AVISTA UTILITIES

GAS METER MEASUREMENT PERFORMANCE REPORT

2015 RESULTS

Submitted 4-19-16

GAS METER MEASUREMENT PERFORMANCE REPORT

GAS METER PERFORMANCE FOR THE PERIOD JANUARY 1 – DECEMBER 31, 2015

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1. SCOPE

This report covers the methodology, test results, and proceedings of the Avista gas meter measurement performance testing program for in-service meters for the period from January 1, 2015 thru December 31, 2015.

2. GENERAL

COMPLIANCE

Washington: Gas meter testing requirements for Avista are promulgated by Washington Administrative Code, Chapter 480-90 "Gas companies - operations", Section 333 (Initial accuracy of meters), Section 338 (Metering tolerance), Section 343 (Statement of meter test procedures), and Section 348 (Frequency of periodic meter tests. Avista gas tariff Rule No. 170, Section 20, effective November 30, 2011, has been approved and is in compliance with the requirements of WAC 480-90 and prescribes the minimum inspection and testing requirements.

Oregon: Gas meter testing requirements for Avista are promulgated by Oregon Administrative Rules, Chapter 860, Division 023 "Service Standards", Section 0015 (Testing Gas and Electric Meters). Avista gas tariff Rule No. 18 with varying approval dates between January 1, 2009 and January 1, 2012 has been approved is in compliance with the requirements of OAR 860-023-0015 and prescribes the minimum inspection and testing requirements.

Idaho: Gas meter testing requirements for Avista are promulgated by Title 31, Chapter 1, "Service Rules for Gas Utilities", IDAPA 31.31.01.000, Rules 151-200 (Standards for service). Avista gas meter testing program is completed in accordance with IDAPA 31.31.01.0000* and Avista Gas Meter Testing Program dated 1/1/2012.

> *(Rule 152 – Avista's random sampling program is completed for meters 0-1000 CFH and in accordance with ANSI/ASQ Z1.9, Inspection by Variables. The IDAPA rule refers to the obsolete military standard 105D, Inspection by Attributes.)

SIGNIFICANT UPDATES OR CHANGES

In February of 2015, Avista changed the system of record for meter testing results from Workplace to Maximo. Maximo cannot easily distinguish between temperature compensated (TC) and non-TC meters when exporting the meter testing results. After examining the testing results in 2015, it was decided to combine temperature compensated (TC) and non-TC meter families. The results were found to have no significant statistical difference by doing so. This change does not conflict with existing tariff language.

Also as a result of the Maximo implementation, some of the meter counts contained in this report may differ when comparing the beginning of the year to the end of the year.

Historically this report was created separately for each of the three states. Since the meter families are no longer state specific, this report will grow to incorporate to cover the complete program, not just the program specific to either Washington, Oregon, or Idaho.

METER CATEGORIES

Meter populations exist within the following gas meter categories. Meter category inspection and testing requirements are summarized as follows for installed meters:

- ***Domestic (Diaphragm) Meters 1000 CFH and smaller*** – Random sampling and proof testing per ANSI Z1.9, testing to begin during the 10th test year after meter installation.
- ***Diaphragm Meters 1001 – 3000 CFH*** – Prescriptively inspected and proof tested every ten (10) years or sooner.
- ***Diaphragm Meters >3000 CFH*** - Prescriptively inspected and proof tested every five (5) years or sooner.
- ***Rotary Meters*** – Prescriptively inspected and tested via differential testing every five (5) years or sooner.
- ***Turbine Meters*** – Prescriptively inspected and tested annually via a spin test and every ten (10) years via a calibration.

METER PERFORMANCE REQUIREMENTS

Random Sampling - Meter inspection performance for randomly tested meters is per ANSI Z1.9 with a tolerance of +/- 2%. The intent of the testing standard is to verify the following:

Overall Performance - Verify with approximately 90% certainty, that the portion of non-conforming meters does not exceed 10% of any installed meter population. For overall performance, equal weight is given to both the upper and lower specification limit (fast and slow reads are equally weighted and are averaged). The "standard deviation – double specification limit method with variability unknown" as detailed in the ANSI Z1.9 shall be used to determine the overall acceptability of a meter population. Acceptable Quality Limit (AQL) for analysis will equal 10.0.

Fast Direction Performance- Verify with approximately 90% certainty that the portion of non-conforming fast meters does not exceed 10% of any installed meter population. For testing equal weight is given to both the upper and lower specification limit (fast and slow reads are equally weighted and are averaged). The "standard deviation – single specification limit method with variability unknown" as detailed in the ANSI Z1.9 shall be used to determine the fast direction performance (disadvantageous to the consumer) acceptability of a meter population. Acceptable Quality Limit (AQL) for analysis will equal 10.0.

Prescriptive Testing - Meter inspection performance for diaphragm meters >1000 CFH, rotary, and turbine meters that are proof tested shall be 100% +/- 2%. Rotary meters that are differential tested shall determine that the meter is operating within 150% of the manufactures differential pressure requirements at the metering pressure. Turbine meter spin tests shall exceed the manufactures minimum prescribed spin duration.

ANSI Z1.9 TESTING REQUIREMENTS

A summary of the meter population performance requirements per ANSI Z1.9 are as follows:

- Meters to be included in the meter test population will be selected at random.
- All meters within the meter test population are eligible for testing except that individual meters tested within preceding five (5) years are excluded from random sample selection.
- Annual meter population sampling requirements will be as prescribed by the ANSI Z1.9 and in accordance with appropriate meter testing category the meter population falls within.
- Meter Testing Categories
    - "Normal Inspection" – Default meter population sample category as detailed by the ANSI Z1.9. Meter population sampling shall be switched from "Normal" to "Tightened" or "Normal" to "Reduced" as described below.
    - "Tightened Inspection" – Increased meter population sampling as detailed by the standard when 2 out of 5 preceding annual tests have been found non-conforming. Meter population sampling may be returned to "Normal" from "Tightened" when 5 consecutive batches have been determined acceptable.
    - "Reduced Inspection" – Decreased meter population sampling as detail by ANSI Z1.9. Meters with a 5 year test history are eligible for reduced inspection requirements. Meter population sampling may be switched from "Normal" to "Reduced" when 5 annual tests have been found acceptable. Meter population sampling shall be returned from "Reduced" to "Normal" if a single annual sampling is rejected.
- Failure of a meter population – A meter population shall be deemed failed when:
    - Three (3) consecutive yearly inspections for a population under tightened inspection are found non-conforming for overall performance or;
    - Two (2) consecutive yearly inspections fail tightened inspection as non-conforming for fast meters or;
    - Two (2) consecutive yearly inspections exceed a total of 20% non-conforming meters (total of fast and slow meters) under tightened inspection.

3. DEFINITIONS

PMC – Refers to Avista's gas meter measurement performance program, commonly referred to as a Periodic Meter Change-out (PMC) program.

Meter Population – Often referred to as Meter Family. Group of meters from the same manufacture, same model, and manufactured in the same year. Temperature Compensation does not distinguish a new population (i.e. 1995 AC250TC is the same as 1995 AC250).

Open Test – Meter proof test completed at 100% of meter rated capacity or the maximum rated capacity of the test equipment.

Check Test – Meter proof test completed at approximately 20% of the meter rated capacity.

4. RANDOM SAMPLING METER PERFORMANCE

DOMESTIC METERS 1000 CFH AND SMALLER

RANDOM SAMPLING - SUMMARY

Beginning of Report Year, In-Service Meters 1/1/15		
Total Gas Meter Populations, Random Testing Models		338,490
Total Number of Test Families, Including families not eligible for test	(a)	283
Number of Test Families >= 10 yrs old	(b)	239
Number of Test Families w/ Size More Than 10	(c)	223
Number of Test Families w/ Size Less Than 10		16
Number of Test Families Administratively Declared Failed	(d)	0
Number of Test Families >= 10 yrs, Size>10, not declared failed	(e)	230
Failed Family By Performance	(f)	2
Meter Families That Were Scheduled For Normal Inspection, Report Year		98
Meter Families That Were Scheduled For Reduced Inspection, Report Year		113
Meter Families That Were Scheduled For Tightened Inspection, Report Year		16
Report Year Meter Testing Quantities, End of 2015 Test Results		
Number of Meters Tested		4423
Number of Meters Passed, (+/-) 2%		4017
Number of Meters Failed, (+/-) 2%		340
Number of Meters, Uniquely Defective Test Result, (+/-) 10%		66
Meter Families With an Overall Fail Result		1
Transition to 2016 Test Year		
Total Number of Meters, Start of New Test Year		342,837
Total Number of Test Families, Start of New Test Year	(a)	218
Number of Test Families >= 10 Years Old, Start of New Test Year	(b)	178
Number of Test Families w/ Size More Than 10, Start of New Test Year	(c)	207
Number of Test Families Administratively Declared Failed For New Test Year	(d)	5
Number of Test Families >= 10 yrs, Size > 10, AND Not Historically Failed, Start of New Test Year	(e)	168
Failed Family By Performance	(f)	0
Meter Families Scheduled For Normal Inspection During New Test Year		77
Meter Families Scheduled For Reduced Inspection During New Test Year		80
Meter Families Scheduled For Tightened Inspection During New Test Year		12

(a) Total number of meter populations includes meter test families that are less than 10 years old and are not yet subject to test requirements.

(b) Number of Meter Test Populations >= 10 years old.

(c) Avista has many test populations with less than 10 members. Random sampling of those populations results in repeated testing of meters with no perceived benefit to customers. Avista has begun a prioritized program which is replacing meters that are more than 20 years old in populations of less than 10 meters. Small populations less than 20 years old are tested but with the restriction that a meter will not be retested within five (5) years.

(d) Number of meter families that were declared failed for administrative reasons. Includes families with less than 10 meters population and meter populations that were observed to be trending towards failure. Meter populations trending towards failure, but not yet failed by test data, were generally older populations that had been mixed with other populations when the testing program was based on last install date rather than manufactured date. The revision in test family grouping uncovered these suspect families which the earlier test family criteria had hidden. In some instances, not enough tests had been performed to statistically declare the family failed; however, manual inspection of results indicated some obvious trend to failure for those groups. Avista has chosen to proactively begin retirement of meter test populations with these characteristics.

(e) Number of meter test families subject to standard random testing procedures: over 10 years old, with more than 10 members, and not a failed family.

(f) Meters populations failed due to performance.

RANDOM SAMPLING METER FAMILIES STATISTICAL RESULTS - DOMESTIC METERS 1000 CFH AND SMALLER

Test Family	Average of Open Test	Average of Check Test	Number Tested	Number in Test Family at End of the Year	Results: T-R-N-F-AF (1)
5B_1959	100.3	101.3	27	1,130	N
5B_1960	100.3	101.3	22	830	R
5B_1961	100.0	100.7	17	933	R
5B_1962	100.4	101.1	21	904	R
5B_1963	100.2	101.1	24	641	R
AC250_1980	99.7	100.3	8	905	T
AC250_1983	100.2	100.4	7	800	N
AC250_1984	100.6	100.8	14	1,313	R
AC250_1985	100.2	100.7	6	623	R
AC250_1986	99.7	100.0	18	1,923	N
AC250_1987	100.2	100.4	17	787	N
AC250_1988	100.2	100.6	10	1,633	R
AC250_1989	99.7	100.0	43	2,947	R
AC250_1990	99.6	100.0	86	7,553	R
AC250_1991	99.6	100.0	78	7,401	R
AC250_1992	99.9	100.3	97	9,646	N
AC250_1993	99.9	100.1	91	11,611	R
AC250_1994	100.4	100.6	56	5,494	R
AC250_1995	100.1	100.5	12	1,037	R
AC250_1996	100.3	100.7	79	7,499	R

Test Family	Average of Open Test	Average of Check Test	Number Tested	Number in Test Family at End of the Year	Results: T-R-N-F-AF (1)
AC250_1997	101.0	101.2	134	13,759	R
AC250_1998	100.9	101.0	111	12,866	R
AC250_1999	100.9	101.0	75	10,590	R
AC250_2000	100.6	100.8	81	11,769	N
AC250_2001	100.6	100.8	37	4,059	N
AC250_2002	100.8	101.0	56	8,578	N
AC250_2003	101.2	101.4	57	10,527	N
AC250_2004	101.4	101.9	77	12,585	T
AC250_2005	101.2	101.5	56	10,670	T
AC630_1998	101.3	101.1	6	248	N
AC630_1999	100.3	100.5	5	223	N
AC630_2003	101.0	101.0	2	183	N
AC630_2004	101.7	102.4	3	257	T
AL1000_1990	100.4	100.4	1	67	T
AL1000_1992	101.3	102.1	1	115	N
AL1000_1994	102.4	104.0	1	268	T
AL1000_1997	100.7	101.4	2	159	N
AL1000_1998	100.5	100.2	1	208	N
AL1000_1999	101.2	101.8	2	237	R
AL1000_2005	101.7	102.0	1	125	N
AL175_1962	100.0	101.3	6	125	R

Test Family	Average of Open Test	Average of Check Test	Number Tested	Number in Test Family at End of the Year	Results: T-R-N-F-AF (1)
AL175_1964	100.3	101.1	17	584	FAIL
AL175_1965	101.0	101.1	94	363	FAIL
AL175_1967	101.7	102.2	21	484	T
AL175_1968	100.4	101.9	15	247	T
AL175_1969	100.4	101.4	160	1,912	FAIL
AL175_1970	100.2	100.8	70	3,453	R
AL175_1971	99.9	100.1	44	2,754	R
AL175_1972	100.3	100.6	54	3,843	R
AL175_1973	100.3	100.8	72	2,675	R
AL175_1974	100.3	100.6	14	950	R
AL175_1975	100.7	101.0	12	318	N
AL175_1976	99.7	100.1	5	137	N
AL175_1977	100.0	100.3	20	497	T
AL175_1978	98.9	99.6	5	236	N
AL175_1979	99.9	100.2	54	2,433	R
AL175_1980	97.3	99.6	5	692	R
AL175_1981	100.3	100.5	23	812	R
AL175_1983	100.1	100.2	9	537	R
AL175_1984	100.1	100.3	8	557	R
AL250_1976	99.8	100.3	2	23	N
AL250_1989	99.5	99.9	8	502	R

Test Family	Average of Open Test	Average of Check Test	Number Tested	Number in Test Family at End of the Year	Results: T-R-N-F-AF (1)
AL425_1964	100.8	100.9	2	63	R
AL425_1965	100.3	100.3	2	81	R
AL425_1966	100.3	100.3	2	128	R
AL425_1967	100.3	100.3	3	120	R
AL425_1968	101.6	101.1	1	129	R
AL425_1969	99.5	99.2	3	147	R
AL425_1970	99.9	99.4	2	116	N
AL425_1972	101.7	101.3	1	122	R
AL425_1973	101.5	100.9	1	158	R
AL425_1978	100.7	100.9	1	78	R
AL425_1979	100.7	100.4	1	205	R
AL425_1981	100.5	100.6	2	70	R
AL425_1985	99.3	99.0	1	66	R
AL425_1992	100.5	100.6	2	219	R
AL425_1993	100.3	100.3	2	128	N
AL425_1994	99.9	100.5	1	386	N
AL425_1995	100.3	100.3	1	165	N
AL425_1997	100.9	100.8	1	244	T
AL425_1998	100.0	100.3	2	210	N
AL425_2002	99.7	100.3	1	102	N
AL425_2003	101.3	101.4	2	145	N

Test Family	Average of Open Test	Average of Check Test	Number Tested	Number in Test Family at End of the Year	Results: T-R-N-F-AF (1)
AL425_2004	100.8	100.8	1	240	N
AL800_1966	99.7	99.7	1	47	R
AL800_1968	100.2	99.8	1	100	R
AL800_1970	100.1	100.6	1	56	N
AL800_1971	100.3	100.7	1	78	R
AL800_1973	101.5	102.0	1	43	R
AL800_1980	100.2	99.9	1	35	N
AL800_1981	100.4	100.9	1	69	N
AL800_1985	100.3	101.2	3	50	R
R275_1993	100.8	100.9	11	1,261	N
R275_1994	100.9	101.1	96	11,435	R
R275_1995	100.9	101.6	40	2,449	T
R275_1996	100.6	101.0	35	3,767	R
R275_2003	100.4	100.5	1	384	N
R275_2005	101.0	101.1	14	1,448	N
RA175_1966	100.1	100.7	1	54	R
RA175_1967	99.6	100.0	1	30	N
RA175_1971	99.6	100.8	1	76	R
RA175_1973	100.4	101.1	1	104	R
RA275_1980	100.1	100.1	5	149	N
RA275_1993	102.2	102.0	4	415	R

Test Family	Average of Open Test	Average of Check Test	Number Tested	Number in Test Family at End of the Year	Results: T-R-N-F-AF (1)
RA275_1994	101.4	101.7	38	2,464	R
RA275_1995	100.9	101.2	38	2,058	R
RA275_1996	100.7	101.0	70	4,303	R
SA175_1964	101.0	101.5	1	8	AF
SA175_1968	100.4	100.1	2	14	N

(1) T-Tightened, R-Reduced, N-Normal, F-Failed, AF-Administratively Failed

5. PRESCRIPTIVE TESTING

PRESCRIPTIVE TESTING SUMMARIES

DIAPHRAGM METERS 1001 - 3000 CFH

See test results in section "Large Diaphragm Meters Data"

10-Year Periodic Testing	
Meter population [1]	2517
Meters tested and adjusted, 2015 test year[2]	128
Meters failed [2]	24

[1]As of 1/1/15
[2]As of 12/31/15 (does not include > +/- 10%)

DIAPHRAGM METERS GREATER THAN 3000 CFH

See test results in section "Large Diaphragm Meters Data"

5-Year Periodic Testing	
Meter population [1]	163
Meters tested and adjusted, 2011 test year[2]	41
Meters failed [2]	5

[1]As of 1/1/15
[2]As of 12/31/15 (does not include > +/- 10%)

PRESCRIPTIVE TESTING DATA, DIAPHRAGM METERS 1001-3000 CFH

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14852523	00042615	AL1400_1963	5/14/15 12:00 AM	2015	96.8	99.6	96.8	99.6	98.2	P
14852525	00042618	AL1400_1963	6/9/15 12:00 AM	2015	104.8	104.1	104.7	104.2	104.45	F
14852542	00042651	AL1400_1963	7/24/15 12:00 AM	2015	99.1	100.1	99.1	100.1	99.6	P
14852547	00042661	AL1400_1963	6/9/15 12:00 AM	2015	98.1	99.2	98.1	99.1	98.65	P
14852548	00042665	AL1400_1963	9/9/15 12:00 AM	2015	101.8	101.2	101.8	101.2	101.5	P
14853245	00045487	AL1400_1964	11/4/15 12:00 AM	2015	97.5	98.6	97.5	98.6	98.05	P
14853531	00046802	AL1400_1964	11/13/15 12:00 AM	2015	99.1	98.8	99.1	98.8	98.95	P
14853655	00047791	AL1400_1965	8/4/15 12:00 AM	2015	96.8	97.4	96.8	97.4	97.1	F
14853663	00047817	AL1400_1965	11/13/15 12:00 AM	2015	96.8	98.1	96.8	98.1	97.45	F
14853666	00047827	AL1400_1965	7/24/15 12:00 AM	2015	98.1	101.2	98.1	101.2	99.65	P
14853904	00053000	AL1400_1965	11/2/15 12:00 AM	2015	101.1	102	100.9	102.1	101.55	P
14853924	00053640	AL1400_1966	11/4/15 12:00 AM	2015	100.2	100.5	100.2	100.5	100.35	P

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14853925	00053652	AL1400_1966	8/31/15 12:00 AM	2015	102	102.8	102	102.8	102.4	F
14853926	00053659	AL1400_1966	8/6/15 12:00 AM	2015	98.2	99.3	98.2	99.3	98.75	P
14853927	00053660	AL1400_1966	7/24/15 12:00 AM	2015	101.2	101.6	101.2	101.6	101.4	P
14853928	00053661	AL1400_1966	7/24/15 12:00 AM	2015	95.6	97.7	95.6	97.7	96.65	F
14853930	00053664	AL1400_1966	9/1/15 12:00 AM	2015	105.5	105.3	105.5	105.3	105.4	F
14853932	00053678	AL1400_1966	8/31/15 12:00 AM	2015	98	98	98	98	98	P
14854348	00057052	AL1400_1967	6/9/15 12:00 AM	2015	98.8	100.7	98.8	100.7	99.75	P
14854353	00057062	AL1400_1967	8/6/15 12:00 AM	2015	98.6	99.6	98.6	99.6	99.1	P
14854795	00061494	AL1400_1968	11/13/15 12:00 AM	2015	97.4	98.4	97.4	98.4	97.9	F
14854799	00061500	AL1400_1968	6/9/15 12:00 AM	2015	98.6	99.9	98.6	99.9	99.25	P
14856206	00065943	AL1400_1969	11/13/15 12:00 AM	2015	96.8	98.2	96.8	98.2	97.5	F
14856580	00066796	AL1400_1969	6/9/15 12:00 AM	2015	98.7	99.3	98.7	99.3	99	P
15163504	05406150	AL1400_1969	11/13/15 12:00 AM	2015	100	99.9	100	99.9	99.95	P
14858292	00070238	AL1400_1970	7/24/15 12:00 AM	2015	98.9	98.9	98.9	98.9	98.9	P

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14858293	00070239	AL1400_1970	9/9/15 12:00 AM	2015	95.9	98.2	96.1	98.4	97.05	F
14862647	00077889	AL1400_1971	7/29/15 12:00 AM	2015	194.4	196.6	194.4	196.6	195.5	F
14868845	00086879	AL1400_1973	11/20/15 12:00 AM	2015	198.8	200.4	199.5	200.4	199.6	F
15046313	00300475	AL1400_1973	11/13/15 12:00 AM	2015	97.5	99.3	97.5	99.3	98.4	P
14868867	00086918	AL1400_1974	7/8/15 12:00 AM	2015	97.6	99.4	99.9	100.2	98.5	P
14869489	00089481	AL1400_1974	5/19/15 10:00 AM	2015	94.6	94.4	100.2	99.8	94.5	F
14869500	00089494	AL1400_1974	7/30/15 12:00 AM	2015	105.3	107.5	100.1	100.1	106.4	F
14869502	00089496	AL1400_1974	7/28/15 12:00 AM	2015	98.3	100.3	100.2	100.1	99.3	P
14869505	00089499	AL1400_1974	7/28/15 12:00 AM	2015	97.6	98.5	100.1	100	98.05	P
14869587	00089664	AL1400_1976	11/18/15 12:00 AM	2015	123.3	114.1	129.3	116.8	118.7	F
14869639	00089775	AL1400_1976	9/2/15 12:00 AM	2015	99.8	101.1	100.1	100.2	100.45	P
14869682	00089849	AL1400_1976	11/20/15 12:00 AM	2015	192	193.8	196	195.9	192.9	F
14869686	00089853	AL1400_1976	7/23/15 12:00 AM	2015	98.7	99.3	99.6	99.9	99	P
14869749	00089938	AL1400_1977	11/19/15 12:00 AM	2015	98.1	99.5	98.1	99.5	98.8	P

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14869749	00089938	AL1400_1977	11/19/15 10:00 AM	2015	98.1	99.5	99.9	100.4	98.8	P
14870004	00090425	AL1400_1977	11/20/15 12:00 AM	2015	202.2	201.8	200.8	200.9	202	F
14870007	00090428	AL1400_1977	8/6/15 12:00 AM	2015	101.6	103.6	100	100.1	102.6	F
14870438	00091187	AL1400_1979	7/15/15 12:00 AM	2015	194	196.2	196.8	198	195.1	F
14870438	00091187	AL1400_1979	7/15/15 1:58 PM	2015	97	98.1	99.8	99.9	97.55	F
14872505	00094355	AL1400_1979	7/7/15 12:00 AM	2015	99.6	99.9	100	99.9	99.75	P
14872508	00094358	AL1400_1979	7/13/15 12:00 AM	2015	107.5	107.3	100.5	100.5	107.4	F
14873376	00097321	AL1400_1980	11/2/15 12:00 AM	2015	196.2	199.4	197.9	199.8	197.8	F
14873451	00097425	AL1400_1980	7/14/15 12:00 AM	2015	194.4	196.2	197.1	198.4	195.3	F
14873451	00097425	AL1400_1980	7/14/15 2:00 PM	2015	97.2	98.1	99.9	100.3	97.65	F
14873459	00097433	AL1400_1981	11/2/15 12:00 AM	2015	198.8	197	199.2	198.3	197.9	F
14874234	00099212	AL1400_1982	5/19/15 10:30 AM	2015	100.6	101	100.2	99.9	100.8	P
14875821	00102446	AL1400_1985	8/20/15 12:00 AM	2015	98.6	99.5	100.1	99.7	99.05	P
14876615	00103664	AL1400_1985	8/31/15 12:00 AM	2015	98.6	100.4	100.5	100.4	99.5	P

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14877322	00104681	AL1400_1985	6/11/15 11:19 AM	2015	95.4	96	100	99.9	95.7	F
14877322	00104681	AL1400_1985	6/10/15 12:00 AM	2015	190.8	192	195.4	195.9	191.4	F
14877357	00104748	AL1400_1986	7/15/15 12:00 AM	2015	201.4	202	201.2	201.5	201.7	F
14877357	00104748	AL1400_1986	7/15/15 1:45 PM	2015	100.7	101	100.5	100.5	100.85	P
14877377	00104768	AL1400_1986	6/11/15 11:17 AM	2015	97.8	98.6	99.7	99.7	98.2	P
14877377	00104768	AL1400_1986	6/10/15 12:00 AM	2015	195.6	197.2	197.5	198.3	196.4	F
14878480	00106371	AL1400_1987	7/15/15 12:00 AM	2015	192.6	196	196.5	198.3	194.3	F
14878480	00106371	AL1400_1987	7/15/15 2:00 PM	2015	96.3	98	100.2	100.3	97.15	F
14878482	00106373	AL1400_1987	11/18/15 12:00 AM	2015	198.2	200.5	198.5	200.2	199.35	F
14878484	00106375	AL1400_1987	8/4/15 12:00 AM	2015	103.3	106.2	100.3	100.3	104.75	F
14878513	00106425	AL1400_1987	11/2/15 12:00 AM	2015	197.6	198.2	198.7	199	197.9	F
14879688	00108004	AL1400_1988	7/15/15 12:00 AM	2015	104.9	106.1	99.6	99.7	105.5	F
14894267	00125353	AL1400_1991	11/2/15 12:00 AM	2015	198.2	199	199.3	199.7	198.6	F
14901012	00133035	AL1400_1992	7/13/15 12:00 AM	2015	100.1	100.5	100	100.2	100.3	P

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14901015	00133038	AL1400_1992	7/28/15 12:00 AM	2015	103.7	104.5	100.2	100.3	104.1	F
14904111	00136505	AL1400_1993	7/15/15 12:00 AM	2015	101.6	101.9	99.7	99.6	101.75	P
14917357	00151532	AL1400_1994	6/11/15 11:15 AM	2015	101.5	100.8	100.1	100.5	101.15	P
14917357	00151532	AL1400_1994	6/11/15 12:00 AM	2015	203	201.6	201.6	201.1	202.3	F
14917474	00151721	AL1400_1995	5/14/15 12:00 AM	2015	197.6	197	199.1	198.5	197.3	F
14917474	00151721	AL1400_1995	5/14/15 8:03 AM	2015	98.8	98.5	100.3	100	98.65	P
15046060	00300051	AL1400_1997	7/14/15 12:00 AM	2015	199.4	201.2	200	200.8	200.3	F
15046060	00300051	AL1400_1997	7/14/15 2:15 PM	2015	99.7	100.6	100.3	100.2	100.15	P
15163477	05329411	AL1400_1997	7/21/15 12:00 AM	2015	99.2	100.6	100	100.2	99.9	P
15163517	05415310	AL1400_1997	11/13/15 12:00 AM	2015	98.2	99.2	98.2	99.2	98.7	P
15163568	05585638	AL1400_1997	7/29/15 12:00 AM	2015	98.8	100.1	100	100	99.45	P
15163579	05601000	AL1400_1997	11/19/15 12:00 AM	2015	204.8	205.6	202.3	203.3	205.2	F
15163591	05607505	AL1400_1997	8/19/15 12:00 AM	2015	105	106.9	100.3	100.3	105.95	F
15163622	05654742	AL1400_1997	8/4/15 12:00 AM	2015	194	197	195.5	197.4	195.5	F

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14964510	00208499	AL1400_2001	7/21/15 12:00 AM	2015	100.3	100.3	99.7	99.8	100.3	P
15046100	00300112	AL1400_2002	7/7/15 12:00 AM	2015	97.1	98.5	99.7	99.8	97.8	F
15046102	00300115	AL1400_2002	7/8/15 12:00 AM	2015	100.2	101.4	100.2	100.3	100.8	P
15046108	00300122	AL1400_2002	8/4/15 12:00 AM	2015	100.3	101.9	100	100.2	101.1	P
15046109	00300123	AL1400_2002	7/14/15 12:00 AM	2015	101.9	102.3	99.7	99.7	102.1	F
15046112	00300127	AL1400_2002	8/7/15 12:00 AM	2015	99	101.8	99	101.8	100.4	P
15046113	00300128	AL1400_2002	10/14/15 12:00 AM	2015	99.8	101.7	99.6	99.7	100.75	P
15046134	00300152	AL1400_2003	11/19/15 12:00 AM	2015	198.6	198.6	199.3	199.4	198.6	F
15046135	00300153	AL1400_2003	11/20/15 12:00 AM	2015	196.2	195.2	198.4	197.8	195.7	F
15046143	00300161	AL1400_2003	5/19/15 9:00 AM	2015	99.4	99.8	100.3	100.5	99.6	P
15046144	00300162	AL1400_2003	7/15/15 12:00 AM	2015	197.8	199	198.7	199.6	198.4	F
15046144	00300162	AL1400_2003	7/15/15 1:00 PM	2015	98.9	99.5	99.8	100.1	99.2	P
14852532	00042631	AL2300_1963	5/19/15 11:15 AM	2015	99.8	100.4			100.1	P
14853257	00045519	AL2300_1964	11/4/15 12:00 AM	2015	102	103.1	102	103.1	102.55	F

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14853258	00045521	AL2300_1964	9/9/15 12:00 AM	2015	99.9	101.1	99.9	101.1	100.5	P
14853528	00046790	AL2300_1964	9/9/15 12:00 AM	2015	100.8	100.5	100.8	100.5	100.65	P
14853850	00052092	AL2300_1965	11/2/15 12:00 AM	2015	99.3	100.3	99.3	100.3	99.8	P
15163480	05334163	AL2300_1965	11/13/15 12:00 AM	2015	100.3	100.9	100.3	100.9	100.6	P
14853934	00053682	AL2300_1966	7/29/15 12:00 AM	2015	98.6	99.1	98.6	99.1	98.85	P
14853936	00053687	AL2300_1966	7/29/15 12:00 AM	2015	98.6	100	98.6	100	99.3	P
14854052	00055194	AL2300_1966	9/9/15 12:00 AM	2015	98.4	99.6	98.4	99.6	99	P
15046410	00300709	AL2300_1966	11/13/15 12:00 AM	2015	99.2	100.8	99.2	100.8	100	P
14854356	00057075	AL2300_1967	11/4/15 12:00 AM	2015	97.7	98.6	97.7	98.6	98.15	P
14854360	00057087	AL2300_1967	7/14/15 12:00 AM	2015	98.6	99.1	98.6	99.1	98.85	P
14854813	00061527	AL2300_1968	9/1/15 12:00 AM	2015	100.7	100.9	100.7	100.9	100.8	P
14854882	00063251	AL2300_1968	9/9/15 12:00 AM	2015	99	99.3	99	99.3	99.15	P
14858289	00070233	AL2300_1970	9/9/15 12:00 AM	2015	98.4	99.8	98.4	99.8	99.1	P
14858290	00070235	AL2300_1970	11/13/15 12:00 AM	2015	98.4	99.2	98.4	99.2	98.8	P

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14862650	00077904	AL2300_1971	9/25/15 12:00 AM	2015	97.1	98	97.1	98	97.55	F
14863715	00079412	AL2300_1972	11/13/15 12:00 AM	2015	101.3	102.2	101.3	102.2	101.75	P
14863812	00079584	AL2300_1972	9/1/15 12:00 AM	2015	98.9	99.3	98.9	99.3	99.1	P
14863842	00079638	AL2300_1972	7/24/15 12:00 AM	2015	98.1	98.8	98.1	98.8	98.45	P
14863882	00079700	AL2300_1972	8/25/15 12:00 AM	2015	98.1	100.9	100.3	100.4	99.5	P
14867152	00084339	AL2300_1973	6/11/15 11:24 AM	2015	97.2	98.3	100.5	100.5	97.75	F
14867152	00084339	AL2300_1973	6/11/15 12:00 AM	2015	194.4	196.6	197.7	198.8	195.5	F
14867175	00084371	AL2300_1973	11/18/15 12:00 AM	2015	198.6	200.6	199.2	200.4	199.6	F
14869495	00089488	AL2300_1974	7/29/15 12:00 AM	2015	197.4	198.2	198.4	198.8	197.8	F
14869512	00089511	AL2300_1974	6/11/15 11:21 AM	2015	99.4	100.5	100.2	100.3	99.95	P
14869512	00089511	AL2300_1974	6/11/15 12:00 AM	2015	198.8	200.6	199.6	200.6	199.7	F
14869674	00089839	AL2300_1976	8/7/15 12:00 AM	2015	98.5	100.5	100.3	100.3	99.5	P
14869786	00090088	AL2300_1977	7/21/15 12:00 AM	2015	99.4	101.4	100.2	100.3	100.4	P
14870416	00091156	AL2300_1978	7/22/15 12:00 AM	2015	98.6	101.1	99.9	100.3	99.85	P

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14871801	00093237	AL2300_1979	8/18/15 12:00 AM	2015	100.1	102.5	100	100.5	101.3	P
14871802	00093238	AL2300_1979	8/11/15 12:00 AM	2015	98.7	101	100.3	100.3	99.85	P
14873369	00097314	AL2300_1980	8/14/15 12:00 AM	2015	100.3	102.3	100.2	100.2	101.3	P
14874246	00099224	AL2300_1983	6/11/15 11:22 AM	2015	99.2	99.9	99.6	99.9	99.55	P
14874246	00099224	AL2300_1983	6/11/15 12:00 AM	2015	198.4	199.8	198.8	199.8	199.1	F
14874255	00099233	AL2300_1983	8/26/15 12:00 AM	2015	98.9	100.7	100.4	100.4	99.8	P
14876622	00103671	AL2300_1985	5/19/15 11:30 AM	2015	100.3	100.2	100	99.8	100.25	P
14877370	00104761	AL2300_1986	8/18/15 12:00 AM	2015	99.6	101.8	99.9	99.9	100.7	P
14885992	00115785	AL2300_1990	4/8/15 12:15 PM	2015	98.97	100.55	99.9	99.98	99.76	P
14894215	00125299	AL2300_1991	6/9/15 12:00 AM	2015	100.6	102.4	100.3	100.1	101.5	P
14894270	00125356	AL2300_1991	7/30/15 12:00 AM	2015	99.5	101.8	99.6	100.1	100.65	P
14894272	00125358	AL2300_1991	2/3/15 12:00 AM	2015	199.6	201.2	199.9	200.9	200.4	F
14894272	00125358	AL2300_1991	2/3/15 1:37 PM	2015	97.54	99.29	100	100.3	98.415	P
14894272	00125358	AL2300_1991	2/4/15 12:00 AM	2015	202.4	200.4	201.3	200.3	201.4	F

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14902520	00134709	AL2300_1992	4/6/15 7:15 AM	2015	98.05	99.91	100.27	100.47	98.98	P
14902522	00134711	AL2300_1992	7/30/15 12:00 AM	2015	100.2	100	100.2	100.1	100.1	P
14904000	00136344	AL2300_1993	9/9/15 12:00 AM	2015	98.8	101.3	100.2	100.4	100.05	P
15163519	05440615	AL2300_1998	6/11/15 12:00 AM	2015	96.9	99.5	-2323	100.7	98.2	P
15163524	05442593	AL2300_1998	8/31/15 12:00 AM	2015	98.9	100	98.9	100	99.45	P
15163596	05612201	AL2300_1998	8/14/15 12:00 AM	2015	98.6	99.7	100.4	100.5	99.15	P
15163602	05614038	AL2300_1998	6/11/15 12:00 AM	2015	99.1	100.7	99.7	100.2	99.9	P
15163530	05447874	AL2300_2002	8/7/15 12:00 AM	2015	99.9	100.6	100.2	100.3	100.25	P
15046119	00300134	AL2300_2003	9/25/15 2:56 PM	2015	96.4	97.6	96.4	97.6	97	F
15046123	00300139	AL2300_2003	8/31/15 12:00 AM	2015	97.7	99.8	100	100	98.75	P
15046151	00300169	AL2300_2003	8/26/15 12:00 AM	2015	97.7	99.9	100	100.4	98.8	P
15046159	00300180	AL2300_2003	6/11/15 12:00 AM	2015	98.9	101.5	99.8	100.3	100.2	P
15046157	00300178	AL2300_2004	11/13/15 12:00 AM	2015	98.7	100.4	98.7	100.4	99.55	P
15046355	00300620	AL2300_2007	7/14/15 12:00 AM	2015	98.6	100.2	98.6	100.2	99.4	P

PRESCRIPTIVE TESTING DATA, DIAPHRAGM METERS 5000 CFH

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
15163483	05340667	AL5000_1963	10/16/15 12:00 AM	2015	101.6	102.9	101.1	102.8	102.25	F
14853671	00047844	AL5000_1965	11/9/15 12:00 AM	2015	96.7	98	96.7	98	97.35	F
14854362	00057092	AL5000_1967	8/31/15 12:00 AM	2015	97.7	98.6	97.7	98.6	98.15	P
14854363	00057093	AL5000_1967	9/25/15 12:00 AM	2015	98	99.7	98	99.7	98.85	P
14854812	00061526	AL5000_1968	9/25/15 12:00 AM	2015	99.1	99.4	99.1	99.4	99.25	P
14854826	00061549	AL5000_1968	11/12/15 12:00 AM	2015	99	99.3	98.8	99.3	99.15	P
14854827	00061550	AL5000_1968	11/12/15 12:00 AM	2015	97.9	98	97.9	98	97.95	F
14855315	00064172	AL5000_1969	8/31/15 12:00 AM	2015	98.3	99.1	98.3	99.1	98.7	P
14856208	00065948	AL5000_1969	11/2/15 12:00 AM	2015	98.8	99.6	98.8	99.6	99.2	P
14856209	00065949	AL5000_1969	7/24/15 12:00 AM	2015	97.5	98.5	97.5	98.5	98	P
14856581	00066803	AL5000_1969	7/24/15 12:00 AM	2015	98	99.1	98	99.1	98.55	P
14856583	00066807	AL5000_1969	7/29/15 12:00 AM	2015	98.9	99.6	98.9	99.6	99.25	P

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14856970	00067663	AL5000_1969	11/2/15 12:00 AM	2015	98.3	99.3	98.3	99.3	98.8	P
14861039	00075341	AL5000_1970	11/12/15 12:00 AM	2015	101.7	101.8	101.7	101.8	101.75	P
14862721	00078044	AL5000_1971	8/10/15 12:00 AM	2015	99.3	100.1	100.2	100.4	99.7	P
14862722	00078047	AL5000_1971	8/31/15 12:00 AM	2015	100.2	99.8	100.2	99.8	100	P
14867172	00084367	AL5000_1973	11/12/15 12:00 AM	2015	199.4	198.8	199.6	199.2	199.1	F
14869482	00089472	AL5000_1974	7/15/15 12:00 AM	2015	100.5	100.6	100.5	100.6	100.55	P
14869482	00089472	AL5000_1974	7/15/15 1:45 PM	2015	100.5	100.6			100.55	P
14869510	00089506	AL5000_1974	8/10/15 12:00 AM	2015	100.4	101.5	100.1	99.9	100.95	P
14869533	00089547	AL5000_1974	4/9/15 8:30 AM	2015	100.2	100.8	99.97	100.2	100.5	P
14869761	00089951	AL5000_1977	10/15/15 12:00 AM	2015	97	97.4	100.2	100	97.2	F
14870419	00091159	AL5000_1979	8/25/15 12:00 AM	2015	99.5	100.1	99.9	100.1	99.8	P
14873382	00097328	AL5000_1980	6/12/15 12:00 AM	2015	100.1	101.2	100.3	100.1	100.65	P
14873383	00097329	AL5000_1980	7/15/15 12:00 AM	2015	197.8	198.4	198.9	199.5	198.1	F
14873383	00097329	AL5000_1980	7/15/15 1:45 PM	2015	98.9	99.2	100	100.3	99.05	P

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14873385	00097331	AL5000_1980	8/12/15 12:00 AM	2015	99.6	100.9	100.3	100.3	100.25	P
14873387	00097333	AL5000_1980	11/9/15 12:00 AM	2015	199.6	200.4	200.1	200.7	200	F
14874864	00100315	AL5000_1983	8/11/15 12:00 AM	2015	100.2	100.4	100.2	100.2	100.3	P
14874865	00100316	AL5000_1983	9/14/15 12:00 AM	2015	98.9	100.1	99.9	99.8	99.5	P
14874915	00100416	AL5000_1984	11/12/15 12:00 AM	2015	99.6	100.5	99.6	100.5	100.05	P
14874915	00100416	AL5000_1984	11/13/15 2:00 PM	2015	100	100.5	101.6	101.6	100.25	P
14875894	00102552	AL5000_1985	4/10/15 11:00 AM	2015	97.49	98.93	100.16	100.27	98.21	P
14875895	00102553	AL5000_1985	11/18/15 12:00 AM	2015	195	197	197.8	198.4	196	F
14884679	00114270	AL5000_1990	7/15/15 12:00 AM	2015	200.8	201.2	200.4	200.9	201	F
14884679	00114270	AL5000_1990	7/15/15 1:45 PM	2015	100.4	100.6	100	100.3	100.5	P
14884680	00114271	AL5000_1990	4/10/15 2:00 PM	2015	101.18	101.92	100.22	100.5	101.55	P
14894330	00125433	AL5000_1991	8/10/15 12:00 AM	2015	99.5	100.3	100	100.1	99.9	P
14894332	00125436	AL5000_1991	7/15/15 12:00 AM	2015	198.8	201	199.1	200.6	199.9	F
14894332	00125436	AL5000_1991	7/15/15 1:30 PM	2015	99.4	100.5	99.7	100.1	99.95	P

Asset Number	Meter Number	Sampling Group	Test Date	Test date Year	Open In Test	Check In Test	Open Out Accuracy Test	Check Out Accuracy Test	Avg In Test	P/F
14901024	00133047	AL5000_1992	11/12/15 12:00 AM	2015	191.8	193.4	195.7	196.8	192.6	F

SUMMARY - PRESCRIPTIVE TESTING, ROTARY METERS

ROTARY METERS – Individual test results included for reference.

In-Service Meters 1/1/15	2049
Number of Tests	3
Number of Failed Tests	0
Number of Passing Tests	3
Number of Retirements	11
Net Meter Additions	34
In-Service Meters 12/31/15 [(1)] -	1533

(1) In Service Meter count is suspected to be off due to the difference in reporting between the Maximo and the legacy system. Avista will continue to research this perceived anomaly in 2016 and ensure any necessary changes are made.

PRESCRIPTIVE TESTING DATA, ROTARY METERS

Asset Number	Meter Number	Model	Mfg Year	Test Date
13088904	00005984	RM16	2000	8/11/2015
13088905	00006627	RM11	1999	8/14/2015
13088916	00007176	RM5	2000	10/19/2015
13088922	00007514	RM2	2000	4/1/2015
13088924	00007816	RM16	2000	7/6/2015
13088933	00011912	RT11	1994	6/8/2015
13088942	00011935	RM3	2001	9/16/2015
13088954	00011947	RM11	2001	2/26/2015
13088958	00012491	RM3	1993	2/18/2015
13088985	00014876	RM11	2001	8/6/2015
13088987	00014922	RM7	2001	3/30/2015
13088990	00014926	RM3	2001	8/17/2015
13088997	00015419	RM5	1992	2/18/2015
13089001	00016514	RM23	2001	7/8/2015
13089004	00017275	RM11	1993	2/16/2015
13089013	00019779	RM11	1993	9/16/2015
13089017	00021110	RM3	1971	2/26/2015
13089028	00023575	RM3	2002	8/12/2015
13089031	00023578	RM3	2002	4/2/2015
13089033	00023581	RM5	2002	7/2/2015
13089034	00023582	RM5	2002	3/23/2015
13089040	00024601	RM7	1993	7/14/2015
13089041	00024665	RM3	1992	4/21/2015
13089054	00027831	RM3	1993	4/1/2015
13089059	00028872	RM3	1993	9/16/2015
13089060	00029604	RM5	1994	7/7/2015
13089064	00031137	RM11	1994	8/25/2015
13089065	00031142	RM11	1994	2/5/2015
13089076	00032564	RM7	1994	2/16/2015
13089080	00032587	RM7	1994	7/2/2015
13089081	00032663	RM3	1993	4/21/2015
13089116	00034171	RM5	1994	3/19/2015
13089131	00035933	RM7	2003	8/25/2015
13089135	00035938	RM11	2003	2/16/2015
13089145	00036676	RM5	2003	9/16/2015
13089152	00037212	RM7	1993	7/14/2015
13089154	00037779	RT11	1994	11/30/2015
13089158	00037821	RM7	1992	5/28/2015
13089167	00038412	RM2	1994	4/1/2015
13089169	00040049	RM11	1994	6/4/2015
13089174	00042222	RM5	2004	3/30/2015
13089175	00042223	RM5	2004	2/18/2015
13089178	00042438	RM23	2004	10/5/2015

Asset Number	Meter Number	Model	Mfg Year	Test Date
13089186	00044420	RM23	2004	7/13/2015
13089207	00051314	RM16	2005	4/29/2015
13089210	00056661	RM7	2005	8/11/2015
13089214	00056666	RM7	2005	6/4/2015
13089217	00301393	RT7	2006	7/1/2015
13089218	00301394	RT3	2006	4/22/2015
13089218	00301394	RT3	2006	7/1/2015
13089231	00301408	RT11	2008	7/7/2015
13089238	00301416	RT5	2006	4/1/2015
13089239	00301417	RT3	2006	3/23/2015
13089240	00301418	RT3	2006	3/24/2015
13089246	00301448	RT5	2006	7/17/2015
13089252	00336194	RT2	2003	4/28/2015
13089261	00340588	RT3	2003	5/19/2015
13089263	00340590	RT3	2003	2/16/2015
13089265	00340593	RT3	2003	5/19/2015
13089278	00500947	AM5.5	2011	10/1/2015
13089286	00513214	AM5.5	2012	12/29/2015
13089293	00513388	AM5.5	2012	11/11/2015
53080187	00553217	AM3.5	2015	6/23/2015
53080186	00553218	AM3.5	2015	6/23/2015
53080185	00553219	AM3.5	2015	6/23/2015
53080184	00553220	AM3.5	2015	6/23/2015
53080183	00553221	AM3.5	2015	6/23/2015
13089320	00628103	RT3	2006	2/16/2015
13089322	00628105	RT3	2006	3/23/2015
13089324	00628107	RT3	2006	3/30/2015
13089326	00628109	RT3	2006	3/24/2015
29326333	00629611	RT5	2006	4/22/2015
13089328	00653736	AM3.5	2009	5/20/2015
13089329	00653737	AM3.5	2009	4/28/2015
13089335	00653743	AM3.5	2009	8/26/2015
13089337	00653745	AM3.5	2009	9/14/2015
13089340	00653748	AM3.5	2009	8/25/2015
13089343	00653751	AM3.5	2009	10/29/2015
13089346	00653754	AM3.5	2009	5/20/2015
13089348	00653756	AM3.5	2009	7/8/2015
13089350	00653758	AM3.5	2009	7/9/2015
13089352	00653760	AM3.5	2009	8/27/2015
13089357	00653765	AM3.5	2009	2/9/2015
13089357	00653765	AM3.5	2009	4/29/2015
13089361	00653769	AM5.5	2009	9/14/2015
13089384	00653792	AM7	2009	7/7/2015
13089387	00653795	AM7	2009	9/15/2015
13089395	00653803	AM7	2009	4/14/2015

Asset Number	Meter Number	Model	Mfg Year	Test Date
13089399	00653807	AM16	2009	11/30/2015
13089404	00653812	AM3.5	2009	4/27/2015
13089406	00653814	AM3.5	2009	3/12/2015
13089406	00653814	AM3.5	2009	5/12/2015
13089409	00653817	AM3.5	2009	6/8/2015
13089417	00653825	AM3.5	2009	2/9/2015
13089417	00653825	AM3.5	2009	2/19/2015
13089419	00653827	AM3.5	2009	8/20/2015
13089419	00653827	AM3.5	2009	6/9/2015
13089423	00653831	AM3.5	2009	4/21/2015
13089440	00653848	AM5.5	2009	7/8/2015
13089465	00653873	AM1.5	2009	8/4/2015
13089472	00653880	AM3.5	2009	8/17/2015
13089473	00653881	AM3.5	2009	3/17/2015
13089473	00653881	AM3.5	2009	9/14/2015
13089474	00653882	AM3.5	2009	8/12/2015
13089475	00653883	AM3.5	2009	7/23/2015
13089477	00653885	AM7	2009	9/8/2015
13089482	00656720	AM3.5	2010	8/3/2015
13089483	00656721	AM3.5	2010	4/21/2015
13089484	00656722	AM3.5	2010	8/4/2015
13089485	00656723	AM3.5	2010	11/4/2015
13089486	00656724	AM3.5	2010	4/2/2015
13089487	00656725	AM3.5	2010	4/30/2015
13089490	00656728	AM3.5	2010	4/27/2015
13089491	00656729	AM3.5	2010	7/22/2015
13089492	00656730	AM3.5	2010	12/2/2015
13089493	00656731	AM3.5	2010	10/1/2015
13089494	00656732	AM3.5	2010	6/18/2015
13089496	00656734	AM3.5	2010	9/1/2015
13089497	00656735	AM3.5	2010	9/10/2015
13089498	00656736	AM3.5	2010	8/17/2015
13089501	00656739	AM3.5	2010	9/24/2015
13089502	00656740	AM5.5	2010	9/22/2015
13089503	00656741	AM5.5	2010	8/25/2015
13089506	00661234	AM16	2011	4/28/2015
13089530	00724691	RT3	2007	6/22/2015
13089561	00746426	RT11	2007	4/2/2015
13089564	00746430	RT7	2007	3/31/2015
13089569	00746435	RT7	2007	4/23/2015
13089570	00751415	RT3	2007	8/24/2015
13089571	00751416	RT3	2007	3/23/2015
13089580	00751425	RT5	2007	6/2/2015
13089651	00836810	RT2	2008	4/1/2015
13089654	00836813	RT3	2008	2/26/2015

Asset Number	Meter Number	Model	Mfg Year	Test Date
13089660	00836819	RT3	2008	3/30/2015
13089675	00848553	RT16	2008	1/22/2015
13089685	00862981	RT2	2008	7/6/2015
13089693	00862990	RT3	2008	5/26/2015
13089696	00862993	RT5	2008	2/16/2015
13089699	00862996	RT5	2008	4/1/2015
13089702	00862999	RT5	2008	7/2/2015
13089706	00863003	RT7	2008	2/19/2015
13089709	00863006	RT7	2008	2/19/2015
13089710	00863008	RT11	2008	3/30/2015
13089712	00863010	RT11	2008	3/30/2015
13089713	00863011	RT11	2008	3/31/2015
13089718	00919283	RT11	2009	11/9/2015
13089724	00932397	RM5	1993	8/3/2015
13089730	00940704	RT5	2009	6/15/2015
13089733	00940707	RT5	2009	3/26/2015
13089734	00940709	RT5	2009	6/23/2015
13089735	00940710	RT3	2009	6/18/2015
13089736	00940711	RT5	2009	8/4/2015
13089740	00940715	RT7	2009	7/8/2015
13089772	01034462	RT5	2010	8/20/2015
13089773	01038348	RT3	2010	7/13/2015
13089779	01038354	RT5	2010	8/21/2015
13089781	01038356	RT7	2010	12/2/2015
13089793	01136492	RT3	2011	9/10/2015
13089796	01136495	RT3	2011	9/10/2015
13089797	01136496	RT3	2011	8/17/2015
13089803	01136502	RT5	2011	8/4/2015
13089829	01227154	RT2	2012	12/1/2015
13089845	01250428	RT5	2012	6/24/2015
13089855	01254374	RT5	2012	1/29/2015
13089866	01255839	RT3	2012	5/18/2015
13089869	01257119	RT11	2012	8/3/2015
13089870	01257120	RT11	2012	4/16/2015
13089870	01257120	RT11	2012	4/23/2015
13089900	01414019	RT5	2014	1/19/2015
13089902	01414021	RT3	2014	9/2/2015
13089903	01414022	RT3	2014	4/23/2015
13089904	01414023	RT3	2014	8/21/2015
13089906	01414025	RT3	2014	10/5/2015
13089907	01414026	RT3	2014	6/12/2015
13089908	01414027	RT3	2014	1/29/2015
13089910	01414029	RT5	2014	1/19/2015
13089911	01414030	RT5	2014	4/15/2015
13089912	01414031	RT5	2014	11/30/2015

Asset Number	Meter Number	Model	Mfg Year	Test Date
13089918	01420912	RT3	2014	7/8/2015
13089919	01420913	RT3	2014	11/30/2015
22102005	01423340	RT7	2014	8/20/2015
22102013	01423348	RT16	2012	6/16/2015
13089921	01423351	RT7	2014	4/15/2015
13089921	01423351	RT7	2014	4/28/2015
13089923	01423353	RT7	2014	12/1/2015
13089924	01423354	RT7	2014	6/22/2015
13089926	01423356	RT7	2014	9/2/2015
13089929	01423359	RT11	2014	6/24/2015
78028593	01547047	RT3	2015	8/17/2015
78028589	01547051	RT3	2015	8/17/2015
78028586	01547054	RT3	2015	8/17/2015
78028583	01547057	RT3	2015	8/17/2015
78028652	01547058	RT5	2015	8/17/2015
78028651	01547059	RT5	2015	8/17/2015
78028650	01547060	RT5	2015	8/17/2015
78028649	01547061	RT5	2015	8/17/2015
78028646	01547064	RT5	2015	8/17/2015
78028645	01547065	RT5	2015	8/17/2015
78028644	01547066	RT5	2015	8/17/2015
78028643	01547067	RT5	2015	8/17/2015
13089942	06990213	RM3	1999	2/18/2015
13089950	06990221	RM3	1999	11/11/2015
13089951	06990222	RM3	1999	2/25/2015
13089972	06990245	RM11	1999	3/31/2015
13089978	06990271	RM3	1999	3/30/2015
13089979	06990272	RM3	1999	4/22/2015
13089979	06990272	RM3	1999	6/22/2015
13089981	06990274	RM3	1999	8/26/2015
13090013	08829323	RT3	1988	8/4/2015
13090018	08924405	RT3	1990	8/25/2015
13090019	08924629	RT5	1989	10/7/2015
13090036	09128804	RT11	1991	4/28/2015
13090047	09235981	RT16	1992	4/28/2015
13090049	09238117	RT3	1993	10/22/2015
13090058	09321211	RT16	1993	4/28/2015
13090063	09321297	RT5	1993	8/24/2015
13090067	09333703	RT3	1993	8/25/2015
13090068	09333704	RT3	1993	4/21/2015
13090068	09333704	RT3	1993	4/23/2015
13090070	09333706	RT5	1993	4/15/2015
13090073	09422211	RT11	2008	8/27/2015
13090079	09425265	RT5	1994	12/9/2015
13090103	09431902	RT5	1994	9/15/2015

Asset Number	Meter Number	Model	Mfg Year	Test Date
13090110	09431945	RT3	1994	7/27/2015
13090111	09432386	RT7	1994	5/26/2015
13090112	09432387	RT7	1994	12/9/2015
13090113	09432389	RT16	1994	4/14/2015
13090124	09438003	RT3	1994	8/25/2015
13090157	09535004	D15C	1995	9/16/2015
13090169	09541848	RT7	1995	12/21/2015
13090175	09545004	RT3	1995	2/25/2015
13090182	09545294	RT7	1995	4/21/2015
13090188	09547409	RT3	1995	8/24/2015
13090200	09620821	RT11	1996	4/20/2015
13090201	09620823	RT11	1996	8/25/2015
13090204	09620826	RT5	1996	4/29/2015
13090207	09620829	RT5	1996	3/31/2015
13090213	09620835	RT3	1996	3/19/2015
13090217	09621493	RT3	1996	4/30/2015
13090218	09621494	RT3	1996	8/19/2015
13090223	09621607	RT16	1996	4/14/2015
13090224	09623408	RT3	1996	7/9/2015
13090225	09623409	RT3	1996	8/4/2015
13090227	09623411	RT3	1996	7/9/2015
13090232	09623422	RT5	1996	4/15/2015
13090235	09623425	RT5	1996	8/4/2015
13090251	09623442	D15C	1996	8/10/2015
13090252	09623444	RT5	1996	4/16/2015
13090254	09623447	RT5	1996	12/2/2015
13090260	09623455	RT11	1996	8/4/2015
13090269	09624700	RT3	1996	2/23/2015
13090271	09624702	RT3	1996	4/20/2015
13090274	09637945	RT16	1996	6/26/2015
13090279	09645123	RT5	1996	11/3/2015
13090289	09645988	RT7	1996	7/17/2015
13090291	09645990	RT7	1996	6/3/2015
13090292	09645991	RT7	1996	11/11/2015
13090293	09646372	D15C	1996	10/13/2015
13090313	09648326	RT3	1996	1/27/2015
13090317	09649412	RT5	1996	5/14/2015
13090318	09649413	RT5	1996	4/28/2015
13090320	09650079	RT11	1996	8/14/2015
13090323	09650082	RT3	1996	12/8/2015
13090324	09650083	RT3	1996	4/1/2015
13090326	09650085	RT3	1996	6/25/2015
13090328	09650087	RT3	1996	4/23/2015
13090329	09650088	RT7	1996	1/29/2015
13090330	09650089	RT7	1996	6/4/2015

Asset Number	Meter Number	Model	Mfg Year	Test Date
13090332	09650091	RT7	1996	4/28/2015
13090346	09722924	RT3	1997	4/2/2015
13090348	09722928	RT3	1997	7/29/2015
13090361	09725130	RT7	1996	8/11/2015
13090383	09734793	RT5	1996	4/28/2015
13090384	09734794	RT5	1996	8/27/2015
13090387	09734797	RT5	1996	8/17/2015
13090390	09734800	RT3	1996	6/23/2015
13090401	09740646	RT5	1997	5/20/2015
13090415	09746198	RT7	1997	4/13/2015
13090415	09746198	RT7	1997	4/14/2015
13090418	09746203	RT5	1997	6/1/2015
13090419	09746204	RT5	1997	8/19/2015
13090425	09747804	RT3	1997	4/30/2015
13090430	09747809	RT3	1997	6/2/2015
13090441	09749530	D15C	1997	2/24/2015
13090448	09749539	RT3	1997	3/18/2015
13090453	09749544	RT3	1997	7/9/2015
13090458	09756152	RT11	1997	7/21/2015
13090461	09756155	RT16	1997	4/27/2015
13090462	09756156	RT16	1997	8/5/2015
13090465	09825187	RT3	1996	11/16/2015
13090471	09825193	RT3	1996	2/18/2015
13090474	09825196	RT3	1996	3/30/2015
13090476	09825198	RT3	1996	5/20/2015
13090493	09825215	RT7	1996	4/15/2015
13090496	09825218	RT11	1996	3/30/2015
13090502	09827490	D15C	1998	10/6/2015
13090512	09827505	RT3	1998	8/17/2015
13090514	09827508	RT3	1998	4/29/2015
13090518	09827512	RT5	1998	4/22/2015
13090527	09843422	RT3	1998	8/4/2015
13090530	09843425	RT5	1998	4/28/2015
13090543	09846164	D15C	1998	11/3/2015
13090544	09846168	D15C	1998	3/19/2015
13090558	09849574	RT3	1998	9/23/2015
13090560	09849577	RT5	1998	8/12/2015
13090569	09850945	RT11	1998	3/31/2015
13090570	09850946	RT11	1998	4/1/2015
13090571	09850949	RT16	1997	4/30/2015
13090577	09852233	D15C	1998	8/26/2015
13090578	09852234	RT3	1998	3/23/2015
13090583	09853804	RT16	1997	10/30/2015
13090584	09853863	RT16	1998	7/15/2015

SUMMARY – PRESCRIPTIVE TESTING, TURBINE METERS

Summary Results

In-Service Meters 1/1/15	42
Meters Tested	42
Meters Passed	42
Meters Failed/Replaced	0
Retired Meters	0
In-Service Meters 12/31/15 -	55

PRESCRIPTIVE TESTING DATA, TURBINE METERS

Asset Number	Meter Number	Model	Mfg Year	Test Date
13090588	00022002	4TURBO	1974	10/1/2015
13090589	00025063	6TURBO	1971	9/15/2015
13090590	00025201	8TURBO	1974	4/29/2015
13090591	00025499	8TURBO	1974	9/15/2015
13090593	00025800	4TURBO	2002	10/27/2015
13090594	00025899	4TURBO	1972	9/22/2015
13090595	00026115	8TURBO	1976	9/30/2015
13090596	00027535	6TURBO	1976	4/7/2015
13090597	00032511	4TURBO	1977	3/12/2015
13090598	00032518	4TURBO	1977	8/11/2015
13090601	00032573	4TURBO	1980	9/21/2015
13090605	00032706	8TURBO	1976	3/10/2015
13090606	00032760	6TURBO	1986	6/29/2015
13090607	00032798	6TURBO	1989	4/16/2015
13090608	00032818	8TURBO	1987	9/23/2015
13090610	00032871	6TURBO	1987	2/10/2015
13090618	00033546	4TURBO	1992	10/29/2015
13090623	00036711	6TURBO	1992	9/21/2015
13090625	00042677	8TURBO	1972	5/19/2015
13090631	00300184	3GT	2004	10/1/2015
13090634	00300996	3GT	1998	9/3/2015
13090635	00300997	3GT	1998	9/17/2015
13090638	00301409	6TURBO	1988	9/29/2015
13090639	00415720	4TURBO	1971	12/24/2015
13090641	00935898	6TURBO	1991	3/9/2015
13090642	00935899	6TURBO	1991	4/28/2015
13090644	00957276	3GT	2000	3/13/2015
13090646	00967870	3GT	1997	5/19/2015
13090649	01822015	6TURBO	1993	7/15/2015
13090651	04111226	4TURBO	1980	9/8/2015
13090652	06848033	4TURBO/30	1999	11/4/2015
13090653	07602204	4TURBO	1999	9/30/2015
13090655	08996021	4TURBO	2001	9/10/2015
13090657	08996023	6TURBO	2001	10/29/2015
13090658	08996855	4TURBO	2001	5/5/2015
13090659	09819763	6TURBO	2003	9/30/2015
13090661	14324855	4TURBO	2006	3/9/2015
13090663	16129323	6TURBO	2009	6/8/2015
13090665	16129325	4TURBO	2009	6/17/2015
13090666	16129326	4TURBO	2009	9/15/2015
13090667	16129327	6TURBO	2009	7/15/2015
13090669	16307880	4TURBO	2010	9/30/2015

End of Report