

Trumbull County SWIW # 21



## American Water Management Services, LLC

One American Way • Warren, OH 44484-5555 • Phone: (330) 856-8800 • Fax (330) 856-8480

August 21, 2014

34-155-2-4076-0000

Mr. Andrew Adgate  
Ohio Department of Natural Resources  
Division of Oil and Gas Resources Management  
2045 Morse Road, Building F-2  
Columbus, Ohio 43229-6693

**Re:** Request to Increase Maximum Injection Pressure; Salt Water Injection Well  
AWMS #1; API No. 3415524076, Weathersfield Township, Trumbull County,  
Ohio

Dear Andrew:

American Water Management Services, LLC (AWMS) respectfully requests an increase of the maximum permitted injection pressure for the subject Lockport Dolomite salt water injection well *based on injected water up to a specific gravity of 1.110*. This request is based on our acceptance of water with a weighted-average specific gravity of approximately 1.092 month-to-date.

On July 11, 2014 the Chief approved an increase in the maximum injection pressure for this well to 1200 psi so long as the specific gravity remained under 1.050. We have been successful in increasing the composite specific gravity of received brine above the 1.050 limit, and therefore operate using 1025 psi as the maximum injection pressure. However, the amount that can be injected in the well is still quite limited.

The following supporting information is attached to this request:

- A summary of the loads (including partial loads) accepted from August 1, 2014 to August 19, 2014, including the date and time of acceptance, barrels delivered and

average specific gravity of the loads. The average and weighted-average specific gravity are presented on page 10 of 10 of the summary.

- Calibration certificates for the two Coriolis meters used at the unloading stations at the facility.
- Laboratory results from two composite samples of received water collected on July 24, 2014 and analyzed by Kroff Well Services, Inc. The composite sample was taken from the water filtration system, which is fed from the one raw water (4000-bbl glass-lined) storage tank at the facility which provides mixing and comingling of all received loads. Kroff reported the specific gravity of the samples as 1.049 and 1.050.

Thank you for your time and attention to this request. Please contact me at 330-618-0259 or [skilper@avalonholdings.com](mailto:skilper@avalonholdings.com) with any questions.



Stephen G. Kilper, PE  
Vice President

cc: Stephen Ochs, ODNR (electronic)

4074

# Summary of Delivered Average Specific Gravity

American Water Management Services, LLC

AWMS Rt. 169, LLC

Aug-14

Weathersfield Township, Ohio

*Note: Short duration/low volume loads indicate multiple  
'starts' were required for unloading pumps.*

TIME	STAMP	BADGE NUMBER	TOTAL BARRELS	AVERAGE DENSITY	AVERAGE T.S.S.	CYCLE DURATION
8/1/2014 6:32		10801	104.4816055	1.035804629	0.232546464	18.92410088
8/1/2014 9:31		10801	79.05109406	1.106651902	0.285467327	14.91451645
8/1/2014 10:55		10801	101.2432632	1.135466576	0.274103701	18.83083344
8/1/2014 11:35		10801	32.97615051	1.106855512	0.319203258	6.451632977
8/1/2014 11:48		10801	45.95333099	1.106686115	0.321450859	8.9285326
8/1/2014 12:21		10801	126.2213593	1.085058212	0.289472312	22.43238258
8/1/2014 14:08		10801	74.90792084	1.105555654	0.313859075	13.84608364
8/1/2014 14:49		10801	33.80954742	1.081367493	0.332293093	6.449233532
8/1/2014 15:10		10801	94.17129517	1.081372619	0.366203278	17.24331665
8/1/2014 17:54		10801	133.862915	1.084372401	0.41634059	23.68029976
8/1/2014 22:51		10801	119.2922592	1.083158374	0.39797622	21.29120064
8/1/2014 1:40		10801	129.9829102	1.086121798	0.265566796	21.03814888
8/1/2014 4:08		10801	0.309523821	1.086121798	0.265566796	0.854833364
8/1/2014 4:29		10801	131.6491699	1.086849809	0.271315753	21.19693375
8/1/2014 9:41		10801	132.1728516	1.087896943	0.267437696	21.22610092
8/1/2014 15:12		10801	108.5533447	1.1112293	0.288562119	17.80340004
8/2/2014 3:36		10801	124.6021881	1.088684916	0.38672179	22.05021477
8/2/2014 9:01		10801	105.6245499	1.137631774	0.242610335	19.16843224
8/2/2014 9:59		10801	128.3404541	1.088672638	0.356098652	22.79290009
8/2/2014 12:39		10801	127.745285	1.087812185	0.379264504	22.65884972
8/2/2014 7:55		10801	91.59967041	1.112370491	0.259099394	15.07671738
8/2/2014 9:53		10801	92.5997467	1.112260938	0.257988065	15.3232832
8/2/2014 15:15		10801	0.285714298	1.112260938	0.257988065	0.858033299
8/2/2014 15:36		10801	126.9833221	1.093720078	0.266513497	20.68338394
8/2/2014 17:55		10801	0.761905074	1.093720078	0.266513497	1.187916636
8/2/2014 18:16		10801	126.1023026	1.093209863	0.25670287	20.52251625
8/2/2014 20:39		10801	0.309523821	1.093209863	0.25670287	0.858666658
8/2/2014 21:04		10801	147.6928711	1.044439673	0.373802513	23.68473244
8/2/2014 23:03		10801	0.309523821	1.044439673	0.373802513	0.836866677
8/2/2014 23:27		10801	148.359375	1.045211077	0.365673542	23.74600029
8/3/2014 9:32		10801	79.02728271	1.110934138	0.443543106	14.60443306
8/3/2014 10:38		10801	113.9823303	1.145436645	0.560967326	20.5124836
8/3/2014 10:48		10801	0	1.145436645	0.560967326	0.26668331
8/3/2014 11:12		10801	110.6249313	1.106014609	0.503677607	20.10066795
8/3/2014 11:40		10801	109.1724396	1.10030067	0.675298512	19.70443344
8/3/2014 17:54		10801	104.791153	1.099708438	0.670052528	20.40714836

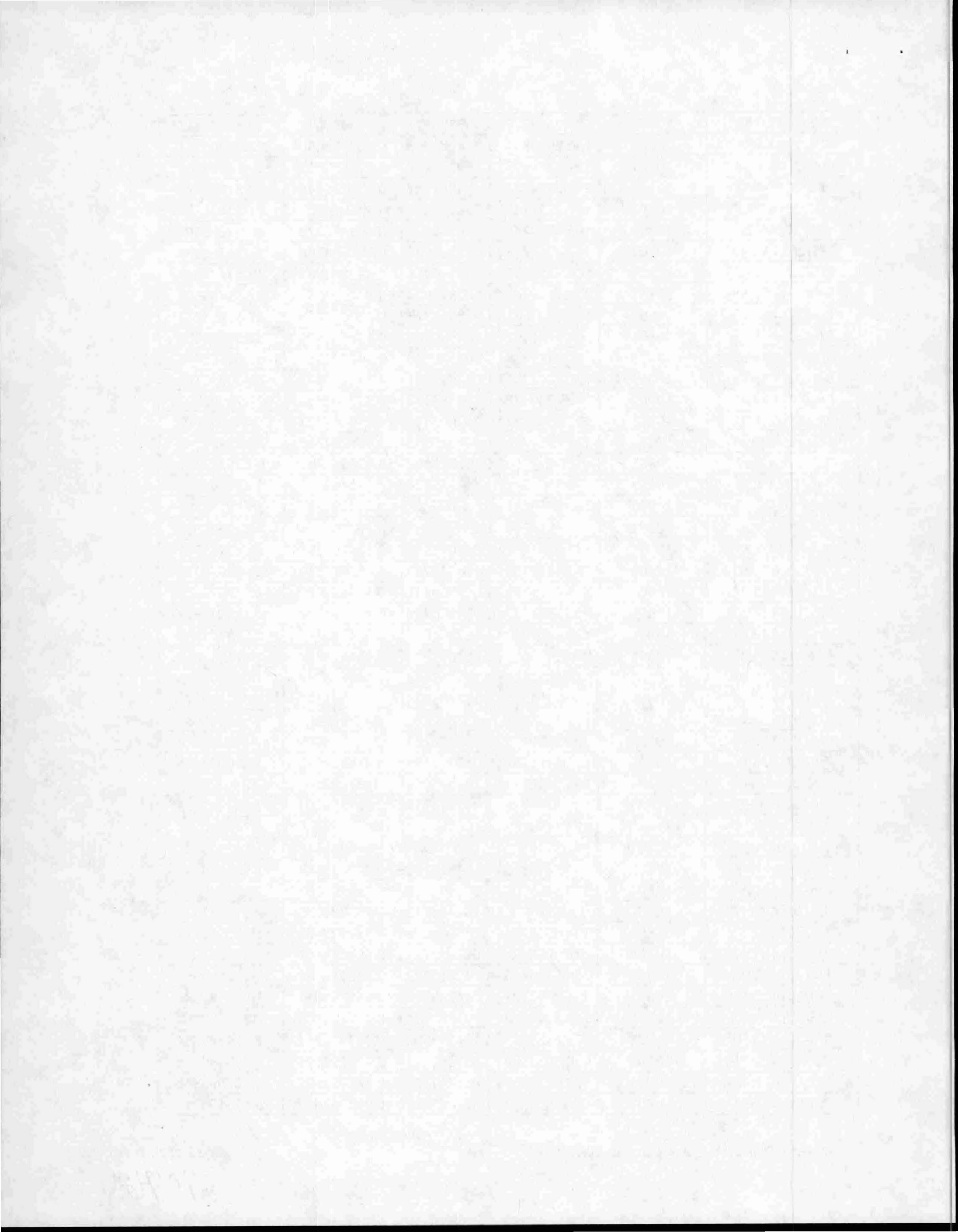
4076

8/3/2014 1:37	10801	0.571428657	1.045211077	0.365673542	0.849183321
8/3/2014 2:00	10801	145.8599854	1.0472157	0.326546073	23.43131638
8/3/2014 4:01	10801	0.261904776	1.0472157	0.326546073	0.831416667
8/3/2014 4:25	10801	148.359375	1.046047926	0.356299728	23.9250164
8/3/2014 10:22	10801	0.809524179	1.046047926	0.356299728	0.955249965
8/3/2014 10:24	10801	0.261904776	1.046047926	0.356299728	1.929666638
8/3/2014 10:26	10801	0.285714298	1.046047926	0.356299728	1.46906662
8/3/2014 10:29	10801	0.261904776	1.046047926	0.356299728	2.588483334
8/3/2014 10:46	10801	68.57410431	1.155531049	0.147667691	12.01268291
8/3/2014 11:03	10801	0.428571433	1.155531049	0.147667691	2.775866747
8/3/2014 11:21	10801	104.2196808	1.112537503	0.302827448	17.22566795
8/3/2014 11:29	10801	0	1.112537503	0.302827448	0.017199999
8/3/2014 11:43	10801	79.40826416	1.113989234	0.254853368	13.45945072
8/3/2014 13:51	10801	79.6701889	1.113924384	0.250067502	13.3805666
8/3/2014 17:52	10801	105.6959839	1.108921647	0.324797869	18.10758209
8/4/2014 7:56	10801	110.4344406	1.059697151	0.521402836	19.71408272
8/4/2014 8:37	10801	79.05109406	1.114074469	0.463619918	14.43898296
8/4/2014 9:05	10801	109.5772324	1.064091921	0.424609333	19.4017334
8/4/2014 9:28	10801	74.02690125	1.156535745	0.418163687	13.55541706
8/4/2014 10:46	10801	79.02728271	1.11333096	0.470873952	14.49526691
8/4/2014 11:54	10801	108.7200241	1.054890275	0.361812055	19.57144928
8/4/2014 13:34	10801	109.0057602	1.107864499	0.305000991	19.44031525
8/4/2014 14:02	10801	109.3867416	1.026838303	0.472987115	19.37140083
8/4/2014 14:31	10801	104.2911148	1.117856741	0.35550195	18.77586746
8/4/2014 14:59	10801	91.55204773	1.108472347	0.476637334	16.50423431
8/4/2014 15:28	10801	107.8390045	1.012757301	0.522524714	19.27719879
8/4/2014 18:01	10801	103.3148499	1.125862241	0.359687537	18.47548485
8/4/2014 21:35	10801	126.8166428	1.054185748	0.41521731	22.34479904
8/4/2014 8:48	10801	129.1973877	1.045619726	0.557206035	20.34210014
8/4/2014 9:12	10801	83.67049408	0.999935031	0.409962535	14.57128334
8/4/2014 10:59	10801	83.26570129	1.119162798	0.278531253	13.94466686
8/4/2014 11:39	10801	130.3637695	1.099826217	0.227374077	21.10993195
8/4/2014 13:16	10801	0.40476191	1.099826217	0.227374077	0.872466683
8/4/2014 13:33	10801	103.814888	1.10652113	0.337820917	17.11578369
8/4/2014 13:51	10801	68.81221771	1.116016746	0.270227671	11.84930038
8/4/2014 14:17	10801	105.2911911	1.099721313	0.272732139	17.19626617
8/4/2014 14:19	10801	0.047619049	1.099721313	0.272732139	0.881250024
8/4/2014 14:21	10801	0.071428575	1.099721313	0.272732139	0.886900008
8/4/2014 14:28	10801	24.66658211	1.099531174	0.276480138	4.748549938
8/4/2014 15:44	10801	110.1248932	1.122178078	0.252364427	18.39730072
8/4/2014 15:58	10801	0.547619104	1.122178078	0.252364427	1.093549967
8/4/2014 16:12	10801	73.69354248	1.160492659	0.226516277	12.5901165
8/4/2014 17:07	10801	67.02636719	1.098989367	0.266370118	11.34060001
8/4/2014 17:16	10801	28.42847252	1.098526716	0.224975303	5.146866798
8/4/2014 17:30	10801	33.5	1.098049164	0.206360027	6.19630003
8/4/2014 17:45	10801	0.71428597	1.098049164	0.206360027	2.451566458
8/4/2014 18:06	10801	102.1242828	1.140235424	0.278468311	17.0468502

4074



8/5/2014 0:40	10801	135.9338379	1.055828571	0.385397613	23.84393311
8/5/2014 3:28	10801	130.2923584	1.054984808	0.359725058	22.91206741
8/5/2014 7:58	10801	111.1249695	1.069132447	0.427430511	19.87841606
8/5/2014 8:42	10801	99.52884674	1.104787827	0.411135346	17.87008286
8/5/2014 9:11	10801	127.3881149	1.058176041	0.40718019	22.57426834
8/5/2014 9:54	10801	106.4103241	1.108388066	0.463475078	18.93668365
8/5/2014 11:32	10801	128.8165283	1.057885885	0.394985706	22.90353394
8/5/2014 11:55	10801	103.3862839	1.098846316	0.442851901	18.53726578
8/5/2014 12:55	10801	97.17152405	1.103349924	0.444551736	17.61888504
8/5/2014 13:59	10801	129.0307617	1.055522323	0.400867075	23.02823257
8/5/2014 15:10	10801	108.5771561	1.10694766	0.459017903	19.30151558
8/5/2014 15:53	10801	76.57471466	1.002570748	0.492454082	13.61383343
8/5/2014 16:04	10801	32.73803711	1.002332211	0.500120878	6.480933189
8/5/2014 17:28	10801	130.6732178	1.056383252	0.392509997	22.76561737
8/5/2014 18:11	10801	101.7909241	1.103058338	0.278682321	18.0654335
8/5/2014 20:35	10801	123.9354706	1.047335505	0.465284258	21.68435097
8/5/2014 7:52	10801	0	1.140235424	0.278468311	0.825333357
8/5/2014 7:54	10801	0	1.140235424	0.278468311	0.752799988
8/5/2014 8:09	10801	79.36064148	1.11981523	0.319672197	13.41518307
8/5/2014 9:04	10801	119.6018066	1.055708408	0.402193636	19.10470009
8/5/2014 9:33	10801	133.9343262	0.998071551	0.324762285	21.63286781
8/5/2014 10:53	10801	79.64637756	1.118956208	0.392417312	13.56878376
8/5/2014 11:28	10801	118.4826736	1.059690237	0.401884079	19.12979889
8/5/2014 13:37	10801	0.333333343	1.059690237	0.401884079	0.829833329
8/5/2014 13:57	10801	125.3403397	1.057607055	0.451910347	20.05373383
8/5/2014 15:48	10801	0.571428657	1.057607055	0.451910347	1.671650052
8/5/2014 16:05	10801	98.21922302	1.129493237	0.344866544	16.33398247
8/5/2014 17:07	10801	0.261904776	1.129493237	0.344866544	0.860099971
8/5/2014 17:27	10801	121.5543365	1.058094263	0.41552788	19.45885086
8/5/2014 22:46	10801	0.476190478	1.058094263	0.41552788	0.86803335
8/5/2014 23:06	10801	122.6496582	1.053252578	0.475162625	19.59093475
8/6/2014 6:40	10801	105.3626251	1.129931569	0.3291246	18.9367485
8/6/2014 8:23	10801	109.2438736	1.037172914	0.527218401	19.43795013
8/6/2014 9:16	10801	99.81458282	1.100464582	0.27904132	17.8000164
8/6/2014 9:39	10801	57.83518982	1.15830946	0.276208848	10.68815041
8/6/2014 9:48	10801	14.95233345	1.157616258	0.220243782	3.507599831
8/6/2014 10:50	10801	119.3160706	1.006592512	0.296763688	22.06475067
8/6/2014 10:56	10801	11.5237751	0.981284142	1.765771985	2.879733324
8/6/2014 11:55	10801	104.0530014	1.10473156	0.437127471	18.81515121
8/6/2014 12:22	10801	101.648056	1.012017727	0.660874367	18.24731636
8/6/2014 12:44	10801	79.05109406	1.117036223	0.440347344	14.62959957
8/6/2014 13:51	10801	104.0053787	1.096235752	0.569288611	18.54181671
8/6/2014 16:13	10801	102.1242828	1.124307394	0.472221404	18.6270504
8/6/2014 17:01	10801	109.6486664	1.114593506	0.262299269	19.74564934
8/6/2014 1:29	10801	0.380952388	1.053252578	0.475162625	0.875166655
8/6/2014 1:49	10801	125.4117737	1.061487317	0.385357678	20.06568336
8/6/2014 3:52	10801	0.523809552	1.061487317	0.385357678	0.875100017



8/6/2014 4:13	10801	125.507019	1.063327074	0.39599663	20.11116791
8/6/2014 7:55	10801	79.52732086	1.119780183	0.425048292	13.46343422
8/6/2014 9:40	10801	65.00240326	1.161267638	0.344289243	11.10470009
8/6/2014 9:49	10801	5.738082886	1.156949997	0.341212571	1.914383292
8/6/2014 10:15	10801	80.00354767	1.114602447	0.447716385	14.73980045
8/6/2014 11:55	10801	105.1721344	1.123438954	0.413960516	18.52700043
8/6/2014 12:35	10801	104.7197189	1.112321377	0.463242471	18.00263214
8/6/2014 12:58	10801	62.66889191	1.150657058	0.375523269	11.4733839
8/6/2014 16:19	10801	56.4065094	1.014551282	0.706741691	9.425850868
8/6/2014 16:29	10801	43.45314026	1.015040517	0.734962702	7.516767025
8/6/2014 16:36	10801	23.97610855	1.014347911	0.694027007	4.726866722
8/6/2014 17:08	10801	0	1.014347911	0.694027007	1.811800003
8/6/2014 17:20	10801	55.07307434	1.146736264	0.551473439	9.90766716
8/7/2014 8:48	10801	107.1960983	1.002943635	0.345838279	18.80828285
8/7/2014 8:57	10801	0	1.002943635	0.345838279	0.016449999
8/7/2014 9:16	10801	106.8389282	1.075018883	0.515839458	19.16431618
8/7/2014 9:48	10801	124.1973953	1.063055396	0.550277352	22.12821579
8/7/2014 10:24	10801	97.29058075	1.099278688	0.545249403	17.48731613
8/7/2014 10:39	10801	1.26190567	1.125500083	3.456495047	1.311199903
8/7/2014 10:41	10801	1.214286566	1.127250075	3.456495047	0.871299982
8/7/2014 11:00	10801	101.8147354	1.127616763	1.610757947	18.55925179
8/7/2014 12:35	10801	112.7917633	1.007968187	0	19.96230125
8/7/2014 14:33	10801	0	1.007968187	0	1.198783398
8/7/2014 14:39	10801	27.99990273	1.138527036	0.09519054	5.447516918
8/7/2014 14:58	10801	90.83770752	1.140142918	0.154733151	16.65239906
8/7/2014 15:29	10801	102.9814911	1.121113539	0.226997137	18.71339989
8/7/2014 16:01	10801	109.339119	1.108995795	0.266948938	19.83561516
8/7/2014 17:50	10801	113.5537262	1.102868557	0.090150639	20.43203354
8/7/2014 7:34	10801	0.40476191	1.146736264	0.551473439	0.864800036
8/7/2014 7:55	10801	79.5511322	1.12576735	0.490721434	20.80238152
8/7/2014 9:09	10801	113.5061035	1.112838626	0.454286277	18.45216751
8/7/2014 9:36	10801	109.9344025	1.10458672	0.717335045	18.20911598
8/7/2014 10:06	10801	79.4320755	1.124169469	0.577389121	13.44418335
8/7/2014 11:19	10801	57.66851044	1.156982422	0.384859145	10.08399963
8/7/2014 12:42	10801	0.380952388	1.156982422	0.384859145	0.853716671
8/7/2014 12:56	10801	79.1939621	1.12087357	0.175930187	13.48483372
8/7/2014 13:55	10801	121.6972046	1.065878987	0.255411118	19.79559898
8/7/2014 14:24	10801	0.285714298	1.065878987	0.255411118	0.765433311
8/7/2014 14:35	10801	60.12107849	1.147148252	0.357544065	10.4419508
8/7/2014 14:51	10801	23.1427784	1.122619629	0.217313185	4.305683613
8/7/2014 15:10	10801	66.02629089	1.118545175	0.245314017	11.21549988
8/7/2014 15:28	10801	0	1.118545175	0.245314017	1.147483349
8/7/2014 15:31	10801	0.261904776	1.118545175	0.245314017	0.852666676
8/7/2014 15:48	10801	100.6479797	1.141649365	0.30483529	16.8330822
8/7/2014 16:35	10801	122.4591675	1.067474961	0.295725733	19.86761665
8/8/2014 8:52	10801	101.505188	1.11761868	0.234943375	18.38736534
8/8/2014 9:18	10801	110.5534973	1.074488044	0.107028097	19.86374855



8/8/2014 9:45	10801	104.9102097	0.99911654	0.232228205	19.94806671
8/8/2014 10:20	10801	98.3859024	1.115261316	0.192019776	18.29150009
8/8/2014 10:42	10801	79.00347137	1.121685147	0.232379571	15.33806705
8/8/2014 13:07	10801	94.74276733	1.137794375	0.11353153	17.59291649
8/8/2014 13:16	10801	5.428560257	1.136550188	0.10148897	1.910583377
8/8/2014 7:52	10801	0.761905074	1.067474961	0.295725733	1.085749984
8/8/2014 8:05	10801	78.55105591	1.125674605	0.296289623	13.12300014
8/8/2014 9:15	10801	109.1724396	1.11226511	0.270526648	17.53361702
8/8/2014 9:22	10801	0.261904776	1.11226511	0.270526648	0.846316636
8/8/2014 9:40	10801	106.9341736	1.11437726	0.366180271	17.29180145
8/8/2014 10:32	10801	108.0533066	1.078148842	0.307408333	17.20139885
8/8/2014 12:47	10801	79.05109406	1.123167753	0.27678138	13.35808277
8/8/2014 13:40	10801	104.1482468	1.108194828	0.253511876	16.87561607
8/9/2014 8:02	10801	113.4346695	1.122135401	0.191826329	20.83455086
8/9/2014 9:31	10801	60.38300323	1.149496198	0.311580479	11.44383335
8/9/2014 9:39	10801	13.57138634	1.148384809	0.134648696	3.389183283
8/9/2014 14:13	10801	108.219986	1.101801634	0.227874294	20.1856823
8/9/2014 8:51	10801	79.45588684	1.127802014	0.20504877	13.31474972
8/9/2014 9:32	10801	38.14321136	1.157460451	0.277469575	6.616149902
8/9/2014 9:46	10801	31.04751015	1.152891278	0.333894879	5.885516644
8/9/2014 11:05	10801	79.64637756	1.126961231	0.248082027	13.37676716
8/9/2014 13:32	10801	79.83686829	1.124600053	0.181728527	13.48148251
8/10/2014 8:43	10801	102.8862457	1.111554146	0.126628309	18.99403191
8/10/2014 8:47	10801	5.69046402	1.112650156	0.347461879	1.943783283
8/10/2014 9:42	10801	74.47931671	1.149111748	0.422166526	14.0707159
8/10/2014 10:43	10801	97.19533539	1.10773015	0.334737808	17.66101646
8/10/2014 10:50	10801	24.64277267	1.107708454	0.333140582	5.171866894
8/10/2014 14:55	10801	98.50495911	1.157473087	0.220390439	18.49029922
8/10/2014 6:40	10801	79.64637756	1.127768993	0.244364053	13.33959961
8/10/2014 8:45	10801	79.64637756	1.128125072	0.268332928	13.38900089
8/10/2014 9:41	10801	71.02667236	1.149082661	0.355744541	12.2139492
8/10/2014 10:51	10801	79.76543427	1.123197675	0.208038911	13.41466713
8/10/2014 14:49	10801	61.52594757	1.159639597	0.219391927	10.66524982
8/11/2014 6:05	10801	58.04949188	1.120579958	0.210612729	10.98308277
8/11/2014 6:18	10801	46.1914444	1.120614171	0.212245718	9.135533333
8/11/2014 7:44	10801	108.9581375	1.10207963	0.389471054	19.93351555
8/11/2014 11:08	10801	102.7910004	1.104214668	0.17142117	19.08046722
8/11/2014 13:58	10801	0	1.104214668	0.17142117	0.22541666
8/11/2014 13:59	10801	0	1.104214668	0.17142117	0.15928334
8/11/2014 14:22	10801	114.4585571	1.126858473	0.288235992	21.35361671
8/11/2014 16:50	10801	111.4821396	1.108554482	0.296769291	20.90826607
8/11/2014 17:31	10801	100.7432251	1.120948315	0.254647136	19.0806179
8/11/2014 18:10	10801	104.7435303	1.130808353	0.279843092	19.62798309
8/11/2014 11:14	10801	0	1.159639597	0.219391927	2.389033318
8/11/2014 11:16	10801	0.261904776	1.159639597	0.219391927	0.879599988
8/11/2014 11:20	10801	9.880924225	1.112888813	0.261915714	3.513849974
8/11/2014 11:43	10801	94.05223846	1.111634731	0.297540575	15.65171719



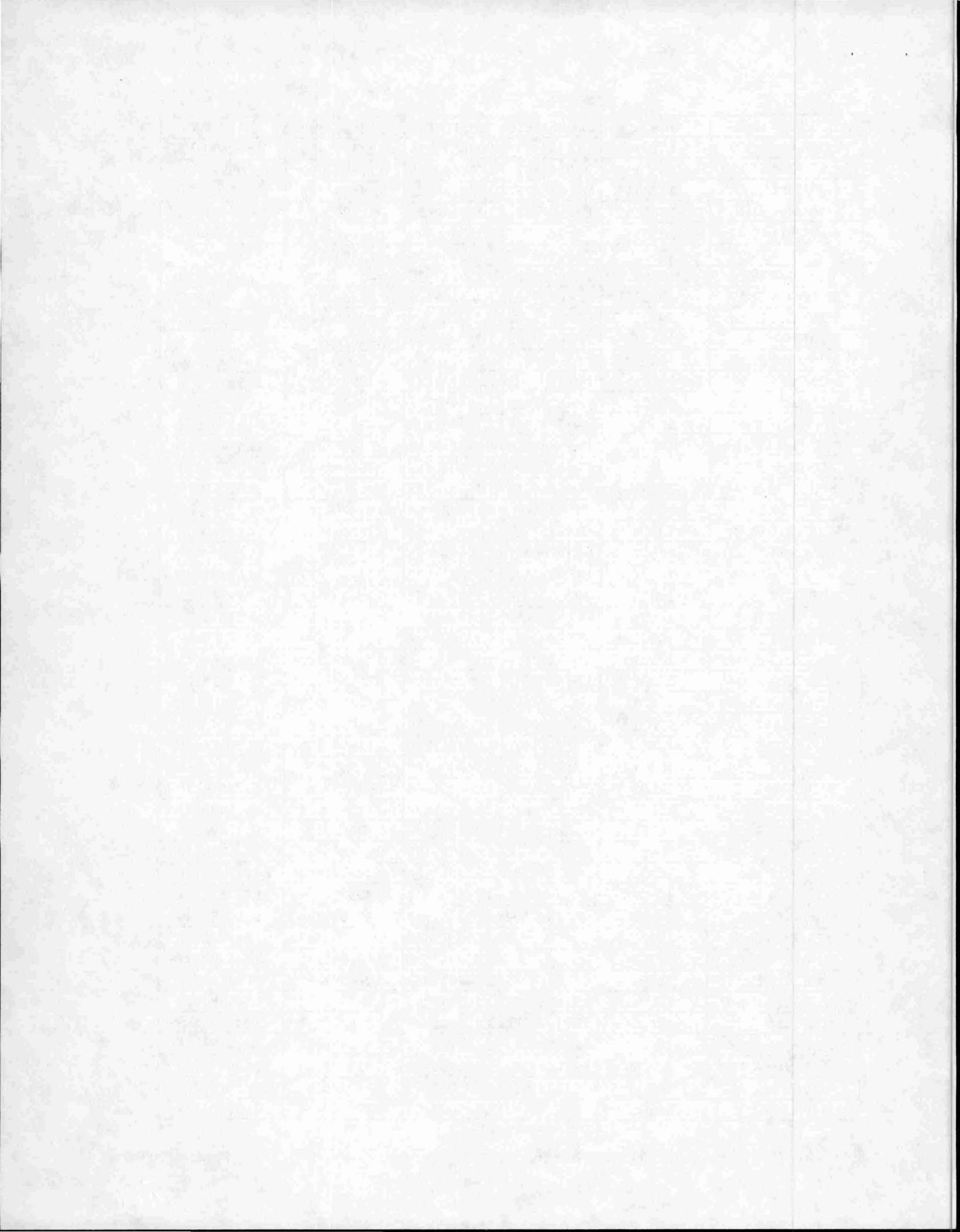
8/11/2014 16:40	10801	0.357142866	1.111634731	0.297540575	1.345916629
8/11/2014 17:07	10801	118.3636169	1.129254818	0.317380637	27.39566612
8/12/2014 7:50	10801	109.9105911	1.114147067	0.226540506	19.48776627
8/12/2014 9:10	10801	86.12306213	0.988560855	0.183744416	13.76344967
8/12/2014 9:18	10801	28.90466118	0.978607178	1.4047786	5.305066586
8/12/2014 9:35	10801	48.54876709	1.158414364	0.187987208	8.299016953
8/12/2014 9:41	10801	21.59516525	1.154624939	0.205215618	4.197400093
8/12/2014 13:49	10801	63.71659088	1.133571863	0.181746021	10.33658314
8/12/2014 14:01	10801	42.95310211	1.133836627	0.225674659	7.533833504
8/12/2014 14:42	10801	42.61974335	1.018485069	0.254138798	7.606100082
8/12/2014 14:47	10801	0.071428575	1.018485069	0.254138798	0.861616671
8/12/2014 14:53	10801	24.11896515	1.018947959	0.197973147	4.533783436
8/12/2014 15:03	10801	41.57204437	1.017935872	0.477005661	7.326383591
8/12/2014 17:18	10801	112.4345932	1.150313497	0.341296256	17.4223671
8/12/2014 8:24	10801	0.357142866	1.129254818	0.317380637	0.863816619
8/12/2014 8:39	10801	79.1939621	1.12928164	0.332234144	13.41341686
8/12/2014 9:30	10801	73.50305176	1.161599517	0.294308424	12.52821636
8/12/2014 9:59	10801	105.1959457	1.10795176	0.478310585	17.26526642
8/12/2014 10:37	10801	0.40476191	1.10795176	0.478310585	1.136966705
8/12/2014 10:59	10801	79.3130188	1.129694819	0.367681175	19.10588455
8/12/2014 13:39	10801	79.62256622	1.123372197	0.280364841	13.42691612
8/12/2014 14:22	10801	111.2440262	1.130747437	0.309442222	18.54958344
8/13/2014 8:03	10801	94.69514465	1.039752364	0.215721145	14.48968315
8/13/2014 8:08	10801	13.57138634	1.038769364	0.218005031	2.952616692
8/13/2014 8:33	10801	78.97966003	1.131173253	0.328713983	12.50581646
8/13/2014 8:54	10801	98.90975189	1.142308712	0.231741145	16.13730049
8/13/2014 9:10	10801	48.90593719	1.11985445	0.260895878	8.405917168
8/13/2014 9:18	10801	15.47614098	1.118999958	0.182438388	3.930649996
8/13/2014 9:23	10801	8.214263916	1.119874954	0.267001957	2.534333229
8/13/2014 12:29	10801	7.69045639	1.034678578	0.178641215	1.766533256
8/13/2014 12:47	10801	113.3394241	1.034795523	0.175744072	15.66253376
8/13/2014 13:07	10801	77.14618683	1.126017451	0.22669591	11.05691624
8/13/2014 13:14	10801	20.23802757	1.125712633	0.190354154	3.581849813
8/13/2014 14:31	10801	103.67202	1.114279985	0.267950028	14.64998341
8/13/2014 16:10	10801	107.6008911	1.039360881	0.20629175	14.9422493
8/13/2014 16:32	10801	99.07643127	1.134458423	0.219780251	14.31413364
8/13/2014 7:49	10801	0.285714298	1.130747437	0.309442222	0.861766696
8/13/2014 8:08	10801	113.3870468	1.018219113	0.287440896	18.02906609
8/13/2014 8:17	10801	0	1.018219113	0.287440896	1.323233247
8/13/2014 8:20	10801	0.357142866	1.018219113	0.287440896	0.851666629
8/13/2014 8:39	10801	107.2913437	1.107950807	0.48880136	17.59054947
8/13/2014 8:52	10801	0	1.107950807	0.48880136	1.293866754
8/13/2014 9:11	10801	105.4578705	1.177251935	0.315102339	18.05316544
8/13/2014 9:17	10801	1.023810148	0.737875104	0.199978113	1.018883348
8/13/2014 9:29	10801	0.571428657	0.737875104	0.199978113	1.34645009
8/13/2014 9:35	10801	29.5713253	1.122418165	0.323326498	5.620583057
8/13/2014 9:43	10801	0.261904776	1.122418165	0.323326498	0.84315002

8/13/2014 9:52	10801	46.3105011	1.160166264	0.279045552	8.100566864
8/13/2014 10:00	10801	21.16659546	1.160190701	0.276874453	4.094266891
8/13/2014 10:09	10801	30.97608185	1.160050154	0.260117412	5.891199589
8/13/2014 10:34	10801	0.309523821	1.160050154	0.260117412	0.852983356
8/13/2014 10:47	10801	71.88388062	1.133242965	0.406821758	12.40668297
8/13/2014 11:44	10801	108.4104767	1.157699466	0.445234686	18.13119888
8/13/2014 11:58	10801	26.73800278	1.042793274	0.249395743	4.762983322
8/13/2014 12:09	10801	33.95241547	1.042761207	0.255521327	5.878866673
8/13/2014 12:24	10801	41.33393097	1.042728901	0.255581886	7.102683544
8/13/2014 12:32	10801	10.66663551	1.042187572	0.254659683	2.498549938
8/13/2014 12:48	10801	0.285714298	1.042187572	0.254659683	0.853266656
8/13/2014 13:08	10801	104.6244736	1.108284235	0.59059602	17.21785164
8/13/2014 13:20	10801	0.309523821	1.108284235	0.59059602	0.848816693
8/13/2014 13:38	10801	96.07620239	1.148061633	0.303280503	16.23086739
8/13/2014 14:49	10801	91.62348175	1.101799369	0.505136788	15.29046631
8/13/2014 16:11	10801	0.309523821	1.101799369	0.505136788	0.83040005
8/13/2014 16:29	10801	114.8633499	1.032066464	0.253431857	18.47553253
8/14/2014 6:59	10801	117.0778046	1.001480341	0.276695311	15.75301743
8/14/2014 8:45	10801	89.12329102	1.111923933	0.303920299	12.59408379
8/14/2014 8:53	10801	18.40470123	1.111770868	0.301494718	3.321116686
8/14/2014 9:16	10801	105.5054932	1.004123449	0.320589781	14.56158352
8/14/2014 9:49	10801	55.97790527	1.165209293	0.24072361	8.42808342
8/14/2014 9:56	10801	15.28566551	1.156283259	0.369292825	3.076950073
8/14/2014 10:33	10801	99.7431488	1.0966115	0.300983399	14.27108383
8/14/2014 10:48	10801	31.97607803	1.004943609	0.339559585	4.887533665
8/14/2014 11:04	10801	77.31286621	1.004387736	0.310047179	11.04046631
8/14/2014 12:01	10801	131.9348145	1.009363294	0.471613199	18.71430016
8/14/2014 12:58	10801	108.362854	1.019320369	0.176514223	14.99345016
8/14/2014 14:52	10801	4.952371597	1.023499966	0.164356947	1.463633299
8/14/2014 16:31	10801	106.6246262	1.018822908	0.168666601	14.66695023
8/14/2014 16:34	10801	1.000000596	1.00287509	0.175605774	0.935433328
8/14/2014 18:05	10801	128.102417	1.10651648	0.25047043	18.72763252
8/14/2014 20:55	10801	57.07322693	1.058875084	0.257921308	8.258099556
8/14/2014 21:07	10801	48.54876709	1.058875203	0.255584031	7.322050095
8/14/2014 8:24	10801	79.38445282	1.133411288	0.427761644	13.46368313
8/14/2014 8:49	10801	101.0527725	1.104856253	0.47215721	16.57999992
8/14/2014 9:49	10801	98.55258179	1.151091576	0.407009006	16.57049942
8/14/2014 10:16	10801	104.0291901	1.115084887	0.510160327	18.99106598
8/14/2014 10:26	10801	0	1.115084887	0.510160327	0.871316671
8/14/2014 10:42	10801	79.28920746	1.132237554	0.511692166	13.43536663
8/14/2014 12:16	10801	100.3622437	1.167703509	0.459468246	16.84539986
8/14/2014 13:29	10801	76.09848785	1.099692345	0.486854494	12.7597332
8/14/2014 15:09	10801	109.9582138	1.134681106	0.456761837	18.12399864
8/15/2014 1:15	10801	104.8863983	1.010160208	0.196907595	14.15323257
8/15/2014 7:54	10801	105.3626251	1.018206477	0.213155165	14.64853287
8/15/2014 9:01	10801	65.81198883	1.001775384	0.231570721	9.140483856
8/15/2014 9:12	10801	46.62004852	1.0009619	0.214881331	6.904983521



8/15/2014 10:07	10801	123.6021118	1.10035038	0.299982339	18.48114967
8/15/2014 11:29	10801	43.61981964	1.016575575	0.211895436	6.391600132
8/15/2014 11:43	10801	70.07421875	1.016696453	0.202951089	10.05573368
8/15/2014 13:36	10801	108.4104767	1.011742592	0.198936582	15.06608391
8/15/2014 14:46	10801	106.6246262	1.123840928	0.2398853	15.18984985
8/15/2014 15:00	10801	0	1.123840928	0.2398853	1.453733325
8/15/2014 15:06	10801	27.99990273	1.105754495	0.429818958	4.518750191
8/15/2014 15:14	10801	37.00026703	1.105872035	0.427723289	5.685716629
8/15/2014 15:22	10801	27.64276123	1.105704188	0.421643615	4.592700005
8/15/2014 16:18	10801	107.6723251	1.15020442	0.305906922	15.58133316
8/15/2014 20:06	10801	87.76604462	1.048680425	0.196285993	12.32021713
8/15/2014 20:13	10801	20.57135963	1.0473876	0.19732222	3.644799948
8/15/2014 21:06	10801	110.3391953	1.0478127	0.198932871	15.58545017
8/15/2014 23:50	10801	105.6245499	1.048453212	0.195335642	14.72046757
8/15/2014 8:06	10801	0.452380955	1.134681106	0.456761837	0.858366668
8/15/2014 8:20	10801	78.71773529	1.135138035	0.426107079	13.49760056
8/15/2014 9:13	10801	8.761880875	1.132046938	0.305591464	3.214999914
8/15/2014 9:32	10801	96.40956116	1.132424712	0.360162467	15.92149925
8/15/2014 10:29	10801	79.1939621	1.133492708	0.479702145	13.41173267
8/15/2014 13:29	10801	68.43123627	1.124023914	0.220012695	11.84140015
8/15/2014 13:54	10801	93.14740753	1.004647851	0.294033557	14.61443424
8/15/2014 15:06	10801	102.4814529	1.110351682	0.364071667	16.69191742
8/15/2014 15:26	10801	0.761905074	1.110351682	0.364071667	0.827866673
8/15/2014 15:46	10801	117.1730499	1.044949651	0.248733491	18.81033325
8/15/2014 18:40	10801	127.8643417	1.123009801	0.235992849	21.4703846
8/15/2014 20:42	10801	0.357142866	1.123009801	0.235992849	0.869750023
8/15/2014 21:04	10801	128.5308838	1.123831987	0.361395836	21.12721825
8/16/2014 1:18	10801	105.2911911	1.050013065	0.202739745	15.3775835
8/16/2014 2:30	10801	100.3384323	1.003944278	0.319871068	13.38341713
8/16/2014 3:41	10801	107.6008911	1.046551824	0.215396851	22.00476646
8/16/2014 7:59	10801	111.2440262	1.046060324	0.20021458	15.28883362
8/16/2014 8:02	10801	10.09520912	1.044262648	0.21110189	2.224949837
8/16/2014 9:44	10801	78.02720642	1.125965238	0.330420524	11.52099991
8/16/2014 10:12	10801	68.76459503	1.118051529	0.295629323	10.11906624
8/16/2014 10:16	10801	6.80950737	1.118083358	0.292884588	1.645716548
8/16/2014 10:24	10801	25.47610283	1.1181252	0.306966364	4.219866753
8/16/2014 10:29	10801	5.69046402	1.118099928	0.305716455	1.618616581
8/16/2014 11:50	10801	107.7437592	1.012317538	0.267096788	14.97184944
8/16/2014 11:58	10801	0	1.012317538	0.267096788	2.036933422
8/16/2014 15:08	10801	0	1.012317538	0.267096788	0.165733337
8/16/2014 15:25	10801	105.8864746	1.112971902	0.284302235	15.18324947
8/16/2014 16:04	10801	46.28668976	1.105872154	0.547317684	6.941267014
8/16/2014 16:17	10801	18.73803329	1.105861187	0.588129878	3.245483398
8/16/2014 16:27	10801	46.45336914	1.105799437	0.554585814	7.221933365
8/16/2014 5:41	10801	79.38445282	1.136185288	0.313066989	13.60461617
8/16/2014 7:36	10801	79.52732086	1.135022163	0.279779464	13.56241703
8/16/2014 7:43	10801	0	1.135022163	0.279779464	0.017183334

4026





8/16/2014 8:03	10801	115.2443314	1.048138022	0.243717924	18.41396713
8/16/2014 10:18	10801	57.66851044	1.154813886	0.492610395	9.866883278
8/16/2014 10:26	10801	3.785709143	1.154708385	0.385999292	1.480100036
8/16/2014 10:44	10801	59.16862488	1.153775454	0.426446885	10.6970005
8/16/2014 11:42	10801	0.261904776	1.153775454	0.426446885	0.894366622
8/16/2014 12:02	10801	116.125351	1.057444096	0.234623849	18.65523338
8/16/2014 15:51	10801	0.285714298	1.057444096	0.234623849	0.836683333
8/16/2014 16:07	10801	95.93333435	1.158596039	0.250314683	15.8752327
8/16/2014 16:13	10801	12.88091278	1.157770872	0.212216333	2.921783447
8/17/2014 10:40	10801	61.88311768	1.153239846	0.417997271	9.624149323
8/17/2014 11:01	10801	52.52526093	1.118041039	0.456969112	7.866666794
8/17/2014 11:13	10801	61.09734344	1.118135333	0.464149922	9.245166779
8/17/2014 13:48	10801	69.38368988	1.158516645	0.289832383	10.44333267
8/17/2014 15:54	10801	110.3391953	1.116129518	0.471135795	15.99726677
8/17/2014 15:58	10801	2.761903524	1.11581254	0.447450876	1.166433334
8/17/2014 9:44	10801	113.9823303	1.135567665	0.300475836	18.73260117
8/17/2014 9:53	10801	32.21418762	1.133644462	0.182382405	6.119283676
8/17/2014 10:48	10801	101.576622	1.154585481	0.430416822	17.18928337
8/17/2014 13:38	10801	0.333333343	1.154585481	0.430416822	0.862283349
8/17/2014 13:52	10801	73.12207031	1.159459114	0.317507952	12.51838398
8/18/2014 3:49	10801	138.0999756	1.012055278	0.227873474	19.41021729
8/18/2014 7:53	10801	108.0771179	1.017130971	0.26708293	15.00801659
8/18/2014 9:25	10801	108.6247787	1.107305765	0.493360072	15.58959961
8/18/2014 9:55	10801	13.5475769	1.069807887	0.734678984	2.689216614
8/18/2014 10:15	10801	68.07406616	1.0705899	0.539380252	10.38724995
8/18/2014 10:18	10801	0.071428575	1.0705899	0.539380252	2.059550047
8/18/2014 11:09	10801	105.9102859	1.120426178	0.337956995	15.15213299
8/18/2014 11:43	10801	112.0298004	1.059400201	0.196061343	15.82003403
8/18/2014 13:20	10801	31.45227051	1.164096713	0.350526065	4.998766422
8/18/2014 13:33	10801	22.45230484	1.164261341	0.316442549	3.799966574
8/18/2014 13:38	10801	10.97615814	1.16221261	0.275594831	2.484533548
8/18/2014 14:05	10801	108.8867035	1.121923327	0.405319989	15.56435013
8/18/2014 15:46	10801	116.1491623	1.03463912	0.223240569	16.10721588
8/18/2014 16:37	10801	102.4576416	1.133367181	0.338167608	14.66811657
8/18/2014 7:39	10801	0.261904776	1.159459114	0.317507952	0.866083324
8/18/2014 7:57	10801	113.8394623	1.052675724	0.239464805	18.31609917
8/18/2014 9:31	10801	0.452380955	1.052675724	0.239464805	0.866516709
8/18/2014 10:00	10801	134.4818115	1.136901379	0.525268555	28.77524948
8/18/2014 10:45	10801	106.2674561	1.126003861	0.481450647	17.50458336
8/18/2014 12:05	10801	121.2686005	1.061116815	0.240547165	20.05743408
8/18/2014 12:40	10801	145.145874	1.134184957	0.530347109	23.64568329
8/18/2014 13:26	10801	66.52632904	1.167598009	0.569255531	11.60785007
8/18/2014 15:49	10801	1.095238805	0.983625054	3.676470995	1.20328331
8/18/2014 16:08	10801	115.3395767	1.038116932	0.294772178	18.43039894
8/19/2014 2:23	10801	116.8635025	1.100193739	0.334537745	16.52183342
8/19/2014 6:15	10801	98.76688385	1.117010355	0.320513368	14.26198292
8/19/2014 8:01	10801	52.19190216	1.006557703	0.281772017	7.419383049

8/19/2014 8:12	10801	54.9302063	1.006386518	0.282735229	7.974600315
8/19/2014 8:31	10801	78.86060333	1.134365916	0.505225062	11.59066677
8/19/2014 10:02	10801	112.4345932	1.150348663	0.578602791	16.09630013
8/19/2014 10:08	10801	4.238088608	1.101531267	0.455731213	1.532300115
8/19/2014 10:23	10801	64.43093109	1.106091976	0.416145742	9.48271656
8/19/2014 10:41	10801	36.50022888	1.095361352	0.438146353	5.706816673
8/19/2014 10:52	10801	27.190382	1.134652972	0.527256906	4.413266659
8/19/2014 11:07	10801	47.45344543	1.134497762	0.531337798	7.232233047
8/19/2014 11:14	10801	3.833328009	1.126541734	0.43599382	1.41778338
8/19/2014 11:57	10801	133.6724854	0.997680306	0.527164876	19.42078209
8/19/2014 12:18	10801	91.36155701	1.154159546	0.481300265	13.4407835
8/19/2014 13:21	10801	127.0785675	1.007729888	0.354169101	17.08511734
8/19/2014 14:29	10801	102.3147736	1.094337583	0.492966682	14.63113308
8/19/2014 15:50	10801	113.1489334	1.050501227	0.289094388	15.95834923
8/19/2014 16:35	10801	117.1016159	1.14249742	0.365878701	16.66054916
8/19/2014 2:25	10801	107.0532303	1.099173665	0.395324588	17.59964943
8/19/2014 8:26	10801	120.2923355	1.009701133	0.31523636	18.41218185
8/19/2014 10:01	10801	86.813591	1.168348074	0.355862141	14.33883381
8/19/2014 10:12	10801	18.02375031	1.146493077	0.355169296	3.77944994
8/19/2014 10:35	10801	70.95523834	1.16261971	0.393697917	18.92336655
8/19/2014 10:42	10801	0.428571433	1.16261971	0.393697917	0.878366649
8/19/2014 10:56	10801	73.33637238	1.162348032	0.395855486	12.55528355
8/19/2014 11:38	10801	0.285714298	1.162348032	0.395855486	0.886333346
8/19/2014 11:57	10801	107.6485138	1.055080652	0.312331319	17.21901703
8/19/2014 13:11	10801	0.428571433	1.055080652	0.312331319	0.858750045
8/19/2014 13:31	10801	117.9588242	1.102287412	0.40452829	19.08264923
8/19/2014 22:31	10801	0.261904776	1.102287412	0.40452829	0.834066629
8/19/2014 22:49	10801	116.339653	1.046077967	0.302773774	18.31206703

**Total 30,461.79**

**Average 69 1.094**

Each line is a data point from the Coriolis meters at the two unloading stations.

**Weighted Average Specific Gravity 1.0923**

# Micro Motion, Inc.

## Mass Flowmeter Calibration Certificate

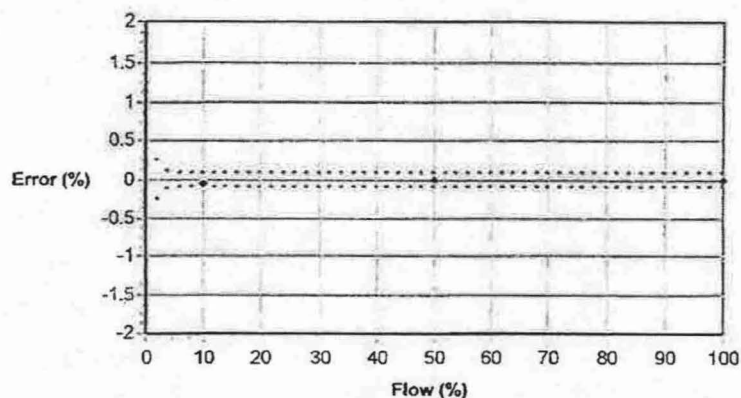
14388988

Product Code	Serial ID	Order ID	Line	Item	Customer Tag
CMF300M355N2BAEZZZ	14388988	10160248	1.1	2	
PUCK800	25526029				

### Process

### Detail

Process ID : 1.30481194  
 Process Time : 2014.01.03 14:46:21  
 Process Stand : TSM2A@SSCB  
 Stand Uncertainty : +/-0.030%  
 Fluid : H2O  
 100% Rate : 2268 KG/MIN  
 Pickoff : 1  
 Max Rate P/T : 28 PSIG/20.5 C



### Results

Status : PASS

D1 : 0

D2 : 1

K1 : 10709.19

K2 : 12734.2

DT : 4.42

FD : 189.0358

DTG : 0

DFQ1 : 0

DFQ2 : 0

FlowCal : 693.224.29

FFQ : 0

FTG : 0

DensCal : 10709127344.42

FCF : 693.22

FT : 4.29

Flow (%)	Flow Rate (kg/min)	Meter Total (kg)	Reference Total (kg)	Error (%)	Specification (±%)
100.0	2268	1701.605	1701.373	0.014	0.100
10.0	226.8	169.2571	169.3221	-0.038	0.100
50.0	1134	848.799	848.8748	-0.009	0.100
100.0	2268	1702.058	1702.138	-0.005	0.100

  
 ANDREW MITCHELL  
 Technician

## Micro Motion, Inc.

## Transmitter Configuration Report

3270326

Product Code	Serial ID	Order ID	Line	Item	Customer Tag
CMF3Q0M355N2BAEZZZ	14388988	10160248	1.1	2	
2700R12BBAEZZZ	3270326	10160248	1.42	2	
PUCK800	25526029				

## Process

Process ID : 1.30481519  
Process Time : 2014.01.03 15:58:50  
Process Stand : SSCB-CONFIG1@SSCB



## Sensor

## Units

D1 : 0  
D2 : 1  
DFQ1 : 0  
DFQ2 : 0  
DT : 4.42  
DTG : 0  
Density Meter Factor : 1  
Density Press Comp Factor : 0  
FCF : 693.22  
FD : 189.0358  
FFQ : 0  
FT : 4.29  
FTG : 0  
Flow PCP : 0  
Flow PCF : 0  
K1 : 10709.19  
K2 : 12734.2  
Mass Flow Meter Factor : 1  
Temperature Cal Factor : 1.00000T.00000  
Volume Flow Meter Factor : 1

Special Volume Base Unit : LITER  
Special Volume Conv Factor : 1  
Special Volume Flow Text : NONE  
Special Volume Time Unit : SEC  
Special Volume Total Text : NONE  
Temperature Unit : DEGF  
Volume Flow Unit : GAL/MIN

## MVD Channel Assignments

Channel A Assignment : ANALOG 1  
Channel B Assignment : ANALOG 2  
Channel B Power : INTERNAL  
Channel C Assignment : FREQUENCY 1  
Channel C Power : INTERNAL

## Assignments

Discrete Input 1 Assignment : NONE  
Discrete Output 1 Assignment : FAULT  
Discrete Output 2 Assignment : FAULT  
Event 1 Variable : DENSITY  
Event 2 Variable : DENSITY  
Frequency Scaling Method : FREQUENCY/FLOW  
Frequency Variable : MASS FLOW RATE  
mA1 Variable : MASS FLOW RATE  
mA2 Variable : DENSITY

## Units

Density Unit : LB/CUFT  
Mass Flow Unit : LB/HR  
Pressure Unit : PSI  
Special Mass Base Unit : GRAM  
Special Mass Conv Factor : 1  
Special Mass Flow Text : NONE  
Special Mass Time Unit : SEC  
Special Mass Total Text : NONE

## Ranges

Event 1 Setpoint : 0  
Event 1 Type : LOW ALARM  
Event 2 Setpoint : 0  
Event 2 Type : LOW ALARM  
Frequency Active State : ACTIVE LOW



---

**Ranges**

Frequency Hertz : 1000  
Frequency Output Mode : SINGLE  
Frequency Pulses/Unit : 1587.302  
Frequency Rate : 2268  
Frequency Units/Pulse : 0.00063  
mA1 LRV : 0  
mA1 URV : 2268  
mA2 LRV : 0  
mA2 URV : 5

---

**Faults**

Frequency Fault Behavior : DOWNSCALE  
Frequency Fault Value : 15000  
mA1 Fault Behavior : DOWNSCALE  
mA1 Fault Value : 2  
mA2 Fault Behavior : DOWNSCALE  
mA2 Fault Value : 2

---

**Other**

Calibration Process ID : 1.30481194  
Core Software Rev : 39  
Density Cutoff : 12.48559  
Density Damping : 0.8  
Density High Limit : 5  
Density Low Limit : 0  
Direction : FORWARD  
Fault Dwell Time : 0  
Feature Key : 0  
Flow Damping : 0.8  
HART Device ID : 5516110  
LD Coil : 0  
LD Type : 0  
Mass Flow Cutoff : 857.1572  
Pressure Comp Line Pressure : 0  
Pressure Compensation State : OFF  
Slug Duration : 0  
Tag :  
Temperature Damping : 2.4  
Transmitter Software Rev : 66  
Volume Flow Cutoff : 1.711835

# Micro Motion, Inc.

## Mass Flowmeter Calibration Certificate

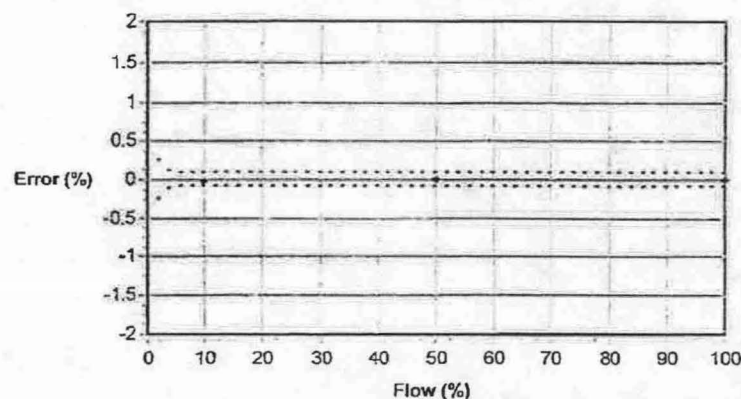
14398844

Product Code	Serial ID	Order ID	Line	Item	Customer Tag
CMF300M355N2BAEZZZ	14398844	10160248	1.1	1	
PUCK800	25525220				

### Process

### Detail

Process ID : 1.30481777  
 Process Time : 2014.01.03 18:57:24  
 Process Stand : TSM3A@SSCB  
 Stand Uncertainty : +/- 0.030%  
 Fluid : H2O  
 100% Rate : 2268 KG/MIN  
 Pickoff : 1  
 Max Rate P/T : 24.33 PSIG/23.6 C



### Results

Status : PASS

D1 : 0

D2 : 1

K1 : 10676.16

K2 : 12690.02

DT : 4.42

FD : 199.9133

DTG : 0

DFQ1 : 0

DFQ2 : 0

FlowCal : 694.034.29

FFQ : 0

FTG : 0

DensCal : 10676126904.42

FCF : 694.03

FT : 4.29

*Bob Caster*

CASTER, BOB




Technician

Flow (%)	Flow Rate (kg/min)	Meter Total (kg)	Reference Total (kg)	Error (%)	Specification (±%)
100.0	2268	2256.773	2256.548	0.010	0.100
10.0	226.8	227.2876	227.3607	-0.032	0.100
50.0	1134	1133.376	1133.221	0.014	0.100
100.0	2268	2264.409	2264.555	-0.006	0.100

# Micro Motion, Inc.

## Transmitter Configuration Report

3270285

Product Code	Serial ID		Order ID	Line	Item	Customer Tag
CMF300M355N2BAEZZZ	14398844		10160248	1.1	1	
2700R12BBAEZZZ	3270285		10160248	1.42	1	
PUCK800	25525220					

### Process

Process ID : 1.30482107  
 Process Time : 2014.01.03 20:57:45  
 Process Stand : SSCB-CONFIG1@SSCB



### Sensor

### Units

D1 : 0  
 D2 : 1  
 DFQ1 : 0  
 DFQ2 : 0  
 DT : 4.42  
 DTG : 0  
 Density Meter Factor : 1  
 Density Press Comp Factor : 0  
 FCF : 694.03  
 FD : 199.9133  
 FFQ : 0  
 FT : 4.29  
 FTG : 0  
 Flow PCP : 0  
 Flow PCF : 0  
 K1 : 10676.16  
 K2 : 12690.02  
 Mass Flow Meter Factor : 1  
 Temperature Cal Factor : 1.00000T.00000  
 Volume Flow Meter Factor : 1

Special Volume Base Unit : LITER  
 Special Volume Conv Factor : 1  
 Special Volume Flow Text : NONE  
 Special Volume Time Unit : SEC  
 Special Volume Total Text : NONE  
 Temperature Unit : DEGF  
 Volume Flow Unit : GAL/MIN

### MVD Channel Assignments

Channel A Assignment : ANALOG 1  
 Channel B Assignment : ANALOG 2  
 Channel B Power : INTERNAL  
 Channel C Assignment : FREQUENCY 1  
 Channel C Power : INTERNAL

### Assignments

Discrete Input 1 Assignment : NONE  
 Discrete Output 1 Assignment : FAULT  
 Discrete Output 2 Assignment : FAULT  
 Event 1 Variable : DENSITY  
 Event 2 Variable : DENSITY  
 Frequency Scaling Method : FREQUENCY/FLOW  
 Frequency Variable : MASS FLOW RATE  
 mA1 Variable : MASS FLOW RATE  
 mA2 Variable : DENSITY

### Units

Density Unit : LB/CUFT  
 Mass Flow Unit : LB/HR  
 Pressure Unit : PSI  
 Special Mass Base Unit : GRAM  
 Special Mass Conv Factor : 1  
 Special Mass Flow Text : NONE  
 Special Mass Time Unit : SEC  
 Special Mass Total Text : NONE

### Ranges

Event 1 Setpoint : 0  
 Event 1 Type : LOW ALARM  
 Event 2 Setpoint : 0  
 Event 2 Type : LOW ALARM  
 Frequency Active State : ACTIVE LOW

---

**Ranges**

Frequency Hertz : 1000  
Frequency Output Mode : SINGLE  
Frequency Pulses/Unit : 1587.302  
Frequency Rate : 2268  
Frequency Units/Pulse : 0.00063  
mA1 LRV : 0  
mA1 URV : 2268  
mA2 LRV : 0  
mA2 URV : 5

---

**Faults**

Frequency Fault Behavior : DOWNSCALE  
Frequency Fault Value : 15000  
mA1 Fault Behavior : DOWNSCALE  
mA1 Fault Value : 2  
mA2 Fault Behavior : DOWNSCALE  
mA2 Fault Value : 2

---

**Other**

Calibration Process ID : 1.30481777  
Core Software Rev : 39  
Density Cutoff : 12.48559  
Density Damping : 0.8  
Density High Limit : 5  
Density Low Limit : 0  
Direction : FORWARD  
Fault Dwell Time : 0  
Feature Key : 0  
Flow Damping : 0.8  
HART Device ID : 5516122  
LD Coil : 0  
LD Type : 0  
Mass Flow Cutoff : 857.1572  
Pressure Comp Line Pressure : 0  
Pressure Compensation State : OFF  
Slug Duration : 0  
Tag :  
Temperature Damping : 2.4  
Transmitter Software Rev : 66  
Volume Flow Cutoff : 1.711835