Sample Testing Normal and Reduced Inspections

A. Double Sampling Plans: Test groups (or equivalent test groups from recent years) which have experienced a very low incidence of individual meter rejects will be inspected using the double sampling scheme in order to reduce the average number of units which are required to be sampled each year. The plan will be as follows:

1. Each test group will have the sample size code letter determined from Table I of MIL-STD 105-D at General Inspection Level II.

2. Normal sample sizes are determined by Table III-A of MIL-STD 105-D will be used on each test group annually (see Table 1 below), unless the test group is in the reduced inspection schemes as described below.

3. The reduced sample sizes are determined in Table III-C of MIL-STD 105-D may be utilized on any test group annually, if the following conditions are satisfied:

    a. The test group has been sampled on normal sample sizes for four (4) years or more.

    b. The total number of meters running faster than 2 percent during the previous four (4) years is equal to, or less than, the applicable number given for an AQL of 6.5 percent in Table 1-C below.

4. Any test group on the reduced sampling plan will return to normal sampling if:

    a. Any test group is rejected as described in Section III hereof.

    b. The results for the current year failed to reach a decision to reject or accept.

5. An acceptable quality level (AQL) of 6.5 percent will be used throughout.

6. All sampled meters will be returned to the original test group from which they were pulled except as noted in Section I.F hereof.

B. Single Sampling Plans: Any test group which does not qualify for double sampling will be inspected on the single sampling plans, as follows:

    1. Each test group will have the sample size code letter determined from Table I of MIL-STD 105-D at General Inspection Level II.

    2. Normal sample sizes are determined in Table II-A of MIL-STD 105-D will be used on each test group annually (see Table 1-A hereof), unless the test group falls within the reduced inspection schemes as described below.

    3. The reduced sample sizes are determined in Table II-C of MIL-STD 105-D may be utilized on any test group annually, if the following conditions are satisfied:

        a. The test group has been sampled on normal sample sizes for four (4) years or more.

        b. The total number of meters running faster than 2 percent during the

previous four (4) years is equal to or less than the applicable number given for an AQL of 6.5 percent in Table 1-A or Table 1-C below.

4. Any test group on the reduced sampling plan will return to normal sampling if:

    a. Any test group is rejected as described in Section III hereof.

    b. The results for the current year failed to reach a decision to reject or accept.

5. An acceptable quality level (AQL) of 6.5 percent will be used throughout.

6. All sampled meters will be returned to the original test group from which they were pulled except as noted in Section 1.F hereof.

III. PHASED REPLACEMENT OF TEST GROUPS

If any sample from a test group is rejected according to the MIL-STD 105-D plans described above, regardless of which inspection level of sampling is being performed, the following procedure will apply in order to confirm the decision to call for phased replacement of that test group.

A. If the test group is currently sampled using a single sampling plan, additional meters will be pulled as soon as possible (either that same year or by the end of March of the next year) to increase the combined sample size to that required by the corresponding normal double sampling plan in Table III-A of MIL-STD 105-D (Table 1-B below). However, if the original sample was inspected under a reduced scheme, additional meters of sufficient number will be pulled to correspond to the normal single sampling plan in Table II-A of MIL-STD 105-D (see also Table 1-C and 1-B hereof).

If the combined first and second samples result in a rejection of the test group, the entire test group will be subject to removal from service as soon as practicable, tested, and adjusted to within 1 percent accuracy. These readjusted meters will be sampled under the reduced inspection level as provided in Section IV.F.2.C. hereof.

B. If the test group is currently sampled using a double sampling plan, additional meters will be pulled as soon as possible (either during the same year or by the end of March of the next year) to increase the combined sample size to match the cumulative sample size (after seven sub-samples) in the multiple sampling plans for normal inspection of MIL-STD 105-D (Table IV-A). See Table 1-D below for required combined sample sizes and acceptance and rejection numbers.

If the combined samples result in a rejection of the test group using the acceptance and rejections numbers in Table IV-A of MIL-STD 105-D (Table 1-D below), the entire test group will be subject to removal from service as soon as practicable, tested, and adjusted to within 1 percent accuracy. The readjusted meters will be sampled under the reduced inspection level as set forth in Section IV.F.2.C. hereof.

C.   If the combined samples are acceptable based on the procedures described in Sections III.A. or III.B. above, then no further sampling will be performed that year on the test group. The test group will be subject to single sample normal inspection the following year.

IV.   Selection of Meters to be Sampled

Meters will be selected for sampling in the following manner:

A.   All sample test groups that contain meters with a rated capacity of 800 CFH or less that were purchased during or after 1985, and are fifteen (15) years old or older from the date of purchase, will be sampled annually.

B.   All sample test groups that contain meters with a rated capacity of 800 CFH or less that were purchased prior to 1985, and are ten (10) years old or older, from the date of purchase, will be sampled annually.

C.   All sample test groups that contain meters with a rated capacity of more than 800 CFH, and are eight (8) years old or older from the date of purchase, will be sampled annually.

D.   Each sample test group which is to be sampled will have the meters categorized by test group number with each meter within that test group listed numerically by Company number and entered into the Company computer.

E.   The Company computer will select a random start point for each sample test group based upon the specific population of each sample test group.

F.   The computer will then be used to select the meters to be sampled starting with the random start point.

G.   In order to avoid biasing the random sample, or causing a questionable test group to be put on reduced sample, the following procedure will be used to avoid pulling a meter which has been tested and adjusted within the last five (5) years.

   1.   For test groups with populations below the minimum quantity, select all meters and retire the test group.

2.   For test groups with populations at or above the minimum quantity:

     a.   If the number selected for random start was tested or adjusted within the last five (5) years, then a new random number will be selected.

     b.   If any meter selected by the incremental counting is a meter that was tested or adjusted within the last five (5) years, then go to the next consecutive meter; if an acceptable meter is not found, go to the meter prior to the original unacceptable meter, continue this forward then backward process until an acceptable meter is found, then begin the incremental counting again.

     c.   If the entire test group has been pulled for testing and adjustments, it shall not be sampled again until four (4) years (for meters over 800 CFH) or five (5) years (for meters 800 CFH or less). When it does return to the sample testing program, it will be at a reduced sample size.

V.   The Period Of Sampling

As established in Section IV.A. and IV.B. above.

VI.   Inspection Performed on Sampled Meters

All meters selected for sampling will be intested for accuracy at 100 percent of rated capacity. The intesting of all sampled meters at 100 percent of rated capacity is performed to determine the meter accuracy. Any meter which registers faster than 2 percent will count as a reject for its specific sample test group. In accordance with Rule 4302 of the Rules Regulating the Service of Gas Utilities and Pipeline Operators promulgated by the Public Utilities Commission of the State of Colorado, meters selected for sampling, if necessary, will be adjusted to be correct within one (1) percent accuracy before being placed back into service.

TABLE 1

SUMMARY TABLE GAS METER SAMPLING PLANS

A.   SINGLE SAMPLING PLANS: AQL = 6.5 PERCENT

Code Letter/Lot Size	Sample Size n	Normal Ac	Normal Re	Limit Nos.*	Reduced n	Reduced Ac	Reduced Re
A 2-8	2	0	1	0	2	0	1
B 9-15	3	0	1	0	2	0	1
C 16-25	5	1	2	0	2	0	2
D 26-50	8	1	2	1	3	0	2
E 51-90	13	2	3	2	5	1	3
F 91-150	20	3	4	3	8	1	4
G 151-280	32	5	6	5	13	2	5
H 281-500	50	7	8	10	20	3	6
J 501-1200	80	10	11	16	32	5	8
K 1201-3200	125	14	15	27	50	7	10
L 3201-10000**	200	21	22	46	80	10	13

TABLE 1

SUMMARY TABLE GAS METER SAMPLING PLANS

B.   DOUBLE SAMPLING PLANS: AQL = 6.5 PERCENT

Code Letter	Sample Size First/Second	Normal Ac	Normal Re	Sample Size n_1/n_2	Reduced Ac	Reduced Re
C	5	0	2	2	0	2
	5	1	2	2	0	2
D	5	0	2	2	0	2
	5	1	2	2	0	2
E	8	0	3	3	0	3
	8	3	4	3	0	4
F	13	1	4	5	0	4
	13	4	5	5	1	5
G	20	2	5	8	0	4
	20	6	7	8	3	6
H	32	3	7	13	1	5
	32	8	9	13	4	7
J	50	5	9	20	2	7
	50	12	13	20	6	9
K	80	7	11	32	3	8
	80	18	19	32	8	12
L**	125	11	16	50	5	10
	125	26	27	50	12	16

TABLE 1

SUMMARY TABLE GAS METER SAMPLING PLANS

C.   LIMIT NUMBERS FOR REDUCED INSPECTION: AQL = 6.5 PERCENT

USE FOR SINGLE AND DOUBLE SAMPLING

Total number of sampled units from last 4 years	Limit Nos.***
20 - 31	0
32 - 51	1
52 - 79	2
80 - 127	3
128 - 199	5
200 - 319	10
320 - 499	16
500 - 799	27
800 - 1259	46
1260 - 2000	74

TABLE 1

SUMMARY TABLE GAS METER SAMPLING PLANS

D.   NORMAL-MULTIPLE SAMPLING PLAN: AQL = 6.5 PERCENT
     ADAPTED FROM MIL-STD 105-D TABLE IV-A FOR VERIFICATION
     SAMPLING AFTER REJECTION UNDER DOUBLING SAMPLING

Code Letter	Combined Total Sample Size	Ac	Re
C	14	2	3
D	14	2	3
E	21	4	5
F	35	6	7
G	56	9	10
H	91	13	14
J	140	18	19
K	224	25	26
L**	350	37	38

TABLE 1

SUMMARY TABLE GAS METER SAMPLING PLANS

Notes:

*   On the basis of four years of data on each meter, the <u>total</u> number of defective (fast) meters must be less than or equal to this value, to go from Normal to Reduced inspection. Also, management should deem that it is desirable to do so.

**   The sampling scheme for lot sizes of 10,000 to 15,000 will be the same as those for code letter L as required in MIL-STD 105-D for AQL = 6.5 percent.

***   The limit numbers were obtained by taking 4/10 of the limit and sample numbers in MIL-STD 105-D, Table VIII.

SAMPLING START-UP PROCEDURES

Due to the regrouping of all meter types, a history does not exist with regard to the specific groupings which have been created. However, a great deal of information does exist for most of the new groups. Therefore, each test group will be assigned to one of the following four sampling procedures based on the past performance of the meters in the group.

SAMPLING PROCEDURE	GENERAL HISTORY OF METERS IN TEST GROUP
1. Reduced Double Sampling	Essentially no defective meters over history
2. Reduced Single Sampling	Very few defective meters over history
3. Normal Double Sampling	Some defective meters but no concerns
4. Normal Single Sampling	Otherwise