Validator Provided

Certified Validation Report: Provided by Validator

Audit Information:

Water Supplier Name: **Rainbow Municipal Water District** PWS ID: CA3710016

System Type: **Potable** Audit Period: **Financial 2018**

Utility Representation: **Cynthia Grey**

Validation Date: **September 30th, 2019** Meeting Time: **11.00 PM** Sufficient Supporting Documents Provided: **Yes**

Validation Findings & Confirmation Statement:

Key Audit Metrics:

Data Validity Score: **78** Data Validity Band (Level): **Band IV (71-90)**

ILI: **0.01** Real Loss: **31.25 gallons/mile/day** Apparent Loss: **90.65 gallons/connection/day**

Non-revenue water as percent of cost of operating system: **4.0 %**

Certification Statement by Validator:

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

If not, rejected recommendations are included here.

Validator Information:

Water Audit Validator : **Tanmay Thakur** Qualifications: **Water Audit Validator Certificate issued by the CA-NV Section of the AWWA**

Certified Validation Report Template, Part B: Provided by Utility

Utility Provided

Water Supplier Name: **Water Supplier ID Number:** **Water Audit Period:**

Water Audit & Water Loss Improvement Steps:

Utility to provide steps taken in preceding year to increase data validity, reduce real loss and apparent loss as informed by the annual validated water audit:

Recommendation for meter testing/calibration by age/size with relevant documentation.

Certification Statement by Utility Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audit and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Executive Name (Print)	Executive Position	Signature	Date
Cynthia Grey	Administrative Analyst	Cynthia M Grey	10/01/19

2018 RATES AND CHARGES

RMWD (O&M) Fixed Charge ($/month)	+	SDCWA Fixed Charge ($/month)	+	Variable Rate ($/unit)	+	Pumping Charge (Fixed + Variable by Zone)	=	Monthly Bill

Water Fixed Charges

Single Family, Multi-Family, Commercial, & Institutional

Capacity Class	Meter Size	RMWD O & M	SDCWA Fixed Pass Through	Total Fixed Charges
A	5/8"	$29.28	$32.18	**$61.46**
B	3/4"	$29.28	$32.18	**$61.46**
C	1"	$45.74	$53.63	**$99.37**
D	1 1/2"	$86.85	$107.27	**$194.12**
E	2"	$136.19	$171.63	**$307.82**
F	3"	$292.42	$375.43	**$667.85**
G	4"	$522.68	$675.78	**$1,198.46**
H	6"	$1,073.62	$1,394.47	**$2,468.09**

Agricultural

Capacity Class	Meter Size	RMWD O & M	SDCWA Fixed Pass Through	Total Fixed Charges
A	5/8"	$53.19	$32.18	**$85.37**
B	3/4"	$53.19	$32.18	**$85.37**
C	1"	$85.55	$53.63	**$139.18**
D	1 1/2"	$166.50	$107.27	**$273.77**
E	2"	$263.64	$171.63	**$435.27**
F	3"	$571.22	$375.43	**$946.65**
G	4"	$1,024.52	$675.78	**$1,700.30**
	6"	$2,109.15	$1,394.47	**$3,503.62**

TSAWR

Capacity Class	Meter Size	RMWD O & M	SDCWA Fixed Pass Through	Total Fixed Charges
A	5/8"	$53.19	$14.82	**$68.01**
B	3/4"	$53.19	$14.82	**$68.01**
C	1"	$85.55	$24.70	**$110.25**
D	1 1/2"	$166.50	$49.39	**$215.89**
E	2"	$263.64	$79.03	**$342.67**
F	3"	$571.22	$172.88	**$744.10**
G	4"	$1,024.52	$311.18	**$1,335.70**
	6"	$2,109.15	$642.12	**$2,751.27**

Water Variable Charges

Customer Class	Rate/Unit*
Single Family Residential	
Tier 1 = ≥ 10	$ 3.64
Tier 2 = 11 to 26	$ 3.86
Tier 3 = 27 +	$ 4.27
Multi Family	$ 3.76
Commercial	$ 3.89
Institutional	$ 3.98
Construction	$ 4.87

Customer Class	Rate/Unit*
Agriculture w/Residence	
Tier 1 = ≥ 10	$ 3.64
Tier 2 = 11 to 26	$ 3.86
Tier 3 = 27 +	$ 3.56
Agriculture w/o Residence	$ 3.56
TSAWR Domestic	**Rate/Unit***
Tier 1 = ≥ 10	$ 3.70
Tier 2 = 11 to 26	$ 3.92
Tier 3 = 27 +	$ 3.04
TSAWR Commercial	$ 3.04

Water Pumping Charges**

Fixed Pumping Charges	
All Zones	$ 9.24

Variable Pumping Charges	
Pumping Zones	**Rate/Unit***
Rainbow Heights	$ 1.03
ID U-1	$ 0.64
Vallecitos	$ 0.36
Northside	$ 0.13
Morro Tank	$ 0.19
Huntley	$ 0.75
Magee Tank	$ 3.37

*1 unit of water = 748 gallons

** Pumping Charges apply to those customers who live at higher elevations that require the water to be pumped in order to provide service. Cost increases in this area primarily due to increasesin energy costs.

2019 RATES AND CHARGES

RMWD (O&M) Fixed Charge ($/month)	+	SDCWA Fixed Charge ($/month)	+	Variable Rate ($/unit)	+	Pumping Charge (Fixed + Variable by Zone)	=	Monthly Bill

Water Fixed Charges

Single Family, Multi-Family, Commercial, & Institutional

Capacity Class	Meter Size	RMWD O & M	SDCWA Fixed Pass Through	Total Fixed Charges
A	5/8"	$35.14	$30.42	**$65.56**
B	3/4"	$35.14	$30.42	**$65.56**
C	1"	$54.89	$50.70	**$105.59**
D	1 1/2"	$104.22	$101.40	**$205.62**
E	2"	$163.43	$162.24	**$325.67**
F	3"	$350.91	$354.90	**$705.81**
G	4"	$627.22	$638.82	**$1,266.04**
H	6"	$1,288.35	$1,318.20	**$2,606.55**

Agricultural

Capacity Class	Meter Size	RMWD O & M	SDCWA Fixed Pass Through	Total Fixed Charges
A	5/8"	$63.83	$30.42	**$94.25**
B	3/4"	$63.83	$30.42	**$94.25**
C	1"	$102.66	$50.70	**$153.36**
D	1 1/2"	$199.80	$101.40	**$301.20**
E	2"	$316.37	$162.24	**$478.61**
F	3"	$685.47	$354.90	**$1,040.37**
G	4"	$1,229.43	$638.82	**$1,868.25**
	6"	$2,530.98	$1,318.20	**$3,849.18**

TSAWR

Capacity Class	Meter Size	RMWD O & M	SDCWA Fixed Pass Through	Total Fixed Charges
A	5/8"	$63.83	$13.53	**$77.36**
B	3/4"	$63.83	$13.53	**$77.36**
C	1"	$102.66	$22.55	**$125.21**
D	1 1/2"	$199.80	$45.09	**$244.89**
E	2"	$316.37	$72.15	**$388.52**
F	3"	$685.47	$157.83	**$843.30**
G	4"	$1,229.43	$284.10	**$1,513.53**
	6"	$2,530.98	$586.23	**$3,117.21**

Water Variable Charges

Customer Class	Rate/Unit*
Single Family Residential	
Tier 1 = ≤ 10	$ 3.73
Tier 2 = 11 to 26	$ 3.99
Tier 3 = 27 +	$ 4.48
Multi Family	$ 3.87
Commercial	$ 4.03
Institutional	$ 4.14
Construction	$ 5.20

Customer Class	Rate/Unit*
Agriculture w/Residence	
Tier 1 = ≤ 10	$ 3.73
Tier 2 = 11 to 26	$ 3.99
Tier 3 = 27 +	$ 3.63
Agriculture w/o Residence	$ 3.63
TSAWR Domestic	**Rate/Unit***
Tier 1 = ≤ 10	$ 3.94
Tier 2 = 11 to 26	$ 4.21
Tier 3 = 27 +	$ 3.15
TSAWR Commercial	$ 3.15

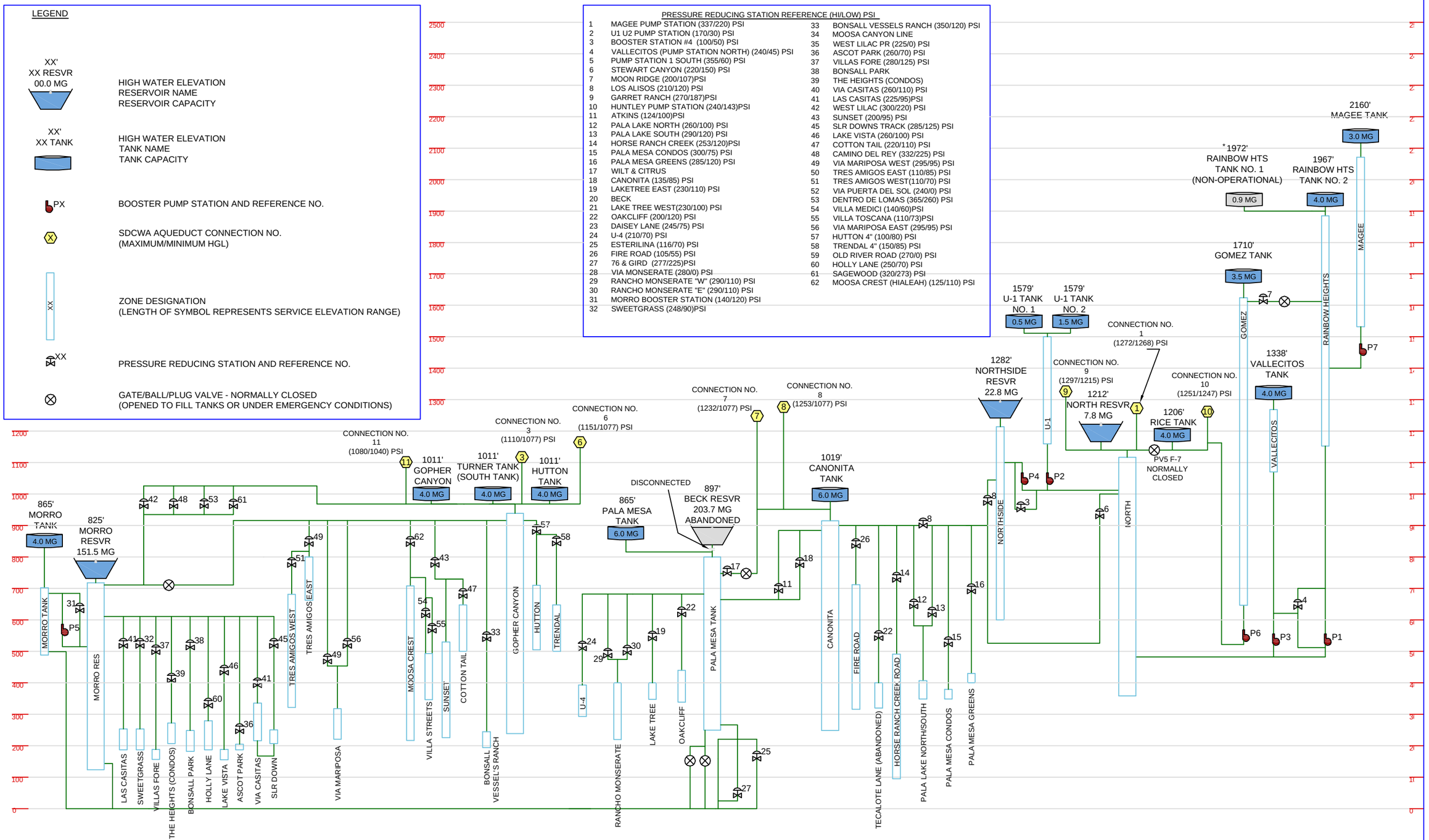
Water Pumping Charges**

Fixed Pumping Charges	
All Zones	$ 9.24

Variable Pumping Charges		
Pumping Zones		**Rate/Unit***
1	Rainbow Heights	$ 1.03
2	ID U-1	$ 0.64
3	Vallecitos	$ 0.36
4	Northside	$ 0.13
5	Morro Tank	$ 0.19
6	Huntley	$ 0.75
7	Magee Tank	$ 3.37

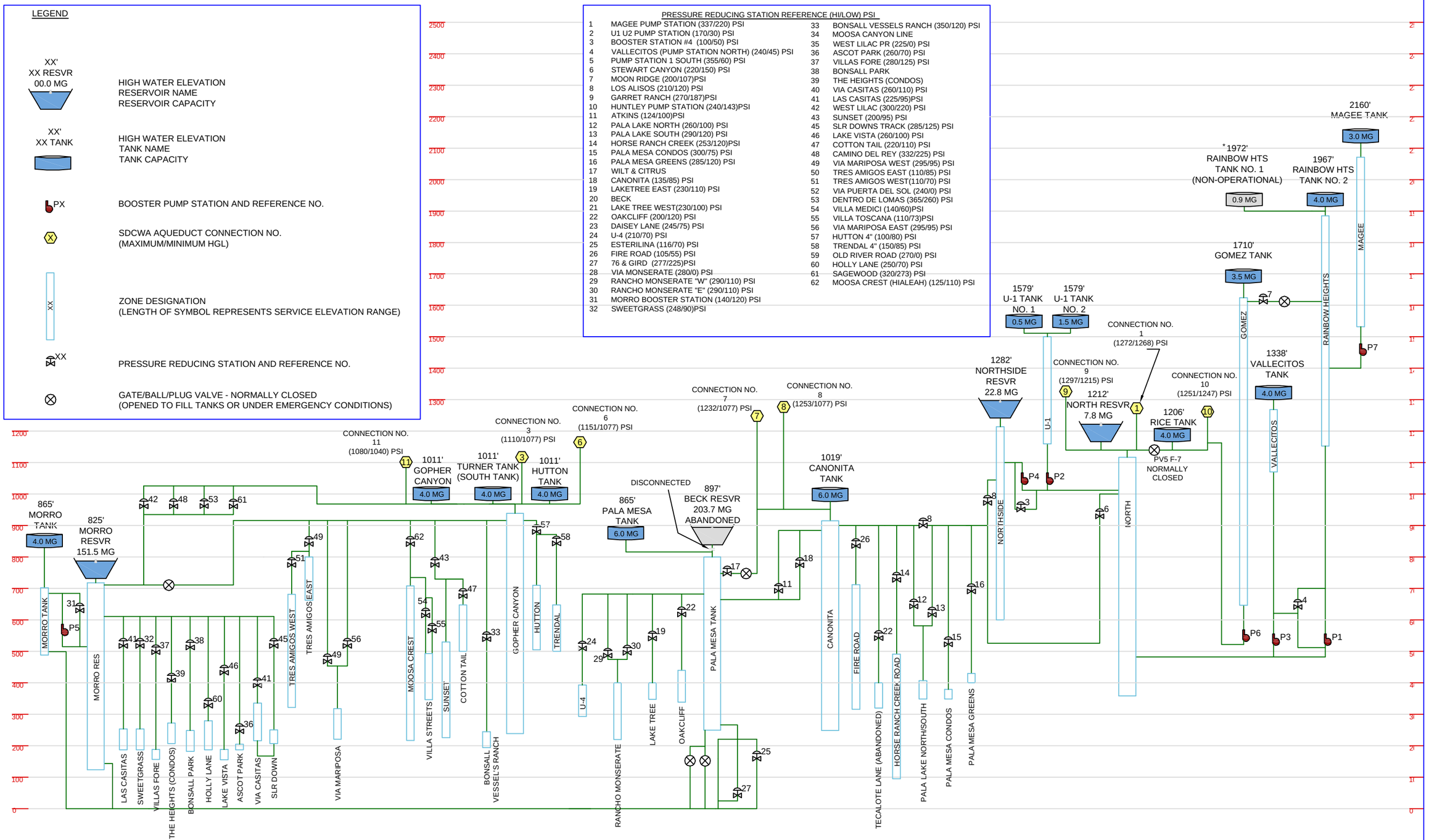
*1 unit of water = 748 gallons

** Pumping Charges apply to those customers who live at higher elevations that require the water to be pumped in order to provide service. Cost increases in this area primarily due to increasesin energy costs.



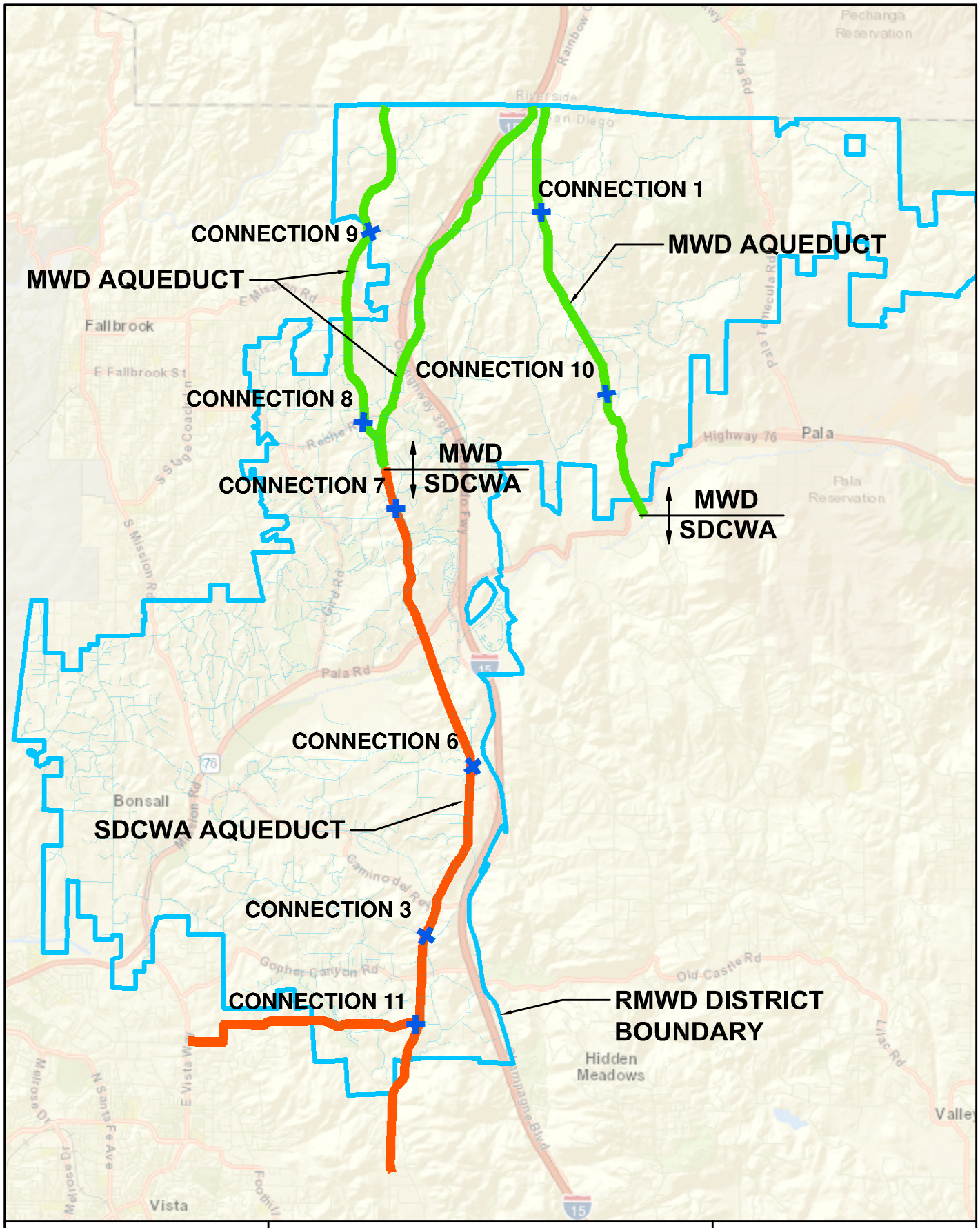
RAINBOW
MUNICIPAL WATER DISTRICT
Committed to Excellence

EXISTING SYSTEM HYDRAULIC SCHEMATIC



RAINBOW
MUNICIPAL WATER DISTRICT
Committed to Excellence

EXISTING SYSTEM HYDRAULIC SCHEMATIC



RAINBOW MUNICIPAL WATER DISTRICT
Committed to Excellence

RMWD Connections to SDCWA and MWD Aqueducts

FIGURE 1

MAY 2019

C:\Users\mpowers\Desktop\Connections.dwg

CALIBRATION CERTIFICATE

Printed: 25.06.2019 14:43:06
Printed by: Brent Young

Certificate Number:

POSITION ID: RB-11_FIT11

POSITION

Position Name:	Flow Transmitter
Work Order Number:	
Location:	3775 Silverleaf Lane 1068-G7 (4/97)
Plant Structure:	P4N\RB-11\RB-11\RB-11_F\

DEVICE

Device ID:	LD301_264922		
Serial Number:	264922-2011		
Manufacturer Model:	Smar International Corporation LD301		
Operating Range:			
Operating Temp.:	-40 to 185 F	Humidity:	0 to 100%

FUNCTION

Function:	Flow Transmitter (ft)	
Transfer Function:	Square Root ($\sqrt{x}$)	
Range (I/O):	0.00 to 133.51	4.00 to 20.00 mA

CALIBRATION EVENT

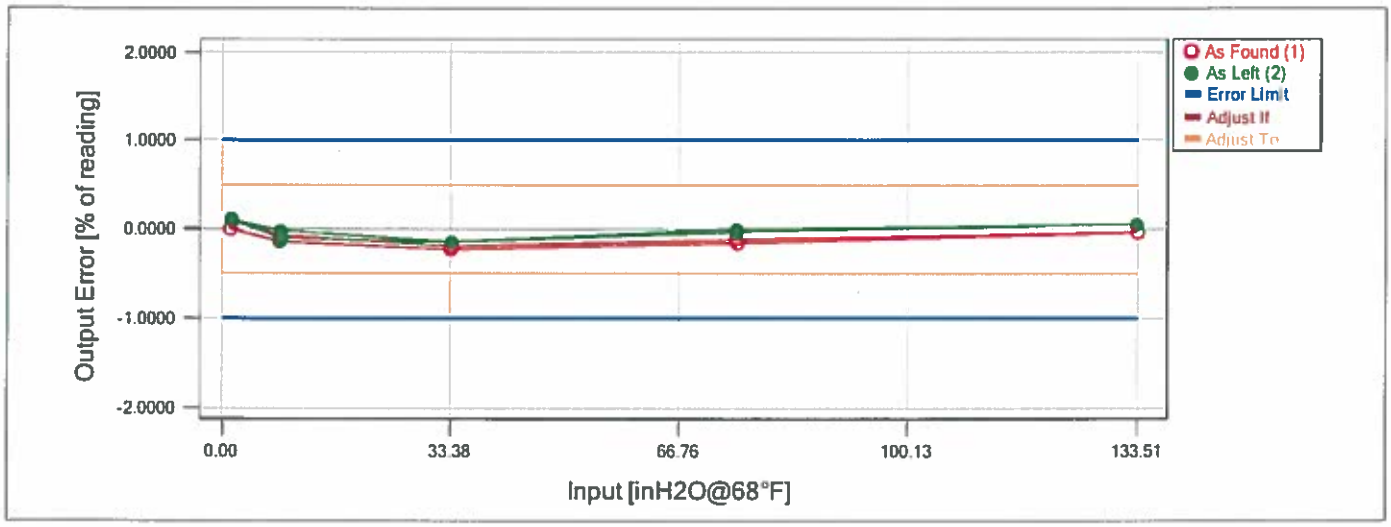
Calibration Date:	6/25/2019 10:35:00 AM		
Next Cal. Date:	12/25/2019		
Environment Temp.:	0.00 °F	Humidity:	0.00 %

PROCEDURE

Due Date:	7/3/2019	Interval:	6 months
Reject if Error >:	1.00 % of reading	Adjust To <:	50.00 % of reading
Classification:	A		
Calibration Strategy:	Quality system calibrations		

CALIBRATORS

Input Calibrator:	MC5 s/n: 25518114	Due Date: 11/15/2019
Input Module:	INT1C s/n: 40520	Due Date: 11/15/2019
Output Calibrator:	MC5 s/n: 25518114	Due Date: 11/15/2019
Output Module:	E s/n: 37799	Due Date: 11/15/2019



1. As Found — PASSED

Max Error: -0.22 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
1.34	1.34	5.60	5.6032	0.0048
8.34	8.34	8.00	7.9877	-0.1407
33.38	33.40	12.00	11.9760	-0.2224
75.10	75.11	16.00	15.9761	-0.1547
133.51	133.51	20.00	19.9937	-0.0315
75.10	75.06	16.00	15.9782	-0.1166
33.38	33.38	12.00	11.9768	-0.1958
8.34	8.36	8.00	7.9984	-0.0668
1.34	1.37	5.60	5.6255	0.0840

2. As Left — PASSED

Max Error: -0.14 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
1.34	1.34	5.60	5.6100	0.1261
8.34	8.34	8.00	7.9910	-0.0994
33.38	33.41	12.00	11.9865	-0.1449
75.10	75.07	16.00	15.9977	0.0003
133.51	133.49	20.00	20.0083	0.0475
75.10	75.02	16.00	15.9868	-0.0429
33.38	33.44	12.00	11.9904	-0.1423
8.34	8.36	8.00	8.0019	-0.0230
1.34	1.34	5.60	5.6088	0.1047

A.F. .05 w/ID

Calibration Note:

Calibrated by: Brent Young
6/25/2019 10:35:00 AM

Approved:

CALIBRATION CERTIFICATE

Printed: 07.01.2019 07:23:50
Printed by: Jose Fragozo

Certificate Number:

POSITION ID: RB-11_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 3775 Silverleaf Lane 1068-G7 (4/97)
Plant Structure: P4N\RB-11\RB-11\RB-11_F\

DEVICE

Device ID: LD301_264922
Serial Number: 264922-2011
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root (√x)
Range (I/O): 0.00 to 133.51 4.00 to 20.00 mA

CALIBRATION EVENT

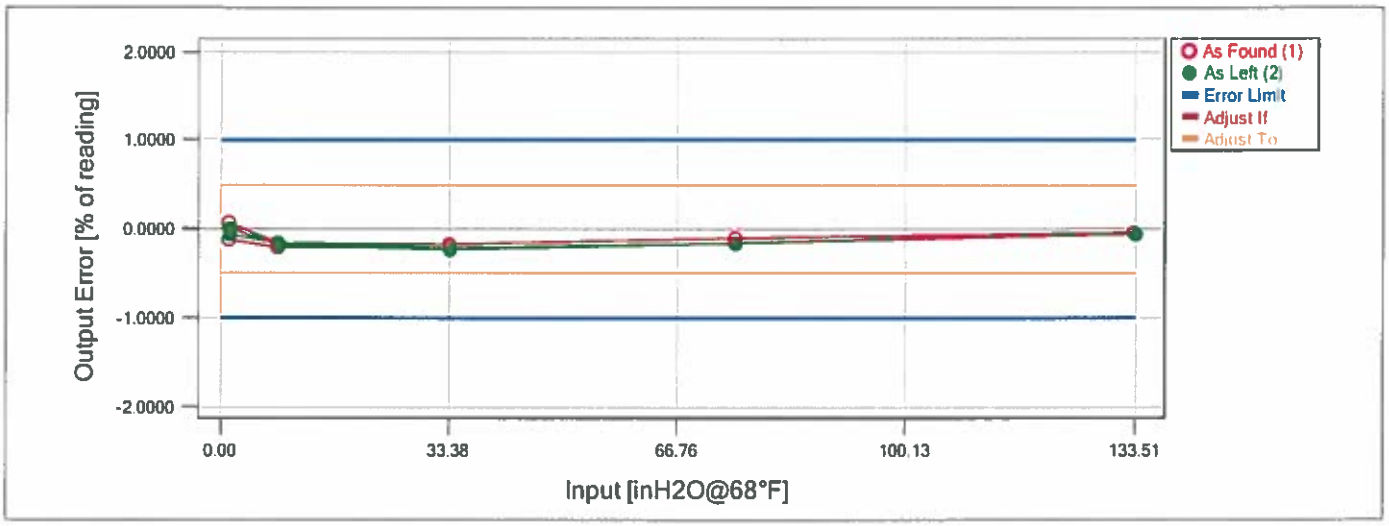
Calibration Date: 1/3/2019 12:08:00 PM
Next Cal. Date: 7/3/2019
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 1/3/2019 Interval: 6 months
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Input Module: INT1C s/n: 40520 Due Date: 11/15/2019
Output Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Output Module: E s/n: 37799 Due Date: 11/15/2019



1. As Found — PASSED

Max Error: -0.22 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
1.34	1.35	5.60	5.6022	-0.1195
8.34	8.35	8.00	7.9838	-0.2193
33.38	33.39	12.00	11.9769	-0.2050
75.10	75.09	16.00	15.9750	-0.1516
133.51	133.49	20.00	19.9915	-0.0365
75.10	75.09	16.00	15.9815	-0.1109
33.38	33.36	12.00	11.9760	-0.1826
8.34	8.35	8.00	7.9890	-0.1543
1.34	1.36	5.60	5.6191	0.0757

2. As Left — PASSED

Max Error: -0.23 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
1.34	1.34	5.60	5.6001	-0.0506
8.34	8.35	8.00	7.9887	-0.1581
33.38	33.38	12.00	11.9745	-0.2150
75.10	75.09	16.00	15.9732	-0.1628
133.51	133.51	20.00	19.9884	-0.0580
75.10	75.11	16.00	15.9753	-0.1597
33.38	33.40	12.00	11.9753	-0.2282
8.34	8.35	8.00	7.9871	-0.1781
1.34	1.32	5.60	5.5922	0.0228

AS F
0.16

Calibration Note:

Calibrated by: Jose Fragozo
1/3/2019 12:08:00 PM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 03.07.2018 15:21:27
Printed by: Brent Young

POSITION ID: RB-11_FIT11

POSITION

Position Name:	Flow Transmitter
Work Order Number:	
Location:	3775 Silverleaf Lane 1068-G7 (4/97)
Plant Structure:	P4N\RB-11\RB-11\RB-11_F\

DEVICE

Device ID:	LD301_264922		
Serial Number:	264922-2011		
Manufacturer Model:	Smar International Corporation LD301		
Operating Range:			
Operating Temp.:	-40 to 185 F	Humidity:	0 to 100%

FUNCTION

Function:	Flow Transmitter (ft)		
Transfer Function:	Square Root (√x)		
Range (I/O):	0.00 to 133.51 iwc (G)	4.00 to 20.00 mA	

CALIBRATION EVENT

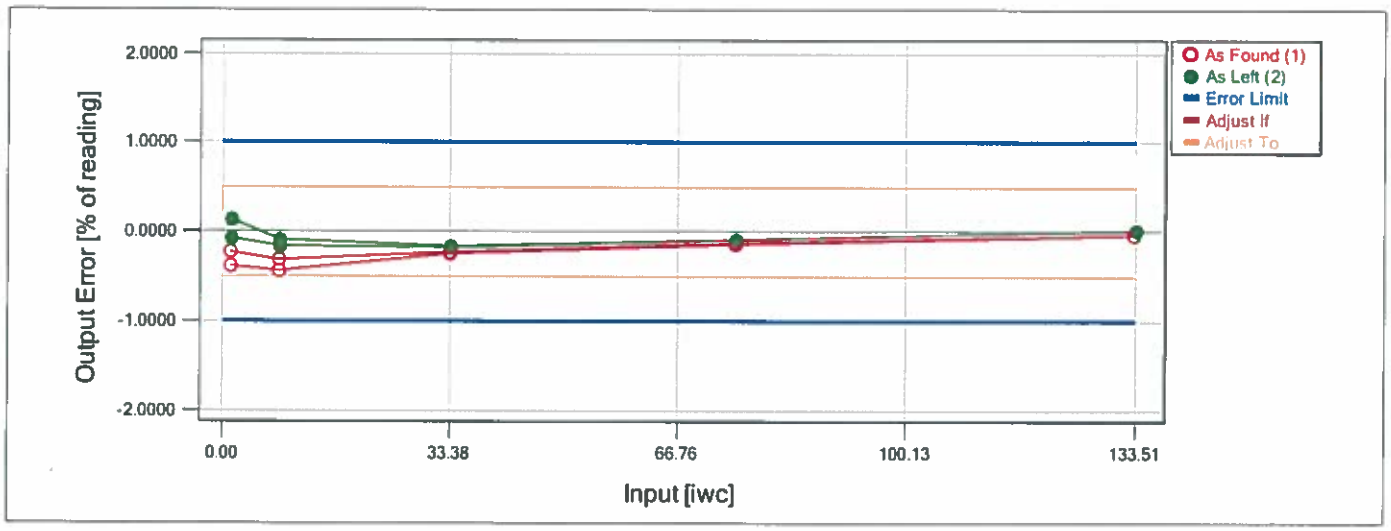
Calibration Date:	7/3/2018 12:58:00 PM		
Next Cal. Date:	1/3/2019		
Environment Temp.:	0.00 °F	Humidity:	0.00 %

PROCEDURE

Due Date:	7/9/2018	Interval:	6 months
Reject if Error >:	1.00 % of reading	Adjust To <:	50.00 % of reading
Classification:	A		
Calibration Strategy:	Quality system calibrations		

CALIBRATORS

Input Calibrator:	MC5 s/n: 24512660	Due Date: 1/8/2019
Input Module:	INT1C s/n: 16973	Due Date: 1/8/2019
Output Calibrator:	MC5 s/n: 24512660	Due Date: 1/8/2019
Output Module:	E s/n: 31457	Due Date: 1/8/2019



1. As Found — PASSED

Max Error: -0.44 % of reading

Nominal Input [iwc]	Actual Input [iwc]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
1.34	1.34	5.60	5.5817	-0.3790
8.34	8.34	8.00	7.9639	-0.4382
33.38	33.38	12.00	11.9700	-0.2525
75.10	75.10	16.00	15.9771	-0.1434
133.51	133.50	20.00	19.9939	-0.0275
75.10	75.10	16.00	15.9798	-0.1266
33.38	33.39	12.00	11.9739	-0.2300
8.34	8.36	8.00	7.9780	-0.3216
1.34	1.35	5.60	5.5962	-0.2265

2. As Left — PASSED

Max Error: -0.17 % of reading

Nominal Input [iwc]	Actual Input [iwc]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
1.34	1.35	5.60	5.6046	-0.0767
8.34	8.35	8.00	7.9886	-0.1593
33.38	33.41	12.00	11.9834	-0.1707
75.10	75.10	16.00	15.9856	-0.0903
133.51	133.51	20.00	20.0020	0.0100
75.10	75.11	16.00	15.9875	-0.0834
33.38	33.37	12.00	11.9810	-0.1509
8.34	8.34	8.00	7.9919	-0.0882
1.34	1.33	5.60	5.6051	0.1458

Calibration Note: A.F 0.03

Calibrated by: Brent Young
7/3/2018 12:58:00 PM

Approved:

CALIBRATION CERTIFICATE

Printed: 02.04.2019 15:08:51
Printed by: Brent Young

Certificate Number:

POSITION ID: RB-10_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 1029-C3 (3/97)
Plant Structure: P1&2N\RB-10 \RB-10\RB-10_F\

DEVICE

Device ID: LD301_359167
Serial Number: 359167-2019
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root ($\sqrt{x}$)
Range (I/O): 0.00 to 244.96 4.00 to 20.00 mA

CALIBRATION EVENT

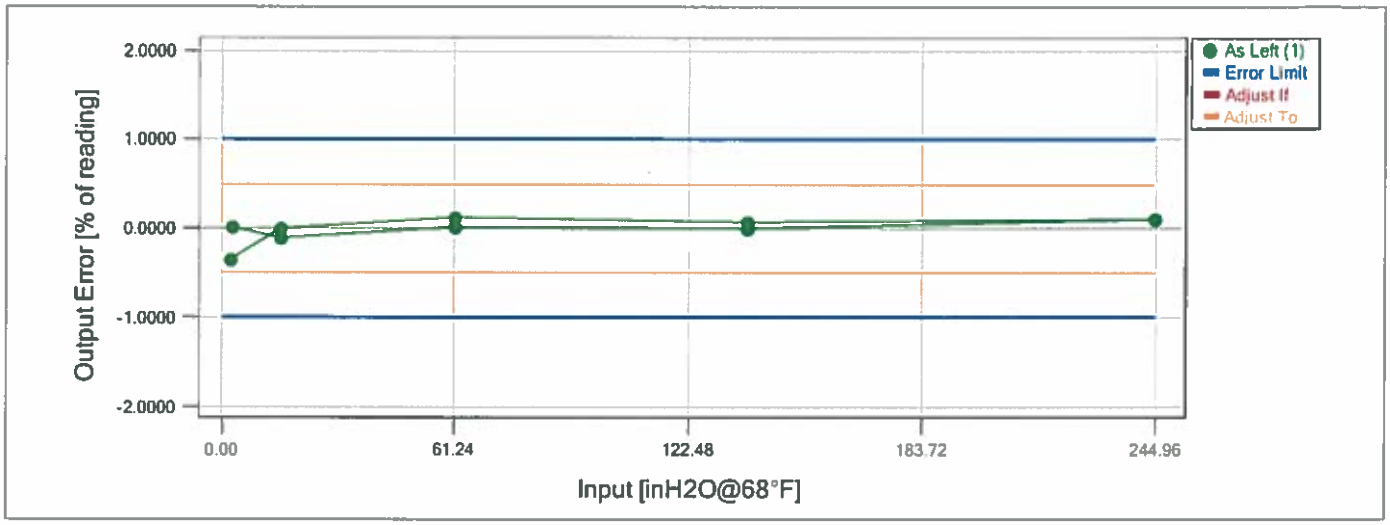
Calibration Date: 4/2/2019 10:58:00 AM
Next Cal. Date: 10/2/2019
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 9/11/2019 Interval: 6 months
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Input Module: INT1C s/n: 40520 Due Date: 11/15/2019
Output Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Output Module: E s/n: 37799 Due Date: 11/15/2019



1. As Left PASSED

Max Error: -0.36 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.45	2.47	5.60	5.6079	0.0223
15.31	15.36	8.00	7.9981	-0.1052
61.24	61.25	12.00	12.0037	0.0254
137.79	137.79	16.00	15.9993	-0.0044
244.96	244.95	20.00	20.0199	0.1011
137.79	137.78	16.00	16.0095	0.0621
61.24	61.24	12.00	12.0148	0.1233
15.31	15.31	8.00	7.9996	-0.0050
2.45	2.44	5.60	5.5768	-0.3584

Calibration Note: New DP installed per ERF. No As found

Calibrated by: Brent Young
4/2/2019 10:58:00 AM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 11.03.2019 13:26:53
Printed by: Brent Young

POSITION ID: RB-10_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 1029-C3 (3/97)
Plant Structure: P1&2N\RB-10 \RB-10\RB-10_F\

DEVICE

Device ID: LD301_181215
Serial Number: 181215-2004
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root ($\sqrt{x}$)
Range (I/O): 0.00 to 244.96 4.00 to 20.00 mA

CALIBRATION EVENT

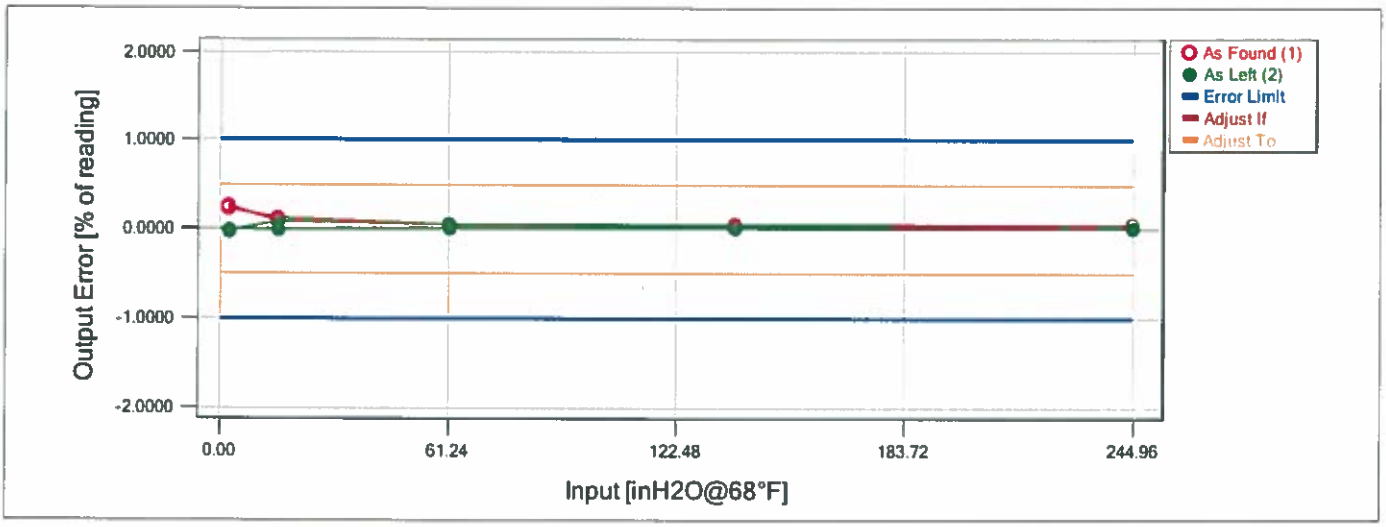
Calibration Date: 3/11/2019 10:04:00 AM
Next Cal. Date: 9/11/2019
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 3/10/2019 Interval: 6 months
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Input Module: INT1C s/n: 40520 Due Date: 11/15/2019
Output Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Output Module: E s/n: 37799 Due Date: 11/15/2019



1. As Found — PASSED

Max Error: 0.27 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.45	2.47	5.60	5.6216	0.2667
15.31	15.34	8.00	8.0108	0.0860
61.24	61.24	12.00	12.0065	0.0542
137.79	137.79	16.00	16.0070	0.0438
244.96	244.94	20.00	20.0085	0.0458
137.79	137.78	16.00	16.0091	0.0596
61.24	61.25	12.00	12.0071	0.0537
15.31	15.30	8.00	8.0087	0.1251
2.45	2.47	5.60	5.6197	0.2328

2. As Left — PASSED

Max Error: 0.09 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.45	2.46	5.60	5.6033	-0.0017
15.31	15.32	8.00	8.0018	0.0062
61.24	61.25	12.00	12.0035	0.0237
137.79	137.85	16.00	16.0058	0.0199
244.96	244.94	20.00	20.0044	0.0253
137.79	137.76	16.00	16.0053	0.0413
61.24	61.22	12.00	12.0048	0.0509
15.31	15.30	8.00	8.0055	0.0851
2.45	2.48	5.60	5.6094	-0.0089

A.F. W .002
D .27

Calibration Note:

Brent Young

Calibrated by: Brent Young
3/11/2019 10:04:00 AM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 10.09.2018 13:52:42
Printed by: Victor DeJesus

POSITION ID: RB-10_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 1029-C3 (3/97)
Plant Structure: P1&2N\RB-10 \RB-10\RB-10_F\

DEVICE

Device ID: LD301_181215
Serial Number: 181215-2004
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root (√x)
Range (I/O): 0.00 to 244.96 4.00 to 20.00 mA

CALIBRATION EVENT

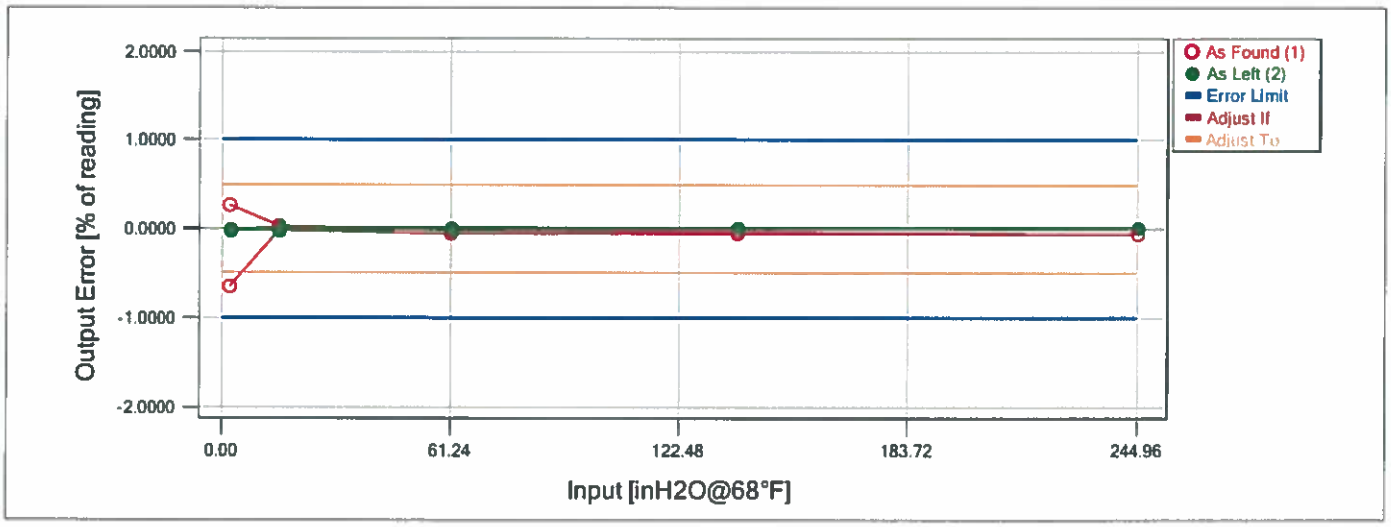
Calibration Date: 9/10/2018 11:37:53 AM
Next Cal. Date: 3/10/2019
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 9/4/2018 Interval: 6 months
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC6 s/n: 605273 Due Date: 7/2/2019
Input Module: P2C s/n: 66282 Due Date: 7/9/2019
Output Calibrator: MC6 s/n: 605273 Due Date: 7/2/2019
Output Module: IN s/n: 25070 Due Date: 7/2/2019



1. As Found — PASSED

Max Error: -0.65 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.45	2.44	5.60	5.5606	-0.6479
15.31	15.31	8.00	7.9986	-0.0175
61.24	61.24	12.00	11.9937	-0.0525
137.79	137.79	16.00	15.9919	-0.0506
244.96	244.96	20.00	19.9894	-0.0530
137.79	137.79	16.00	15.9942	-0.0363
61.24	61.24	12.00	11.9983	-0.0142
15.31	15.31	8.00	8.0022	0.0275
2.45	2.45	5.60	5.6152	0.2691

2. As Left — PASSED

Max Error: 0.03 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.45	2.45	5.60	5.5996	-0.0095
15.31	15.31	8.00	7.9982	-0.0225
61.24	61.24	12.00	11.9994	-0.0050
137.79	137.78	16.00	15.9995	-0.0004
244.96	244.96	20.00	20.0036	0.0180
137.79	137.79	16.00	16.0023	0.0144
61.24	61.24	12.00	12.0016	0.0133
15.31	15.31	8.00	8.0021	0.0263
2.45	2.46	5.60	5.6032	-0.0034

Calibration Note:

vdes

Calibrated by: Victor DeJesus
9/10/2018 11:37:53 AM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 13.06.2019 15:05:40
Printed by: Brent Young

POSITION ID: RB-7_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 1028-F6 (3/97)
Plant Structure: P4N\RB-7\RB-7\RB-7_F\

DEVICE

Device ID: LD301_343369
Serial Number: 343369-2016
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root (√x)
Range (I/O): 0.00 to 277.71 4.00 to 20.00 mA

CALIBRATION EVENT

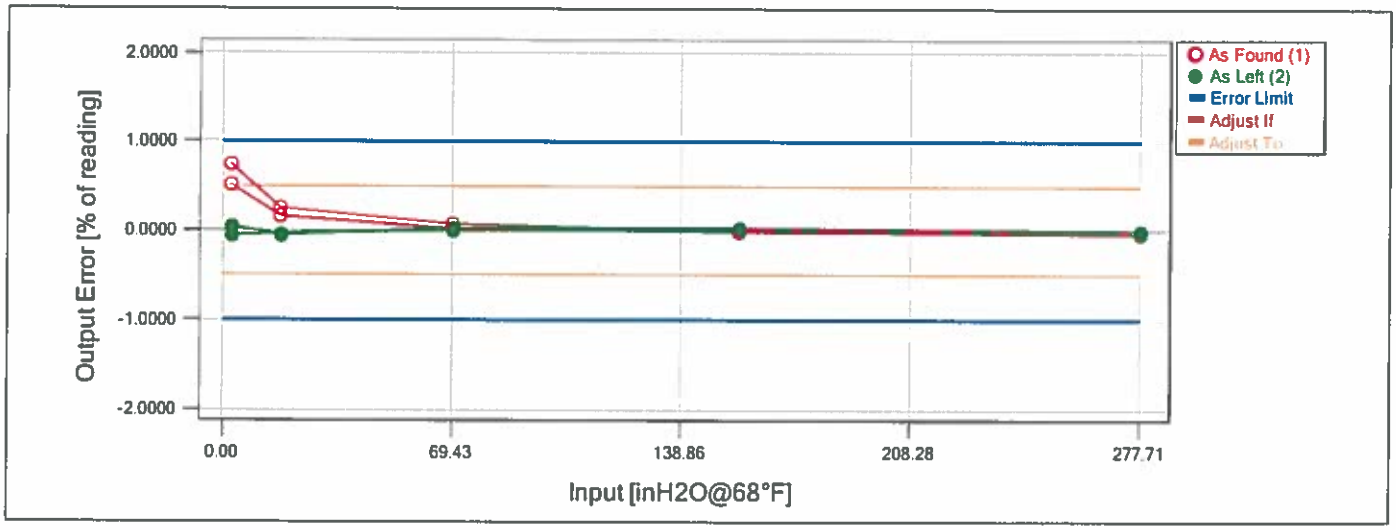
Calibration Date: 6/13/2019 12:49:00 PM
Next Cal. Date: 12/13/2019
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 6/18/2019 Interval: 6 months
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Input Module: INT1C s/n: 40520 Due Date: 11/15/2019
Output Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Output Module: E s/n: 37799 Due Date: 11/15/2019



1. As Found — PASSED

Max Error: 0.74 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.78	2.78	5.60	5.6290	0.5029
17.36	17.36	8.00	8.0135	0.1642
69.43	69.44	12.00	12.0019	0.0098
156.21	156.21	16.00	15.9960	-0.0245
277.71	277.71	20.00	19.9927	-0.0365
156.21	156.21	16.00	15.9992	-0.0045
69.43	69.42	12.00	12.0070	0.0619
17.36	17.36	8.00	8.0198	0.2430
2.78	2.74	5.60	5.6309	0.7447

2. As Left — PASSED

Max Error: -0.06 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.78	2.79	5.60	5.6011	-0.0466
17.36	17.36	8.00	7.9977	-0.0332
69.43	69.46	12.00	12.0014	-0.0039
156.21	156.29	16.00	16.0058	0.0175
277.71	277.75	20.00	20.0022	0.0052
156.21	156.20	16.00	16.0056	0.0379
69.43	69.42	12.00	12.0044	0.0403
17.36	17.36	8.00	7.9955	-0.0607
2.78	2.78	5.60	5.6041	0.0583

A.F W .02
D .02

Calibration Note:

Calibrated by: Brent Young
6/13/2019 12:49:00 PM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 18.12.2018 14:29:10
Printed by: Jose Fragozo

POSITION ID: RB-7_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 1028-F6 (3/97)
Plant Structure: P4N\RB-7\RB-7\RB-7_F\

DEVICE

Device ID: LD301_343369
Serial Number: 343369-2016
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root ($\sqrt{x}$)
Range (I/O): 0.00 to 277.71 4.00 to 20.00 mA

CALIBRATION EVENT

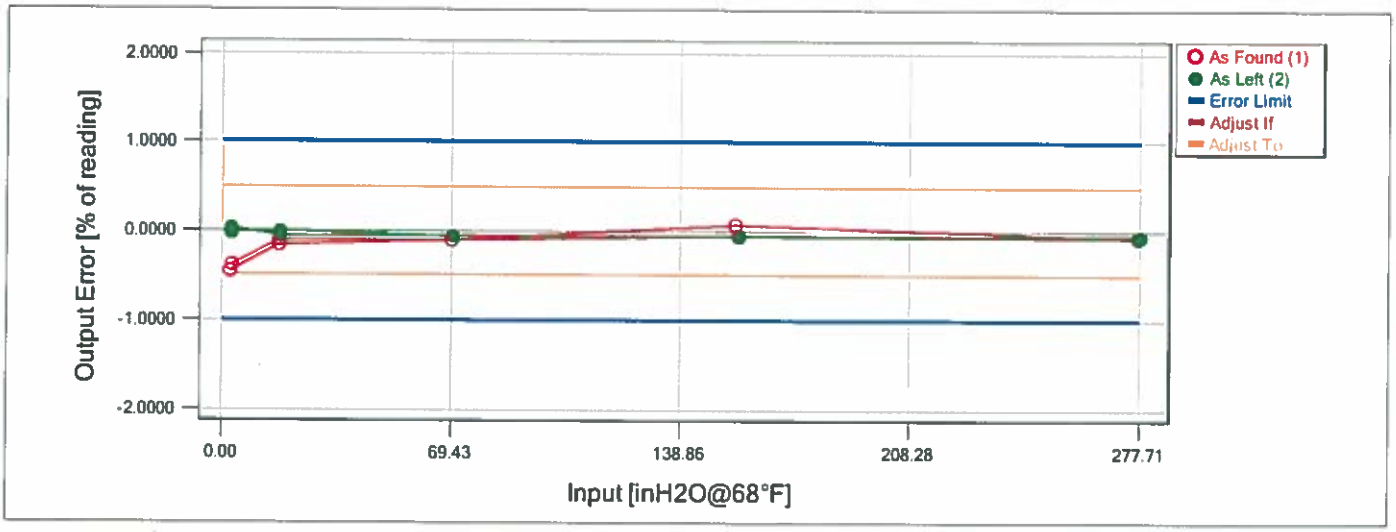
Calibration Date: 12/18/2018 10:05:00 AM
Next Cal. Date: 6/18/2019
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 12/19/2018 Interval: 6 months
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Input Module: INT1C s/n: 40520 Due Date: 11/15/2019
Output Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Output Module: E s/n: 37799 Due Date: 11/15/2019



1. As Found — PASSED

Max Error: -0.47 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.78	2.77	5.60	5.5719	-0.4654
17.36	17.35	8.00	7.9860	-0.1651
69.43	69.46	12.00	11.9900	-0.0989
156.21	155.26	16.00	15.9745	0.0696
277.71	277.70	20.00	19.9872	-0.0626
156.21	156.20	16.00	15.9897	-0.0615
69.43	69.47	12.00	11.9891	-0.1112
17.36	17.40	8.00	7.9969	-0.1008
2.78	2.88	5.60	5.6077	-0.3850

2. As Left — PASSED

Max Error: -0.06 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.78	2.79	5.60	5.6024	-0.0234
17.36	17.36	8.00	8.0006	0.0030
69.43	69.43	12.00	11.9947	-0.0454
156.21	156.22	16.00	15.9924	-0.0494
277.71	277.77	20.00	19.9920	-0.0486
156.21	156.20	16.00	15.9922	-0.0459
69.43	69.47	12.00	11.9967	-0.0479
17.36	17.40	8.00	8.0002	-0.0595
2.78	2.79	5.60	5.6053	0.0283

AS F

Calibration Note: 0.34

Calibrated by: Jose Fragozo
12/18/2018 10:05:00 AM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed 19.06.2018 15:20:14
Printed by: Brent Young

POSITION ID: RB-7_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 1028-F6 (3/97)
Plant Structure: P4N\RB-7\RB-7\RB-7_F\

DEVICE

Device ID: LD301_343369
Serial Number: 343369-2016
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root (√x)
Range (I/O): 0.00 to 277.71 iwc (G) 4.00 to 20.00 mA

CALIBRATION EVENT

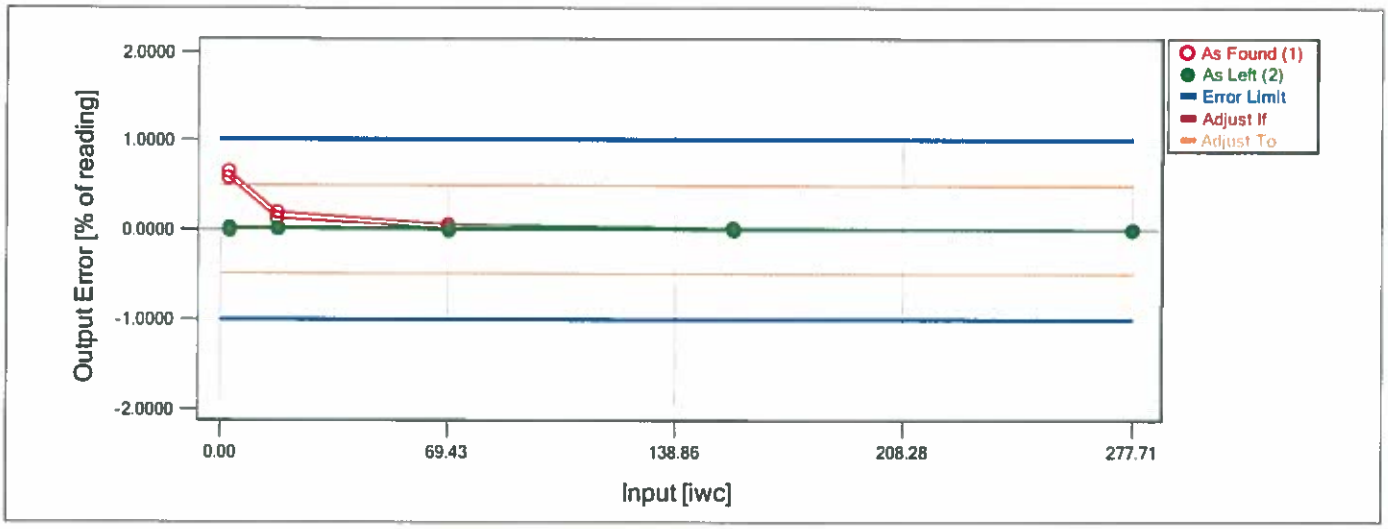
Calibration Date: 6/19/2018 9:52:00 AM
Next Cal. Date: 12/19/2018
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 6/12/2018 Interval: 6 months
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC5 s/n: 24512660 Due Date: 1/8/2019
Input Module: INT1C s/n: 16973 Due Date: 1/8/2019
Output Calibrator: MC5 s/n: 24512660 Due Date: 1/8/2019
Output Module: E s/n: 31457 Due Date: 1/8/2019



1. As Found — PASSED

Max Error: 0.65 % of reading

Nominal Input [iwc]	Actual Input [iwc]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.78	2.77	5.60	5.6304	0.5796
17.36	17.38	8.00	8.0123	0.1204
69.43	69.44	12.00	12.0028	0.0173
156.21	156.21	16.00	16.0019	0.0123
277.71	277.72	20.00	20.0017	0.0071
156.21	156.21	16.00	16.0032	0.0205
69.43	69.44	12.00	12.0077	0.0582
17.36	17.35	8.00	8.0152	0.1999
2.78	2.77	5.60	5.6346	0.6546

2. As Left — PASSED

Max Error: 0.04 % of reading

Nominal Input [iwc]	Actual Input [iwc]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.78	2.79	5.60	5.6059	0.0390
17.36	17.36	8.00	8.0021	0.0217
69.43	69.44	12.00	12.0012	0.0040
156.21	156.19	16.00	15.9997	0.0034
277.71	277.70	20.00	20.0004	0.0034
156.21	156.23	16.00	16.0023	0.0100
69.43	69.40	12.00	11.9997	0.0107
17.36	17.34	8.00	8.0006	0.0318
2.78	2.79	5.60	5.6037	-0.0002

A.F. 13

Calibration Note:

Calibrated by: Brent Young
6/19/2018 9:52:00 AM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 28.03.2019 09:29:00
Printed by: Brent Young

POSITION ID: RB-6_FIT11

POSITION

Position Name:	Flow Transmitter
Work Order Number:	
Location:	32607 Aqueduct Rd. 1048-H7 (3/97)
Plant Structure:	P4N\RB-6 \RB-6\RB-6_F\

DEVICE

Device ID:	LD301_359165		
Serial Number:	359165-2019		
Manufacturer Model:	Smar International Corporation LD301		
Operating Range:			
Operating Temp.:	-40 to 185 F	Humidity:	0 to 100%

FUNCTION

Function:	Flow Transmitter (ft)		
Transfer Function:	Square Root (√x)		
Range (I/O):	0.00 to 265.96		4.00 to 20.00 mA

CALIBRATION EVENT

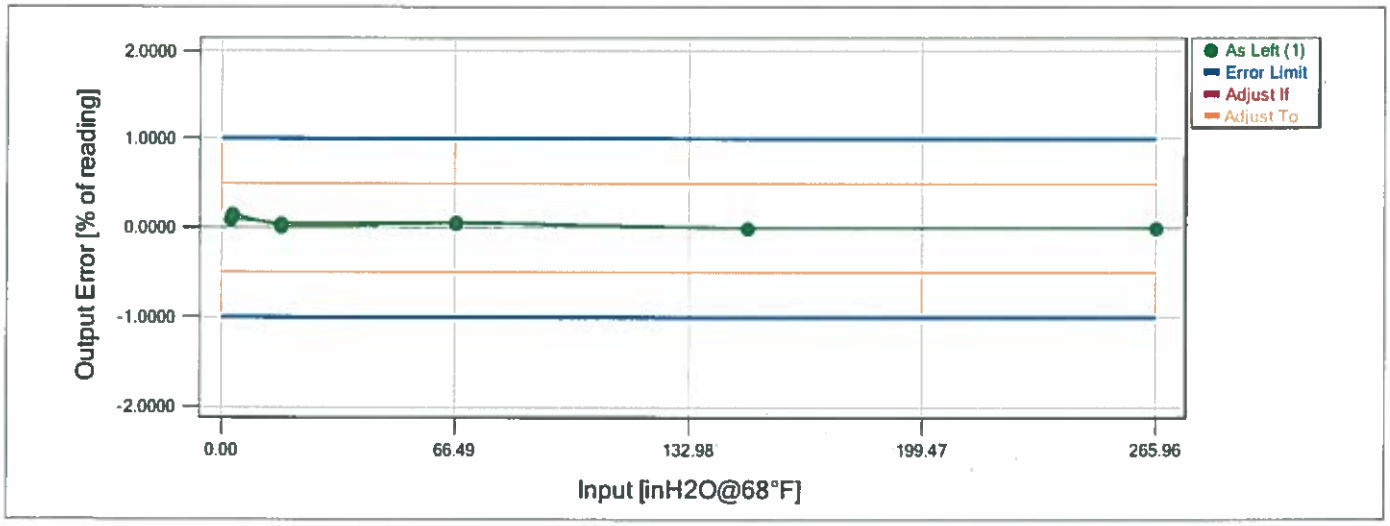
Calibration Date:	3/27/2019 10:58:00 AM		
Next Cal. Date:	9/27/2019		
Environment Temp.:	0.00 °F	Humidity:	0.00 %

PROCEDURE

Due Date:	6/17/2019	Interval:	6 months
Reject if Error >:	1.00 % of reading	Adjust To <:	50.00 % of reading
Classification:	A		
Calibration Strategy:	Quality system calibrations		

CALIBRATORS

Input Calibrator:	MC5 s/n: 25518114	Due Date: 11/15/2019
Input Module:	INT1C s/n: 40520	Due Date: 11/15/2019
Output Calibrator:	MC5 s/n: 25518114	Due Date: 11/15/2019
Output Module:	E s/n: 37799	Due Date: 11/15/2019



1. As Left

PASSED

Max Error: 0.15 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.66	2.67	5.60	5.6116	0.1513
16.62	16.63	8.00	8.0026	0.0212
66.49	66.50	12.00	12.0060	0.0450
149.60	149.60	16.00	16.0005	0.0038
265.96	265.96	20.00	20.0013	0.0065
149.60	149.62	16.00	16.0019	0.0075
66.49	66.49	12.00	12.0084	0.0700
16.62	16.62	8.00	8.0040	0.0538
2.66	2.66	5.60	5.6064	0.1121

New meter installed per ERF

Calibration Note:

Calibrated by: Brent Young
3/27/2019 10:58:00 AM

Approved:

CALIBRATION CERTIFICATE

Printed: 17.12.2018 15:22:06
Printed by: Victor DeJesus

Certificate Number:

POSITION ID: RB-6_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 32607 Aqueduct Rd. 1048-H7 (3/97)
Plant Structure: P4N\RB-6 \RB-6\RB-6_F\

DEVICE

Device ID: LD301_264356
Serial Number: 264356-2010
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root (√x)
Range (I/O): 0.00 to 265.96 4.00 to 20.00 mA

CALIBRATION EVENT

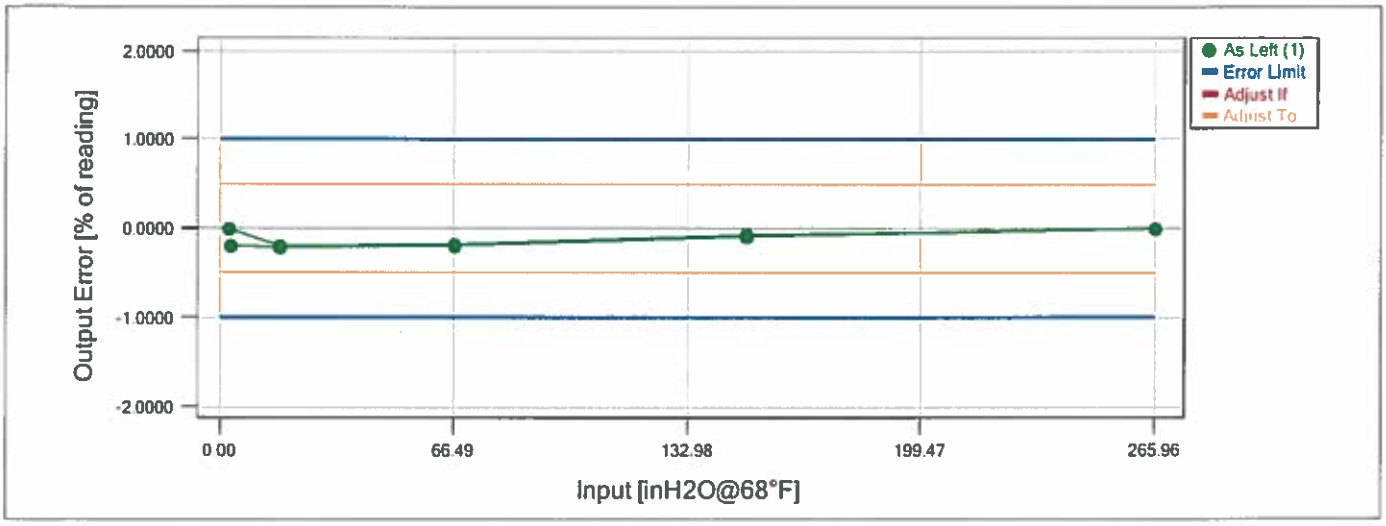
Calibration Date: 12/17/2018 10:13:30 AM
Next Cal. Date: 6/17/2019
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 12/19/2018 Interval: 6 months
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC6 s/n: 605273 Due Date: 7/2/2019
Input Module: P2C s/n: 66282 Due Date: 7/9/2019
Output Calibrator: MC6 s/n: 605273 Due Date: 7/2/2019
Output Module: IN s/n: 25070 Due Date: 7/2/2019



1. As Left PASSED

Max Error: -0.22 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.66	2.67	5.60	5.5925	-0.1896
16.62	16.62	8.00	7.9821	-0.2200
66.49	66.49	12.00	11.9771	-0.1908
149.60	149.60	16.00	15.9861	-0.0862
265.96	265.96	20.00	20.0015	0.0075
149.60	149.60	16.00	15.9882	-0.0731
66.49	66.49	12.00	11.9782	-0.1817
16.62	16.62	8.00	7.9845	-0.1900
2.66	2.66	5.60	5.6002	0.0014

Calibration Note: Lost As-Found Data when I switched from "Supply On" to Supply Off" due to MC6 Communicator not allowing for Pressure trims. This cause the data for the As-Found to be lost.
As-Found drift = .04 iwc. As Found max % error = 1% at first cal point.

Calibrated by: Victor DeJesus
12/17/2018 10:13:30 AM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 19.06.2018 15:20:14
Printed by: Brent Young

POSITION ID: RB-6_FIT11

POSITION

Position Name:	Flow Transmitter
Work Order Number:	
Location:	32607 Aqueduct Rd. 1048-H7 (3/97)
Plant Structure:	P4N\RB-6 \RB-6\RB-6_F\

DEVICE

Device ID:	LD301_264356		
Serial Number:	264356-2010		
Manufacturer Model:	Smar International Corporation LD301		
Operating Range:			
Operating Temp.:	-40 to 185 F	Humidity:	0 to 100%

FUNCTION

Function:	Flow Transmitter (ft)	
Transfer Function:	Square Root (√x)	
Range (I/O):	0.00 to 265.96 iwc (G)	4.00 to 20.00 mA

CALIBRATION EVENT

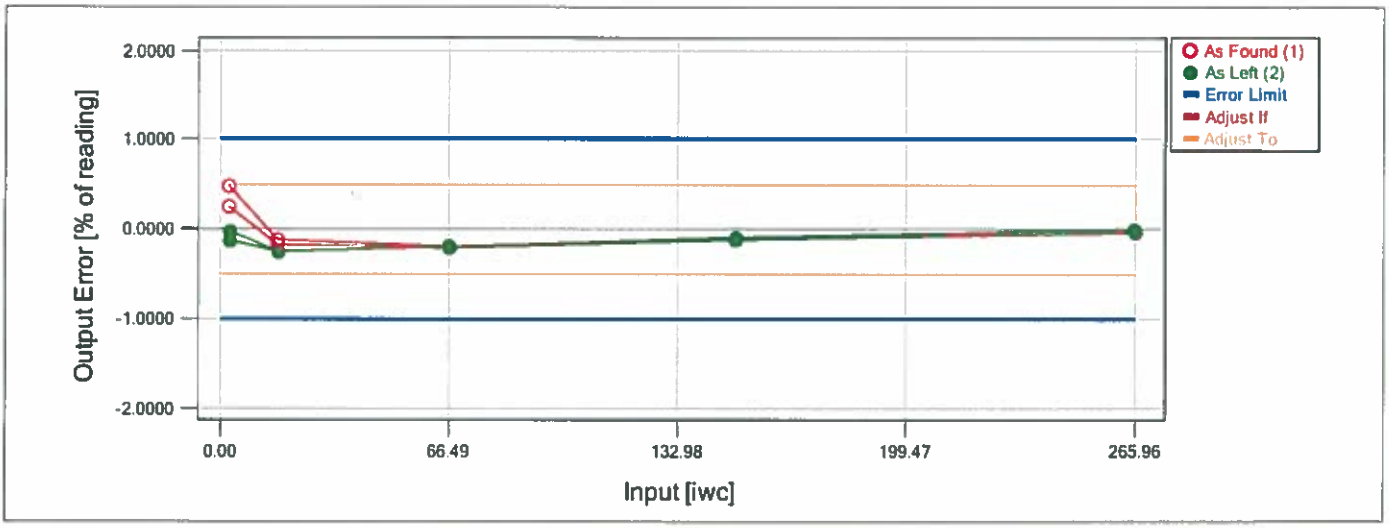
Calibration Date:	6/19/2018 12:45:00 PM		
Next Cal. Date:	12/19/2018		
Environment Temp.:	0.00 °F	Humidity:	0.00 %

PROCEDURE

Due Date:	6/10/2018	Interval:	6 months
Reject if Error >:	1.00 % of reading	Adjust To <:	50.00 % of reading
Classification:	A		
Calibration Strategy:	Quality system calibrations		

CALIBRATORS

Input Calibrator:	MC5 s/n: 24512660	Due Date: 1/8/2019
Input Module:	INT1C s/n: 16973	Due Date: 1/8/2019
Output Calibrator:	MC5 s/n: 24512660	Due Date: 1/8/2019
Output Module:	E s/n: 31457	Due Date: 1/8/2019



1. As Found — PASSED

Max Error: 0.47 % of reading

Nominal Input [iwc]	Actual Input [iwc]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.66	2.66	5.60	5.6139	0.2461
16.62	16.63	8.00	7.9869	-0.1750
66.49	66.49	12.00	11.9751	-0.2075
149.60	149.60	16.00	15.9794	-0.1281
265.96	265.97	20.00	19.9934	-0.0345
149.60	149.61	16.00	15.9816	-0.1169
66.49	66.49	12.00	11.9772	-0.1900
16.62	16.60	8.00	7.9878	-0.1187
2.66	2.63	5.60	5.6172	0.4673

2. As Left — PASSED

Max Error: -0.25 % of reading

Nominal Input [iwc]	Actual Input [iwc]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.66	2.68	5.60	5.5993	-0.1217
16.62	16.62	8.00	7.9797	-0.2500
66.49	66.48	12.00	11.9752	-0.2017
149.60	149.59	16.00	15.9837	-0.0987
265.96	265.94	20.00	19.9991	-0.0015
149.60	149.63	16.00	15.9866	-0.0906
66.49	66.48	12.00	11.9766	-0.1900
16.62	16.62	8.00	7.9800	-0.2462
2.66	2.66	5.60	5.5993	-0.0146

A.F , 05

Calibration Note:

Calibrated by: Brent Young
6/19/2018 12:45:00 PM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 23.07.2019 07:37:35
Printed by: Jose Fragozo

POSITION ID: RB-3_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 1776 Avo Hill Rd. 1068-G5 (3/97)
Plant Structure: P4N\RB-3 \RB-3\RB-3_F\

DEVICE

Device ID: LD301_181203
Serial Number: 181203-2014
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root (√x)
Range (I/O): 0.00 to 266.20 4.00 to 20.00 mA

CALIBRATION EVENT

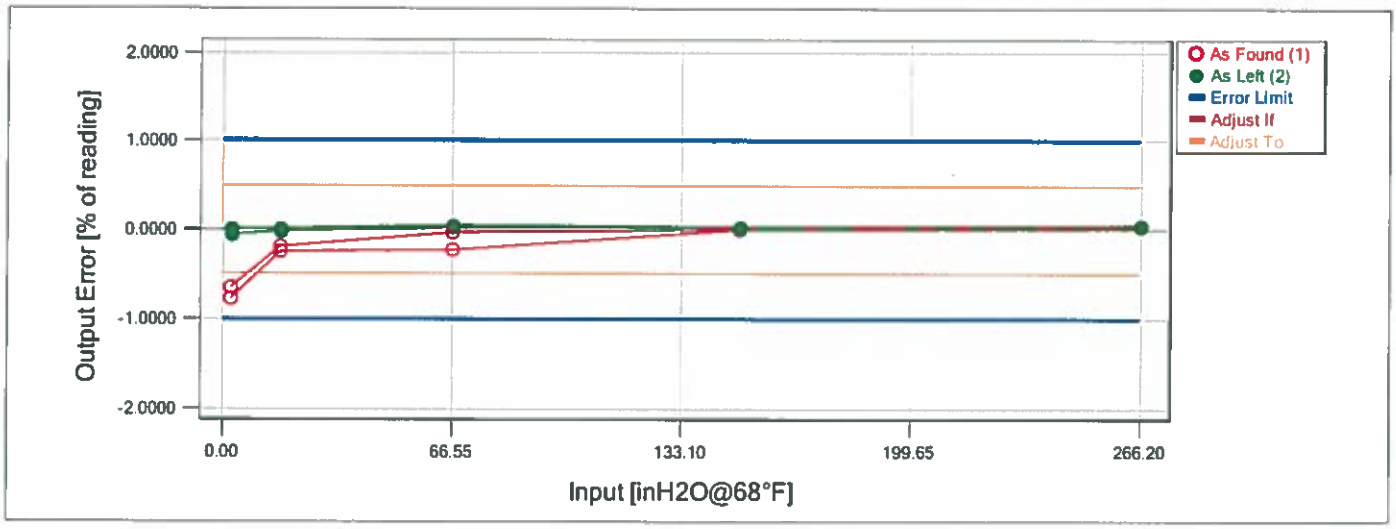
Calibration Date: 7/22/2019 11:41:00 AM
Next Cal. Date: 1/22/2020
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 8/6/2019 Interval: 6 months
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC5 s/n: 25513233 Due Date: 1/2/2020
Input Module: INT1C s/n: 18398 Due Date: 1/2/2020
Output Calibrator: MC5 s/n: 25513233 Due Date: 1/2/2020
Output Module: E s/n: 32277 Due Date: 1/2/2020



1. As Found — PASSED

Max Error: -0.77 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.66	2.70	5.60	5.5679	-0.7748
16.64	16.66	8.00	7.9827	-0.2500
66.55	66.63	12.00	11.9782	-0.2216
149.74	149.75	16.00	16.0006	0.0006
266.20	266.23	20.00	20.0073	0.0320
149.74	149.74	16.00	16.0008	0.0044
66.55	66.57	12.00	11.9970	-0.0350
16.64	16.69	8.00	7.9910	-0.1912
2.66	2.67	5.60	5.5661	-0.6480

2. As Left — PASSED

Max Error: 0.06 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.66	2.66	5.60	5.5965	-0.0518
16.64	16.66	8.00	8.0017	-0.0125
66.55	66.59	12.00	12.0064	0.0333
149.74	149.75	16.00	16.0063	0.0362
266.20	266.22	20.00	20.0117	0.0555
149.74	149.75	16.00	16.0070	0.0406
66.55	66.55	12.00	12.0061	0.0508
16.64	16.67	8.00	8.0047	0.0099
2.66	2.67	5.60	5.6035	0.0196

0.16
AF

Calibration Note:

Calibrated by: Jose Fragozo
7/22/2019 11:41:00 AM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 06.02.2019 15:14:38
Printed by: Brent Young

POSITION ID: RB-3_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 1776 Avo Hill Rd. 1068-G5 (3/97)
Plant Structure: P4N\RB-3 \RB-3\RB-3_F\

DEVICE

Device ID: LD301_181203
Serial Number: 181203-2014
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root (√x)
Range (I/O): 0.00 to 266.20 4.00 to 20.00 mA

CALIBRATION EVENT

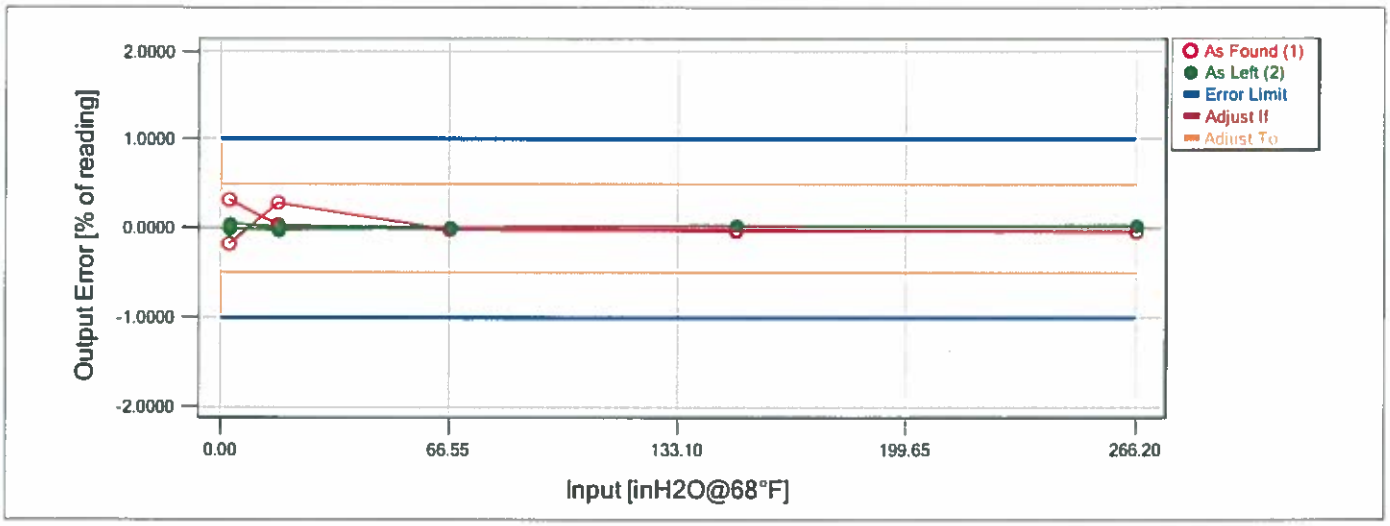
Calibration Date: 2/6/2019 11:26:00 AM
Next Cal. Date: 8/6/2019
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 2/15/2019 Interval: 6 months
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Input Module: INT1C s/n: 40520 Due Date: 11/15/2019
Output Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Output Module: E s/n: 37799 Due Date: 11/15/2019



1. As Found — PASSED

Max Error: 0.32 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.66	2.68	5.60	5.5951	-0.1838
16.64	16.63	8.00	8.0220	0.2863
66.55	66.52	12.00	11.9961	-0.0175
149.74	149.75	16.00	15.9935	-0.0438
266.20	266.20	20.00	19.9913	-0.0435
149.74	149.73	16.00	15.9955	-0.0262
66.55	66.54	12.00	11.9975	-0.0158
16.64	16.69	8.00	8.0087	0.0299
2.66	2.66	5.60	5.6172	0.3179

2. As Left — PASSED

Max Error: 0.06 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.66	2.69	5.60	5.6087	0.0055
16.64	16.65	8.00	8.0007	-0.0100
66.55	66.57	12.00	12.0027	0.0125
149.74	149.77	16.00	16.0066	0.0331
266.20	266.20	20.00	20.0067	0.0335
149.74	149.73	16.00	16.0057	0.0375
66.55	66.56	12.00	12.0032	0.0217
16.64	16.66	8.00	8.0046	0.0237
2.66	2.66	5.60	5.6026	0.0572

A.F. .02 W
.24 D

Calibration Note:

Calibrated by: Brent Young
2/6/2019 11:26:00 AM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 15.08.2018 15:05:19
Printed by: Jason Mauro

POSITION ID: RB-3_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 1776 Avo Hill Rd. 1068-G5 (3/97)
Plant Structure: P4N\RB-3 \RB-3\RB-3_F\

DEVICE

Device ID: LD301_181203
Serial Number: 181203-2014
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root (√x)
Range (I/O): 0.00 to 266.20 iwc (G) 4.00 to 20.00 mA

CALIBRATION EVENT

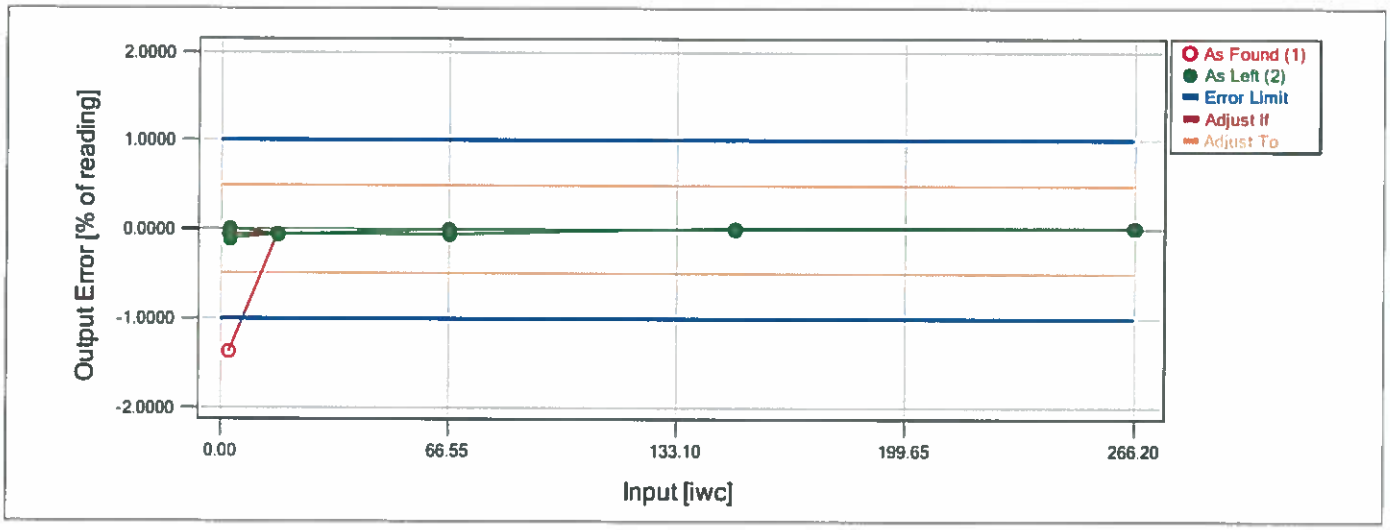
Calibration Date: 8/15/2018 10:27:55 AM
Next Cal. Date: 2/15/2019
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 8/14/2018 Interval: 6 months
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC6 s/n: 605273 Due Date: 7/2/2019
Input Module: P2C s/n: 66282 Due Date: 7/9/2019
Output Calibrator: MC6 s/n: 605273 Due Date: 7/2/2019
Output Module: IN s/n: 25070 Due Date: 7/2/2019



1. As Found — FAILED

Max Error: -1.37 % of reading

Nominal Input [iwc]	Actual Input [iwc]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.66	2.66	5.60	5.5228	-1.3680
16.64	16.64	8.00	7.9961	-0.0525
66.55	66.54	12.00	11.9994	0.0000
149.74	149.74	16.00	16.0015	0.0087
266.20	266.19	20.00	20.0033	0.0180
149.74	149.73	16.00	16.0007	0.0063
66.55	66.55	12.00	11.9993	-0.0058
16.64	16.67	8.00	7.9999	-0.0500
2.66	2.66	5.60	5.5960	-0.0607

2. As Left — PASSED

Max Error: -0.10 % of reading

Nominal Input [iwc]	Actual Input [iwc]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.66	2.66	5.60	5.5937	-0.1018
16.64	16.64	8.00	7.9960	-0.0538
66.55	66.55	12.00	11.9992	-0.0067
149.74	149.73	16.00	15.9997	0.0000
266.20	266.20	20.00	20.0022	0.0110
149.74	149.75	16.00	16.0021	0.0100
66.55	66.56	12.00	11.9941	-0.0542
16.64	16.65	8.00	7.9976	-0.0488
2.66	2.66	5.60	5.6008	0.0250

Calibration Note: Possible stuck diaphragm. 0.00 AS LEFT

Calibrated by: Jason Mauro
8/15/2018 10:27:55 AM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 05.06.2019 15:23:18
Printed by: Brent Young

POSITION ID: RB-1_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 8th St. @Select Wy 999-A5 (3/97)
Plant Structure: P1&2N\RB1/FB3\RB-1\RB-1_F\

DEVICE

Device ID: LD301_349528
Serial Number: 349528-2017
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root (√x)
Range (I/O): 0.00 to 278.69 4.00 to 20.00 mA

CALIBRATION EVENT

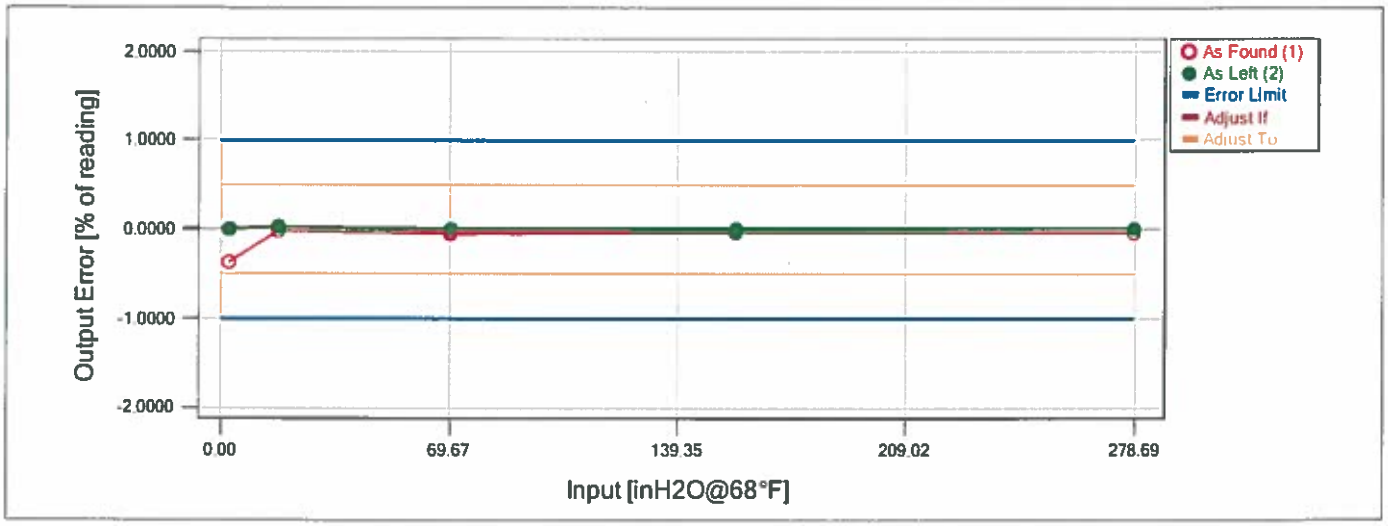
Calibration Date: 6/5/2019 10:32:00 AM
Next Cal. Date: 12/4/2019
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 6/11/2019 Interval: 182 days
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Input Module: INT1C s/n: 40520 Due Date: 11/15/2019
Output Calibrator: MC5 s/n: 25518114 Due Date: 11/15/2019
Output Module: E s/n: 37799 Due Date: 11/15/2019



1. As Found — PASSED

Max Error: -0.37 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.79	2.81	5.60	5.5861	-0.3659
17.42	17.44	8.00	8.0011	-0.0176
69.67	69.67	12.00	11.9928	-0.0588
156.76	156.75	16.00	15.9937	-0.0362
278.69	278.68	20.00	19.9932	-0.0326
156.76	156.80	16.00	15.9970	-0.0276
69.67	69.69	12.00	11.9974	-0.0300
17.42	17.42	8.00	8.0028	0.0323
2.79	2.78	5.60	5.5976	-0.0075

2. As Left — PASSED

Max Error: 0.03 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.79	2.80	5.60	5.6045	0.0133
17.42	17.40	8.00	8.0004	0.0310
69.67	69.66	12.00	11.9998	0.0043
156.76	156.76	16.00	16.0008	0.0057
278.69	278.68	20.00	20.0023	0.0129
156.76	156.77	16.00	16.0033	0.0190
69.67	69.69	12.00	12.0025	0.0125
17.42	17.42	8.00	8.0029	0.0336
2.79	2.80	5.60	5.6051	0.0240

A.F W .000
D .000

Calibration Note:

Brent Young

Calibrated by: Brent Young
6/5/2019 10:32:00 AM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 11.12.2018 15:09:12
Printed by: Victor DeJesus

POSITION ID: RB-1_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 8th St. @Select Wy 999-A5 (3/97)
Plant Structure: P1&2N\RB1/FB3\RB-1\RB-1_F\

DEVICE

Device ID: LD301_264347
Serial Number: 264347-2008
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root (√x)
Range (I/O): 0.00 to 278.69 4.00 to 20.00 mA

CALIBRATION EVENT

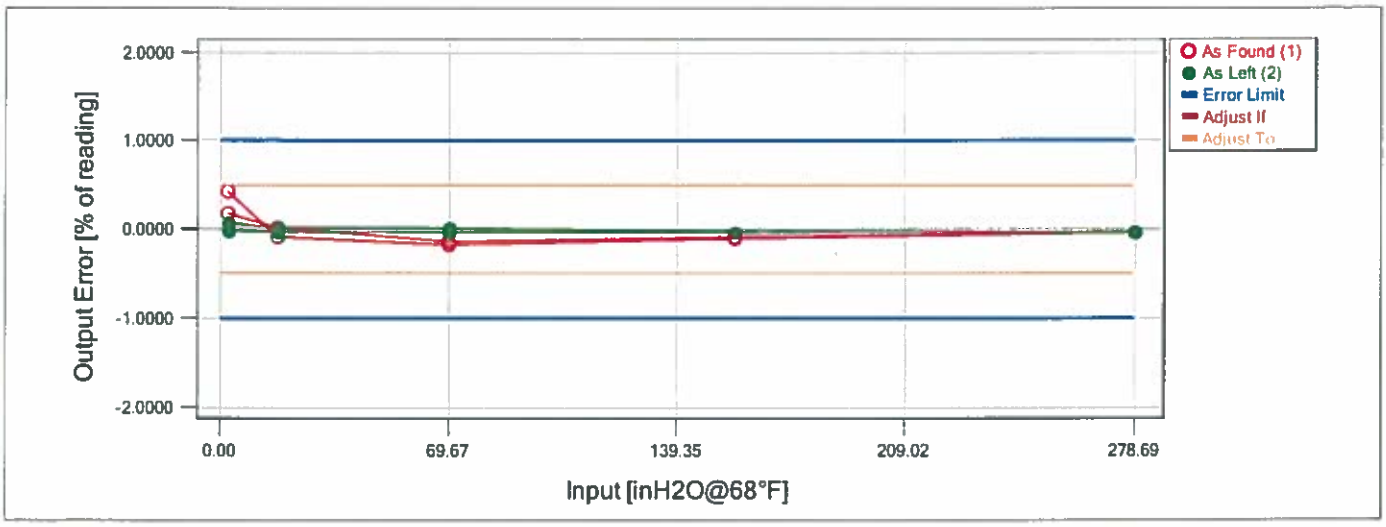
Calibration Date: 12/11/2018 11:23:05 AM
Next Cal. Date: 6/11/2019
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 12/19/2018 Interval: 182 days
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC6 s/n: 605273 Due Date: 7/2/2019
Input Module: P2C s/n: 66282 Due Date: 7/9/2019
Output Calibrator: MC6 s/n: 605273 Due Date: 7/2/2019
Output Module: IN s/n: 25070 Due Date: 7/2/2019



1. As Found — PASSED

Max Error: 0.43 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.79	2.79	5.60	5.6112	0.1841
17.42	17.42	8.00	8.0018	0.0198
69.67	69.66	12.00	11.9818	-0.1457
156.76	156.75	16.00	15.9858	-0.0856
278.69	278.69	20.00	19.9940	-0.0300
156.76	156.76	16.00	15.9841	-0.0986
69.67	69.67	12.00	11.9782	-0.1805
17.42	17.42	8.00	7.9937	-0.0814
2.79	2.80	5.60	5.6277	0.4273

2. As Left — PASSED

Max Error: 0.08 % of reading

Nominal Input [inH2O@68°F]	Actual Input [inH2O@68°F]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.79	2.80	5.60	5.6026	-0.0206
17.42	17.42	8.00	7.9979	-0.0289
69.67	69.67	12.00	11.9959	-0.0330
156.76	156.76	16.00	15.9946	-0.0330
278.69	278.69	20.00	19.9946	-0.0270
156.76	156.77	16.00	15.9960	-0.0266
69.67	69.75	12.00	12.0059	0.0121
17.42	17.42	8.00	8.0014	0.0148
2.79	2.79	5.60	5.6053	0.0787

Calibration Note: AS LEFT WITH NEW METER LD301 - ~~34528~~ 349528 - 2017

vdJ

Calibrated by: Victor DeJesus
12/11/2018 11:23:05 AM

Approved:

CALIBRATION CERTIFICATE

Certificate Number:

Printed: 20.06.2018 13:28:46
Printed by: Brent Young

POSITION ID: RB-1_FIT11

POSITION

Position Name: Flow Transmitter
Work Order Number:
Location: 8th St. @Select Wy 999-A5 (3/97)
Plant Structure: P1&2N\RB1/FB3\RB-1\RB-1_F\

DEVICE

Device ID: LD301_264347
Serial Number: 264347-2008
Manufacturer Model: Smar International Corporation LD301
Operating Range:
Operating Temp.: -40 to 185 F Humidity: 0 to 100%

FUNCTION

Function: Flow Transmitter (ft)
Transfer Function: Square Root (√x)
Range (I/O): 0.00 to 278.69 iwc (G) 4.00 to 20.00 mA

CALIBRATION EVENT

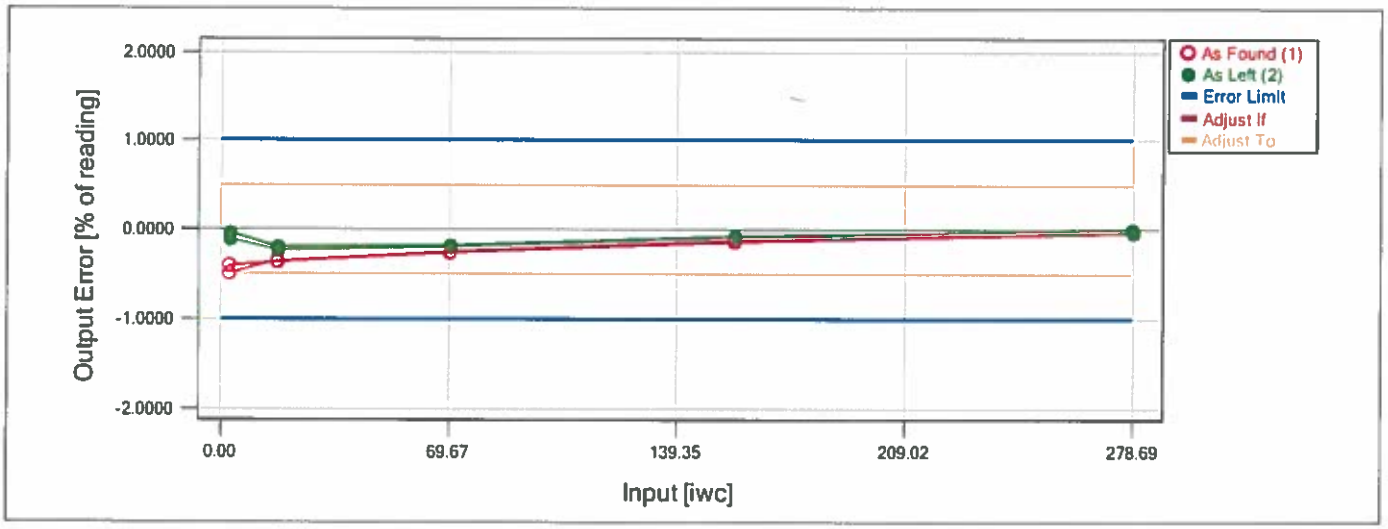
Calibration Date: 6/20/2018 10:07:00 AM
Next Cal. Date: 12/19/2018
Environment Temp.: 0.00 °F Humidity: 0.00 %

PROCEDURE

Due Date: 6/12/2018 Interval: 182 days
Reject if Error >: 1.00 % of reading Adjust To <: 50.00 % of reading
Classification: A
Calibration Strategy: Quality system calibrations

CALIBRATORS

Input Calibrator: MC5 s/n: 24512660 Due Date: 1/8/2019
Input Module: INT1C s/n: 16973 Due Date: 1/8/2019
Output Calibrator: MC5 s/n: 24512660 Due Date: 1/8/2019
Output Module: E s/n: 31457 Due Date: 1/8/2019



1. As Found — PASSED

Max Error: -0.49 % of reading

Nominal Input [iwc]	Actual Input [iwc]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.79	2.75	5.60	5.5666	-0.4074
17.42	17.42	8.00	7.9713	-0.3614
69.67	69.67	12.00	11.9675	-0.2696
156.76	156.74	16.00	15.9776	-0.1345
278.69	278.70	20.00	19.9918	-0.0424
156.76	156.77	16.00	15.9802	-0.1254
69.67	69.67	12.00	11.9692	-0.2555
17.42	17.42	8.00	7.9723	-0.3489
2.79	2.76	5.60	5.5651	-0.4857

2. As Left — PASSED

Max Error: -0.22 % of reading

Nominal Input [iwc]	Actual Input [iwc]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of reading]
2.79	2.79	5.60	5.5949	-0.1069
17.42	17.42	8.00	7.9824	-0.2227
69.67	69.67	12.00	11.9769	-0.1913
156.76	156.76	16.00	15.9859	-0.0874
278.69	278.68	20.00	20.0012	0.0074
156.76	156.74	16.00	15.9871	-0.0751
69.67	69.68	12.00	11.9797	-0.1727
17.42	17.42	8.00	7.9852	-0.1877
2.79	2.79	5.60	5.5991	-0.0320

A.F, 00

Calibration Note:

Calibrated by: Brent Young
6/20/2018 10:07:00 AM

Approved:

Water Capacity Fees

Class	Meter Size	Max CCF/Mo	Ratio	Charge
A	5/8"	30	0.6	$ 6,241
B	3/4"	50	1	$ 10,401
C	1"	80	1.6	$ 16,642
D	1 1/2"	130	2.6	$ 27,043
E	2"	300	6	$ 62,406
F	3"	600	12	$ 124,812
G	4"	1000	20	$ 208,020

Sewer Charges

Fixed Charge per Dwelling Unit	
Single Family	$ 55.07
Multi Family	$ 40.51
Sewer Only	$ 54.40
Commercial	$ 40.51
Variable Charges	**Rate/Unit***
Commercial	**$ 6.67**
Commercial w/Irrigation	**$ 2.99**

*1 unit of water = 748 gallons

Other Charges

Item	Charge
Delinquency Rate	5% for the first month, 1.5% thereafter
Returned Check	$ 30.00
Locked Meter Turn-on Fee	$ 50.00
After Hours Turn-on Fee	$ 75.00
Cut Padlock Fee	$ 22.00
Fire Standby Charge	$5/month
Bypass Meter	$10/month
Fire Service Only Meter	$10/month
48 Hour Notice	$ 40.00
Tax Roll Fee Unpaid Water/Sewer Charges	$ 45.00
Backflow Inspections	$ 11.00
Meter Testing Charge	
1" or smaller	$ 50.00
1.5" to 2"	$ 71.00
3" to 6"	$ 225.00
Service Availability Letters	
Minor Subdivision	$ 150.00
Major Subdivision	$ 250.00

RAINBOW
MUNICIPAL WATER DISTRICT
Committed to Excellence

Water Capacity Fees

Class	Meter Size	Max CCF/Mo	Ratio	Charge
A	5/8"	30	0.6	$ 6,241
B	3/4"	50	1	$ 10,401
C	1"	80	1.6	$ 16,642
D	1 1/2"	130	2.6	$ 27,043
E	2"	300	6	$ 62,406
F	3"	600	12	$ 124,812
G	4"	1000	20	$ 208,020

Sewer Charges

Fixed Charge per Dwelling Unit	
Single Family	$ 55.07
Multi Family	$ 40.51
Sewer Only	$ 54.40
Commercial	$ 40.51
Variable Charges	**Rate/Unit***
Commercial	**$ 6.67**
Commercial w/Irrigation	**$ 2.99**

*1 unit of water = 748 gallons

Other Charges

Item	Charge
Delinquency Rate	5% for the first month, 1.5% thereafter
Returned Check	$ 30.00
Locked Meter Turn-on Fee	$ 50.00
After Hours Turn-on Fee	$ 75.00
Cut Padlock Fee	$ 22.00
Fire Standby Charge	$5/month
Bypass Meter	$10/month
Fire Service Only Meter	$10/month
48 Hour Notice	$ 40.00
Tax Roll Fee Unpaid Water/Sewer Charges	$ 45.00
Backflow Inspections	$ 11.00
Meter Testing Charge	
1" or smaller	$ 50.00
1.5" to 2"	$ 71.00
3" to 6"	$ 225.00
Service Availability Letters	
Minor Subdivision	$ 150.00
Major Subdivision	$ 250.00

RAINBOW
MUNICIPAL WATER DISTRICT
Committed to Excellence