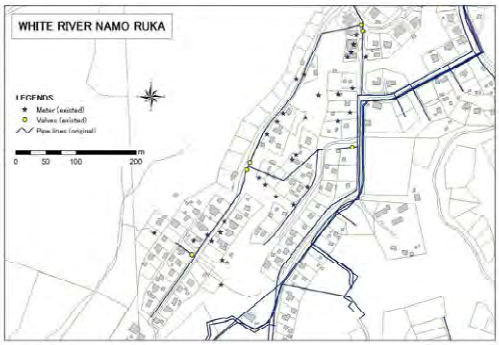
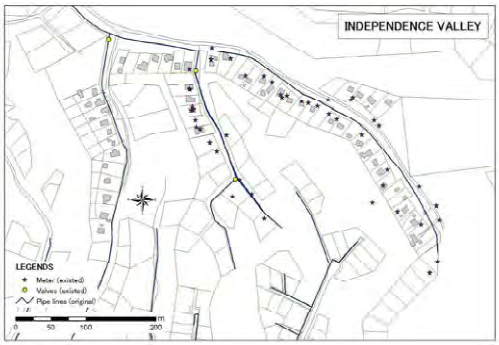
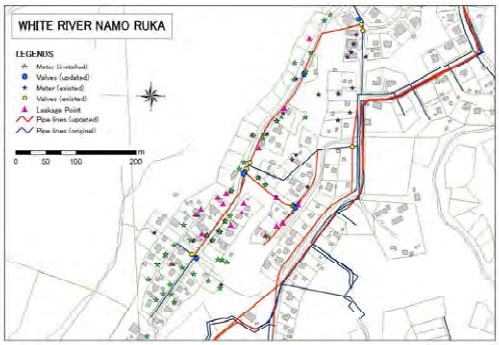
S6.3-2 UPDATED EXISTING WATER DISTRIBUTION NETWORK



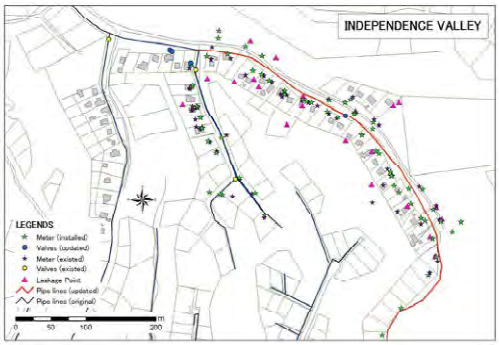
No.9: White River - Namo Ruka



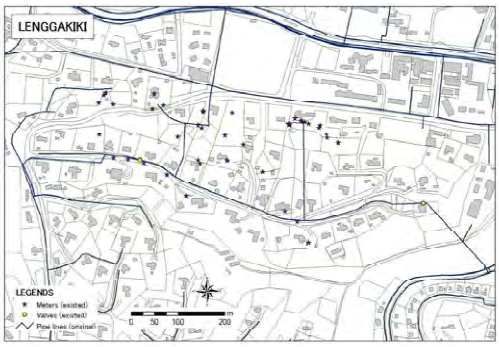
No.10: Independence Valley



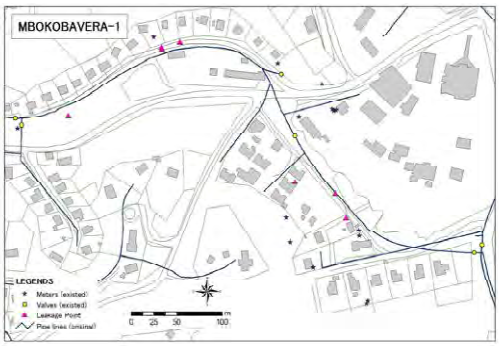
No.9: White River - Namo Ruka (updated)



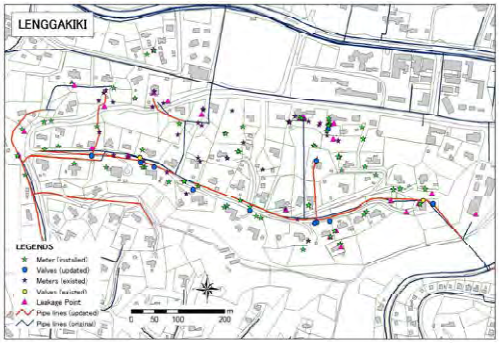
No.10: Independence Valley (updated)



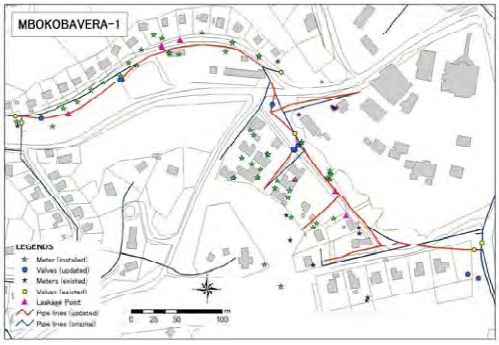
No.3: Lenggakiki



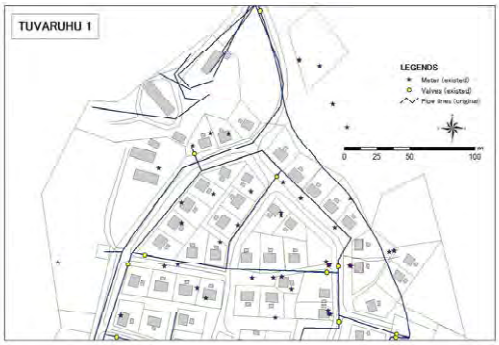
No.5: Mbokonavera-1



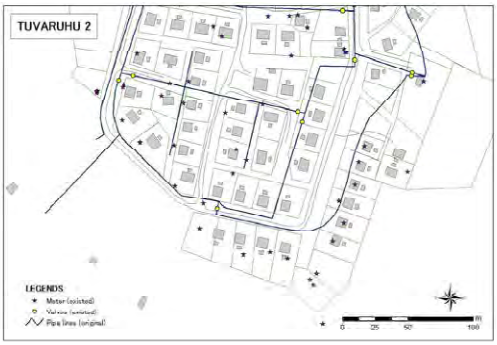
No.3: Lenggakiki (updated)



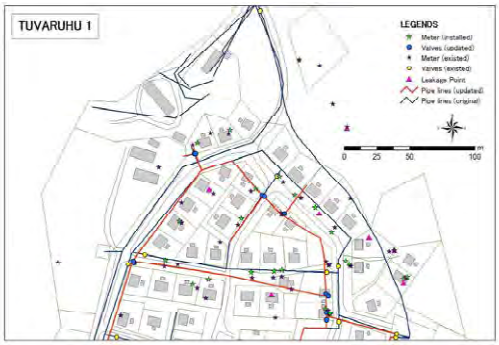
No.5: Mbokonavera-1 (updated)



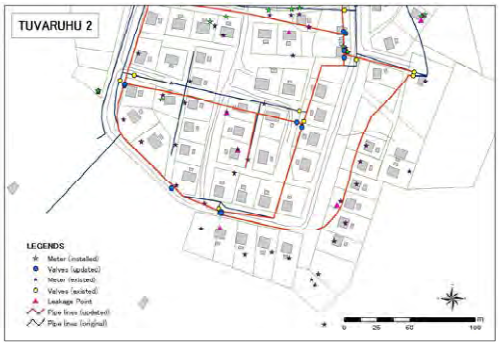
No.14: Tuvaruhu-1



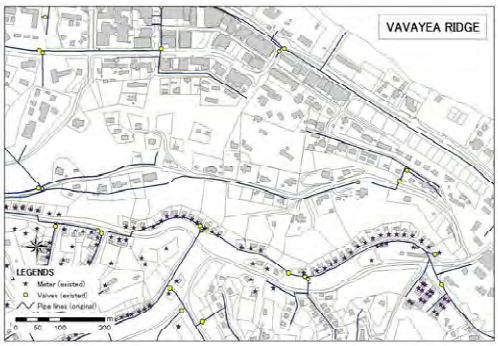
No.15: Tuvaruhu-2



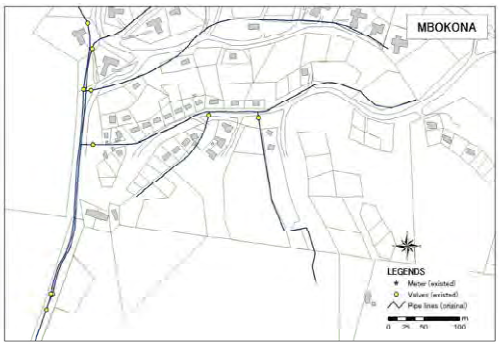
No.14: Tuvaruhu-1 (updated)



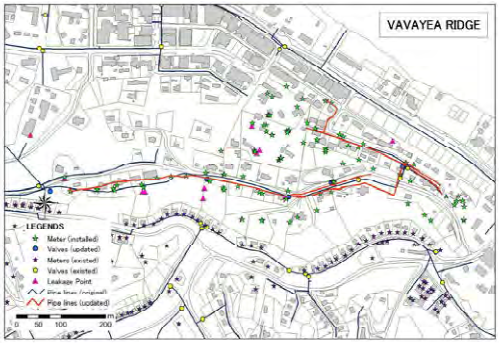
No.15: Tuvaruhu-2 (updated)



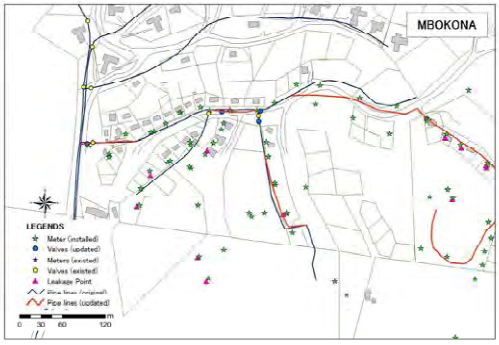
No.6: Vavaea Ridge



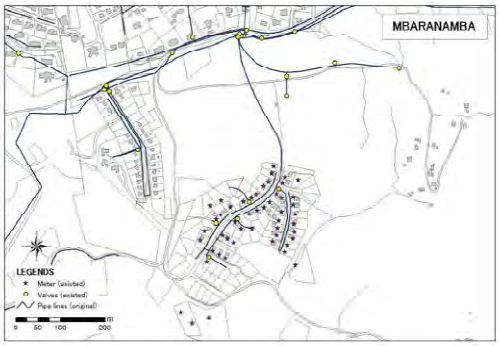
No.4: Mbokona



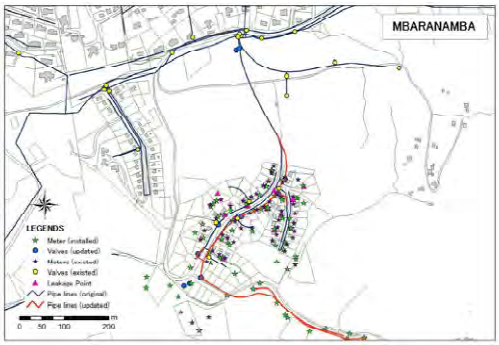
No.6: Vavaea Ridge (updated)



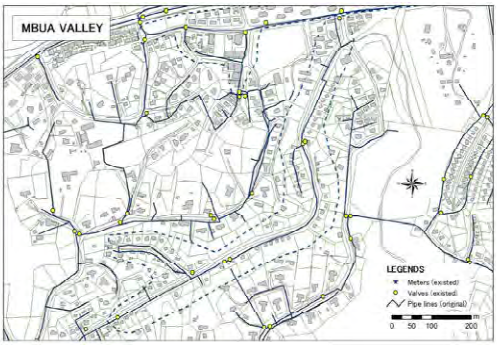
No.4: Mbokona (updated)



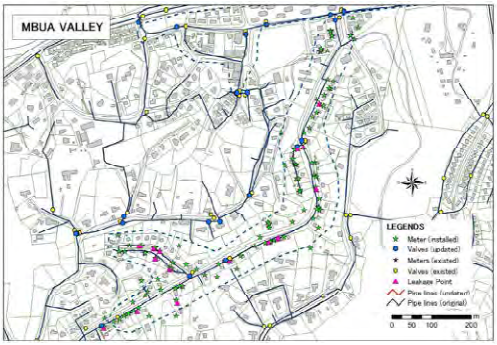
No.8: Mbaranamba



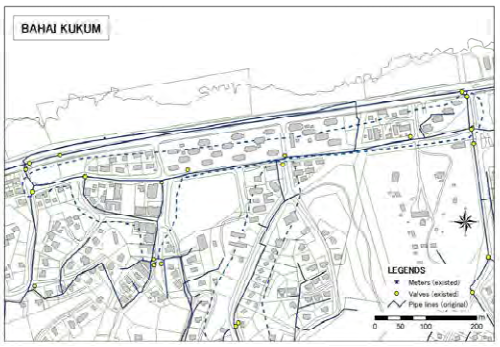
No.8: Mbaranamba (updated)



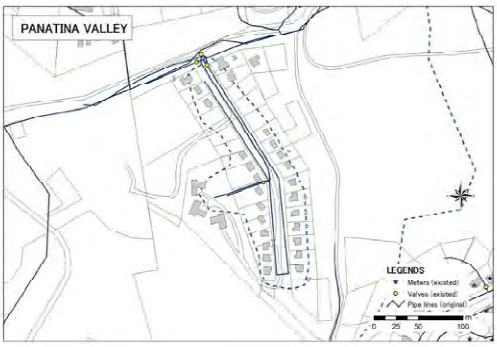
No.2: Mbua Valley



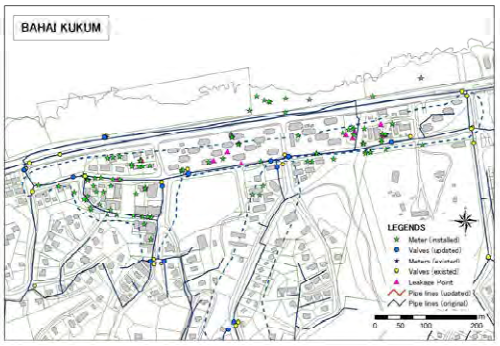
No.2: Mbua Valley (updated)



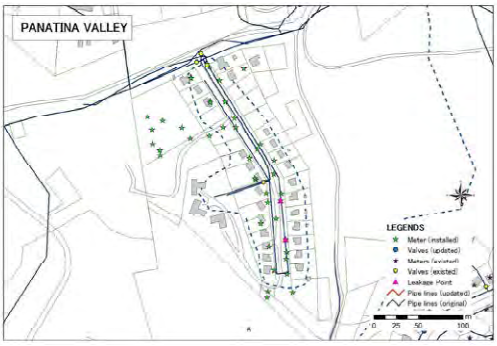
No.11: Bahai Kukum



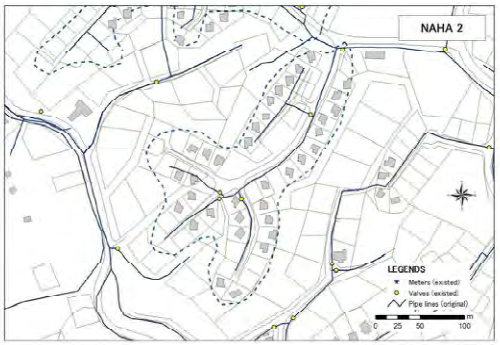
No.7: Panatina Valley



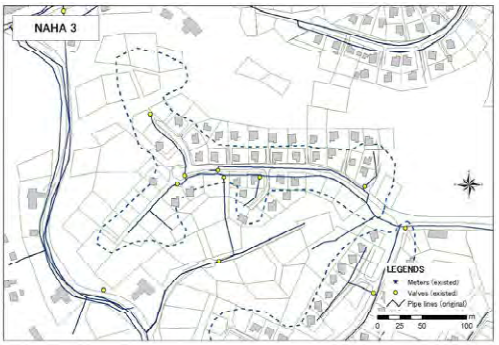
No.11: Bahai Kukum (updated)



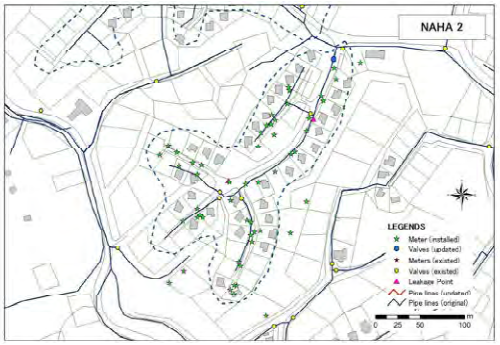
No.7: Panatina Valley (updated)



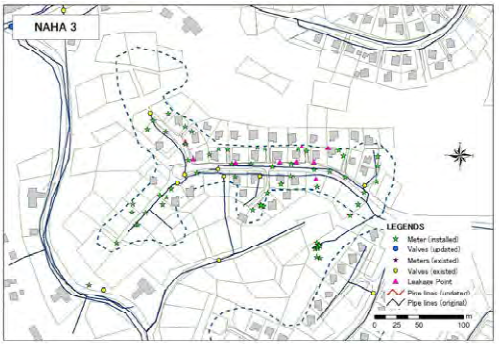
No.12: Naha-2



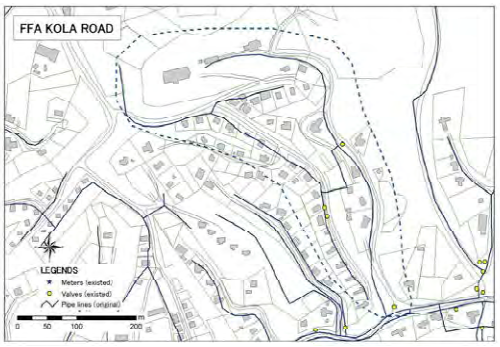
No.13: Naha-3



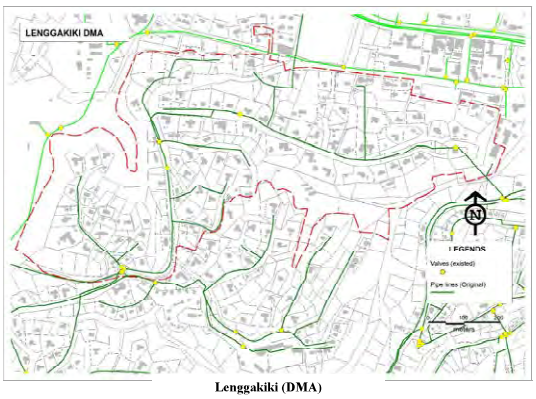
No.12: Naha-2 (updated)



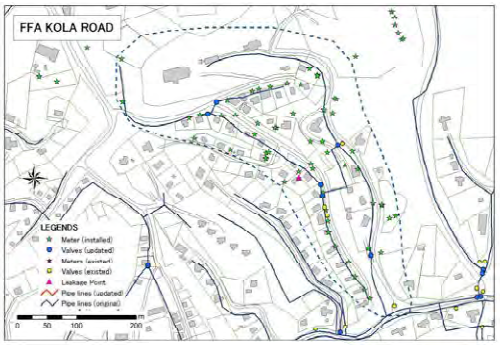
No.13: Naha-3 (updated)



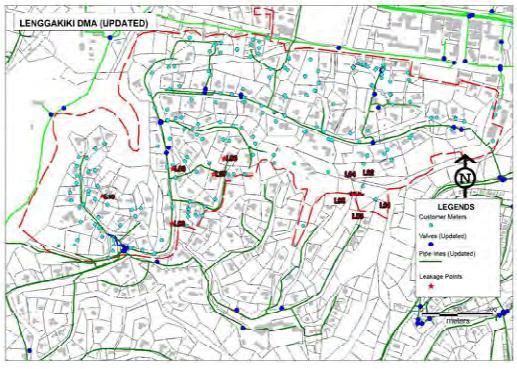
No.6: FFA Kola Road



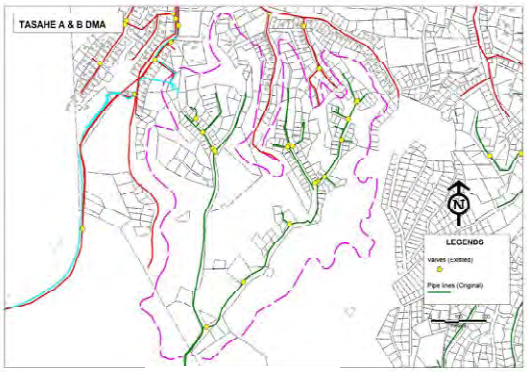
Lenggakiki (DMA)



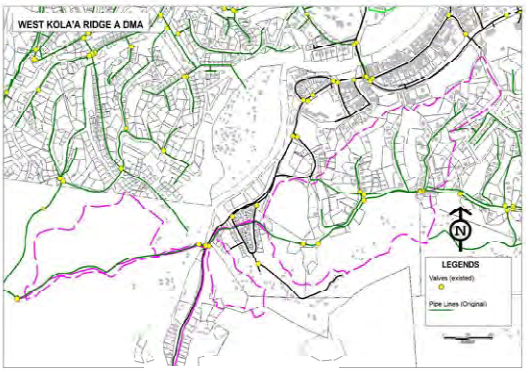
No.6: FFA Kola Road (updated)



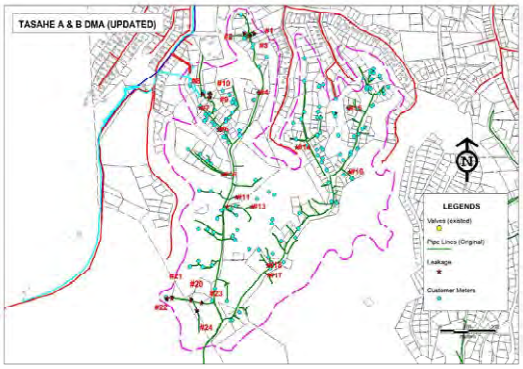
Lenggakiki (DMA) (updated)



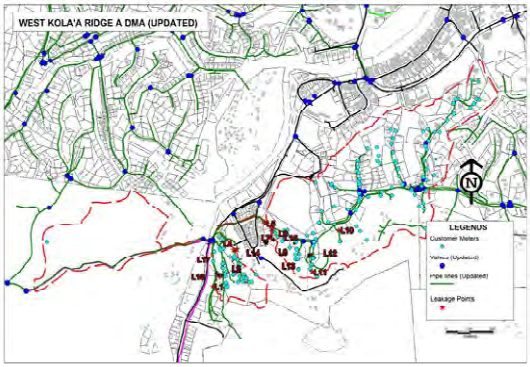
Tasahe A&B (DMA)



West Kola Ridge A (DMA)



Tasahe A&B (DMA) (updated)



West Kola Ridge A (DMA) (Updated)

S6.4-1 RESULTS OF THE MEASURED WATER CONSUMPTION AND CONCEPTUAL DATA OF SIV & MNF

Change in Status of Connections (Customers, Users and Unconnection) 1 No,9 Namo Ruka

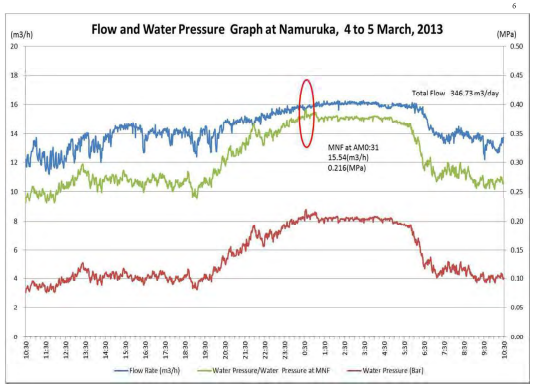
| No. | Account No. | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

S6.4-1-2

Namo Ruka before countermeasure

Date at MNF	Time at MNF	MNF (m3/h)	Water Pressure at MNF (Kg/cm2)	Assumed Daily Leakage (m3/day)
		[*]	[8]	
5-May	1:31	15.540	2.160	295.040

Date	Time	Flow Rate (m3/h)	Water Pressure (Bar)	Water Pressure/Water Pressure at MNF	Excepted leak Volume	Leakage Rate(m3/h)	Leakage Rate(m3/min
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{0.5}$	[5]=[4]x[8]	[6]=[5]/60
4-May	10:30	12.01	0.076	9.212	4.61	71.58	1.19
	10:31	12.20	0.081	9.528	4.76	74.03	1.23
	10:32	11.69	0.083	9.639	4.82	74.89	1.25
	10:33	11.70	0.083	9.621	4.81	74.76	1.25
	10:34	12.31	0.085	9.725	4.86	75.57	1.26
	10:35	12.50	0.087	9.840	4.92	76.45	1.27
	10:36	12.40	0.087	9.879	4.94	76.76	1.28
	10:37	12.54	0.083	9.627	4.81	74.80	1.25
	10:38	11.94	0.082	9.598	4.80	74.58	1.24
	10:39	11.96	0.080	9.451	4.73	73.44	1.22
	10:40	11.73	0.080	9.469	4.73	73.58	1.23
	10:41	11.71	0.078	9.344	4.67	72.61	1.21
	10:42	11.72	0.081	9.522	4.76	73.99	1.23
	10:43	11.72	0.082	9.598	4.80	74.58	1.24
	10:44	12.36	0.087	9.845	4.92	76.50	1.27
	10:45	12.42	0.088	9.913	4.96	77.03	1.28
	10:46	12.61	0.089	9.947	4.97	77.29	1.29
	10:47	12.77	0.091	10.081	5.04	78.33	1.31
	10:48	12.78	0.092	10.147	5.07	78.85	1.31
	10:49	12.83	0.095	10.284	5.14	79.91	1.33
	10:50	12.76	0.096	10.338	5.17	80.33	1.34
	10:51	12.97	0.093	10.219	5.11	79.40	1.32
	10:52	13.04	0.093	10.213	5.11	79.36	1.32
	10:53	12.98	0.095	10.290	5.14	79.95	1.33
	10:54	13.49	0.095	10.311	5.16	80.12	1.34
	10:55	13.25	0.092	10.114	5.06	78.59	1.31
	10:56	13.25	0.088	9.902	4.95	76.94	1.28
	10:57	13.54	0.092	10.158	5.08	78.93	1.32
	10:58	13.30	0.090	10.053	5.03	78.11	1.30
	10:59	13.12	0.089	9.970	4.98	77.46	1.29
	11:00	13.27	0.087	9.879	4.94	76.76	1.28
	11:01	13.39	0.087	9.885	4.94	76.81	1.28
	11:02	13.74	0.089	9.958	4.98	77.38	1.29
	11:03	13.92	0.090	10.042	5.02	78.03	1.30
	11:04	12.50	0.085	9.754	4.88	75.79	1.26
	11:05	12.41	0.083	9.645	4.82	74.94	1.25
	11:06	12.24	0.086	9.806	4.90	76.19	1.27
	11:07	12.17	0.082	9.546	4.77	74.17	1.24
	11:08	12.11	0.080	9.473	4.74	73.62	1.23
	11:09	12.61	0.085	9.743	4.87	75.70	1.26
	11:10	12.39	0.087	9.845	4.92	76.50	1.27
	11:11	12.77	0.090	10.037	5.02	77.98	1.30
	11:12	12.96	0.090	10.020	5.01	77.85	1.30

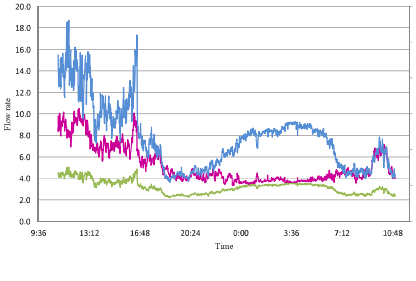


Date	Time	Flow Rate (m3/h)	Water Pressure (Bar)	Water Pressure/Water Pressure at MNF	Excepted leak Volume	Leakage Rate(m3/h)	Leakage Rate(m3/min
	9:45	13.55	0.104	10.773	5.39	83.70	1.40
	9:46	13.41	0.100	10.579	5.29	82.20	1.37
	9:47	13.32	0.093	10.213	5.11	79.36	1.32
	9:48	13.37	0.098	10.467	5.23	81.33	1.36
	9:49	13.48	0.098	10.483	5.24	81.46	1.36
	9:50	13.34	0.103	10.736	5.37	83.42	1.39
	9:51	13.54	0.105	10.850	5.43	84.31	1.41
	9:52	13.49	0.105	10.819	5.41	84.07	1.40
	9:53	13.38	0.105	10.835	5.42	84.19	1.40
	9:54	13.31	0.102	10.700	5.35	83.14	1.39
	9:55	13.14	0.101	10.616	5.31	82.49	1.37
	9:56	13.23	0.103	10.705	5.35	83.18	1.39
	9:57	13.00	0.105	10.835	5.42	84.19	1.40
	9:58	13.51	0.098	10.478	5.24	81.41	1.36
	9:59	13.14	0.100	10.547	5.27	81.95	1.37
	10:00	13.14	0.099	10.515	5.26	81.70	1.36
	10:01	13.08	0.095	10.300	5.15	80.03	1.33
	10:02	13.04	0.096	10.349	5.17	80.41	1.34
	10:03	13.02	0.092	10.158	5.08	78.93	1.32
	10:04	12.93	0.095	10.311	5.16	80.12	1.34
	10:05	12.88	0.100	10.574	5.29	82.16	1.37
	10:06	12.91	0.103	10.705	5.35	83.18	1.39
	10:07	12.79	0.103	10.710	5.36	83.22	1.39
	10:08	12.93	0.102	10.653	5.33	82.77	1.38
	10:09	12.75	0.101	10.637	5.32	82.65	1.38
	10:10	12.87	0.104	10.762	5.38	83.62	1.39
	10:11	12.66	0.106	10.896	5.45	84.67	1.41
	10:12	12.71	0.104	10.783	5.39	83.78	1.40
	10:13	12.95	0.103	10.819	5.41	84.07	1.40
	10:14	12.67	0.104	10.773	5.39	83.70	1.40
	10:15	13.04	0.103	10.726	5.36	83.34	1.39
	10:16	12.85	0.102	10.689	5.34	83.06	1.38
	10:17	12.72	0.104	10.783	5.39	83.78	1.40
	10:18	13.16	0.102	10.668	5.33	82.89	1.38
	10:19	13.23	0.101	10.637	5.32	82.65	1.38
	10:20	13.27	0.106	10.861	5.43	84.39	1.41
	10:21	13.29	0.104	10.793	5.40	83.86	1.40
	10:22	13.21	0.109	11.034	5.52	85.74	1.43
	10:23	13.18	0.108	10.973	5.49	85.26	1.42
	10:24	13.47	0.104	10.773	5.39	83.70	1.40
	10:25	13.67	0.108	10.978	5.49	85.30	1.42
	10:26	13.67	0.104	10.799	5.40	83.90	1.40
	10:27	13.39	0.101	10.626	5.31	82.57	1.38
	10:28	13.36	0.099	10.510	5.25	81.66	1.36
	10:29	13.72	0.099	10.557	5.27	81.87	1.36
	10:30	13.72	0.101	10.611	5.31	82.44	1.37
				Estimated Leakage Rate (m^3/day)			2293.80
System Input Volume		346.73 m^3/day					

MNF Measure after countermeasure in Namo Ruka

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
18-Jun	3:41	3.5258	1.375	76.676

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{0.5}$	[5]=[4]x[7]	[6]=[5]/60
17/06/2013	11:00	9.8046	2.324	1.690181818	1.300069928	4.583786533	0.076
17/06/2013	11:01	8.5689	2.187	1.590545455	1.261168290	4.446027155	0.074
17/06/2013	11:02	8.6525	2.052	1.477818182	1.215655454	4.286157998	0.071
17/06/2013	11:03	8.4561	1.970	1.432727273	1.196965861	4.220262233	0.070
17/06/2013	11:04	8.6639	1.885	1.369454545	1.170236961	4.126021478	0.069
17/06/2013	11:05	9.3828	2.020	1.475636364	1.214757739	4.282992835	0.071
17/06/2013	11:06	10.0528	2.131	1.549818182	1.244916938	4.389328139	0.073
17/06/2013	11:07	9.9158	1.914	1.392000000	1.179830496	4.159840364	0.069
17/06/2013	11:08	9.9467	2.100	1.531636364	1.237592972	4.363505300	0.073
17/06/2013	11:09	9.6438	2.100	1.531636364	1.237592972	4.363505300	0.073
17/06/2013	11:10	8.3171	2.250	1.642909091	1.281760153	4.519259949	0.075
17/06/2013	11:11	8.9885	1.851	1.346181818	1.160507577	4.090812118	0.068
17/06/2013	11:12	7.9576	1.895	1.378181818	1.173959888	4.139147772	0.069
17/06/2013	11:13	8.7658	1.883	1.369454545	1.170236961	4.126021478	0.069
17/06/2013	11:14	9.3364	2.286	1.662545455	1.289397522	4.546157079	0.076
17/06/2013	11:15	9.2589	2.208	1.604363636	1.266634768	4.465900866	0.074
17/06/2013	11:16	9.2370	2.218	1.609454545	1.268642797	4.472980772	0.075
17/06/2013	11:17	9.2839	2.089	1.519272727	1.232587817	4.345858126	0.072
17/06/2013	11:18	9.0724	2.278	1.656727273	1.287139182	4.538195326	0.076
17/06/2013	11:19	8.8660	2.178	1.581818182	1.257705535	4.434411124	0.074
17/06/2013	11:20	9.6304	2.344	1.704727273	1.305652049	4.603467994	0.077
17/06/2013	11:21	9.7665	2.169	1.576000091	1.255391233	4.410035595	0.074
17/06/2013	11:22	9.7782	2.015	1.465454545	1.210359600	4.268191088	0.071
17/06/2013	11:23	9.8359	2.187	1.590545455	1.261168290	4.446027155	0.074
17/06/2013	11:24	10.1614	2.053	1.493090909	1.221920991	4.308249031	0.072
17/06/2013	11:25	9.2432	2.011	1.462545455	1.209357455	4.263952516	0.071
17/06/2013	11:26	9.2982	1.758	1.278909091	1.131101552	4.009353684	0.067
17/06/2013	11:27	9.0507	1.727	1.256000000	1.120714098	3.951413626	0.066
17/06/2013	11:28	8.4061	1.827	1.328727273	1.152704330	4.064204927	0.068
17/06/2013	11:29	9.2686	1.982	1.441454545	1.200605908	4.233695309	0.071
17/06/2013	11:30	8.7728	2.198	1.598545455	1.264335974	4.457957769	0.074
17/06/2013	11:31	9.3519	2.269	1.647272727	1.283461229	4.525227602	0.075
17/06/2013	11:32	9.0136	2.000	1.454545455	1.206045378	4.252274795	0.071
17/06/2013	11:33	9.4952	2.121	1.542545455	1.241992534	4.379017276	0.073
17/06/2013	11:34	9.3125	2.354	1.712000000	1.308431759	4.612727227	0.077
17/06/2013	11:35	8.8479	2.123	1.543272727	1.242385284	4.380049455	0.073
17/06/2013	11:36	8.6854	2.542	1.847272733	1.359679107	4.793056594	0.080
17/06/2013	11:37	8.6507	2.530	1.838181818	1.356369987	4.785465251	0.080
17/06/2013	11:38	8.0137	2.714	1.973818182	1.404926397	4.953489492	0.083



Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{0.5}$	[5]=[4]x[7]	[6]=[5]/60
18/06/2013	10:15	6.8042	1.010	0.734545455	0.857062273	3.021809066	0.050
18/06/2013	10:16	6.5571	0.999	0.726545455	0.852376357	3.005308501	0.050
18/06/2013	10:17	6.4149	0.934	0.679272727	0.824180033	2.905893961	0.048
18/06/2013	10:18	6.3445	1.005	0.730909091	0.854932214	3.014320001	0.050
18/06/2013	10:19	6.4756	0.928	0.700363636	0.836877813	2.950662259	0.049
18/06/2013	10:20	6.4422	1.001	0.728000000	0.853229160	3.008315373	0.050
18/06/2013	10:21	6.7828	0.983	0.714909091	0.845522969	2.981144884	0.050
18/06/2013	10:22	6.8656	1.043	0.758545455	0.870945150	3.070778410	0.051
18/06/2013	10:23	6.9842	1.021	0.742545455	0.861710772	3.038219840	0.051
18/06/2013	10:24	5.8820	0.933	0.678545455	0.823738705	2.904357927	0.048
18/06/2013	10:25	5.7893	0.891	0.648000000	0.804984472	2.838214251	0.047
18/06/2013	10:26	5.6964	0.849	0.617454545	0.785782760	2.770612854	0.046
18/06/2013	10:27	5.4056	0.743	0.541818182	0.736825999	2.598281459	0.043
18/06/2013	10:28	5.4408	0.775	0.563636364	0.750757194	2.647019715	0.044
18/06/2013	10:29	5.6033	0.861	0.626181818	0.791316509	2.790023749	0.047
18/06/2013	10:30	5.2380	0.828	0.602181818	0.776003749	2.736048188	0.046
18/06/2013	10:31	4.6817	0.878	0.638545455	0.799060392	2.817432904	0.047
18/06/2013	10:32	4.4450	0.842	0.612363636	0.782536668	2.759067783	0.046
18/06/2013	10:33	4.5349	0.825	0.600000000	0.774596669	2.731072936	0.046
18/06/2013	10:34	4.4524	0.789	0.573454545	0.757312915	2.684069514	0.045
18/06/2013	10:35	4.5274	0.795	0.578181818	0.760382679	2.680957249	0.045
18/06/2013	10:36	4.4132	0.758	0.551272727	0.742477423	2.617836907	0.044
18/06/2013	10:37	4.3522	0.754	0.548363636	0.740626621	2.576050392	0.043
18/06/2013	10:38	4.3313	0.690	0.501818182	0.708391263	2.497645916	0.042
18/06/2013	10:39	4.3926	0.686	0.498909091	0.706334971	2.490395840	0.042
18/06/2013	10:40	4.5631	0.697	0.506909091	0.711975485	2.510283164	0.042
18/06/2013	10:41	4.8301	0.714	0.519272727	0.720605806	2.540711950	0.042
18/06/2013	10:42	4.8690	0.692	0.503272727	0.709411174	2.501263073	0.042
18/06/2013	10:43	4.9190	0.703	0.511272727	0.715033975	2.521064673	0.042
18/06/2013	10:44	5.0838	0.670	0.487272727	0.698049230	2.461181975	0.041
18/06/2013	10:45	5.1095	0.666	0.484363636	0.695962381	2.453821164	0.041
18/06/2013	10:46	4.7872	0.672	0.488727273	0.699090318	2.464852643	0.041
18/06/2013	10:47	4.3789	0.617	0.448727273	0.669871087	2.361831477	0.039
18/06/2013	10:48	4.1832	0.648	0.471272727	0.686493064	2.420437246	0.040
18/06/2013	10:49	4.0105	0.656	0.477090909	0.690717677	2.435332885	0.041
18/06/2013	10:50	3.9781	0.620	0.451454545	0.672153861	2.384688444	0.040
18/06/2013	10:51	4.2039	0.623	0.453090909	0.673120278	2.373287477	0.040
18/06/2013	10:52	4.1160	0.634	0.458181818	0.676891290	2.386583310	0.040
18/06/2013	10:53	4.3076	0.655	0.476000000	0.690332498	2.438751357	0.039
18/06/2013	10:54	4.3368	0.635	0.461818182	0.679572098	2.399035162	0.040
18/06/2013	10:55	4.3084	0.660	0.480000000	0.692820323	2.442745895	0.041
18/06/2013	10:56	4.1323	0.781	0.538909091	0.733903491	2.574294991	0.043
18/06/2013	10:57	4.0250	0.666	0.484363636	0.695962381	2.453821164	0.041
18/06/2013	10:58	4.1141	0.617	0.448727273	0.669871087	2.361831477	0.039
18/06/2013	10:59	4.0221	0.660	0.480000000	0.692820323	2.442745895	0.041
18/06/2013	11:00	4.0021	0.658	0.478545455	0.691769790	2.438041957	0.041
				Estimated Leakage Rate (m^3/day)			76.676
System Input Volume		125.24 m3/day					

Checking of Water Meter Accuracy in Pilot Area: Namo Ruka (Revision 1)

No	House ID	Account	Name	Location	M / ID	M/Size	Time (min)	Initial Reading		Final Reading		Integrated Value		Difference (litres)	Error (%)
								Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	TR-III Meter (litres)		
								A	B	C	D	C-A = E	D - B = F	E-F = G	G/F
1	Wd-051	1226	JULIE ANII	WHITE RIVER	12B086752	20mm									
2	WD-290	1234	UNICE FATAI	WHITE RIVER	97B033443	16mm	20	129.5	828.9	187.5	898.9	58.0	70.0	-12.0	-17.14%
3	WD-276-01	01236-1	ROLLEY VIGA	WHITE RIVER	9752266	16mm	20	964.0	911.8	1029.0	988.6	65.0	76.8	-11.8	-15.36%
4	Wd-276	01236-2	ANDREW SALE	WHITE RIVER	99B141744	20mm	20	286.7	993.8	327.3	1040.9	40.6	47.1	-6.5	-13.80%
5		01237-1	ANDREW SALE	PN:191-001-004	11B091832		10	252.0	148.5	290.0	189.1	38.0	40.6	-2.6	-6.40%
6		01237-2	ANDREW SALE		11B091835		10	641.0	194.6	680.0	240.5	39.0	45.9	-6.9	-15.03%
7	WD-265-01	01247-1	JOEL RAMOSAEA	WHITE RIVER	97B033519	16mm	15	658.5	304.4	735.5	406.4	77.0	102.0	-25.0	-24.51%
8	WD-218	1256	THOMAS MAMAE	WHITE RIVER	17684		15	824.9	415.2	828.8	468.6	3.9	53.4	-49.5	
9	WD-169	01258-1	DOREEN JUELA VAN DEN HEEVER	WHITE RIVER	12A004514	16mm	15	146.1	57.2	155.3	72.3	9.2	15.1	-5.9	-39.15%
10	WD-160-01	1263	FRANCISCO MERCADO	WHITE RIVER	07-001362	16mm	15	153.0	23.6	165.3	51.1	12.3	27.5	-15.2	-55.27%
11	WD-160	01263-1	BETSY KUMA	WHITE RIVER	07-001361	16mm	15	121.2	690.8	232.7	813.5	111.5	122.7	-11.2	-9.13%
12	WD_242	1143	JERRY SIOTA	WHITE RIVER	07-000993		10	721.8	2997.0	880.2	3188.0	158.4	191.0	-32.6	-17.07%
															-21.29%

Actual Measurement of Leakage and Open-end Flow **1 No.9 Namo Ruka**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			User Type (excl. Leakage on Main lines)		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom.: 32m^3 Non-D: 45m^3	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom	Non-D	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1	*		*						*										*			1.80	43.2				
2	*		*						*										*			0.60	14.4				
3	*			*						*			*		*					*							
4	*			*							*			*	*				*								
5	*			*				*						*	*					*							
6	*			*						*			*		*					*							
7		*			*		*						*		*				*			0.36		8.64	1.06	7.58	
8	*			*					*				*		*				*								
9		*			*		*						*		*				*			0.60		14.40	1.06	13.34	
10		*				*	*							*	*				*			1.20		28.80	1.06		28.80
11	*			*			*						*		*				*								
12		*			*		*						*		*				*			0.45		10.80	1.06	9.74	
13	*			*			*						*		*				*								
14	*			*			*						*		*					*		0.04	0.96				
15	*			*			*						*		*				*								
16		*				*	*							*	*				*			0.19		4.56	1.06		4.56
17	*			*			*						*		*				*								
18		*			*		*						*		*				*			0.51		12.24	1.06	11.18	
19		*				*	*							*	*				*			0.60		14.40	1.06		14.40
20		*			*		*						*		*				*			0.30		7.20	1.06	6.14	
21		*				*	*							*	*				*			0.17		4.08	1.06		4.08
22	*			*			*							*	*				*								
Total	13	9	2	11	5	4	15	0	4	2	1	0	13	7	20	0	0	13	5	3	1		58.56			47.98	51.84
	22		13		9		22					20			20		22										

Note:

S6.4-1-3

NAMO RUKA METER TESTING AFTER COUNTER MEASURES

No	Account_Name	Account #	Location	Meter_ID	Meter_Type	Meter_Size	Time (s)	Initial Reading		Final Reading		Integrated Value		Difference	error %
								Tested Meter	TR-III Meter	Tested Meter	TR-III Meter	Machine (L)	Meter (L)		
1	DAVID RUSU	1215	Namo Ruka	12A006082	Kent	15	41	200.744	0.000	200.756	0.012	0.012	0.012	0.000	0.00%
2	JOHN ABUNI	1218	Namo Ruka	12A006084	Kent	15		100.005	0.000						
3	FRANCIS PITABELAMA	1220	Namo Ruka	12A006118	Kent	15	43	82.483	0.000	82.496	0.012	0.012	0.013	-0.001	-8.33%
4	WILSON NAMAE	1216	Namo Ruka	12A006160	Kent	15	120	90.179	0.000	90.190	0.012	0.012	0.011	0.001	8.33%
5	JULIE ANII	1226	Namo Ruka	12B172438	Kent	20	45	372.129	0.000	372.142	0.012	0.012	0.013	-0.001	-8.33%
6	WAWARI MALOLO	1239	Namo Ruka	12A006159	Kent	15	41	422.039	0.000	422.051	0.012	0.012	0.012	0.000	0.00%
7	JOHN & BARBARA KINGSLEY	1235	Namo Ruka	12A006157	Kent	15	60	128.448	9.198	128.460	9.210	0.012	0.012	0.000	0.00%
8	MORIS NAE	1237	Namo Ruka	12A006108	Kent	15	89	212.060	9.261	212.079	9.273	0.012	0.019	-0.007	-58.33%
9	ANDREW SALE	01236-2	Namo Ruka	12A006158	Kent	15	124	30.869	9.248	30.889	9.260	0.012	0.020	-0.008	-66.67%
10	ROLLEY VIGA	01236-1	Namo Ruka	12A006083	Kent	15	83	57.484	9.236	57.496	9.248	0.012	0.012	0.000	0.00%
11	ANDREW SALE	01237-2	Namo Ruka	12A006121	Kent	15	57	56.638	9.285	56.649	9.297	0.012	0.011	0.001	8.33%
12	ANDREW SALE	01237-1	Namo Ruka	12A006125	Kent	15	8	0.072	8.076	0.173	8.279	0.203	0.101	0.102	50.25%
13	SAMSON RANGIFAKAUTA	01238-1	Namo Ruka	12A006156	Kent	15						0.000	0.000	0.000	
14	SOUTH SEA EVANGELICAL	1232	Namo Ruka	12A006123	Kent	15	40	170.519	0.000	170.532	0.012	0.012	0.013	-0.001	-8.33%
15	C/ NIMRON FATAMANA	1233	Namo Ruka	12A006122	Kent	15	90	88.611	0.000	88.624	0.012	0.012	0.013	-0.001	-8.33%
16	HARRY SANAU	01247-2	Namo Ruka	12A006124	Kent	15	87	96.990	9.298	97.001	9.310	0.012	0.011	0.001	8.33%
17	LUKE MAMAE	1247	Namo Ruka	12A006109	Kent	15	73	175.264	9.311	175.276	9.323	0.012	0.012	0.000	0.00%
18	JOEL RAMOSAEA	01247-1	Namo Ruka	12A006079	Kent	15	146	254.704	9.325	254.723	9.337	0.012	0.019	-0.007	-58.33%
19	RUTH NARE	1250	Namo Ruka	12A006078	Kent	15	38	318.672	0.000	318.685	0.012	0.012	0.013	-0.001	-8.33%
20	ROSE MUA	1252	Namo Ruka	12B173437	Kent	20	50	225.937	0.000	225.943	0.012	0.012	0.006	0.006	50.00%
21	MICHAEL NODA	1254	Namo Ruka	12A006137	Kent	15	60	206.120	0.000	206.133	0.012	0.012	0.013	-0.001	-8.33%
22	ELIJAH MARITE	1256	Namo Ruka	12A006076	Kent	15	56	281.751	0.000	281.763	0.012	0.012	0.012	0.000	0.00%
23	ELIZABETH RAMONI	01257-1	Namo Ruka	12A006080	Kent	15	60	59.037	0.000	59.042	0.012	0.012	0.005	0.007	58.33%
24	ALBAN KOME	01257-3	Namo Ruka	12A006077	Kent	15	55	140.408	0.000	140.419	0.012	0.012	0.011	0.001	8.33%
25	DOREEN JUELA VAN DEN HEEVER	01258-1	Namo Ruka	12A004514	Kent	15	54	205.851	9.344	205.864	9.356	0.012	0.013	-0.001	-8.33%
26	CHARLES & TINA KONAI	1258	Namo Ruka	12A006110	Kent	15	58	476.067	0.000	476.087	0.012	0.012	0.020	-0.008	-66.67%
27	LAWI SAUNGONGO	1259	Namo Ruka	12A006081	Kent	15	50	106.971	0.000	106.984	0.012	0.012	0.013	-0.001	-8.33%
28	JENNY HAUPOLO	01260-2	Namo Ruka	12A006085	Kent	15	38	32.078	9.357	32.090	9.369	0.012	0.012	0.000	0.00%
29	BETSY KUMA	01263-1	Namo Ruka	12A006106	Kent	15	80	40.885	9.372	40.896	9.384	0.012	0.011	0.001	8.33%
30	FRANCISCO MERCADO	1263	Namo Ruka	12A006107	Kent	15	41	19.617	0.000	19.630	0.012	0.012	0.013	-0.001	-8.33%
31	JOHN PANIO	1161	Namo Ruka	12A006136	Kent	20	60	238.474	0.000	238.486	0.012	0.012	0.010	0.002	16.67%
32	UNICE FATAI	1234	Namo Ruka	12B172488	Kent	20	83	543.728	9.185	543.739	9.197	0.012	0.011	0.001	8.33%
33	SIMON TAVE	1238	Namo Ruka	12B172435	Kent	20	55	116.570	9.211	116.582	9.223	0.012	0.012	0.000	0.00%
34	FRANK MAEABA	1224	Namo Ruka	12B172486	Kent	20	38	116.273	0.000	116.285	0.012	0.012	0.012	0.000	0.00%
35	THOMAS SARERE	1222	Namo Ruka	12B172489	Kent	20	41	382.068	0.000	382.081	0.012	0.012	0.013	-0.001	-8.33%
36	ERIC WAKI	1217	Namo Ruka	12B172439	Kent	20	69	47.152	9.160	47.167	9.172	0.012	0.015	-0.003	-25.00%
37	ALICE SAENI	01251-1	Namo Ruka	12B172485	Kent	20	103	388.518	0.000	388.518	0.012	0.012	0.000	0.012	
38	JERRY SIOTA	1143	Namo Ruka	12A006139	Kent		59	121.852	0.000	121.865	0.012	0.012	0.013	-0.001	-8.33%
39	DYELL TENA	1144	Namo Ruka	12A006140	Kent		43	200.391	0.000	200.404	0.012	0.012	0.013	-0.001	-8.33%
40	SAM AU	1255	Namo Ruka	12B172487	Kent		60	609.200	0.000	609.213	0.012	0.012	0.013	-0.001	-8.33%
41	NAREN UERE'E	1219	Namo Ruka	12B172436	Kent		56	88.024	0.000	88.037	0.012	0.012	0.013	-0.001	-8.33%
42	TONY KEDEAU	1214	Namo Ruka	12B011026	Kent		60	112.167	0.000	112.180	0.012	0.012	0.013	-0.001	-8.33%
43	K. KABWERE	1209	Namo Ruka	12B010876	Kent	15	20	7.969	0.842	8.069	0.960	0.118	0.100	0.018	15.25%
44	CLESTINE KULAGOE	1221	Namo Ruka	12B011205	Kent		46	95.954	0.000	95.965	0.012	0.012	0.011	0.001	8.33%
45	JACK SAEMALA	1138	Namo Ruka	13A000725	Kent	16	46	78.028	0.000	78.047	0.012	0.012	0.019	-0.007	-58.33%
46	NATHAN ALENIA	1244	Namo Ruka	13A000940	Kent	16	55	49.272	9.273	49.285	9.285	0.012	0.013	-0.001	-8.33%
47	FRANCIS RAMONI	1257	Namo Ruka	13A000973	Kent	16	53	273.071	0.000	273.088	0.012	0.012	0.017	-0.005	-41.67%
48	ANNIE KANIKO	1261	Namo Ruka	13A000974	Kent	16						0.000	0.000	0.000	
49	Nursing Association	1262	Namo Ruka	13A000839	Kent	16	DISCO					0.000	0.000	0.000	
50	Frank Maautai Hariku		Namo Ruka	13A000666	Kent	16	2	0.771	0.297	0.804	0.325	0.028	0.033	-0.005	-17.86%
51	CHARLES TARO		Namo Ruka	13A001043	Kent		48	12.790	9.224	12.801	9.236	0.012	0.011	0.001	8.33%
													average[error]		-2.10%

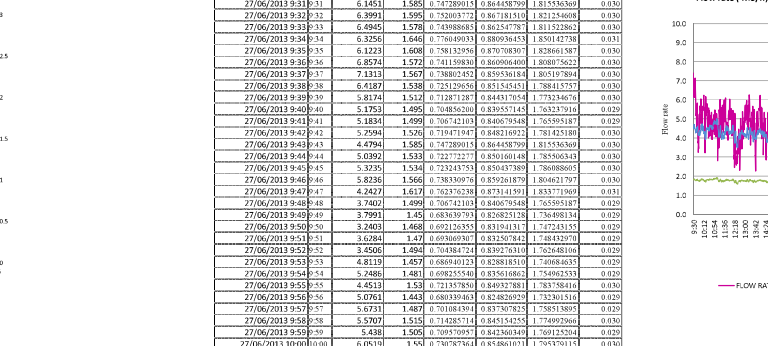
Change in Status of Connections (Customers, Users and Unconnection) 2 No.10 Independence Valley

| No. | Account No. | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

MNF Measure before countermeasure in Independence valley

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm²)	Assumed Daily Leakage (m^3/day)
		[1]	[2]	
19-Mar	10:20PM	4.3880	2.183	1.248

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm²)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{3/2}$	[5]=[4] x [7]	[6]=[5]/60
2013/3/19 11:45	11:45	6.6084	1.483	0.679340357	0.822223061	5.0168028115	0.0669	0.0841670
2013/3/19 11:46	11:46	6.6751	1.484	0.681473034	0.825311155	5.0388993478	0.0950	0.0841670
2013/3/19 11:47	11:47	7.221	1.48	0.677966102	0.823389078	5.9433023531	0.0660	0.0841670
2013/3/19 11:48	11:48	6.6011	1.469	0.682008869	0.825986717	5.4539999112	0.0660	0.0841670
2013/3/19 11:49	11:49	6.6074	1.478	0.631699396	0.794795254	5.4875631578	0.0958	0.0841670
2013/3/19 11:50	11:50	6.6813	1.253	0.619789283	0.787266969	5.4545274601	0.0958	0.0841670
2013/3/19 11:51	11:51	6.7603	1.233	0.618637577	0.78542622	5.4289004949	0.0857	0.0841670
2013/3/19 11:52	11:52	6.7768	1.38	0.623595877	0.789368079	5.4634522562	0.0958	0.0841670
2013/3/19 11:53	11:53	6.8918	1.354	0.618873118	0.786088886	5.4197975581	0.0948	0.0841670
2013/3/19 11:54	11:54	7.269	1.405	0.597801191	0.773176411	5.3920964776	0.0857	0.0841670
2013/3/19 11:55	11:55	7.7468	1.387	0.635364178	0.797097345	5.4975631511	0.0958	0.0841670
2013/3/19 11:56	11:56	7.3781	1.403	0.679540957	0.824223061	5.6166820115	0.0960	0.0841670
2013/3/19 11:57	11:57	7.2539	1.444	0.661479314	0.813311155	5.5688950479	0.0959	0.0841670
2013/3/19 11:58	11:58	8.0845	1.48	0.677966102	0.823389078	5.6630320231	0.0960	0.0841670
2013/3/19 11:59	11:59	6.4186	1.408	0.682088869	0.825986717	5.3239599912	0.0960	0.0841670
2013/3/19 12:00	12:00	6.5265	1.278	0.631699396	0.794795254	5.4875631578	0.0958	0.0841670
2013/3/19 12:01	12:01	6.167	1.253	0.619789283	0.787266969	5.4545274601	0.0958	0.0841670
2013/3/19 12:02	12:02	6.8852	1.233	0.618637577	0.78542622	5.4289004949	0.0857	0.0841670
2013/3/19 12:03	12:03	6.7648	1.38	0.623595877	0.789368079	5.4634522562	0.0958	0.0841670
2013/3/19 12:04	12:04	6.7794	1.354	0.618873118	0.786088886	5.4197975581	0.0948	0.0841670
2013/3/19 12:05	12:05	6.7771	1.405	0.597801191	0.773176411	5.3920964776	0.0857	0.0841670
2013/3/19 12:06	12:06	6.8857	1.387	0.635364178	0.797097345	5.4975631511	0.0958	0.0841670
2013/3/19 12:07	12:07	6.7615	1.38	0.636738433	0.797958917	5.5014437238	0.0958	0.0841670
2013/3/19 12:08	12:08	6.7688	1.384	0.635809722	0.796234841	5.4938768485	0.0958	0.0841670
2013/3/19 12:09	12:09	6.8043	1.389	0.640861209	0.800538695	5.5172703417	0.0959	0.0841670
2013/3/19 12:10	12:10	6.2933	1.278	0.630352249	0.793931049	5.4837659033	0.0958	0.0841670
2013/3/19 12:11	12:11	6.2058	1.278	0.631699396	0.794795254	5.4875631578	0.0958	0.0841670
2013/3/19 12:12	12:12	6.0297	1.358	0.623537792	0.789018641	5.4627789491	0.0958	0.0841670
2013/3/19 12:13	12:13	6.0578	1.301	0.595988858	0.771990188	5.3874929441	0.0956	0.0841670
2013/3/19 12:14	12:14	5.7482	1.343	0.568599908	0.754385918	5.3112130107	0.0955	0.0841670
2013/3/19 12:15	12:15	5.7684	1.247	0.573232248	0.757596889	5.3164463663	0.0855	0.0841670
2013/3/19 12:16	12:16	5.7852	1.208	0.552505756	0.743276511	5.2614770127	0.0954	0.0841670
2013/3/19 12:17	12:17	6.3104	1.218	0.557031606	0.746349503	5.2798643603	0.0953	0.0841670
2013/3/19 12:18	12:18	6.9948	1.309	0.59663532	0.773436079	5.3978920261	0.0957	0.0841670
2013/3/19 12:19	12:19	6.8387	1.227	0.602878966	0.776885996	5.4217743891	0.0957	0.0841670
2013/3/19 12:20	12:20	6.6708	1.248	0.617988875	0.78581854	5.4481186464	0.0957	0.0841670
2013/3/19 12:21	12:21	6.6877	1.339	0.613376988	0.783183304	5.4369883359	0.0947	0.0841670
2013/3/19 12:22	12:22	6.5402	1.352	0.619031196	0.78697982	5.4532369057	0.0958	0.0841670
2013/3/19 12:23	12:23	6.794	1.356	0.621163536	0.788139287	5.4785519193	0.0958	0.0841670
2013/3/19 12:24	12:24	5.8885	1.212	0.601007787	0.775246926	5.4017854869	0.0957	0.0841670
2013/3/19 12:25	12:25	5.8598	1.293	0.592504105	0.76961599	5.3770018491	0.0963	0.0841670
2013/3/19 12:26	12:26	5.7375	1.311	0.600549702	0.774951419	5.4004868282	0.0857	0.0841670
2013/3/19 12:27	12:27	5.6017	1.287	0.594136509	0.770802519	5.3882361418	0.0961	0.0841670
2013/3/19 12:28	12:28	5.7235	1.267	0.580309953	0.761859018	5.3429159972	0.0962	0.0841670
2013/3/19 12:29	12:29	5.7141	1.293	0.595925086	0.771896978	5.3888881182	0.0961	0.0841670
2013/3/19 12:30	12:30	5.4877	1.254	0.620347566	0.787557849	5.4558038438	0.0958	0.0841670
2013/3/19 12:31	12:31	7.1558	1.295	0.600602899	0.775078234	5.4185952926	0.0857	0.0841670
2013/3/19 12:32	12:32	6.9828	1.447	0.617980716	0.785519427	5.4468859244	0.0957	0.0841670
2013/3/19 12:33	12:33	7.1902	1.468	0.625744388	0.791019068	5.4710858816	0.0958	0.0841670
2013/3/19 12:34	12:34	6.1095	1.238	0.612003832	0.782595408	5.4527926357	0.0857	0.0841670

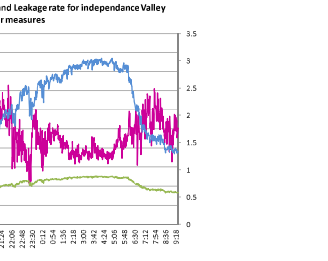


Estimated Leakage Rate (m^3/day)		97.12
System Input Volume	159.73 m3/day	63.4441

MNF Measure AFTER countermeasure in Independence Valley

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm²)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
27-Jun	23:21	2.1002	2.121	47.837

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm²)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{3/2}$	[5]=[4] x [7]	[6]=[5]/60
27/06/2013 9:30	9:30	7.4066	1.578	0.743988685	0.862547787	1.811522862	0.030
27/06/2013 9:31	9:31	6.1451	1.585	0.747289015	0.864458799	1.815536369	0.030
27/06/2013 9:32	9:32	6.3991	1.595	0.752003772	0.867181510	1.821234608	0.030
27/06/2013 9:33	9:33	6.4945	1.578	0.743988685	0.862547787	1.811522862	0.030
27/06/2013 9:34	9:34	6.3256	1.646	0.776049033	0.880936453	1.850142738	0.031
27/06/2013 9:35	9:35	6.1223	1.608	0.758132956	0.870708307	1.828661587	0.030
27/06/2013 9:36	9:36	6.8574	1.572	0.741159830	0.860006400	1.808075622	0.030
27/06/2013 9:37	9:37	7.1313	1.567	0.738802452	0.859536184	1.805197894	0.030
27/06/2013 9:38	9:38	6.4187	1.538	0.725129656	0.851545451	1.788415757	0.030
27/06/2013 9:39	9:39	5.8174	1.512	0.712871287	0.844317654	1.773234676	0.030
27/06/2013 9:40	9:40	5.1753	1.495	0.704856209	0.839557145	1.765237916	0.029
27/06/2013 9:41	9:41	5.1834	1.499	0.706742103	0.840679548	1.765595187	0.029
27/06/2013 9:42	9:42	5.2594	1.526	0.719471947	0.848216921	1.781425180	0.030
27/06/2013 9:43	9:43	4.4794	1.585	0.747289015	0.864458799	1.815536369	0.030
27/06/2013 9:44	9:44	5.0392	1.533	0.722772277	0.850160148	1.785506343	0.030
27/06/2013 9:45	9:45	5.3235	1.534	0.723243753	0.850457389	1.786088605	0.030
27/06/2013 9:46	9:46	5.8236	1.566	0.738330976	0.859261879	1.804621797	0.030
27/06/2013 9:47	9:47	4.2427	1.617	0.762376238	0.873141591	1.833771969	0.031
27/06/2013 9:48	9:48	3.7402	1.499	0.706742103	0.840679548	1.765595187	0.029
27/06/2013 9:49	9:49	3.7991	1.45	0.683639793	0.826825128	1.736498134	0.029
27/06/2013 9:50	9:50	3.2403	1.468	0.692126355	0.831941317	1.747243155	0.029
27/06/2013 9:51	9:51	3.6284	1.47	0.693069307	0.832507842	1.748432970	0.029
27/06/2013 9:52	9:52	3.4506	1.494	0.704384724	0.839276319	1.762648106	0.029
27/06/2013 9:53	9:53	4.8119	1.457	0.686940123	0.828818510	1.740684635	0.029
27/06/2013 9:54	9:54	5.2486	1.481	0.698255548	0.835616862	1.754962533	0.029
27/06/2013 9:55	9:55	4.4513	1.53	0.721357850	0.849327881	1.783758416	0.030
27/06/2013 9:56	9:56	5.0761	1.443	0.680339463	0.824826929	1.732301516	0.029
27/06/2013 9:57	9:57	5.6731	1.487	0.701084394	0.837507825	1.758513895	0.029
27/06/2013 9:58	9:58	5.5707	1.515	0.714285714	0.845154255	1.774992966	0.030
27/06/2013 9:59	9:59	5.438	1.505	0.709570957	0.842360349	1.769125204	0.029
27/06/2013 10:00	10:00	6.0519	1.55	0.730787364	0.854861021	1.795379115	0.030
27/06/2013 10:01	10:01	5.98	1.561	0.735973597	0.857889036	1.801738553	0.030
27/06/2013 10:02	10:02	4.7732	1.628	0.767562471	0.876106426	1.839998717	0.031
27/06/2013 10:03	10:03	5.2509	1.604	0.756247053	0.869624662	1.826385716	0.030
27/06/2013 10:04	10:04	4.8001	1.647	0.776520509	0.881204011	1.850704664	0.031
27/06/2013 10:05	10:05	4.4175	1.657	0.781235266	0.883875142	1.856314573	0.031
27/06/2013 10:06	10:06	4.967	1.561	0.735973597	0.857889036	1.801738553	0.030



Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm²)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{3/2}$	[5]=[4] x [7]	[6]=[5]/60
28/06/2013 8:48	8:48	4.953	1.423	0.670909908	0.819009528	1.720254767	0.029
28/06/2013 8:49	8:49	5.2756	1.39	0.655351249	0.809534776	1.700191028	0.028
28/06/2013 8:50	8:50	5.1073	1.389	0.654879774	0.809246423	1.699579338	0.028
28/06/2013 8:51	8:51	5.3927	1.404	0.661951909	0.813604271	1.708731690	0.028
28/06/2013 8:52	8:52	4.9967	1.397	0.658651579	0.811573521	1.704466708	0.028
28/06/2013 8:53	8:53	3.799	1.391	0.655822725	0.809828825	1.700802497	0.028
28/06/2013 8:54	8:54	4.4781	1.323	0.623762376	0.789786285	1.658709156	0.028
28/06/2013 8:55	8:55	5.6513	1.349	0.636020745	0.797509088	1.674928586	0.028
28/06/2013 8:56	8:56	5.6248	1.41	0.664780764	0.815340888	1.712378933	0.029
28/06/2013 8:57	8:57	5.2438	1.44	0.678925035	0.823969074	1.730409850	0.029
28/06/2013 8:58	8:58	4.9967	1.394	0.657237152	0.810701642	1.702635588	0.028
28/06/2013 8:59	8:59	4.4519	1.433	0.675624705	0.821963932	1.726288650	0.029
28/06/2013 9:00	9:00	4.2705	1.422	0.670438472	0.818803073	1.719650214	0.029
28/06/2013 9:01	9:01	3.9198	1.427	0.672795851	0.820241337	1.722670856	0.029
28/06/2013 9:02	9:02	4.1086	1.435	0.676567657	0.822537328	1.727492897	0.029
28/06/2013 9:03	9:03	4.2158	1.355	0.638849599	0.799280676	1.678649276	0.028
28/06/2013 9:04	9:04	4.6572	1.383	0.652050919	0.807496699	1.695904508	0.028
28/06/2013 9:05	9:05	3.2688	1.376	0.648750589	0.805450551	1.691607246	0.028
28/06/2013 9:06	9:06	4.047	1.35	0.636492221	0.797804626	1.675549275	0.028
28/06/2013 9:07	9:07	3.7399	1.318	0.621401998	0.788292125	1.655571818	0.028
28/06/2013 9:08	9:08	4.8121	1.33	0.627062706	0.791872910	1.663091486	0.028
28/06/2013 9:09	9:09	4.9682	1.344	0.633663366	0.796029752	1.671821686	0.028
28/06/2013 9:10	9:10	4.1742	1.343	0.633191891	0.795733555	1.671199612	0.028
28/06/2013 9:11	9:11	4.6396	1.341	0.632248939	0.795140830	1.669954771	0.028
28/06/2013 9:12	9:12	4.6837	1.359	0.640735502	0.800459557	1.681125161	0.028
28/06/2013 9:13	9:13	4.7593	1.33	0.627062706	0.791872910	1.663091486	0.028
28/06/2013 9:14	9:14	5.7639	1.294	0.610089589	0.781082315	1.640429075	0.027
28/06/2013 9:15	9:15	5.4159	1.327	0.625648279	0.790979316	1.661214760	0.028
28/06/2013 9:16	9:16	4.9297	1.379	0.650165017	0.806328107	1.693450291	0.028
28/06/2013 9:17	9:17	5.3528	1.356	0.639321075	0.799575559	1.679268590	0.028
28/06/2013 9:18	9:18	5.7114	1.356	0.639321075	0.799575559	1.679268590	0.028
28/06/2013 9:19	9:19	5.496	1.392	0.656294201	0.810119868	1.701413747	0.028
28/06/2013 9:20	9:20	5.3594	1.365	0.643563456	0.801222630	1.684832167	0.028
28/06/2013 9:21	9:21	5.6098	1.375	0.648279114	0.805157819	1.690992452	0.028
28/06/2013 9:22	9:22	4.8837	1.364	0.643092881	0.801930721	1.684214900	0.028
28/06/2013 9:23	9:23	5.2614	1.338	0.630834512	0.794250913	1.668085766	0.028
28/06/2013 9:24	9:24	5.4354	1.317	0.620933522	0.787993351	1.654943637	0.028
28/06/2013 9:25	9:25	4.5596	1.305	0.615275813	0.784395189	1.647386777	0.027
28/06/2013 9:26	9:26	4.5318	1.341	0.632248939	0.795140830	1.669954771	0.028
28/06/2013 9:27	9:27	4.704	1.324	0.624233852	0.790084712	1.659335912	0.028
28/06/2013 9:28	9:28	4.8016	1.327	0.625648279	0.790979316	1.661214760	0.028
28/06/2013 9:29	9:29	5.0405	1.323	0.623762376	0.789786285	1.658709156	0.028
28/06/2013 9:30	9:30	5.022	1.326	0.625176803	0.790681227	1.660588714	0.028
		Estimated Leakage Rate (m^3/day)					47.837
System Input Volume		114.83 m3/day					

S6.4-1-5

Checking of Water Meter Accuracy in Pilot Area: Independence Banana Valley (Revision 1)

No	BID	Account No	Name	Location	Status	Meter ID	Time (min)	Initial Reading Tested Metr	Initial Reading TR-III	Final Reading Tested Metr	Final Reading TR-III Metr	Integrated Value Tested Metr(L)	TR-III (L)	Difference	Error (%)
				INDEPENDENCE VALLEY CUSTOMERS											
1		1003	ELMA LAUNGI	INDEPENDENCE VALLEY	Meter	12A005363	6	891	0.3	989	103.5	98	103.2	-5.2	-5.0%
2		01003-1	JOHN MENONI	INDEPENDENCE VALLEY	Meter	12A005154	6	971	227.9	1072	328.4	101	100.5	0.5	0.5%
3	TW-534	1005	BARBARA HARO	INDEPENDENCE VALLEY	Meter	94345244	5	204	109.9	298	210.8	94	100.9	-6.9	-6.8%
4	TW-535	01006-01	KEN TAMAIKA PISU	WHITERIVER	Meter	12B086732	4	210	454.9	309	555.4	99	100.5	-1.5	-1.5%
5	TW-525	01006-1	GRACE MOSES	WHITE RIVER (INDEP VAL	Meter	12B086736	4	284	352.5	385	453	101	100.5	0.5	0.5%
6		1008	Robort Uma	INDEPENDENCE VALLEY	Meter	12A004504	5	675	856.2	775	956.3	100	100.1	0.1	0.1%
7			Elaine Tekope	INDEPENDENCE VALLEY	Meter	12B086761	3	321	557.3	422	657.7	101	100.4	0.6	0.6%
8		01012-1	EDNA & STEVEN BOBBY	INDEPENDENCE VALLEY	Meter	11A000812	5	721	748.2	822	848.6	101	100.4	0.6	0.6%
9	TW-509	1013	VICKY P VEVOA	INDEPENDENCE VALLEY	Meter	09A000212	18	521	666.8	410	767.2	-111	100.4	-211.4	-210.6%
10	WD-630	1017	PATRICK TOM. OROTALOA	INDEPENDENCE VALLEY	Meter	09A000220	4	319	659.7	402	759.9	83	100.2	-17.2	-17.2%
11	WD-639	1019	GEORGE KENI	INDEPENDENCE VALLEY	Meter	11A000678	11	498.5	773.7	508	873.7	9.5	100	-90.5	-90.5%
12	WD-638	1020	BENJAMIN OKIA	INDEPENDENCE VALLEY	Meter	07-000954	12	752.2	876	847.1	976.1	94.9	100.1	-5.2	-5.2%
13	WD-649	1024	JANE BOSO	INDEPENDENCE VALLEY	Meter	07-000922	14	813	181	905.4	281.5	92.4	100.5	-8.1	-8.1%
14	WD-648	01025-1	ISAAC TOSIKA	INDEPENDENCE VALLEY	Meter	05B826551	7	561	187.4	658	287.9	97	100.5	-3.5	-3.5%
15	WD-635	1026	MICHAEL TELLA	INDEPENDENCE VALLEY	Meter	12A005142	5	147	197.4	248	297.7	101	100.3	0.7	0.7%
16	WD-642	01027-1	ALEX MCDONALD	INDEPENDENCE VALLEY	Meter	06B940509	7	464	301.4	565	401.6	101	100.2	0.8	0.8%
17	WD-633	1028	TOMMY ALUTA	INDEPENDENCE VALLEY	Meter	07-000641	5	188	406	260	506.4	72	100.4	-28.4	-28.3%
18	WD-634	1029	TAPUALIKI SAMASONI	INDEPENDENCE VALLEY	Meter	97208600	9	240	515.4	353	615.4	113	100	13	13.0%
19	WD-590	1033	GEORGE HOATAMAURI	INDEPENDENCE VALLEY	Meter	09A000346	7	844.4	619.8	944.5	719.8	100.1	100	0.1	0.1%
20	WD-582	1037	GRACE GUKUNA	INDEPENDENCE VALLEY	Meter	9752448	8	584	442.1	677	542.9	93	100.8	-7.8	-7.7%
21	WD-583	1038	JOSHUA KALEVALAKA	INDEPENDENCE VALLEY	Meter	12A005289	8	290	342.7	370	442.7	80	100	-20	-20.0%
22	WD-584	1039	EDREEN TOVA	INDEPENDENCE VALLEY	Meter	546692	18	583	242.3	675.3	342.5	92.3	100.2	-7.9	-7.9%
23	TW-210	1040	DOREEN ALFRED	INDEPENDENCE VALLEY	Meter	12A005346	8	254	138.6	355	238.8	101	100.2	0.8	0.8%
24	TW-210	01040-2	DOREEN ALFRED	WHITE RIVER/ DOREEN'S RENTED HOUSE	Meter	12A005236	15	760	136.4	858	236.5	98	100.1	-2.1	-2.1%
25	TW-211	1041	JULIAN ROVE	INDEPENDENCE VALLEY	Meter	12A004648	13	705	835.1	790	935.2	85	100.1	-15.1	-15.1%
26	TW-212	01041-1	JOSEPH MAEFITI	INDEPENDENCE VALLEY W/	Meter	12A005027	9	565	729.6	692	829.7	127	100.1	26.9	26.9%
27	TW-211	01041-2	JULIAN ROVE		Meter	12A004647	9	421	836.8	512	936	91	99.2	-8.2	-8.3%
28	TW-212	1042	BEN DOMI	INDEPENDENCE VALLEY	Meter	12A004649	18	142	620	237	720	95	100	-5	-5.0%
29	TW-213	01043-1	PETER. OLIFAIDILI	INDEPENDENCE VALLEY	Meter	9246185	15	520	512.2	615	612.5	95	100.3	-5.3	-5.3%
30	TW-214	1044	TONY ANIKWAI	INDEPENDENCE VALLEY	Meter	9752446	7	1023	395.4	1103	495.6	80	100.2	-20.2	-20.2%
31		01046-2	BRIAN TAUMERE	INDEPENDENCE	Meter	12A010882	12	94.61	7.0742	94.709	7.17498	0.099	0.10073	-0.00173	-1.7%
32		01047-2	MATTEW FEKAUVAVE		Meter	12A004549	5	3702	6972.4	2800	7072.2	98	99.8	-1.8	-1.8%
33	WD-578	1052	UNIVERSAL TRADERS	INDEPENDENCE VALLEY	Meter	07-000643	8	470	555.1	573.3	655.4	103.3	100.3	3	3.0%
												average			-12.9%

No.	Account Name	Account #	Suburb	Meter ID	Time (min)	Tested Met	TR-III	Tested Met	TR-III (litres	Machine	Meter	Integrated Value	error %
34	JOSEPH MAEFITI	01041-1	Banana Vall	13A000827	2	20.43	8.464	20.468	8.495	0.031	0.038	0.007	22.58%
35	JULIAN ROVE	1041	Banana Vall	13A000845	2	41.732	8.515	41.753	8.535	0.02	0.021	0.001	5.00%
36	JULIAN ROVE	01041-2	Banana Vall	13A000844	2	41.866	8.535	41.886	8.555	0.02	0.02	0	0.00%
37	DOREEN ALFRED	01040-2	Banana Vall	13A000905	2	31.17	8.555	31.207	8.591	0.036	0.037	0.001	2.78%
38	DOREEN ALFRED	1040	Banana Vall	12A005346	2	108.116	8.591	108.149	8.624	0.033	0.033	0	0.00%
39	EDREEN TOVA	1039	Banana Vall	13A000697	2	81.259	8.624	81.294	8.658	0.034	0.035	0.001	2.94%
40	JOSHUA KALEVALAKA	1038	Banana Vall	12A005289	2	550.596	8.662	550.616	8.683	0.021	0.02	-0.001	-4.76%
41	GRACE GUKUNA	1037	Banana Vall	13A000904	2	67.5	8.684	67.535	8.718	0.034	0.035	0.001	2.94%
42	UNIVERSAL TRADERS	1052	Banana Vall	13A000696	0.49	0.036	0	0.036	0.012	0.012	0	-0.012	
43	NESSYLEEN RAHUMORE	1034	Banana Vall	13A000699	2	89.021	8.747	89.046	8.77	0.023	0.025	0.002	8.70%
44	ASANETH TALO	1018	Independen	13A000842	1.34	57.711	0	57.723	0.012	0.012	0.012	0	0.00%
45	ANDREW KALIMA	01018-1	Independen	13A000841	0.49	56.831	0	56.843	0.012	0.012	0.012	0	0.00%
46	DR. MANIMU		Independen	13A000843	1.44	37.875	0	37.887	0.012	0.012	0.012	0	0.00%
47	GEORGE KENI	1019	Independen	13A000698	1.18	17.146	0	17.158	0.012	0.012	0.012	0	0.00%
48	BENJAMIN OKIA	1020	Independen	13A000700	1.15	45.923	0	45.935	0.012	0.012	0.012	0	0.00%
49	PERRY POETAI	01001-1	Independen	13A000955	2.31	32.837	0	32.849	0.012	0.012	0.012	0	0.00%
50	NORMAN TONGAKA	01000-01	Independen	13A000953									
51	DICK TAMATA	01002-2	Independen	13A000954									
52	TONY KAGOVAI	1049	Banana Vall	13A000645	3	35.777	8.35	35.805	8.375	0.025	0.028	0.003	12.00%
53	PETER MANOVAKI	1048	Banana Vall	13A000644	2	32.386	8.376	32.405	8.391	0.015	0.019	0.004	26.67%
54	CASPER MUNA	1046	Banana Vall	13A000641	2	17.923	8.392	17.939	8.408	0.016	0.016	0	0.00%
55	BRIAN TAUMERE	01046-2	Banana Vall	13A000643									
56	STELLA BENDLEY	1027	Independen	13A000713	0.46	60.057	0	60.069	0.012	0.012	0.012	0	0.00%
57	SHELLY KORIA	01006-3	Independen	13A000715	DISCO								
58	ELAINE TEKOPO		Independen	13A000714	1.01	12.111	0	12.123	0.012	0.012	0.012	0	0.00%
59	ALEX MCDONALD	01027-1	Independen	13A000711	0.56	24.265	0	24.277	0.012	0.012	0.012	0	0.00%
60	TOMMY ALUTA	1028	Independen	13A000712	0.58	96.758	0	96.77	0.012	0.012	0.012	0	0.00%
61	LIONEL MEANI	01010-01	Independen	13A000642	1.19	46.204	0	46.215	0.012	0.012	0.011	-0.001	-8.33%
62	EXPRESS	1023	Independen	13A000796	1.01	30.112	0	30.124	0.012	0.012	0.012	0	0.00%
63	RINO TEKEHU	01002-3	Independen	13A000797									
64	TEXLEY FULABURI	1013	Independen	13A000798	1.18	30.692	0	30.705	0.012	0.012	0.013	0.001	8.33%
65	TIMOTHY RUSSEL	01031-1	Independen	13A000951	2.15	85.069	0	85.082	0.012	0.012	0.013	0.001	8.33%
66	PETER MAEPIOH	1032	Independen	13A000799	1.19	19.904	0	19.916	0.012	0.012	0.012	0	0.00%
67	NATHAN SAU	1035	Independen	13A000837	1.18	21.167	0	21.179	0.012	0.012	0.012	0	0.00%
68	COROLLA JACOB	1036	Independen	13A000838	1.34	21.5	0	21.512	0.012	0.012	0.012	0	0.00%
69	SENDAH SAVAKANA	1043	Banana Vall	13A000800	2	15.346	8.501	15.358	8.513	0.012	0.012	0	0.00%
70	MATHEW FEKAUVAVE	01047-2	Banana Vall	13A000952									
71	TIMOTHY FAIFU		Banana Vall	13A000897	2	17.957	8.718	17.978	8.745	0.027	0.021	-0.006	-22.22%
												average	1.39%

S6.4-1-6

INDEPENDENCE & BANANA VALLEY CUSTOMER METER TESTING **29/06/2013 - 30/06/2013**

No.	Account Name	Account #	Suburb	Meter ID	Time (min)	Initial Reading Tested Met	Initial Reading TR-III	Final Reading Tested Met	Final Reading TR-III (litres	Difference Machine	Difference Meter	Integrated Value	error %
1	KENDRICK SANGA	01001-2	Independen	12B011073	1.17	31.61	0	31.623	0.012	0.012	0.013	0.001	8.33%
2	ELMAH LAUNGI	1003	Independen	12B011274	1.04	23.138	0	23.15	0.012	0.012	0.012	0	0.00%
3	JOHN MENONI	01003-1	Independen	12A005154	1.09	202.156	0	202.168	0.012	0.012	0.012	0	0.00%
4	JOSEPH DELI	1004	Independen	12B011273	0.43	44.333	0	44.345	0.012	0.012	0.012	0	0.00%
5	EDDIE NGIMAIKA	01006-1	Independen	13A000921	4.14	25.689	0	25.701	0.012	0.012	0.012	0	0.00%
6	KEN TAMAIKA PISU	01006-01	Independen	12B086730	1.08	405.482	0	405.494	0.012	0.012	0.012	0	0.00%
7	BARBARA HARO	1005	Independen	12B011275	0.56	101.465	0	101.478	0.012	0.012	0.013	0.001	8.33%
8	MOSES KARUI	1006	Independen	12B011085	0.57	58.684	0	58.695	0.012	0.012	0.011	-0.001	8.33%
9	GRACE MOSES	01006-1	Independen	13A000922	1.15	44.161	0	44.173	0.012	0.012	0.012	0	0.00%
10	ROBERT UMA	1008	Independen	13A000923	1.13	101.862	0	101.874	0.012	0.012	0.012	0	0.00%
11	DALES PULE	1009	Independen	12B086607	0.55	65.223	0	65.234	0.012	0.012	0.011	-0.001	-8.33%
12	HELLEN PALMER	01009-1	Independen	12B011190	1.02	23.524	0	23.534	0.012	0.012	0.01	-0.002	-16.67%
13	EDNA & STEVEN BOBBY	01012-1	Independen	12B011187	1.36	2.816	0	2.828	0.012	0.012	0.012	0	0.00%
14	PATTESON OLOFIA	1010	Independen	12B011186	3.05	47.576	0	47.588	0.012	0.012	0.012	0	0.00%
15	BEN MCIANGAO	1011	Independen	12B011188	2.13	82.414	0	82.426	0.012	0.012	0.012	0	0.00%
16	PETER NAKISI	1012	Independen	12B011189	1.22	70.51	0	70.522	0.012	0.012	0.012	0	0.00%
17	MENZY MEANI		Independen	12B011272	1.03	61.692	0	61.704	0.012	0.012	0.012	0	0.00%
18	VICKY P. VEVOA	1015	Independen	12B011083	1.21	59.147	0	59.159	0.012	0.012	0.012	0	0.00%
19	PATRICK HAEFAFIA	01017-1	Independen	12B011084	2.58	33.814	0	33.826	0.012	0.012	0.012	0	0.00%
20	PATRICK TOM OROTOLOA	1017	Independen	12B011082	2.1	21.999	0	22.011	0.012	0.012	0.012	0	0.00%
21	REX U'UPWE	1021	Independen	12B011081	1.01	51.844	0	51.856	0.012	0.012	0.012	0	0.00%
22	JOHN REUBEN	01030-1	Independen	12B011074	0.44	74.718	0	74.73	0.012	0.012	0.012	0	0.00%
23	CYRENE ANGIKIMU'A	01048-1	Banana Vall	12B011075	2	81.92	8.329	81.937	8.345	0.016	0.017	0.001	6.25%
24	JANE BOSO	1024	Independen	13A000925	0.46	83.395	0	83.407	0.012	0.012	0.012	0	0.00%
25	NELSON AMASIA	1025	Independen	13A000830	0.49	207.131	0	207.143	0.012	0.012	0.012	0	0.00%
26	ISAAC TOSIKA	01025-1	Independen	13A000924	0.5	143.154	0	143.166	0.012	0.012	0.012	0	0.00%
27	MICHAEL TELLA	1026	Independen	12A005142	0.44	427.353	0	427.366	0.012	0.012	0.013	0.001	8.33%
28	TAPUALIKI SAMASONI	1029	Independen	13A000902	0.56	40.186	0	40.198	0.012	0.012	0.012	0	0.00%
29	MARUA TABE	1030	Independen	13A000903	0.44	81.972	0	81.985	0.012	0.012	0.013	0.001	8.33%
30	GEORGE HOATAMAURI	1033	Independen	13A000828	0.37	32.703	0	32.715	0.012	0.012	0.012	0	0.00%
31	TONY ANIKWAI	1044	Banana Vall	13A000901	2	41.603	8.41	41.633	8.436	0.026	0.03	0.004	15.38%
32	PETER OLIFAIDILI	01043-1	Banana Vall	13A000829	2.28	180.001	0	180.013	0.012	0.012	0.012	0	0.00%
33	BEN DOMI	1042	Banana Vall	13A000826	2	143.86	8.437	143.888	8.464	0.027	0.028	0.001	3.70%

Actual Measurement of Leakage and Open-end Flow **2 No.1(Independence Valley**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			User Type (excl. Leakage on Main lines)		Pipe Material						Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom.: 32m^3 Non-D.:45m^3	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom	Non-D	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1		*			*		*						*		*					*		0.30		7.20	1.06	6.14	
2		*			*		*						*		*				*			0.45		10.80	1.06	9.74	
3		*			*		*						*		*					*		0.60		14.40	1.06	13.34	
4	*			*				*					*		*					*		0.09	2.16				
5	*			*					*				*		*					*		0.05	1.2				
6	*			*					*				*		*					*		0.45	10.8				
7		*			*		*						*		*					*		0.60		14.40	1.06	13.34	
8	*			*					*				*		*						*	0.36	8.64				
9		*			*		*						*		*					*		0.36		8.64	1.06	7.58	
10																											
11	*			*					*				*		*					*		0.06	1.44				
12																											
13	*			*					*				*		*					*		0.90	21.6				
14	*			*				*					*		*					*		0.04	1.06				
15	*			*				*					*		*					*		0.04	1.06				
16	*			*				*					*		*					*		0.05	1.2				
17	*			*					*				*		*					*		0.45	10.8				
18	*			*					*				*		*					*		0.60	14.4				
19		*			*	*								*	*					*		0.24		5.76	1.06		5.76
20	*			*				*					*		*					*		0.04	1.06				
Total	12	6	0	12	5	1	6	5	7	0	0	0	17	1	18	0	0	0	1	16	1		75.42			50.14	5.76
	18		12		6		18					17			18		18										

Note:

Change in Status of Connections (Customers, Users and Unconnection) 3 No. 3 Lenggakiki

| No. | Account No. | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

Change in Status of Connections (Customers, Users and Unconnection) 3 No. 3 Lenggakiki

No.	Account No.	Account Name	Location	Before Countermeasures: Registered Meter	D/L	Non-Regist./Illegal: Direct	Indirect	Un-Connect.	Consumer Type: Dom.	Com.	?	Meter ID Number	Meter: 15	20	32	40	50	?	Service Pipe End: Closed	Open	If open: m3/day	Meter Reading (m3): 2/7/2013	3/7/2013	Consumption	After Countermeasures: New/Re Regist.	Legalized	Disconnection: Illegal	Registered	Un-Connect.	Meter Raising: No-Change	Replace	New	Consumer Type: Dom.	Com.	?	Meter ID Number	Meter (m3 unit): 15	20	32	40	50	?	Meter Reading (m3): 2/18/2013	22/8/2013	Consumption
153	04267	SERAH OSYABU						1																						1																	
154	5264	ROSE BATAANISIA		1					1			12A004727						1				****	****							1			1			13A000760	1						****	****		
155	5274	KRISTA JANINE JACOB		1					1			07-000104						1				****	****							1			1			13A000773	1						****	****		
156	5275	MARKTUS FORAU		1					1			07-000004						1				****	****							1			1			13A000775	1						****	****		
157	5276	DALTON HONE		1					1			07-000001						1				****	****							1			1			13A000774	1						****	****		
158	5277	STEVEN LEBARO						1				05B891508																		1																	
159	5278	JOHN LANGLEY		1					1			07-000003						1				****	****							1			1			13A000772	1						****	****		
160	5279	AFFRED KADI		1					1			07-000002						1				****	****							1			1			13A000771	1						****	****		
161	05269-1	JOHN JUNIOR WAHURU			1																												1			13A001049	1						****	****		
				93	22	6	0	40	107	8	0		0	0	0	0	0	93						164.720	1	1	5	1	39	2	90	24	108	8	0		108	7	0	1	0	0				234.949

Category in Water Audit Table

A	B	D+E	F	I	
93	22	6	29	11	115

Total HH: 161

A: 93

164.720

No of the meter read: 76

Average: 2,167

Assumed consumption of all meters: 201.565

I		A		
1	1	45	116	116

Total HH: 161

A: 116

234.949

No of the meter read: 83

Average: 2,831

Assumed consumption of all meters: 328.362

* Each indirect un-registered (parasite) user cannot be recognized, so only the total should be entered manually.

Change in Status of Connections (Customers, Users and Unconnection) 3 No. 3 Lenggakiki

No.	Account No.	Account Name	Location	Before Countermeasures: Registered Meter	D/L	Non-Regist./Illegal: Direct	Indirect	Un-Connect.	Consumer Type: Dom.	Com.	?	Meter ID Number	Meter: 15	20	32	40	50	?	Service Pipe End: Closed	Open	If open: m3/day	Meter Reading (m3): 2/7/2013	3/7/2013	Consumption	After Countermeasures: New/Re Regist.	Legalized	Disconnection: Illegal	Registered	Un-Connect.	Meter Raising: No-Change	Replace	New	Consumer Type: Dom.	Com.	?	Meter ID Number	Meter (m3 unit): 15	20	32	40	50	?	Meter Reading (m3): 2014/5/1	2014/9/2	Consumption
1	5026	MALCOLM ALIKI	LENGGAKIKI RIDGE			1						ACS44415																1																				
2	5026-1	RITE DAKEI	LENGGAKIKI RIDGE	1					1			07-001347						1				1,928,700	1,930,609	1,909							1			1			13A000835	1						676.47	677.733	1.263
3	23104	SAMUEL MANETOALI	LENGGAKIKI RIDGE	1					1			07-001494						1				9,924,951	9,945,114	20,163							1			1			13A000832	1						5392.124	5402.529	10.405
4	5053	FRANCIS BILLY HILLY	LENGGAKIKI RIDGE	1					1			11A000582						1				2,368,968	2,378,545	9,579							1			1			13A000678	1						4856.932	4867.043	10.111
5	-	WICHHAM	Opposite Quan Chee			1																						1																	
6	5027	ALLEN & JEAN GORDON	LENGGAKIKI RIDGE					1				07-000946														1							1			12D086767	1						233.423	233.761	0.368
7	5047	JOHN MURIA - JUNIOR	LENGGAKIKI RIDGE	1					1			80132107						1				****	****								1			1			13A000680	1						874.028	876.291	2.263
8	5048	PAUL DAOKALIA	LENGGAKIKI RIDGE		1				1			12A004537						1															1			13A000676	1						505.687	507.766	2.079
9	5049	MR & MRS QUAN	LENGGAKIKI RIDGE	1					1			07-001193						1				5,091,684	5,098,483	6,799							1			1			13A000756	1						1201.178	1205.05	3.872
10	05046-1	PATRICK VAHOE	LOT NO:1944/111H					1																						1																	
11	05059-1	CHACHABULE AMOI	LENGGAKIKI RIDGE			1						07-001303(STOP)																1																	
12	05050-2	PATRICK VAHOE						1																						1																	
13	5051	SIMPSON KONARE	LENGGAKIKI RIDGE					1				492355																		1																	
14	05055-1	JACOB MOLI	LENGGAKIKI	1					1			06B940467						1				1,379,482	1,380,064	0,582							1			1			13A000634	1						301.191	302.345	1.154
15	05059-2	ROBERT IROGA		1					1			7000147						1				1,402,375	1,403,590	1,215							1			1			13B019733		1					573.592	575.291	1.699
16	5052	WOODFORD SCHOOL	LENGGAKIKI RIDGE	1					1			05A018553						1				4,365,766	4,369,666	3,900							1			1			13A000662	1						609.651	612.751	3.100
17	5054	BIRD SULIVANS	LENGGAKIKI RIDGE	1					1			05A018576						1				21,647,920	21,657,729	9,809							1			1			13A000685	1						2078.358	2081.636	3.278
18	5055	JOE PORAIMAI	LENGGAKIKI RIDGE	1					1			54B373(STOP)						1				342,508	344,342	1,834							1			1			13A001035	1						1581.39	1584.507	3.117
19	05055-01	JAMES REMOBATU	LENGGAKIKI	1					1			07-000325						1				3,194,004	3,194,697	0,693							1			1			13A000794	1						516.222	517.216	0.994
20	05055-1	THERESA BULU	LENGGAKIKI RIDGE	1					1			12B011003						1				67,565	68,357	0,792							1			1			13A000655	1						216.899	217.339	0.440
21	05055-2	FRANCIS CHEKA	LENGAKIKI	1					1			12B001029						1				31,957	32,581	0,624							1			1			13A000795	1						283.793	284.333	0.540
22	5056	ALEXAND WGATT	LENGGAKIKI RIDGE		1				1			88065150(STOP)																					1			12B001146		1					238.101	238.656	0.555
23	5057	AUSTRALIAN HIGH COMMISSION	LENGGAKIKI RIDGE	1					1			2A005138						1				114,146	115,076	0,930							1			1			13A000958		1					263.453	264.238	0.785
24	05057-1	S M I LTD	LENGAKIKI				1					94345257																1																	
25	05057-2	DAVE COOKE	LENGGAKIKI RIDGE	1					1			05A019001						1				2,479,328	2,479,664	0,336							1			1			13A001032	1						273.729	274.301	0.572
26	05057-3	DAVE COOKE	LENGGAKIKI RIDGE		1				1																								1			13A001033	1						381.167	382.019	0.852
27	5058	PAUL STEWART	LENGGAKIKI RIDGE	1					1			05A018400						1				1,688,284	1,689,496	1,212							1			1			13A000631	1						485.323	489.86	4.537
28	5059	ADRIAN & FLORI WICKHAM	LENGGAKIKI RIDGE	1					1			11B091826						1				397,976	398,646	0,670							1			1			13A001031	1						813.887	819.986	6.099
29	5060	CHANELLA AMOI	LENGGAKIKI RIDGE	1					1			17136						1				3,154,901	3,155,039	0,138							1			1			13A000633	1						1135.119	1137.268	2.149
30	05060A	AUSTRALIAN HIGH COMMISSION	LENGGAKIKI RIDGE				1					17136						1										1																	
31	5061	PITANUM PELOMO	LENGGAKIKI RIDGE	1					1			12A005538						1				112,343	113,815	1,472							1			1			13A001007	1						549.224	551.77	2.546
32	5062	SABINA PELOMO	LENGGAKIKI RIDGE	1					1			86127549						1				2,674,043	2,674,294	0,251							1			1			13A001006	1						734.291	*****	
33	05062-1	RINA EVO	LENGGAKIKI- DOWN STAIR	1					1			12A005419						1				493,249									1			1			13A000956	1						426.475	428.04	1.565
34	05062-1A	ALLADINE EVO	LENGGAKIKI (NO USED)					1																				1																	
35	5063	CLEMENT OHOMABEMESI	LENGGAKIKI RIDGE	1					1			05A018984						1				5,772,228	5,774,693	2,465							1			1			13A000957	1						1169.206	1172.218	3.012
36	5064	LEMU DARCY	LENGGAKIKI RIDGE	1					1			07-00454						1				5,194,993	5,209,933	14,940						1				1			13A000654									
37	05064-1	TONY LUN	PARCEL NO: 1944/111H	1					1			12A004539						1				178,305	180,567	2,262							1			1			13A001008	1								
38	5065	JJH BEVERLEY	LENGGAKIKI RIDGE		1				1			12A004485						1															1			13A001009	1						740.938	743.711	2.773
39	5066	ISLAND MANUFACTURING	LENGGAKIKI RIDGE	1					1			05B826462						1				1,561,107	1,561,871	0,764							1			1			13A000661	1						3407.059	***	
40	05066-1	IAN FORBES	LENGGAKIKI					1				94345368																1																	
41	5067	DUDDLEY HIRATA	LENGGAKIKI RIDGE	1					1			09A000201						1				1,506,839	1,507,563	0,724							1			1			13A000963	1						322.238	322.959	0.721
42	05067-1	BOROWA MEAT SERVICE	LENGGAKIKI RIDGE					1				9245923																1																	
43	5068	JOHN ADIFAKA JUNIOR	LENGGAKIKI RIDGE	1					1			883846						1				718,000	718,855	0,855							1			1			13A000965	1						517.051	519.527	2.476
44	05068-01	VICKY GAVIRO	LENGGAKIKI	1					1			09B053555						1				1,439	1,439,763	0,512							1			1			13A000964	1						420.514	421.505	0.991
45	05068-1	IRINE GAVIRO	LENGGAKIKI	1					1			05A018729						1				1,555,547	1,556,658	1,111							1			1			13A000862	1						396.104	396.894	0.790
46	05068A	CORNELIUS RATHAMANA	LENGGAKIKI RIDGE					1				883846																1																	
47	5069	AUSTRALIA HIGH COMM	LENGGAKIKI RIDGE	1					1			09B147715						1				4,529,048	4,532,252	3,204							1			1			12B011148		1					944.839	945.728	0.889
48	05069-1	PHILITUS GORAZU	LENGGAKIKI RIDGE	1					1			09B141509						1				3,685,392	3,686,788	1,396							1			1			13A001048	1						753.747	755.275	1.528
49	5070	ALFRED SASAKO	LENGGAKIKI RIDGE					1				11A000583																1																	
50	05070-1	RIBBIE LIO			1				1																								1			13A000792	1						367.387	368.291	0.904
51	5071	GEOFF DENNIS		1					1			80123111						1				7,246,894	7,250,551	1,657							1			1			13A000791	1						2209.472	2215.65	6.178
52	5072	KATIE GREEN WOOD		1					1			12B011062						1				****	2,964,082								1			1			13A000873	1						308.565	308.7	0.135
53	05072-1	DAVID DENNIS	LENGGAKIKI RIDGE					1				06A021701																1																	
54	5073	DUDDLEY POSALA	LENGGAKIKI RIDGE	1					1			12B011062						1				166,345	168,240	1,895							1			1			13A000819	1						725.929	727.493	1.564
55	5074	BEST INVESTMENT	LENGGAKIKI RIDGE	1					1			05A018398						1				5,097,438	5,099,937	2,499							1			1			13A000632	1						1439.709	1447.347	7.638
56	5075	FRANKLIN FORAU	LENGGAKIKI RIDGE	1					1			12A005371						1				70,161	70,529	0,368							1			1			13A001010	1						212.472	213.297	0.825
57	05075-1	A R R MOTEL	LENGAKIKI RIDGE	1						1		12B011320						1				821,590	825,342	3,752							1				1		13A000653	1						1982.68	1985.665	2.985
58	05075-2	A R R MOTEL	LENGAKIKI	1						1		GK04MD400164						1				12,238,568	12,251,734	13,166							1				1		13A000631	1						1322.151	1322.216	0.065
59	05075-3	ALFRED TOAKI	LOWER LENGGAKIKI RIDGE		1				1			D/L						1															1			13A000876	1						869.355	869.904	0.549
60	05075-4	LAXTON BAORO KORAUA	LOWER LENGAKIKI	1					1			05A018777						1				6,867,901	6,867,901							1							05A018777	1						6867.905	6867.905	0.000
61	05075-5	B L KORAUA	[illegible]	1					1			05B881645						1				4,611,314	4,613,492	2,178							1			1			13A000652	1						879.56	881.58	2.020
62	5076	FRANCIS LUZA				1						54A060(MSTOP)																	1							13A000660	1						****	****	
63	5077	HON PATRICK KOEOLIA	LENGGAKIKI RIDGE					1				86127439(STOP)													1								1			S13A000060	1						1098.303	1100.629	2.326
64	05077-1	GORDON UNGA						1				10A005363						1															1													
65	5078	HOLLIES VATO	LENGGAKIKI RIDGE					1				12A005460													1								1				1							686.551	688.952	2.401
66	05078-1	BEN BELAPITU	LOT 1735 PC NO 1944/111H	1					1			12B086737						1				281,568	282,457	0,889							1			1			13A000959	1						419.206	420.059	0.853
67	5079	NOEL NOKALI	SISTER LENGGAKIKI RIDGE					1				517215																1																	
68	5080	C J SIMPU	LENGGAKIKI RIDGE					1				545417																1																	
69	05080-1	VICTORY CO LTD	LENGGAKIKI (NO USED)	1					1			07-000817						1				1,968,573	1,969,128	0,555							1			1			13A000683	1						509.174	510.216	1.042
70	05080-2	CLAYTON TUIMAKA						1				05A018404																1																	
71	5081	MASAO NAKADA	LENGGAKIKI RIDGE	1					1			05A018412						1				2,912,995	2,919,235	6,240							1			1			13A000682	1						200.514	****	
72	5082	STEVE STANLEY	NEAR NAKADA HOUSE					1				86127562(STOP)																1																	
73	5083	MASAO NAKADA	SISTER LENGGAKIKI RIDGE	1					1			545552						1				2,447,719	2,447,956	0,237							1			1			13A000684	1						332.631	****	
74	5084	DAVID SITAI	LENGGAKIKI RIDGE	1					1			545882						1				816,417	818,911	2,494							1			1			13A000681	1						1676.192	1678.344	2.182
75	5085	CHARDENMID NGAMUWILAD	LENGGAKIKI RIDGE	1					1			544357						1				2,775,290	2,775,857	0,567							1			1			13A000677	1						****	****	
76	5086	GLOBAL VISION CO. LTD	LENGGAKIKI RIDGE	1					1			06B942122						1				2,388,516	2,388,542	0,026							1			1			13A000651	1						591.253	593.602	2.349

Change in Status of Connections (Customers, Users and Unconnection) 3 No. 3 Lenggakiki

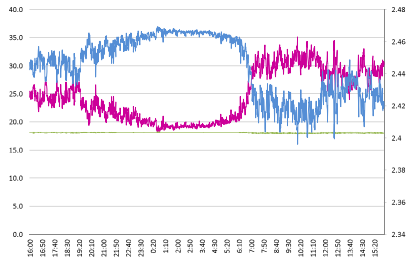
| No. | Account No. | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

S64-1-10

MNF Measure before countermeasure in Lenggakiki

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
3-Jul	0:41	18.1779	2.469	434.466

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)	
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{1.5}$	[5]=[4] x [7]	[6]=[5]/60	
2/07/2013 16:00	16:00	24.382	2.447086	0.991018466	0.995499104	18.096083164	0.302	0.04417
2/07/2013 16:01	16:01	25.5127	2.442458	0.989143874	0.99457125	18.078959951	0.301	0.04417
2/07/2013 16:02	16:02	25.3419	2.443168	0.989431671	0.994701808	18.081589852	0.301	0.04417
2/07/2013 16:03	16:03	25.0689	2.444296	0.989888268	0.994931284	18.085761389	0.301	0.04417
2/07/2013 16:04	16:04	25.3436	2.443161	0.989428815	0.994700364	18.081563752	0.301	0.04417
2/07/2013 16:05	16:05	23.5965	2.448624	0.991641048	0.995811755	18.101766468	0.302	0.04417
2/07/2013 16:06	16:06	24.3549	2.447209	0.991068193	0.995524080	18.096537168	0.302	0.04417
2/07/2013 16:07	16:07	24.5479	2.446418	0.990747944	0.995363222	18.093613119	0.302	0.04417
2/07/2013 16:08	16:08	25.5189	2.442432	0.989133396	0.994551857	18.078864201	0.301	0.04417
2/07/2013 16:09	16:09	24.3449	2.447235	0.991078749	0.995529381	18.096633543	0.302	0.04417
2/07/2013 16:10	16:10	24.8646	2.445133	0.990227197	0.995101601	18.088857402	0.301	0.04417
2/07/2013 16:11	16:11	24.1116	2.448167	0.991456045	0.995718858	18.100077854	0.302	0.04417
2/07/2013 16:12	16:12	25.1317	2.444037	0.989783600	0.994878086	18.084805269	0.301	0.04417
2/07/2013 16:13	16:13	25.7546	2.441445	0.988733805	0.994350946	18.075212070	0.301	0.04417
2/07/2013 16:14	16:14	26.3102	2.439086	0.987778380	0.993870404	18.066476817	0.301	0.04417
2/07/2013 16:15	16:15	26.0018	2.440401	0.988311007	0.994138324	18.071347037	0.301	0.04417
2/07/2013 16:16	16:16	26.437	2.438542	0.987557982	0.993759519	18.064461169	0.301	0.04417
2/07/2013 16:17	16:17	25.9489	2.440624	0.988401430	0.994183801	18.072173716	0.301	0.04417
2/07/2013 16:18	16:18	26.6439	2.437649	0.987196426	0.993577589	18.061154064	0.301	0.04417
2/07/2013 16:19	16:19	24.5157	2.446548	0.990800573	0.995380659	18.094093677	0.302	0.04417
2/07/2013 16:20	16:20	25.8027	2.441244	0.988652318	0.994300971	18.074467218	0.301	0.04417
2/07/2013 16:21	16:21	26.0263	2.440296	0.988268573	0.994116981	18.070959077	0.301	0.04417
2/07/2013 16:22	16:22	23.7203	2.449712	0.992081919	0.996033091	18.105789991	0.302	0.04417
2/07/2013 16:23	16:23	25.325	2.443238	0.989460058	0.994716069	18.081849233	0.301	0.04417
2/07/2013 16:24	16:24	25.3008	2.443339	0.989500679	0.994736487	18.082220392	0.301	0.04417
2/07/2013 16:25	16:25	25.6183	2.442057	0.988973595	0.994471515	18.077403760	0.301	0.04417
2/07/2013 16:26	16:26	24.5963	2.446223	0.990668728	0.995323429	18.092888758	0.302	0.04417
2/07/2013 16:27	16:27	24.7327	2.445668	0.990443946	0.995210503	18.090837008	0.302	0.04417
2/07/2013 16:28	16:28	24.143	2.448042	0.991405444	0.995693449	18.099615945	0.302	0.04417
2/07/2013 16:29	16:29	24.2967	2.447428	0.991156952	0.995568658	18.097347501	0.302	0.04417
2/07/2013 16:30	16:30	23.669	2.449913	0.992163326	0.996073956	18.106532750	0.302	0.04417
2/07/2013 16:31	16:31	23.8246	2.449302	0.991915945	0.995949778	18.104275329	0.302	0.04417
2/07/2013 16:32	16:32	24.2393	2.447658	0.991249909	0.995615342	18.098196127	0.302	0.04417
2/07/2013 16:33	16:33	25.3267	2.443231	0.989457203	0.994714634	18.081823149	0.301	0.04417
2/07/2013 16:34	16:34	23.7383	2.449642	0.992053320	0.996018735	18.105528953	0.302	0.04417
2/07/2013 16:35	16:35	22.446	2.454596	0.994059612	0.997025382	18.123827687	0.302	0.04417
2/07/2013 16:36	16:36	21.8179	2.456918	0.995000173	0.997496954	18.132399879	0.302	0.04417
2/07/2013 16:37	16:37	22.9326	2.452758	0.993315373	0.996652082	18.117041886	0.302	0.04417
2/07/2013 16:38	16:38	23.5961	2.450198	0.992278753	0.996131895	18.107585979	0.302	0.04417



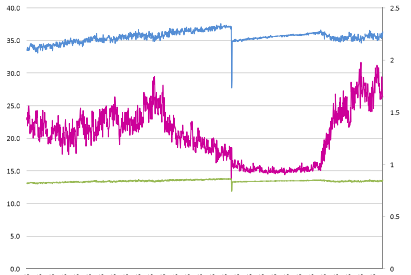
Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)	
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{1.5}$	[5]=[4] x [7]	[6]=[5]/60	
3/07/2013 15:15	15:15	31.7499	2.416252	0.978311179	0.980207349	17.981712263	0.300	0.04417
3/07/2013 15:16	15:16	29.1854	2.413759	0.977521676	0.978609698	17.972434440	0.300	0.04417
3/07/2013 15:17	15:17	28.1929	2.426202	0.982560658	0.991241978	18.018697544	0.300	0.04417
3/07/2013 15:18	15:18	29.3063	2.430777	0.984413683	0.992176236	18.035680394	0.301	0.04417
3/07/2013 15:19	15:19	28.2793	2.425635	0.982331215	0.991126236	18.016559602	0.300	0.04417
3/07/2013 15:20	15:20	29.0587	2.430384	0.984254169	0.992095847	18.034219095	0.301	0.04417
3/07/2013 15:21	15:21	30.8899	2.426793	0.982800242	0.991362811	18.020894220	0.300	0.04417
3/07/2013 15:22	15:22	29.3079	2.418031	0.979251641	0.989571443	17.988330735	0.300	0.04417
3/07/2013 15:23	15:23	29.1353	2.425628	0.982328173	0.991124701	18.016565707	0.300	0.04417
3/07/2013 15:24	15:24	28.1288	2.426435	0.982655123	0.991389626	18.019583693	0.300	0.04417
3/07/2013 15:25	15:25	29.9543	2.431069	0.984531851	0.992235784	18.034762858	0.301	0.04417
3/07/2013 15:26	15:26	28.5438	2.422565	0.981087724	0.990498725	18.005186767	0.300	0.04417
3/07/2013 15:27	15:27	28.1483	2.429175	0.983764771	0.991849168	18.029734983	0.300	0.04417
3/07/2013 15:28	15:28	29.0149	2.43098	0.984495671	0.992237552	18.036431447	0.301	0.04417
3/07/2013 15:29	15:29	28.9921	2.426997	0.983882860	0.991804489	18.021651656	0.300	0.04417
3/07/2013 15:30	15:30	28.1048	2.427104	0.982925825	0.991426157	18.022045541	0.300	0.04417
3/07/2013 15:31	15:31	29.2304	2.431177	0.984575532	0.992257795	18.037162973	0.301	0.04417
3/07/2013 15:32	15:32	28.1137	2.425991	0.982475352	0.991198947	18.017915331	0.300	0.04417
3/07/2013 15:33	15:33	30.054	2.431137	0.984559201	0.992249566	18.037013385	0.301	0.04417
3/07/2013 15:34	15:34	29.088	2.422087	0.980894352	0.990410107	18.003412750	0.300	0.04417
3/07/2013 15:35	15:35	29.5162	2.426666	0.982748694	0.991336822	18.020421612	0.300	0.04417
3/07/2013 15:36	15:36	30.0315	2.426647	0.981930955	0.990924293	18.012922714	0.300	0.04417
3/07/2013 15:37	15:37	29.1512	2.422195	0.980938039	0.990423162	18.003813191	0.300	0.04417
3/07/2013 15:38	15:38	29.3402	2.426362	0.982625416	0.991274642	18.019293137	0.300	0.04417
3/07/2013 15:39	15:39	28.8247	2.425476	0.982266736	0.991093707	18.016002292	0.300	0.04417
3/07/2013 15:40	15:40	27.4987	2.427883	0.983241334	0.991585263	18.024937750	0.300	0.04417
3/07/2013 15:41	15:41	26.915	2.433898	0.985677319	0.992812832	18.047252379	0.301	0.04417
3/07/2013 15:42	15:42	26.8043	2.43647	0.986719057	0.993337333	18.056786790	0.301	0.04417
3/07/2013 15:43	15:43	28.4112	2.436953	0.986914481	0.993435695	18.058574736	0.301	0.04417
3/07/2013 15:44	15:44	29.8431	2.429783	0.984010787	0.991973179	18.031980245	0.301	0.04417
3/07/2013 15:45	15:45	27.5985	2.423096	0.981302755	0.990607266	18.007159819	0.300	0.04417
3/07/2013 15:46	15:46	28.1363	2.433453	0.985497305	0.992722169	18.045604313	0.301	0.04417
3/07/2013 15:47	15:47	30.1621	2.431033	0.984517345	0.992228474	18.036629982	0.301	0.04417
3/07/2013 15:48	15:48	29.44	2.421568	0.980684071	0.990294942	18.001482419	0.300	0.04417
3/07/2013 15:49	15:49	29.5694	2.425006	0.982076542	0.990997751	18.014238018	0.300	0.04417
3/07/2013 15:50	15:50	30.3907	2.424395	0.981829122	0.990872909	18.011988657	0.300	0.04417
3/07/2013 15:51	15:51	28.6198	2.420465	0.980237277	0.990069329	17.997381259	0.300	0.04417
3/07/2013 15:52	15:52	28.1778	2.428826	0.983623328	0.991777862	18.028438799	0.300	0.04417
3/07/2013 15:53	15:53	30.0405	2.430846	0.984441453	0.992190238	18.035934791	0.301	0.04417
3/07/2013 15:54	15:54	31.0782	2.422152	0.980920568	0.99041434	18.003652857	0.300	0.04417
3/07/2013 15:55	15:55	30.5908	2.417104	0.978876313	0.989381783	17.984883116	0.300	0.04417
3/07/2013 15:56	15:56	30.2547	2.419493	0.979843832	0.989870614	17.993769033	0.300	0.04417
3/07/2013 15:57	15:57	30.8455	2.421122	0.980503432	0.990203732	17.999824428	0.300	0.04417
3/07/2013 15:58	15:58	29.3024	2.418249	0.979339858	0.989616016	17.989149971	0.300	0.04417
3/07/2013 15:59	15:59	30.6771	2.422813	0.981188169	0.990549428	18.006108446	0.300	0.04417
3/07/2013 16:00	16:00	30.1858	2.419073	0.979673469	0.989784557	17.992204694	0.300	0.04417
Estimated Leakage Rate (m^3/day)						**434.466**	**63.6442**	

591.460265 156.634

MNF Measure After countermeasure in Lenggakiki

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
22-Aug	3:00	13.6411	2.284	322.97

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)	
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{1.5}$	[5]=[4] x [7]	[6]=[5]/60	
21/08/2013 10:15	10:15	23.1183	2.095	0.917250438	0.955731924	13.064536945	0.218	0.044167
21/08/2013 10:16	10:16	22.8154	2.1	0.919439580	0.958874121	13.0800977710	0.218	0.044167
21/08/2013 10:17	10:17	23.1904	2.114	0.925569177	0.962065059	13.1236256703	0.219	0.044167
21/08/2013 10:18	10:18	21.9083	2.12	0.928106147	0.963429368	13.1422363532	0.219	0.044167
21/08/2013 10:19	10:19	23.9778	2.092	0.919396953	0.957045951	13.0551595255	0.218	0.044167
21/08/2013 10:20	10:20	23.9896	2.097	0.918126095	0.958188966	13.0707515030	0.218	0.044167
21/08/2013 10:21	10:21	22.2698	2.108	0.922942207	0.960698812	13.1049885539	0.218	0.044167
21/08/2013 10:22	10:22	24.6707	2.096	0.917688266	0.957960472	13.0676354597	0.218	0.044167
21/08/2013 10:23	10:23	24.9803	2.114	0.925569177	0.962065059	13.1236256703	0.219	0.044167
21/08/2013 10:24	10:24	24.4646	2.094	0.916812609	0.955703321	13.0363398550	0.218	0.044167
21/08/2013 10:25	10:25	23.3098	2.094	0.916812609	0.955703321	13.0363398550	0.218	0.044167
21/08/2013 10:26	10:26	23.0944	2.119	0.927758319	0.963202117	13.1391364402	0.219	0.044167
21/08/2013 10:27	10:27	23.4497	2.126	0.930823117	0.964791748	13.1608207165	0.219	0.044167
21/08/2013 10:28	10:28	20.7001	2.132	0.933450088	0.966152207	13.1793788874	0.220	0.044167
21/08/2013 10:29	10:29	21.8598	2.147	0.940017513	0.969545003	13.2256603432	0.220	0.044167
21/08/2013 10:30	10:30	21.589	2.142	0.937828171	0.968413565	13.2102512035	0.220	0.044167
21/08/2013 10:31	10:31	20.9194	2.138	0.936077058	0.967510753	13.1979310937	0.220	0.044167
21/08/2013 10:32	10:32	22.0677	2.157	0.944305797	0.971800287	13.2564248888	0.221	0.044167
21/08/2013 10:33	10:33	21.854	2.133	0.933887916	0.966378564	13.1824693361	0.220	0.044167
21/08/2013 10:34	10:34	21.5514	2.131	0.933012359	0.965925597	13.1763263633	0.220	0.044167
21/08/2013 10:35	10:35	21.313	2.151	0.941708827	0.970477145	13.2379747140	0.221	0.044167
21/08/2013 10:36	10:36	21.9136	2.151	0.941708827	0.970477145	13.2379747140	0.221	0.044167
21/08/2013 10:37	10:37	22.9514	2.145	0.939141856	0.969093317	13.2194988842	0.220	0.044167
21/08/2013 10:38	10:38	22.8248	2.114	0.925569177	0.962065059	13.1236256703	0.219	0.044167
21/08/2013 10:39	10:39	21.3984	2.118	0.927320490	0.962974813	13.1360835721	0.219	0.044167
21/08/2013 10:40	10:40	22.4458	2.146	0.939579685	0.969319861	13.2225759951	0.220	0.044167
21/08/2013 10:41	10:41	20.023	2.114	0.925569177	0.962065059	13.1236256703	0.219	0.044167
21/08/2013 10:42	10:42	21.9138	2.133	0.933887916	0.966378564	13.1824693361	0.220	0.044167
21/08/2013 10:43	10:43	22.3494	2.102	0.920314236	0.959330619	13.0863214906	0.218	0.044167
21/08/2013 10:44	10:44	21.2137	2.114	0.925569177	0.962065059	13.1236256703	0.219	0.044167
21/08/2013 10:45	10:45	21.609	2.145	0.939141856	0.969093317	13.2194988842	0.220	0.044167
21/08/2013 10:46	10:46	21.011	2.132	0.933450088	0.966152207	13.1793788874	0.220	0.044167
21/08/2013 10:47	10:47	20.446	2.114	0.925569177	0.962065059	13.1236256703	0.219	0.044167
21/08/2013 10:48	10:48	22.6118	2.123	0.929509632	0.964110799	13.1515318173	0.219	0.044167
21/08/2013 10:49	10:49	22.2861	2.095	0.917250438	0.955731924	13.0645369455	0.218	0.044167
21/08/2013 10:50	10:50	22.9834	2.107	0.922504378	0.960470915	13.0108787597	0.218	0.044167



Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)	
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{1.5}$	[5]=[4] x [7]	[6]=[5]/60	
22/08/2013 9:31	9:31	24.0855	2.211	0.968038529	0.983889498	13.4223349253	0.224	0.044167
22/08/2013 9:32	9:32	26.188	2.253	0.986427320	0.993190475	13.5482105941	0.226	0.044167
22/08/2013 9:33	9:33	27.073	2.23	0.976357268	0.988107923	13.4788738992	0.225	0.044167
22/08/2013 9:34	9:34	28.7483	2.242	0.981611208	0.990762943	13.5150863763	0.225	0.044167
22/08/2013 9:35	9:35	27.3842	2.224	0.977307298	0.988677345	13.4607337567	0.224	0.044167
22/08/2013 9:36	9:36	26.2156	2.196	0.981471103	0.990546329	13.5775709259	0.226	0.044167
22/08/2013 9:37	9:37	24.5578	2.243	0.982049037	0.990983873	13.5181101112	0.225	0.044167
22/08/2013 9:38	9:38	24.6745	2.218	0.971103327	0.985445751	13.4425640250	0.224	0.044167
22/08/2013 9:39	9:39	26.6426	2.226	0.974605954	0.987221330	13.4667848885	0.224	0.044167
22/08/2013 9:40	9:40	27.6284	2.254	0.986865149	0.993410866	13.5512169652	0.226	0.044167
22/08/2013 9:41	9:41	28.9789	2.236	0.978861238	0.989438393	13.4969998832	0.225	0.044167
22/08/2013 9:42	9:42	29.333	2.232	0.977232925	0.988550922	13.4849219977	0.225	0.044167
22/08/2013 9:43	9:43	27.1069	2.23	0.976357268	0.988107923	13.4788738992	0.225	0.044167
22/08/2013 9:44	9:44	26.9274	2.227	0.975043783	0.987443053	13.4698069430	0.224	0.044167
22/08/2013 9:45	9:45	30.8062	2.233	0.977679753	0.988772346	13.4879424455	0.225	0.044167
22/08/2013 9:46	9:46	29.9065	2.212	0.968476357	0.984111964	13.4243607700	0.224	0.044167
22/08/2013 9:47	9:47	29.3666	2.206	0.965849387	0.982776367	13.4061506496	0.223	0.044167
22/08/2013 9:48	9:48	29.8231	2.219	0.971541156	0.985667873	13.4455940223	0.224	0.044167
22/08/2013 9:49	9:49	29.201	2.226	0.974605954	0.987221330	13.4667848885	0.224	0.044167
22/08/2013 9:50	9:50	28.4753	2.222	0.972854641	0.986333940	13.4546799072	0.224	0.044167
22/08/2013 9:51	9:51	29.3802	2.204	0.964973730	0.982330764	13.4000721888	0.223	0.044167
22/08/2013 9:52	9:52	31.1919	2.225	0.974168126	0.988090557	13.4637596611	0.224	0.044167
22/08/2013 9:53	9:53	30.6202	2.186	0.957092820	0.978311208	13.3452410010	0.223	0.044167
22/08/2013 9:54	9:54	29.2893	2.221	0.972416813	0.986111968	13.4516519061	0.224	0.044167
22/08/2013 9:55	9:55	30.1799	2.254	0.986865149	0.993410866	13.5512169652	0.226	0.044167
22/08/2013 9:56	9:56	29.4933	2.212	0.968476357	0.984111964	13.4243607700	0.224	0.044167
22/08/2013 9:57	9:57	28.3673	2.218	0.971103327	0.985445751	13.4425640250	0.224	0.044167
22/08/2013 9:58	9:58	30.8091	2.192	0.959719790	0.979652803	13.3635430723	0.223	0.044167
22/08/2013 9:59	9:59	29.396	2.193	0.960157618	0.979876328	13.3665990978	0.223	0.044167
22/08/2013 10:00	10:00	27.9736	2.206	0.965849387	0.982776367	13.4061506496	0.223	0.044167
22/08/2013 10:01	10:01	28.3945	2.218	0.971103327	0.985445751	13.4425640250	0.224	0.044167
22/08/2013 10:02	10:02	26.9527	2.222	0.972854641	0.986333940	13.4546799072	0.224	0.044167
22/08/2013 10:03	10:03	27.5679	2.237	0.979422067	0.989675501	13.5000117607	0.225	0.044167
22/08/2013 10:04	10:04	25.9606	2.253	0.986427320	0.993190475	13.5482105941	0.226	0.044167
22/08/2013 10:05	10:05	27.3522	2.233	0.977679753	0.988772346	13.4879424455	0.225	0.044167
22/08/2013 10:06	10:06	26.942	2.235	0.978546410	0.989215047	13.4939813682	0.225	0.044167
22/08/2013 10:07	10:07	26.0536	2.217	0.970665499	0.985233578	13.4395333533	0.224	0.044167
22/08/2013 10:08	10:08	26.3505	2.236	0.978984238	0.989436323	13.4969908832	0.225	0.044167
22/08/2013 10:09	10:09	26.0063	2.218	0.971103327	0.985445751	13.4425640250	0.224	0.044167
22/08/2013 10:10	10:10	27.3295	2.254	0.987718806	0.993851501	13.5577277075	0.226	0.044167
22/08/2013 10:11	10:11	27.1295	2.205	0.965411559	0.982553591	13.4031111787	0.223	0.044167
22/08/2013 10:12	10:12	29.421	2.229	0.975919440	0.987886350	13.4758564833	0.225	0.044167
22/08/2013 10:13	10:13	27.8099	2.219	0.971541156	0.985667873	13.4455940223	0.224	0.044167
22/08/2013 10:14	10:14	26.5597	2.243	0.982049037	0.990983873	13.5181101112	0.225	0.044167
22/08/2013 10:15	10:15	26.3303	2.271	0.994508231	0.997150554	13.6022236608	0.227	0.044167
Estimated Leakage Rate (m^3/day)						**322.9701**	**63.6442**	
System Input Volume		491.43 m3/day						

168.330

LENGGAKIKI - METER TESTING BEFORE COUNTERMEASURE

Date: 5,9 & 10 July 2013

CYCLE: 21

No	Name	Account No	Current Meter ID	LOCATION	Status	Time (min)	Initial Reading		Final Reading		Difference	
							Tested Meter	TR-III Machine	Tested Meter	TR-III Machine	Meter	Machine	error
1	JOHN MURIA - JUNIOR	5047	80132107	LENGGAKIKI RIDGE	ok	21	3513,671	0	3513,673	0,012	0.002	0.012	83.33%
2	MR & MRS QUAN	5049	07-001193	LENGGAKIKI RIDGE	ok	30	5123.78	0	5123.792	0,012	0.012	0.012	0.00%
3	JACOB MOLI	05051-1	06B940467	LENGGAKIKI	ok	34	1384,294	0	1384,305	0,012	0.011	0.012	8.33%
4	ROBERT IROGA	05051-2	7000147		ok	59	1410.494	0	1410,507	0,012	0.013	0.012	-8.33%
5	WOODFORD SCHOOL	5052	05A018553	LENGGAKIKI RIDGE	ok	26	4391,077	0	4391,086	0,012	0.009	0.012	25.00%
6	BIRD SULIVANS	5054	05A018576	LENGGAKIKI RIDGE	ok	26	21705.548	0	21705,556	0,012	0.008	0.012	33.33%
7	JOE PORAIWAI	5055	548373(STOP)	LENGGAKIKI RIDGE	ok	20	353,105	9,538	353,109	9,55	0.004	0.012	0.08%
8	JAMES REMOBATU	05055-01	07-000325	LENGGAKIKI	ok	34	3200.851	9,559	3200,862	9,571	0.011	0.012	0.01%
9	THERESA BULU	05055-1	12B011003	LENGGAKIKI RIDGE	ok	19	72,587	9,525	72,698	9,537	0.111	0.012	-1.04%
10	FRANCIS CHEKA	05055-2		LENGGAKIKI	V	17	34.777	9.5	34.789	9,512	0.012	0.012	0.00%
11	AUSTRALIAN HIGH COMMISSION	5057	2A005138	LENGGAKIKI RIDGE	ok	21	119,73	0	119,731	0,012	0.001	0.012	91.67%
12	DAVE COOKE	05057-2	05A019001	LENGGAKIKI RIDGE	ok	22	2480.752	0	2480.784	0,012	0.032	0.012	
13	ADRIAN & FLORI WICKHAM	5059	11B091827	LENGGAKIKI RIDGE	ok	13	401,337	0	401,349	0,012	0.012	0.012	0.00%
14	BLUE LAGOON COMPANY	5060	17136	LENGGAKIKI RIDGE	ok	41	3156,373	9,487	3156,373	9,499	0	0.012	0.13%
15	PITAKIA M PELOMO	5061	12A004538	LENGGAKIKI RIDGE	ok	48	125,141	0	125,154	0,012	0.013	0.012	-8.33%
16	THE CONSUMER	5062	86127549	LENGGAKIKI RIDGE	V	60	2675,374	0	2675,377	0,012	0.003	0.012	75.00%
17	RINA EVO	05062-1	12A005419	LENGGAKIKI - DOWN STAIR	ok	72	508,673	0	508,688	0,012	0.015	0.012	-25.00%
18	CLEMENT OHOMAEMESI	5063	05A018984	LENGGAKIKI RIDGE	ok	67	5791,767	0	5791,782	0,012	0.015	0.012	-25.00%
19	LEMU DARCY	5064	07-00454	LENGGAKIKI RIDGE	ok	49	5278.391	9,458	5278.401	9,47	0.01	0.012	0.02%
20	TONY LUN	05064-1	12A004539	PARCEL NO: 191-014-181	ok	49	191,293	9,473	191,304	9,485	0.011	0.012	0.01%
21	J.H BEVERLEY	5065	12A004485	LENGGAKIKI RIDGE	M/STOP	43	8,536	0	8,548	0,012	0.012	0.012	0.00%
22	DUDDLEY HIRATA	5067	09A000201	LENGGAKIKI RIDGE	ok	54	1510,437	0	1510,45	0,012	0.013	0.012	8.33%
23	VICKY GAVIRO	05068-01	09B053555	LENGGAKIKI	ok	7	1441,994	0	1442,006	0,012	0.012	0.012	0.00%
24	IVINE GAVIRO	05068-1	05A018729	LENGGAKIKI	ok	22	1563,331	0	1563,347	0,012	0.016	0.012	-33.33%
25	AUSTRALIA HIGH COMM	5069	99B141715	LENGGAKIKI RIDGE	ok	15	4543,994	0	4544,009	0,012	0.015	0.012	-25.00%
26	GEOFF DENNIS	5071	80123111		ok	27	7259,752	0	7259,757	0,012	0.005	0.012	58.33%
27	DUDDLEY POSALA	5073	12B0111062	LENGGAKIKI RIDGE	ok	22	177,069	9,387	177,08	9,399	0.011	0.012	0.01%
28	BEST INVESTMENT	5074	05A018398	LENGGAKIKI RIDGE	ok	58	5102.024	8,873	5102,039	8,892	0.015	0.019	0.04%
29	FRANKLIN FORAU	5075	12A005371	LENGGAKIKI RIDGE	ok	67	71,267	8,852	71,287	8,872	0.02	0.02	0.00%
30	A R R MOTEL	05075-1	12B011320	LENGGAKIKI RIDGE	ok	180	830,001	8,787	830,029	8,809	0.028	0.022	-0.07%
31	A R R MOTEL	05075-2	GKM04C00164	LENGGAKIKI	ok	48	12271,664	8,831	12271,677	8,85	0.013	0.019	0.07%
32	BEN BELAPITU	05078-1	12B086737	LOT:1725 PC NO:191-018-268	ok	50	283,775	8,894	283,796	8,914	0.021	0.02	-0.01%
33	VICTORY CO LTD	05080-1	07-000817	LENGGAKIKI (TEL NO 20383)	M/STOP	68	1969,799	8,918	1969,82	8,939	0.021	0.021	0.00%
34	MASAO NAKADA	5081	05A018412	LENGGAKIKI RIDGE	ok	90	2920,338	8,94	2920,357	8,96	0.019	0.02	0.01%
35	MASAO NAKADA	5083	545552	S/QTRS LENGGAKIKI RIDGE	ok	61	2448,703	8,961	2448,708	8,981	0.005	0.02	0.17%
36	DAVID SITAI	5084	545582	LENGGAKIKI RIDGE	ok	69	824,305	8,983	824,31	9,013	0.005	0.03	0.28%
37	GEORGE & ROSE BOAPE	5087	05A018411	LENGGAKIKI RIDGE	ok	219	6227.594	9,033	6227,616	9,054	0.022	0.021	-0.01%
38	RINNIE HERMING	5088	12A004613	LENGGAKIKI RIDGE	ok	152	874,074	9,054	874,099	9,074	0.025	0.02	-0.06%
39	DELILAH TILUKANA	5089	83078912	LENGGAKIKI RIDGE	ok	89	2546,206	9,075	2546,21	9,095	0.004	0.02	0.18%
40	ALISON SALU	05089-1	12A004619	LENGGAKIKI RIDGE	ok	81	332,496	9,095	332,515	9,115	0.019	0.02	0.01%
41	JANET PATATOTU	5090	90047621	LENGGAKIKI RIDGE	D	117	231,001	9,116	231,02	9,136	0.019	0.02	0.01%
42	NICHOL NONGA	5092	545460	LENGGAKIKI RIDGE	ok	139	5933.48	9,136	5933,484	9,156	0.004	0.02	0.17%
43	Donald Makini		10A005127		ok	35	1737,748	0	1737,762	0,012	0.014	0.012	-16.67%
44	FLETCHER KWAIMANI JR CONSTI	05235-7	11C0041891			43	1161,04	0	1161,041	0,012	0.101	0.012	
45	JACK GULAUMA	5240	05B881506	HIBISCUS AVENUE		23	2578,081	0	2578,091	0,012	0.01	0.012	16.67%
46	WENDY HIELE	5242	05B881510			14	1890,971	0	1890,982	0,012	0.011	0.012	8.33%
47	CASPER CHITE	5244	05B881507	HIBISCUS AVENUE		37	2083,525	0	2083,536	0,012	0.011	0.012	8.33%
48	BOB WESLEY IRO	5245	99B141564	HIBISCUS AVENUE		20	3065,033	0	3065,043	0,012	0.01	0.012	16.67%
49	ANTHONY TARIBO	05246-01	07-000978	BEHIND FLAT & STORE		62	740.132	0	740.174	0,012	0.042	0.012	
50	NICKY FAST FOODS	05246-1	12A004433	TOWN GROUND		101	896,601	0	896,604	0,012	0.003	0.012	75.00%
51	NICKY FAST FOODS	05246-2	99B141574	BEHIND FLATS AND STORE		35	2092.397	0	2092.408	0,012	0.011	0.012	8.33%
52	YAM & COMPANY	05246-3	09B053431	BEHIND FLATS & STORE		21	91133.357	0	91133,368	0,012	0.011	0.012	8.33%
53	CHRIS MAE	5249	11A000693	HIBISCUS AVENUE		44	563,562	0	563,563	0,012	0.001	0.012	91.67%
54	SELINA HAGORIA	5252	12B086715	HIBISCUS AVENUE		14	98,462	0	98,475	0,012	0.013	0.012	-8.33%
55	STELLA NASIHUNU	5255	05A018548	TOWN GROUND AREA		36	945,405	0	945,406	0,012	0.001	0.012	91.67%
56	DESMAH LEKEZOTO	05255-1	99B141616	TOWN GROUND BEHIND FLATS		18	5489,107	0	5489,118	0,012	0.011	0.012	8.33%
57	SCRIPTURE UNION	5258	05B826485	HIBISCUS AVENUE		24	5594,851	0	5594,868	0,012	0.017	0.012	-41.67%
58	L & B MART	05258-1	99B141877	H/AVENUE		17	4736,612	0	4736,621	0,012	0.009	0.012	25.00%
59	SCRIPTURE UNION	05258-2	13A-873	TOWN GROUND		21	0,031	0	0,043	0,012	0.012	0.012	0.00%
60	AUSPAC GROUP COMPANY LTD	5259	12A004663	LOWER LENGGAKIKI RIDGE		22	1358,519	0	1358,531	0,012	0.012	0.012	0.00%
61	CHILD EVANGILICAL FELL	05259-1	11B091758	LOWER LENGGAKIKI RIDGE		38	1597,526	0	1597,538	0,012	0.012	0.012	0.00%
62	VIVIAN LAGWARIKO	05259-2	07-000505	LOWER LENGGAKIKI		24	1871,223	0	1871,234	0,012	0.011	0.012	8.33%
63	AUSPAC GROUP COMP. LTD	05259-3	12B010866	TOWN GROUND		20	97,201	0	97,22	0,012	0.019	0.012	-58.33%
64	AUSPAC GROUP COM. LTD	05259-4	12B010867	TOWN GROUND		26	102,819	0	102,822	0,012	0.003	0.012	75.00%
65	A N T LEGAL SERVICES	5260	7001190	LOWER LENGGAKIKI RIDGE		37	2893,292	0	2893,318	0,012	0.026	0.012	
66	SI RED CROSS	5261	88091723	LENGGAKIKI RIDGE		30	1867,75	0	1867,753	0,012	0.003	0.012	75.00%
67	WATSON AIKWAE		12B086791			18	20,487	0	20,498	0,012	0.011	0.012	8.33%
68	LIFE STOCK DEPT		11A000581			38	984,195	0	984,206	0,012	0.011	0.012	8.33%
69	SIBC QUARTERS		12A004724			36	180,839	0	180,852	0,012	0.013	0.012	-8.33%
70	Ronald Buaoka		84633892			26	6285,076	0	6285,078	0,012	0.002	0.012	83.33%
71	Francis Billy		07-001494			35	2447.874	9,572	2447,886	9,584	0.012	0.012	0.00%
72	RITE DAKEI	05026-1	07-001347	LENGGAKIKI		40	1943,739	0	1943,751	0,012	0.012	0.012	0.00%
73	Salei Rukasa		97B033536			31	6652.277	0	6652,288	0,012	0.011	0.012	8.33%
74	Henry Kanai	05270-2	9720241			33	7628,899	9,615	7628,899	9,627	0	0.012	0.12%
75	Gabriel Apa	5271	09A000107			60	978.607	9,63	978,619	9,642	0.012	0.012	0.00%
76	Joseph Toorumae	5272	A0018275			47	5087,031	9,643	5087,035	9,655	0.004	0.012	0.08%
77	Wilson Ne'e	05270-1	345			48	3155	9,656	3155	9,668	0	0.012	0.12%
78	SIEA POWER STATION		13E000375			14	7,644	0	7,66	0,012	0.016	0.012	-33.33%
											Average		9.46%

S64-T-11

Lenggakiki METER TESTING AFTER COUNTER MEASURES

No	Account_Name	Account #	Location	Meter_ID	Meter_Type	Meter_Size	Time (s)	Initial Reading		Final Reading		Integrated Value			
								Tested Meter	TR-III Meter	Tested Meter	TR-III Meter	Machine (L)	Meter (L)	Difference	error %
1	Francis Billy Hilly	5053	MINISTERS RIDGE	13A000578	metric	15	20	186.647	2.748	186.707	2.700	-0.048	0.060	0.108	4.00%
2	JOHN MURIA - JUNIOR	5047	MINISTERS RIDGE	13A000680	metric	15	20	1172.573	2.648	1172.634	2.766	0.118	0.061	-0.057	-2.06%
3	PAUL DAOKALIA	5048	MINISTERS RIDGE	13A000676	metric	15	20	121.358	2.700	121.405	2.748	0.048	0.047	-0.001	-0.04%
4	FRANCIS Cheka	05057-2	MINISTERS RIDGE	13A000765	metric	15	20	40.064	2.884	40.126	2.946	0.062	0.062	0.000	0.00%
5	JOE PORAIWAI		MINISTERS RIDGE	13A001036	metric	15	20	468.004	2.799	468.067	2.864	0.065	0.063	-0.002	-0.07%
														average(error)	0.48%

Actual Measurement of Leakage and Open-end Flow — 3 No. 3 Lenggakiki

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			User Type (excl. Leakage on Main lines)		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom.: $32m^3$ Non-D.:$45m^3$	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom	Non-D	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1	*		*							*					*			*				0.73	17.52				
2	*			*					*				*		*							2.46	59.04				
3	*			*							*		*		*				*			0.06	1.44				
4	*			*							*		*		*						*	0.60	14.4				
5	*			*						*			*		*						*	0.24	5.76				
6	*			*					*				*		*					*		0.58	13.92				
7	*			*					*				*		*					*		0.09	2.16				
8	*			*					*				*		*					*		0.11	2.64				
9	*			*					*				*		*					*		0.16	3.84				
10	*			*					*				*		*					*		0.11	2.64				
11	*			*					*				*		*					*		0.45	10.8				
12	*			*					*				*		*					*		0.08	1.92				
13	*			*					*				*		*					*		0.05	1.2				
14	*			*					*				*		*					*		0.06	1.44				
15	*			*				*					*		*				*			0.07	1.68				
16	*			*							*		*		*					*		0.13	3.12				
17	*			*							*		*		*					*		0.07	1.68				
18	*			*					*				*		*				*			0.04	0.96				
19	*			*					*				*		*				*			0.09	2.16				
20	*			*					*				*		*					*							
21	*			*						*			*		*						*	0.09	2.16				
22	*			*						*			*		*						*	0.02	0.48				
23	*			*						*			*		*					*		0.09	2.16				
24	*			*						*			*		*				*			1.67	40.08				
Total	24	0	1	23	0	0	0	1	13	6	4	0	23	0	24	0	0	2	5	13	4		193.20			0.00	0.00
	24		24		0				24				23		24				24								

Note:

Actual Measurement of Leakage and Open-end Flow **3 No. 3 Lenggakiki**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			User Type (excl. Leakage on Main lines)		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom.: $32m^3$ Non-D :$45m^3$	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom	Non-D	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1	*		*							*								*				0.73	17.52				
2	*			*					*										*			2.46	59.04				
3	*			*							*								*			0.06	1.44				
4	*			*							*										*	0.60	14.4				
5	*			*						*											*	0.24	5.76				
6	*			*					*											*		0.58	13.92				
7	*			*					*											*		0.09	2.16				
8	*			*					*											*		0.11	2.64				
9	*			*					*											*		0.16	3.84				
10	*			*					*											*		0.11	2.64				
11	*			*					*											*		0.45	10.8				
12	*			*					*											*		0.08	1.92				
13	*			*					*											*		0.05	1.2				
14	*			*					*											*		0.06	1.44				
15	*			*				*											*			0.07	1.68				
16	*			*							*									*		0.13	3.12				
17	*			*							*									*		0.07	1.68				
18	*			*					*										*			0.04	0.96				
19	*			*					*										*			0.09	2.16				
20	*			*					*											*							
21	*			*						*											*	0.09	2.16				
22	*			*						*											*	0.02	0.48				
23	*			*						*										*		0.09	2.16				
24	*			*						*									*			1.67	40.08				
25	*			*					*											*							
26	*			*					*											*							
27	*			*					*											*							
28	*			*					*											*							
29	*		*						*									*									
30	*			*							*									*							
31	*			*					*											*							
Total	**31**	**0**	**2**	**29**	**0**	**0**	**0**	**1**	**19**	**6**	**5**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**5**	**19**	**4**		**193.20**			**0.00**	**0.00**
	31		**31**		**0**		**31**					**0**			**0**		**31**										

Note:

Change in Status of Connections (Customers, Users and Unconnection) 4 No. 5 Mbokonavera-1

| No. | Account No. | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

S64-1-14

MNF Measure before countermeasure in MBokonavera 1

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
8-Aug	0:32	5.8141	4.856	125.102

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{0.5}$	[5]=[4] x [7]	[6]=[5]/60
##########	11:30	9.3267	3.108	0.640035949	0.800020593	4.651399729	0.078
##########	11:31	9.8457	3.022	0.623525904	0.78887449	4.586504946	0.076
##########	11:32	9.5715	3.138	0.646210873	0.803872423	4.673794657	0.078
##########	11:33	9.0328	2.819	0.580518046	0.761917939	4.429867089	0.074
##########	11:34	8.9805	3.009	0.619645799	0.787117883	4.576719036	0.076
##########	11:35	9.3854	3.045	0.627059798	0.791870765	4.604015813	0.077
##########	11:36	8.9685	2.925	0.60234761	0.776110566	4.512384444	0.075
##########	11:37	9.3291	3.151	0.648887974	0.805535830	4.683465870	0.078
##########	11:38	9.2674	3.033	0.624588138	0.790308888	4.594934983	0.077
##########	11:39	9.3887	2.998	0.609145328	0.780470547	4.537767258	0.076
##########	11:40	9.6849	2.920	0.601317957	0.775446940	4.508526053	0.075
##########	11:41	9.3538	2.917	0.600700165	0.775048692	4.506269437	0.075
##########	11:42	9.5003	2.976	0.612850082	0.782847420	4.551553182	0.076
##########	11:43	9.6655	2.945	0.606466625	0.778759416	4.527851181	0.075
##########	11:44	9.9192	3.009	0.619645799	0.787117883	4.576719036	0.076
##########	11:45	9.9250	2.771	0.570634267	0.755403880	4.391560793	0.073
##########	11:46	10.3995	2.617	0.538920928	0.734112586	4.268202936	0.071
##########	11:47	10.5577	2.577	0.530683690	0.728480398	4.235457882	0.071
##########	11:48	9.6808	2.578	0.530889621	0.728631757	4.236279583	0.071
##########	11:49	9.7513	2.837	0.584255700	0.764546584	4.445987473	0.074
##########	11:50	9.3279	2.792	0.574995881	0.758293387	4.4086017	0.073
##########	11:51	9.3263	2.973	0.612232900	0.782452740	4.549258474	0.076
##########	11:52	8.5867	2.936	0.604612850	0.777568550	4.520863077	0.075
##########	11:53	8.7582	3.123	0.643407538	0.802295612	4.665828310	0.078
##########	11:54	9.2766	3.058	0.629736408	0.793550329	4.613833294	0.077
##########	11:55	8.7555	2.797	0.575988468	0.758899041	4.412547478	0.074
##########	11:56	8.6357	3.179	0.654654036	0.809110937	4.704228645	0.078
##########	11:57	9.1463	3.317	0.683073808	0.826481905	4.805489660	0.080
##########	11:58	8.7971	3.130	0.644563427	0.802847076	4.667833182	0.078
##########	11:59	9.3746	3.108	0.640032949	0.800020593	4.651399729	0.078
##########	12:00	9.2621	2.981	0.613879736	0.783504778	4.555335127	0.076
##########	12:01	9.2748	2.976	0.604612850	0.777568550	4.520863077	0.075
##########	12:02	8.9535	2.881	0.593786656	0.770251034	4.478316538	0.075
##########	12:03	9.0308	3.227	0.664538715	0.81519244	4.739610368	0.079
##########	12:04	9.3149	3.191	0.657125206	0.810632596	4.713056977	0.079
##########	12:05	9.5231	3.114	0.641268534	0.800792441	4.655887332	0.078
##########	12:06	9.1800	3.003	0.618410214	0.786390624	4.572153729	0.076
##########	12:07	9.0300	2.912	0.599670511	0.774383656	4.502345756	0.075
##########	12:08	8.8415	2.937	0.604818781	0.7777100959	4.521631143	0.075
##########	12:09	9.2793	3.147	0.648064250	0.805024379	4.680492241	0.078
##########	12:10	9.5359	2.885	0.594110578	0.770785560	4.481424322	0.075

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{0.5}$	[5]=[4] x [7]	[6]=[5]/60
##########	10:43	8.7558	3.265	0.672364086	0.819978101	4.767434675	0.079
##########	10:44	9.3425	3.406	0.701400329	0.837496465	4.869288199	0.081
##########	10:45	8.7281	3.076	0.633431638	0.795801425	4.627592344	0.077
##########	10:46	7.9354	3.169	0.652594728	0.807833554	4.696823905	0.078
##########	10:47	8.6153	3.557	0.732495881	0.855859732	4.976054070	0.083
##########	10:48	7.9408	3.439	0.708196946	0.841534847	4.892920080	0.082
##########	10:49	8.6306	3.570	0.735172982	0.857422889	4.985388931	0.083
##########	10:50	8.7992	3.367	0.693369028	0.832687833	4.841330333	0.081
##########	10:51	8.5794	3.269	0.673134432	0.819350006	4.763782867	0.079
##########	10:52	7.5598	3.386	0.697381719	0.835039569	4.854970943	0.081
##########	10:53	8.0699	3.679	0.757619404	0.87041373	5.060670392	0.084
##########	10:54	8.1924	3.564	0.733937397	0.856701463	4.980947577	0.083
##########	10:55	8.7161	3.659	0.753500824	0.868044252	5.046890087	0.084
##########	10:56	7.2173	3.200	0.659121586	0.8251111871	4.7850619	0.080
##########	10:57	8.7213	3.915	0.806219110	0.897897049	5.220463252	0.087
##########	10:58	8.8120	3.500	0.720757825	0.848974573	4.936023064	0.082
##########	10:59	8.5332	3.363	0.692545305	0.832199069	4.838453725	0.081
##########	11:00	8.0670	3.374	0.694810544	0.833552961	4.843602388	0.081
##########	11:01	8.2864	3.514	0.7236408857	0.850670827	4.945885258	0.082
##########	11:02	7.9442	3.259	0.671128501	0.819253529	4.763052170	0.079
##########	11:03	8.6102	3.737	0.769598723	0.816845544	4.749408365	0.079
##########	11:04	7.8493	3.524	0.68451403	0.827355014	4.810316650	0.080
##########	11:05	7.7647	3.438	0.707990115	0.841421485	4.892108656	0.082
##########	11:06	8.7551	3.412	0.702635914	0.838253806	4.873575174	0.081
##########	11:07	7.3694	3.185	0.655890521	0.8098710 36	4.708659090	0.078
##########	11:08	8.1382	3.570	0.735175082	0.857422289	4.985388931	0.083
##########	11:09	7.2704	3.333	0.686367381	0.828472921	4.816824469	0.080
##########	11:10	8.3705	3.484	0.717462932	0.847031837	4.924727802	0.082
##########	11:11	7.6823	3.028	0.623558464	0.7896571941	4.5911458893	0.077
##########	11:12	8.5633	3.349	0.689662273	0.830459074	4.828372102	0.080
##########	11:13	7.7676	3.075	0.633237232	0.795762045	4.626640106	0.077
##########	11:14	8.1000	3.424	0.705107864	0.839706546	4.882137831	0.081
##########	11:15	8.0027	3.363	0.692545305	0.832199069	4.838453725	0.081
##########	11:16	8.9985	3.375	0.695016474	0.833676481	4.847078426	0.081
##########	11:17	8.8901	3.089	0.636120264	0.797571479	4.637160334	0.077
##########	11:18	8.8750	3.116	0.641840895	0.801049549	4.657382739	0.078
##########	11:19	8.5242	3.126	0.643736903	0.802333910	4.6648 49587	0.078
##########	11:20	8.2350	3.197	0.658360791	0.811394350	4.717527889	0.079
##########	11:21	8.8145	3.306	0.680807249	0.825110446	4.797276460	0.080
##########	11:22	8.2324	3.514	0.723640857	0.8506710827	4.945885258	0.082
##########	11:23	8.6807	3.418	0.703871499	0.838970300	4.877858382	0.081
##########	11:24	8.3143	3.334	0.686573811	0.828597195	4.817546951	0.080
##########	11:25	8.5052	3.535	0.727963404	0.853288886	4.960641780	0.083
##########	11:26	8.2860	3.415	0.703253707	0.838602234	4.875717248	0.081
##########	11:27	8.4051	3.527	0.726317957	0.852742898	4.955025433	0.083
##########	11:28	7.2139	3.458	0.712108731	0.843863552	4.9063175 40	0.082
##########	11:29	7.4016	3.744	0.781301 483	0.883912599	5.139156242	0.086
##########	11:30	7.7843	3.687	0.759256884	0.871359218	5.066169638	0.084
Estimated Leakage Rate (m^3/day)							**125.102**
System Input Volume		178.67 m3/day					

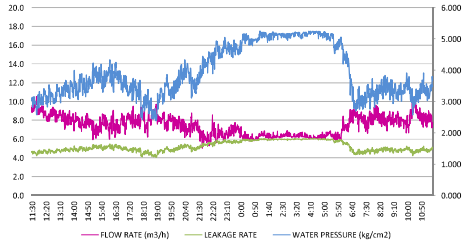
465 998

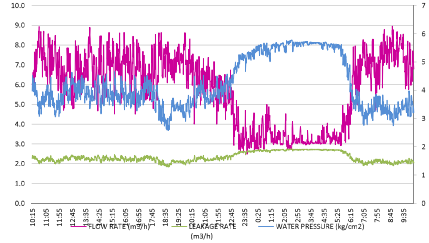
MNF Measure After countermeasure in Mbokonavera 1

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
18-Sep	2:32	2.7403	5.772	55.952

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{0.5}$	[5]=[4] x [7]	[6]=[5]/60
18/09/2013 10:15	10:15	5.995	3.964	0.686763687	0.828712063	2.270919672	0.038
18/09/2013 10:16	10:16	6.0935	4.341	0.752070602	0.867224886	2.376456354	0.040
18/09/2013 10:17	10:17	6.0194	4.507	0.780838551	0.883656084	2.421467969	0.040
18/09/2013 10:18	10:18	6.3261	4.227	0.732328482	0.855761931	2.345044419	0.039
18/09/2013 10:19	10:19	6.6203	4.002	0.693147193	0.832674723	2.281778542	0.038
18/09/2013 10:20	10:20	6.1982	3.942	0.682952183	0.826409210	2.264609159	0.038
18/09/2013 10:21	10:21	6.0367	4.067	0.704608455	0.839409587	2.300234091	0.038
18/09/2013 10:22	10:22	6.748	4.433	0.768018018	0.876566372	2.401506769	0.040
18/09/2013 10:23	10:23	5.8884	4.032	0.698514699	0.835789865	2.290314967	0.038
18/09/2013 10:24	10:24	6.958	4.233	0.733367983	0.856369070	2.346708161	0.039
18/09/2013 10:25	10:25	7.6529	4.179	0.724012474	0.850889235	2.331691745	0.039
18/09/2013 10:26	10:26	7.5841	3.82	0.661815662	0.813529356	2.229203324	0.037
18/09/2013 10:27	10:27	6.3802	3.851	0.667186417	0.816814800	2.238317596	0.037
18/09/2013 10:28	10:28	6.9645	4.272	0.740124740	0.860505027	2.357495867	0.039
18/09/2013 10:29	10:29	6.6323	4.014	0.695426195	0.833922176	2.285196939	0.038
18/09/2013 10:30	10:30	7.7937	3.976	0.688842689	0.829965474	2.274354390	0.038
18/09/2013 10:31	10:31	6.6697	3.773	0.653672904	0.808500404	2.215535698	0.037
18/09/2013 10:32	10:32	6.9179	3.807	0.659563410	0.812135093	2.225493766	0.037
18/09/2013 10:33	10:33	7.0249	3.984	0.690228690	0.830800030	2.276641323	0.038
18/09/2013 10:34	10:34	7.0712	3.91	0.677408177	0.823048102	2.255398713	0.038
18/09/2013 10:35	10:35	7.6055	3.756	0.650727651	0.806576918	2.210536760	0.037
18/09/2013 10:36	10:36	8.1861	3.665	0.634961885	0.796844957	2.183594255	0.036
18/09/2013 10:37	10:37	7.874	3.435	0.595114345	0.771436546	2.113967508	0.035
18/09/2013 10:38	10:38	7.9139	3.575	0.619369369	0.787090235	2.156616743	0.036
18/09/2013 10:39	10:39	8.698	3.563	0.617290367	0.785678285	2.152994204	0.036
18/09/2013 10:40	10:40	8.3404	3.155	0.546604297	0.739356921	2.025977565	0.034
18/09/2013 10:41	10:41	8.9386	3.277	0.567740818	0.753485778	2.064777078	0.034
18/09/2013 10:42	10:42	8.1387	3.078	0.533236033	0.730319255	2.001102164	0.033
18/09/2013 10:43	10:43	7.7729	3.075	0.532744283	0.729893337	2.000126710	0.033
18/09/2013 10:44	10:44	7.3518	3.34	0.578655579	0.760694143	2.084530159	0.035
18/09/2013 10:45	10:45	7.6123	3.617	0.626658877	0.791629974	2.169237991	0.036
18/09/2013 10:46	10:46	7.9241	3.46	0.599455599	0.774238723	2.121664371	0.035
18/09/2013 10:47	10:47	8.6017	3.365	0.582986833	0.763357744	2.092317800	0.035
18/09/2013 10:48	10:48	8.6783	3.367	0.583333333	0.763562616	2.092938696	0.035
18/09/2013 10:49	10:49	8.311	3.367	0.583333333	0.763562616	2.092938696	0.035
18/09/2013 10:50	10:50	7.785	3.16	0.547470547	0.739915527	2.025852397	0.034
18/09/2013 10:51	10:51	7.5208	3.773	0.653696533	0.808503154	2.215240035	0.037
18/09/2013 10:52	10:52	7.3618	3.687	0.638773389	0.799233060	2.190138191	0.037
18/09/2013 10:53	10:53	7.8791	3.583	0.620755371	0.787880302	2.159028392	0.036
18/09/2013 10:54	10:54	6.3852	3.484	0.603603604	0.776919303	2.128959966	0.035
18/09/2013 10:55	10:55	7.4246	3.945	0.683471933	0.826723614	2.265470719	0.038
18/09/2013 10:56	10:56	7.3523	3.604	0.624393624	0.790185816	2.165346193	0.036
18/09/2013 10:57	10:57	7.5538	3.788	0.656271656	0.810105954	2.219933345	0.037
18/09/2013 10:58	10:58	8.2478	3.723	0.645010395	0.803123392	2.200804511	0.037
18/09/2013 10:59	10:59	8.6987	3.487	0.604123354	0.777253726	2.129908385	0.035

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{0.5}$	[5]=[4] x [7]	[6]=[5]/60
19/09/2013 9:25	9:25	8.5263	3.128	0.541926542	0.736356601	2.017289935	0.034
19/09/2013 9:26	9:26	8.1974	3.116	0.539847540	0.734943180	2.013416755	0.034
19/09/2013 9:27	9:27	7.9911	3.262	0.565142065	0.751759313	2.060046046	0.034
19/09/2013 9:28	9:28	7.9982	3.363	0.582640333	0.763308806	2.091695120	0.035
19/09/2013 9:29	9:29	7.8352	3.362	0.582467082	0.763195311	2.091384110	0.035
19/09/2013 9:30	9:30	8.0831	3.618	0.626819127	0.791719096	2.169547839	0.036
19/09/2013 9:31	9:31	7.9582	3.452	0.598059598	0.773431311	2.119192182	0.035
19/09/2013 9:32	9:32	7.7813	3.295	0.570859321	0.755532328	2.070440045	0.035
19/09/2013 9:33	9:33	8.3874	3.668	0.635481635	0.797171020	2.184487747	0.036
19/09/2013 9:34	9:34	7.8089	3.309	0.573284823	0.757157460	2.074833890	0.035
19/09/2013 9:35	9:35	8.5521	3.396	0.588357988	0.76704711	2.101932621	0.035
19/09/2013 9:36	9:36	7.1054	3.346	0.579695080	0.761377094	2.086401651	0.035
19/09/2013 9:37	9:37	7.2565	3.356	0.581427581	0.762513988	2.089517080	0.035
19/09/2013 9:38	9:38	7.3629	3.302	0.572072072	0.756354463	2.072638132	0.035
19/09/2013 9:39	9:39	7.3893	3.463	0.599965350	0.774574302	2.122565961	0.035
19/09/2013 9:40	9:40	7.412	3.407	0.590263340	0.768285976	2.105334059	0.035
19/09/2013 9:41	9:41	6.8344	3.423	0.593035343	0.770087880	2.110271818	0.035
19/09/2013 9:42	9:42	6.666	3.518	0.609494109	0.780701037	2.139355052	0.036
19/09/2013 9:43	9:43	5.7837	3.563	0.617290367	0.785678285	2.152994204	0.036
19/09/2013 9:44	9:44	6.7996	3.723	0.645010395	0.803123392	2.200804511	0.037
19/09/2013 9:45	9:45	7.2721	3.485	0.603774854	0.777030792	2.129297483	0.035
19/09/2013 9:46	9:46	7.4627	3.353	0.580907851	0.762173098	2.088582940	0.035
19/09/2013 9:47	9:47	6.8867	3.212	0.556479556	0.745955774	2.044196864	0.034
19/09/2013 9:48	9:48	5.9387	3.502	0.606722107	0.778923685	2.133485733	0.036
19/09/2013 9:49	9:49	7.1273	3.728	0.645876646	0.803664511	2.202281859	0.037
19/09/2013 9:50	9:50	7.3984	3.571	0.618676369	0.786559832	2.155409907	0.036
19/09/2013 9:51	9:51	7.7998	3.236	0.560637661	0.748757344	2.051891751	0.034
19/09/2013 9:53	9:52	8.0164	3.348	0.580041580	0.761604609	2.087025109	0.035
19/09/2013 9:53	9:53	8.1922	3.186	0.551975052	0.742950235	2.035906530	0.034
19/09/2013 9:54	9:54	6.3302	3.071	0.532397782	0.729653934	1.999476157	0.033
19/09/2013 9:55	9:55	6.3243	3.413	0.591302841	0.768962185	2.107187074	0.035
19/09/2013 9:56	9:56	5.7534	3.612	0.625779626	0.791062340	2.167748130	0.036
19/09/2013 9:57	9:57	6.9159	3.977	0.689015939	0.830069840	2.274649382	0.038
19/09/2013 9:58	9:58	7.1988	3.88	0.672210672	0.819885438	2.246729627	0.037
19/09/2013 9:59	9:59	8.1234	3.698	0.640679141	0.800424350	2.193402847	0.037
19/09/2013 10:00	10:00	8.0483	3.674	0.636537611	0.797784645	2.186180460	0.036
19/09/2013 10:01	10:01	8.186	3.069	0.531704782	0.729380898	1.998174314	0.033
19/09/2013 10:02	10:02	7.0077	3.063	0.530665281	0.728467762	1.996220209	0.033
19/09/2013 10:03	10:03	7.7798	3.394	0.588011088	0.766818810	2.101315586	0.035
19/09/2013 10:04	10:04	5.9554	3.066	0.531185031	0.728824177	1.997197551	0.033
19/09/2013 10:05	10:05	6.5144	3.807	0.659563410	0.812135093	2.225493766	0.037
19/09/2013 10:06	10:06	6.5338	3.474	0.601871102	0.775803520	2.125934386	0.035
19/09/2013 10:07	10:07	6.8823	3.789	0.656449096	0.810212877	2.220226347	0.037
19/09/2013 10:08	10:08	6.5944	3.618	0.626819127	0.791719096	2.169547839	0.036
19/09/2013 10:09	10:09	6.4718	3.564	0.617463617	0.785788532	2.153296315	0.036
19/09/2013 10:10	10:10	6.1487	3.599	0.623527374	0.789637495	2.163845628	0.036
19/09/2013 10:11	10:11	7.2796	3.503	0.606895357	0.779034888	2.134789304	0.036
19/09/2013 10:12	10:12	7.702	3.521	0.610013860	0.781033841	2.140267033	0.036
19/09/2013 10:13	10:13	7.4371	3.199	0.554227304	0.744644411	2.040055908	0.034
19/09/2013 10:14	10:14	7.0609	3.397	0.588530839	0.767157636	2.102242070	0.035
19/09/2013 10:15	10:15	6.7859	3.205	0.555266805	0.745162268	2.041968162	0.034
Estimated Leakage Rate (m^3/day)							**55.952**
System Input Volume		138.32 m3/day					**63.64417**





CYCLE 32 MBOKONAVERA 1 CUSTOMERS' METER INACCURACY TEST BEFORE COUNTERMEASURE- 10 August 2013

							Initial Reading		Final Reading		Integrated Value		
No.	Account No	Name	Location	Stat	Meter ID	Field Current Status	Time (Sec)	Tested Metr	Machine	Tested Metr	Machine	Meter	Machine	Error
1	06930-2	RACHEL PUWA	LOT/NO.013 PACNO.191-024-15		07-001420	METER OKAY	34	2865.928	0	2865.941	0.012	0.013	0.012	-8%
2	6931	CHARLES MEPIRKE	MB/VERA 1		128086461	METER OKAY	44	169.926	0	169.938	0.012	0.012	0.012	0%
3	6932	RAYMOND GAOTEE	MB/VERA 1 H T C AREA		05A019103	METER OKAY	17	4505.07	0	4505.082	0.012	0.012	0.012	0%
4	6935	GORETTI TARUSIA	MB/VERA 1 H T C AREA		05A018727	METER OKAY	16	4994.833	0	4994.849	0.012	0.016	0.012	-33%
5	6936	RACHEL TARO	MB/VERA 1 H T C AREA		12A004586	METER OKAY	41	495.578	0	495.592	0.012	0.014	0.012	-17%
6	6939	RUTH MANEBONA	MB/VERA 1		545367	METER OKAY	44	45.112	0	45.115	0.012	0.003	0.012	
7	6942	STEPHEN MAELASI	MB/VERA 1 H T C AREA		492306	METER OKAY	116	3023.295	0	3023.297	0.012	0.002	0.012	
8	06949-2	JANET JERRY RAFE	NEAR DEPOT AREA		12A005177	METER OKAY	64	173.261	0	173.273	0.012	0.012	0.012	0%
9	6950	HONIARA TOWN COUNCIL	MB/VERA 1 DEPOT AREA		6KM04C00008	METER OKAY	36	11604.501	0	11604.512	0.012	0.011	0.012	8%
10	06952-1	DORIS BAVA			10A005359	METER OKAY	54	311.523	0	311.535	0.012	0.012	0.012	0%
11	6953	WILFRED SAE	MB/VERA 1 PORTS M/QTRS.		06B942118	METER OKAY	90	2188.393	0	2188.409	0.012	0.016	0.012	-33%
12	6957	DAVID MAELI	PORTS M/QTR		617270	METER OKAY	85	2213.576	0	2213.58	0.012	0.004	0.012	
13	6963	BEN TUMU	PORTS M/QTR		12A004879	METER OKAY	171	846.806	0	846.824	0.012	0.018	0.012	-50%
14	06963-01	MORGAN LIKA			09B053542	METER OKAY	41	858.969	0	858.982	0.012	0.013	0.012	-8%
15	06963-02	MR. KENETTI			09B053544	METER OKAY	40	1133.583	0	1133.596	0.012	0.013	0.012	-8%
16	06963-03	LINO RUAVA	PORTS MARRIED QUARTER		09B053541	METER OKAY	45	2024.8	0	2024.816	0.012	0.016	0.012	-33%
17	06963-04	MR DON VOUZA			09B053540	METER OKAY	32	1243.9	0	1243.913	0.012	0.013	0.012	-8%
18	06963-05	LI YULAN	FIJIAN QTRS AREA		09B053537	METER OKAY	37	559.015	0	559.027	0.012	0.012	0.012	0%
19	06963-06	LI YULAN	FIJIAN QTRS AREA		09B053538	METER OKAY	40	2914.352	0	2914.361	0.012	0.009	0.012	25%
20	06963-07	REX DODO	PORTS AUTHORITY AREA		11A000610	METER OKAY	27	785.524	0	785.537	0.012	0.013	0.012	-8%
21	06963-08	TIMOTHY VANE	PORTS AUTHORITY M/QRT		09A000123	METER OKAY	40	1312.883	0	1312.896	0.012	0.013	0.012	-8%
22	6965	MOSTYN VAGURU	PORTS M/QTR		09A000206	METER OKAY	75	1942.583	0	1942.596	0.012	0.013	0.012	-8%
23	6970	FAMILY LIFE CLINIC	HOLY CROSS AREA		12A005180	METER OKAY	57	157.609	0	157.623	0.012	0.013	0.012	-8%
24	6972	THE PARISH PRIEST	VAVAVA RIDGE		129010881	METER OKAY	12	1098.638	0	1098.648	0.012	0.01	0.012	17%
25		HOLY CROSS MARRIED QTRS	HOLY CROSS AREA		129086603	METER OKAY-	120	264.941	20	264.962	0.012	0.021	0.012	
26	8294	TRAVELLERS MOTEL	FIJIAN QUARTERS		88078289	METER OKAY	12	6076.013	0	6076.016	0.012	0.003	0.012	
27	08291-2	JOHN GOROSI	FIJIAN QUARTERS		9980150011	METER OKAY	54	7758.238	0	7758.244	0.012	0.006	0.012	50%
28	8295	OLIVER MERPIRLA	FIJIAN QUARTERS		12A004533	METER OKAY	38	179.121	0	179.133	0.012	0.012	0.012	0%
29	08296-1	JOHNSON LI	FIJIAN QUARTERS		11B091733	METER OKAY	72	330.032	0	330.044	0.012	0.012	0.012	0%
													Average	-6%

S64-T-15

MBOKONAVERA 1 NEW METERS INSTALLATION LIST METER INACCURACY

								Initial Reading		Final Reading		Integrated Value		Error%
No	Meter_ID	Account_Na	Account_Nu	Account_Ty	Suburb	Location	Meter_Size	Tested M	Machine	Tested Metr	Machine	Meter	Machine	
1	13A000701	DAVID TALAFAFIZ	06960-1	Domestic	MBOKONAVERA-1	PORTS	15	30.2	11.2848	30.216	11.3	0.016	0.0152	-5.26%
2	13A000750	MARY LANI	06960-2	Domestic	MBOKONAVERA-1	PORTS	15	27.432	11.2712	27.45	11.29	0.018	0.0188	4.26%
15	13A001103	SELWYN MEKE	6964	Domestic	MBOKONAVERA-1	PORTS	15	27.035	11.3319	27.049	11.3458	0.014	0.0139	-0.72%
27	13A001101	JOHN FINISI	6955	Domestic	MBOKONAVERA-1	PORTS	15	29.966	11.3168	29.978	11.3263	0.012	0.0095	-26.32%
28	13A001102	GODFREY	6956	Domestic	MBOKONAVERA 1	PORTS	15	25.698	11.3015	25.71	11.3142	0.012	0.0127	5.51%
													average	-4.51%

Actual Measurement of Leakage and Open-end Flow **4 No. 5 Mbokonavera-1**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			User Type (excl. Leakage on Main lines)		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom.: $32m^3$ Non-D.:$45m^3$	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom	Non-D	cIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1	*		*						*										*			1.80	43.2				
2	*		*						*										*			0.03	0.72				
3	*			*					*				*		*				*			0.05	1.2				
4	*			*					*				*		*						*	0.12	2.88				
5	*			*				*					*		*					*		0.62	14.88				
6	*			*					*				*		*					*		0.09	2.16				
7	*			*					*				*		*					*		3.00	72				
8	*		*							*									*			0.03	0.72				
9	*			*							*		*		*					*		0.16	3.84				
10	*			*							*		*		*			*				0.11	2.64				
11	*			*							*		*		*					*		0.05	1.2				
12	*			*						*			*		*					*		0.08	1.92				
13	*			*							*		*		*					*		0.05	1.2				
Total	**13**	**0**	**3**	**10**	**0**	**0**	**0**	**1**	**6**	**2**	**4**	**0**	**10**	**0**	**10**	**0**	**0**	**1**	**6**	**5**	**1**		**148.56**			**0.00**	**0.00**
	13		**13**		**0**				**13**				**10**		**10**				**13**								

Note:

Change in Status of Connections (Customers, Users and Unconnection) 5 No. 14 Tuvaruhu-1

No.	Account No.	Account Name	Location	Before Countermeasures: Registered Meter	D/L	Non-Regist./Illegal Direct	Indirect	Un-Connect.	Consumer Type Dom.	Com.	?	Meter ID Number	Meter 15	20	32	40	50	?	Service Pipe End Closed	Open	If open, m3/day	Meter Reading (m3) 2013/6/4	2013/6/5	Consumption	After Countermeasures: New/Re Regist.	Legalized	Disconnection Illegal	Registered	Un-Connect.	Meter Raising No-Change	Replace	New	Consumer Type Dom.	Com.	?	Meter ID Number	Meter (m3 unit) 15	20	32	40	50	?	Meter Reading (m3) 2013/10/2	2013/10/31	Consumption
1	7001	JOSEPH WALE	TUVARUHU ESTATE	1							1	07-000022						1				3,602,550	3,603,048	0,498							1					13B019502		1					9,496	10,233	0,737
2	7002	PATRICK TEALEI	TUVARUHU		1						1	DILINE																		1					13B019666		1					1,413	3,208	1,795
3	7003	DIANA ROJUMANA	TUVARUHU	1							1	07-001133						1				1,634,497	1,635,797	1,300							1					13B019503		1					15,269	16,628	1,359
4	7004	WILLIAM NALO	TUVARUHU			1					1	545479																1																	
5	07004-1	HILDA TAKAROSO	LOTINO		1						1	07-000792																	1																	
6	07004-2	NELSON FRASER			1						1	05A018591																	1																	
7	7005	FRANCIS HOASIPUA	TUVARUHU	1							1	07-000105						1				1,682,072	1,683,805	1,733							1					13B019448		1					9,694	10,747	1,053
8	7006	EDWARD HORIA	TUVARUHU	1							1	383115404						1				2,052,432	2,052,436	0,004							1					13A000787	1						7,999	8,766	0,767
9	7007	M MAMIKANA	TUVARUHU		1						1	545418																				1				13B019478	1						9,694	10,747	1,053
10	7008	REX MEMEA AENA	TUVARUHU	1							1	11A000785						1				1,934,405	1,936,159	1,754							1					13B019491		1					15,502	16,551	1,049
11	7009	JOHN SAEFARA	TUVARUHU		1						1	545499																				1				13A000786	1						21,410	25,076	3,666
12	7010	FANNY KILUA	TUVARUHU	1							1	545451						1				530,602	531,234	0,632							1					13B019477		1					20,846	23,219	2,373
13	7011	WALTER MALAU NUIA	TUVARUHU			1					1	06A021873															1					1				13A000789	1						19,894	23,458	3,564
14	07011-1	JOHN SIO	TUVARUHU					1			1	99B147737													1							1				13A000715	1						27,152	28,152	1,000
15	07012-1	JOHNSON PITA	TUVARUHU NEAR TANK	1							1	10A005188						1				522,859	****						1																	
16	7027	PETER RAPASIA	TUVARUHU	1							1	545483						1				2,045,608	2,046,618	1,010							1					13A000757	1						14,379	16,341	1,962
17	7028	BEGNAL MELEHA	TUVARUHU	1							1	07-000747						1				1,501,399	1,501,790	0,391				1																	
18	07028-1	MILDRED TAHMARE	TUVARUHU					1			1	07-000123													1							1				13B019446		1					7,787	8,812	1,025
19	7029	BOBBY KELLY	TUVARUHU	1							1	12A005025						1				257,482	258,181	0,699				1																	
20	7030	SUSAN LUFALUA	TUVARUHU		1						1	DILINE																1																	
21	7031	JOANA RAMO	TUVARUHU		1						1	544450																1																	
22	7032	LEAH WICHKAM	TUVARUHU		1						1	544439																				1				13B019445	1						22,948	25,011	2,063
23	7033	RICHARD TARO	TUVARUHU	1							1	07-000179						1				3,186,480	3,187,454	0,974							1					13B019444	1						22,140	22,956	0,816
24	7034	MARTIN BOUKO	TUVARUHU		1						1	07-000452																1																	
25	7035	ANNA KAMA	TUVARUHU			1					1	544405																	1																	
26	7036	JOHN BOY	TUVARUHU		1						1	95359001																1																	
27	7037	GABRIEL KONARE	TUVARUHU	1							1	493396						1				****	4,828,722									1				13B019447		1					18,019	20,114	2,095
28	7038	GABRIEL WALEWIMTA	TUVARUHU		1						1																	1																	
29	7039	THOMAS LEO	TUVARUHU		1						1	DIL																1																	
30	7040	ISHMAEL KHEGRASOPA	TUVARUHU	1							1	05B826567						1				****	87,693									1				12B010878	1						102,759	103,214	0,455
31	07040-1	DOREEN DONNIE	TUVARUHU	1							1	09B053492						1				****	1,840,515									1				09B053492	1						1873,258	1873,390	0,132
32	7041	ATKIN FAKAIA	TUVARUHU		1						1	12A004854																				1				13B019501	1						23,525	25,523	1,998
33	7042	JINGQUAN TAN	TUVARUHU		1						1	07-000353																				1				13B019476	1						31,806	31,842	0,036
34	7043	JESSE HOU	TUVARUHU		1						1	545338																				1				13B019500	1						19,517	21,816	2,299
35	7044	NESTA TOLOBUA	TUVARUHU		1						1	06B940494																				1				13A000788	1						6,110	10,017	3,907
36	7045	MELODY MUDU	TUVARUHU		1						1	95359039																				1				13A000971	1						4,839	5,657	0,818
37	7046	CHRISTOPHER WASIMANI	TUVARUHU					1			1	95358970																			1															
38	7047	PRISCILLA RAUPASI	TUVARUHU	1							1	12B01969						1				****	1,582,580									1				12B010869	1						102,759	103,214	0,455
39	7048	YSABEL RIOI	TUVARUHU			1					1	543346																1				1				13B019499	1						11,945	13,407	1,462
40	7049	JEFFREY WALEKA	TUVURUHU		1						1	543366																	1																	
41	7050	ENOS GHOLOMO	TUVARUHU			1					1	09A000255																	1																	
42	7051	DICKSON POLASI	TUVARUHU		1						1	99127466																				1				13A000952	1						18,803	18,912	0,109
43	7078	RAMO TIANA	TUVARUHU			1					1	77129404																	1																	
44	7084	TUVARUHU SCHOOL	TUVARUHU SCHOOL		1						1	09A000209																	1																	
45		MAMIKANA	TUVARUHU	1							1	12B010860						1				191,543	192,835	1,292							1																	
46		BETHLEMEN CHURCH	TUVARUHU	1							1	11B091754						1				276,415	276,421	0,006							1					11B091754	1						284,863	284,920	0,057
47		Unknow		1							1	12B010878						1				87,693	****					1																	
48																																															
49																																															
50																																															
				18	20	6	0	3	0	0	38		0	0	0	0	0	18	0	0	0			10,293	2	2	4	16	1	0	12	14	0	0	0		9	17	0	0	0				37,670

Category in Water Audit Table

A	B	D+E	F	I		A						I		A			A		
18	20	6	0	3	38	18	10,293	2	2	21	26	0		26			37,670		
Total HH	47						No of the meter read	12	Total HH	47							No of the meter read	26	
							Average	0,858									Average	1,449	
							Assumed consumption of all meters	15,440									Assumed consumption of all meters	37,670	

* Each indirect un-registered (parasite) user cannot be recognized, so only the total should be entered manually.

Change in Status of Connections (Customers, Users and Unconnection) 5 No. 14 Tuvaruhu-1

No.	Account No.	Account Name	Location	Before Countermeasures: Registered Meter	D/L	Non-Regist./Illegal Direct	Indirect	Un-Connect.	Consumer Type Dom.	Com.	?	Meter ID Number	Meter 15	20	32	40	50	?	Service Pipe End Closed	Open	If open, m3/day	Meter Reading (m3) 2013/6/4	2013/6/5	Consumption	After Countermeasures: New/Re Regist.	Legalized	Disconnection Illegal	Registered	Un-Connect.	Meter Raising No-Change	Replace	New	Consumer Type Dom.	Com.	?	Meter ID Number	Meter (m3 unit) 15	20	32	40	50	?	Meter Reading (m3) 2014/9/1	2014/9/2	Consumption
1	7001	JOSEPH WALE	TUVARUHU ESTATE	1							1	07-000022						1				3,602,550	3,603,048	0,498							1					13B019502		1					331,322	331,963	0,641
2	7002	PATRICK TEALEI	TUVARUHU		1						1	DILINE																		1					13B019666									
3	7003	DIANA ROJUMANA	TUVARUHU	1							1	07-001133						1				1,634,497	1,635,797	1,300							1					13B019503		1					511,817	514,851	3,034
4	7004	WILLIAM NALO	TUVARUHU			1					1	545479																1																	
5	07004-1	HILDA TAKAROSO	LOTINO		1						1	07-000792																	1																	
6	07004-2	NELSON FRASER			1						1	05A018591																	1																	
7	7005	FRANCIS HOASIPUA	TUVARUHU	1							1	07-000105						1				1,682,072	1,683,805	1,733							1					13B019448		1					278,846	281,191	2,345
8	7006	EDWARD HORIA	TUVARUHU	1							1	383115404						1				2,052,432	2,052,436	0,004							1					13A000787	1						303,617	305,348	1,731
9	7007	M MAMIKANA	TUVARUHU		1						1	545418																				1				13B019478	1						284,797	285,794	0,997
10	7008	REX MEMEA AENA	TUVARUHU	1							1	11A000785						1				1,934,405	1,936,159	1,754							1					13B019491		1					223,585	224,737	1,152
11	7009	JOHN SAEFARA	TUVARUHU		1						1	545499																				1				13A000786	1						760,938	763,114	2,176
12	7010	FANNY KILUA	TUVARUHU	1							1	545451						1				530,602	531,234	0,632							1					13B019477		1					570,320	573,409	3,089
13	7011	WALTER MALAU NUIA	TUVARUHU			1					1	06A021873															1					1				13A000789	1						358,742	360,156	1,414
14	07011-1	JOHN SIO	TUVARUHU					1			1	99B147737													1							1				13A000715	1						375,312	377,118	1,806
15	07012-1	JOHNSON PITA	TUVARUHU NEAR TANK	1							1	10A005188						1				522,859	****						1																	
16	7027	PETER RAPASIA	TUVARUHU	1							1	545483						1				2,045,608	2,046,618	1,010							1					13A000757	1						520,757	523,530	2,773
17	7028	BEGNAL MELEHA	TUVARUHU	1							1	07-000747						1				1,501,399	1,501,790	0,391				1																	
18	07028-1	MILDRED TAHMARE	TUVARUHU					1			1	07-000123													1							1				13B019446		1					200,030	****	
19	7029	BOBBY KELLY	TUVARUHU	1							1	12A005025						1				257,482	258,181	0,699				1																	
20	7030	SUSAN LUFALUA	TUVARUHU		1						1	DILINE																1																	
21	7031	JOANA RAMO	TUVARUHU		1						1	544450																1																	
22	7032	LEAH WICHKAM	TUVARUHU		1						1	544439																				1				13B019445	1						360,230	362,195	1,965
23	7033	RICHARD TARO	TUVARUHU	1							1	07-000179						1				3,186,480	3,187,454	0,974							1					13B019444	1						468,949	470,688	1,739
24	7034	MARTIN BOUKO	TUVARUHU		1						1	07-000452																1								S13A00439	1						70,880	71,409	0,529
25	7035	ANNA KAMA	TUVARUHU			1					1	544405																	1																	
26	7036	JOHN BOY	TUVARUHU		1						1	95359001																1								12B172431	1						280,476	282,208	1,732
27	7037	GABRIEL KONARE	TUVARUHU	1							1	493396						1				****	4,828,722									1				13B019447									
28	7038	GABRIEL WALEWIMTA	TUVARUHU		1						1																	1																	
29	7039	THOMAS LEO	TUVARUHU		1						1	DIL																1																	
30	7040	ISHMAEL KHEGRASOPA	TUVARUHU	1							1	05B826567						1				****	87,693									1				12B010878	1						288,525	289,281	0,756
31	07040-1	DOREEN DONNIE	TUVARUHU	1							1	09B053492						1				****	1,840,515									1				09B053492	1						2108,270	2109,209	0,939
32	7041	ATKIN FAKAIA	TUVARUHU		1						1	12A004854																				1				13B019501	1						466,889	467,921	1,032
33	7042	JINGQUAN TAN	TUVARUHU		1						1	07-000353																				1				13B019476	1						780,940	781,630	0,690
34	7043	JESSE HOU	TUVARUHU		1						1	545338																				1				13B019500	1						294,725	296,149	1,424
35	7044	NESTA TOLOBUA	TUVARUHU		1						1	06B940494																				1				13A000788	1						201,945	202,925	0,980
36	7045	MELODY MUDU	TUVARUHU		1						1	95359039																				1				13A000971	1						235,187	236,435	1,248
37	7046	CHRISTOPHER WASIMANI	TUVARUHU					1			1	95358970																			1															
38	7047	PRISCILLA RAUPASI	TUVARUHU	1							1	12B01969						1				****	1,582,580									1				12010969	1						2595,223	2599,164	3,941
39	7048	YSABEL RIOI	TUVARUHU			1					1	543346																1				1				13B019499	1						356,157	357,242	1,085
40	7049	JEFFREY WALEKA	TUVURUHU		1						1	543366																	1																	
41	7050	ENOS GHOLOMO	TUVARUHU			1					1	09A000255																	1																	
42	7051	DICKSON POLASI	TUVARUHU		1						1	99127466																				1				13A000952									
43	7078	RAMO TIANA	TUVARUHU			1					1	77129404																	1																	
44	7084	TUVARUHU SCHOOL	TUVARUHU SCHOOL		1						1	09A000209																	1																	
45		MAMIKANA	TUVARUHU	1							1	12B010860						1				191,543	192,835	1,292							1																	
46		BETHLEMEN CHURCH	TUVARUHU	1							1	11B091754						1				276,415	276,421	0,006							1					11B091754	1						323,729	323,759	0,030
47		Unknow		1							1	12B010878						1				87,693	****					1																	
48		GABRIEL WALE	TUVURUHU					1																	1				1				S13A00346	1						9,397	10,196	0,799
49																																															
50																																															
				18	20	6	0	4	0	0	38		0	0	0	0	0	18	0	0	0			10,293	3	3	3	16	1	1	11	16	0	0	0		13	15	0	0	0				40,334

Category in Water Audit Table

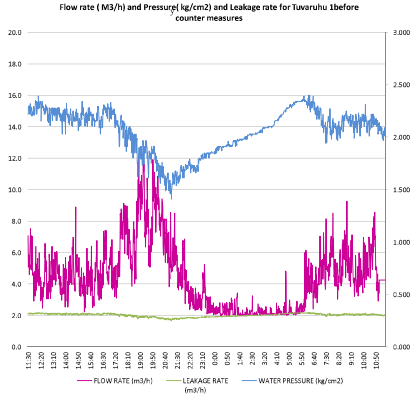
A	B	D+E	F	I		A						I		A			A		
18	20	6	0	4	38	18	10,293	3	3	20	28	0		28			40,334		
Total HH	48						No of the meter read	12	Total HH	48							No of the meter read	22	
							Average	0,858									Average	1,494	
							Assumed consumption of all meters	15,440									Assumed consumption of all meters	41,828	

* Each indirect un-registered (parasite) user cannot be recognized, so only the total should be entered manually.

MNF Measure before countermeasure in Tuvaruhu 1

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
11-Sep	1:35	1.9714	1.971	48.234

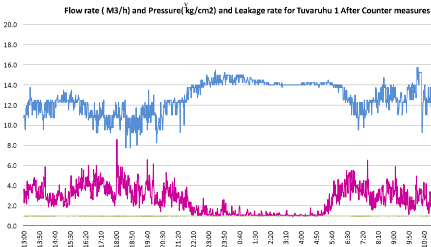
Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
10/09/2013 11:30	11:30	7.0677	2.220	1.126103277	1.061180134	2.092010516	0.035
10/09/2013 11:31	11:31	5.1797	2.230	1.131175814	1.063567494	2.096716958	0.035
10/09/2013 11:32	11:32	5.0652	2.280	1.156538501	1.075424800	2.120092451	0.035
10/09/2013 11:33	11:33	5.8359	2.280	1.156538501	1.075424800	2.120092451	0.035
10/09/2013 11:34	11:34	5.5548	2.300	1.166683575	1.080131277	2.129370799	0.035
10/09/2013 11:35	11:35	4.5927	2.280	1.156538501	1.075424800	2.120092451	0.035
10/09/2013 11:36	11:36	5.1490	2.280	1.156538501	1.075424800	2.120092451	0.035
10/09/2013 11:37	11:37	5.3707	2.280	1.156538501	1.075424800	2.120092451	0.035
10/09/2013 11:38	11:38	6.3032	2.220	1.126103277	1.061180134	2.092010516	0.035
10/09/2013 11:39	11:39	6.8386	2.320	1.176828650	1.084817335	2.138608804	0.036
10/09/2013 11:40	11:40	7.5231	2.220	1.126103277	1.061180134	2.092010516	0.035
10/09/2013 11:41	11:41	6.9781	2.290	1.161611038	1.077780607	2.124736690	0.035
10/09/2013 11:42	11:42	4.9597	2.280	1.156538501	1.075424800	2.120092451	0.035
10/09/2013 11:43	11:43	5.2281	2.270	1.151465963	1.073063821	2.115438016	0.035
10/09/2013 11:44	11:44	4.8821	2.260	1.146393426	1.070697635	2.110773818	0.035
10/09/2013 11:45	11:45	7.0571	2.280	1.156538501	1.075424800	2.120092451	0.035
10/09/2013 11:46	11:46	5.2262	2.260	1.115958202	1.056389229	2.082565725	0.035
10/09/2013 11:47	11:47	7.0269	2.220	1.126103277	1.061180134	2.092010516	0.035
10/09/2013 11:48	11:48	6.4797	2.210	1.121030740	1.058787391	2.087293463	0.035
10/09/2013 11:49	11:49	4.5561	2.240	1.136248351	1.065949507	2.101412858	0.035
10/09/2013 11:50	11:50	4.5971	2.210	1.121030740	1.058787391	2.087293463	0.035
10/09/2013 11:51	11:51	4.7036	2.220	1.126103277	1.061180134	2.092010516	0.035
10/09/2013 11:52	11:52	4.5900	2.290	1.161611038	1.077780607	2.124736690	0.035
10/09/2013 11:53	11:53	2.9014	2.290	1.161611038	1.077780607	2.124736690	0.035
10/09/2013 11:54	11:54	4.0667	2.270	1.151465963	1.073063821	2.115438016	0.035
10/09/2013 11:55	11:55	3.2454	2.270	1.151465963	1.073063821	2.115438016	0.035
10/09/2013 11:56	11:56	4.7787	2.210	1.121030740	1.058787391	2.087293463	0.035
10/09/2013 11:57	11:57	4.2180	2.230	1.131175814	1.063567494	2.096716958	0.035
10/09/2013 11:58	11:58	4.7084	2.280	1.156538501	1.075424800	2.120092451	0.035
10/09/2013 11:59	11:59	3.2344	2.340	1.186973724	1.089483237	2.147807254	0.036
10/09/2013 12:00	12:00	5.3275	2.350	1.192046262	1.091808711	2.152391693	0.036
10/09/2013 12:01	12:01	5.0156	2.330	1.181901187	1.087152789	2.143213009	0.036
10/09/2013 12:02	12:02	6.3029	2.340	1.186973724	1.089483237	2.147807254	0.036
10/09/2013 12:03	12:03	4.4099	2.340	1.186973724	1.089483237	2.147807254	0.036
10/09/2013 12:04	12:04	3.6035	2.310	1.171756112	1.082476842	2.133994845	0.036
10/09/2013 12:05	12:05	4.8577	2.340	1.186973724	1.089483237	2.147807254	0.036
10/09/2013 12:06	12:06	4.7335	2.220	1.126103277	1.061180134	2.092010516	0.035
10/09/2013 12:07	12:07	5.2551	2.270	1.151465963	1.073063821	2.115438016	0.035



MNF Measure after countermeasure in Tuvaruhu 1

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
11-Sep	2:48	0.986	3.570	23.074

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
2/10/2013 13:30	13:00	2.3048	3.430	0.960784314	0.980196059	0.965983216	0.016
2/10/2013 13:31	13:01	3.0208	3.440	0.963585434	0.981623876	0.967390304	0.016
2/10/2013 13:32	13:02	3.6872	3.440	0.963585434	0.981623876	0.967390304	0.016
2/10/2013 13:33	13:03	3.0015	3.440	0.963585434	0.981623876	0.967390304	0.016
2/10/2013 13:34	13:04	2.2818	3.430	0.960784314	0.980196059	0.965983216	0.016
2/10/2013 13:35	13:05	2.6522	3.390	0.949579832	0.974463869	0.960334143	0.016
2/10/2013 13:36	13:06	3.1714	3.380	0.946778711	0.973025545	0.958916674	0.016
2/10/2013 13:37	13:07	3.4310	3.430	0.960784314	0.980196059	0.965983216	0.016
2/10/2013 13:38	13:08	2.7753	3.470	0.971988796	0.985894921	0.971599445	0.016
2/10/2013 13:39	13:09	3.4004	3.470	0.971988796	0.985894921	0.971599445	0.016
2/10/2013 13:40	13:10	2.1898	3.440	0.963585434	0.981623876	0.967390304	0.016
2/10/2013 13:41	13:11	4.1300	3.480	0.974789916	0.987314497	0.972998437	0.016
2/10/2013 13:42	13:12	4.4458	3.470	0.971988796	0.985894921	0.971599445	0.016
2/10/2013 13:43	13:13	3.0495	3.440	0.963585434	0.981623876	0.967390304	0.016
2/10/2013 13:44	13:14	3.9248	3.490	0.977591036	0.988732035	0.974385420	0.016
2/10/2013 13:45	13:15	3.7871	3.460	0.969187675	0.984473288	0.970198435	0.016
2/10/2013 13:46	13:16	2.6886	3.430	0.960784314	0.980196059	0.965983216	0.016
2/10/2013 13:47	13:17	4.1478	3.500	0.980392157	0.990147543	0.975750404	0.016
2/10/2013 13:48	13:18	3.6603	3.500	0.980392157	0.990147543	0.975750404	0.016
2/10/2013 13:49	13:19	3.9037	3.490	0.977591036	0.988732035	0.974385420	0.016
2/10/2013 13:50	13:20	3.5452	3.500	0.980392157	0.990147543	0.975750404	0.016
2/10/2013 13:51	13:21	3.5457	3.480	0.974789916	0.987314497	0.972998437	0.016
2/10/2013 13:52	13:22	4.1227	3.550	0.994397759	0.997194945	0.982736196	0.016
2/10/2013 13:53	13:23	3.8108	3.500	0.980392157	0.990147543	0.975750404	0.016
2/10/2013 13:54	13:24	3.5669	3.500	0.980392157	0.990147543	0.975750404	0.016
2/10/2013 13:55	13:25	3.8799	3.510	0.983193277	0.991561031	0.977183390	0.016
2/10/2013 13:56	13:26	3.4599	3.500	0.980392157	0.990147543	0.975750404	0.016
2/10/2013 13:57	13:27	3.3133	3.500	0.980392157	0.990147543	0.975750404	0.016
2/10/2013 13:58	13:28	3.2700	3.440	0.963585434	0.981623876	0.967390304	0.016
2/10/2013 13:59	13:29	3.3386	3.440	0.963585434	0.981623876	0.967390304	0.016
2/10/2013 14:00	13:30	4.1571	3.490	0.977591036	0.988732035	0.974385420	0.016
2/10/2013 14:01	13:31	4.0139	3.490	0.977591036	0.988732035	0.974385420	0.016
2/10/2013 14:02	13:32	4.0025	3.460	0.969187675	0.984473288	0.970198435	0.016
2/10/2013 14:03	13:33	4.6642	3.490	0.977591036	0.988732035	0.974385420	0.016
2/10/2013 14:04	13:34	4.0587	3.500	0.980392157	0.990147543	0.975750404	0.016
2/10/2013 14:05	13:35	4.8239	3.460	0.969187675	0.984473288	0.970198435	0.016
2/10/2013 14:06	13:36	3.9665	3.490	0.977591036	0.988732035	0.974385420	0.016
2/10/2013 14:07	13:37	4.4950	3.490	0.977591036	0.988732035	0.974385420	0.016
2/10/2013 14:08	13:38	4.3881	3.500	0.980392157	0.990147543	0.975750404	0.016
2/10/2013 14:09	13:39	3.4782	3.460	0.969187675	0.984473288	0.970198435	0.016
2/10/2013 14:10	13:40	4.5640	3.480	0.974789916	0.987314497	0.972998437	0.016
2/10/2013 14:11	13:41	2.7776	3.490	0.977591036	0.988732035	0.974385420	0.016
2/10/2013 14:12	13:42	3.3018	3.430	0.960784314	0.980196059	0.965983216	0.016
2/10/2013 14:13	13:43	2.9835	3.460	0.969187675	0.984473288	0.970198435	0.016
2/10/2013 14:14	13:44	3.4080	3.500	0.980392157	0.990147543	0.975750404	0.016
2/10/2013 14:15	13:45	2.4394	3.490	0.977591036	0.988732035	0.974385420	0.016
2/10/2013 14:16	13:46	2.6698	3.490	0.977591036	0.988732035	0.974385420	0.016



Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
11/09/2013 10:46	10:46	7.6669	2.160	1.095668053	1.046741636	2.063546462	0.034
11/09/2013 10:47	10:47	8.5467	2.150	1.090595516	1.044315812	2.058764192	0.034
11/09/2013 10:48	10:48	6.9389	2.150	1.090595516	1.044315812	2.058764192	0.034
11/09/2013 10:49	10:49	7.0402	2.120	1.075377904	1.037004293	2.044350264	0.034
11/09/2013 10:50	10:50	6.5270	2.170	1.100740590	1.049161851	2.068317674	0.034
11/09/2013 10:51	10:51	4.8806	2.160	1.095668053	1.046741636	2.063546462	0.034
11/09/2013 10:52	10:52	5.1043	2.180	1.105813128	1.051576496	2.073075905	0.035
11/09/2013 10:53	10:53	5.0024	2.150	1.090595516	1.044315812	2.058764192	0.034
11/09/2013 10:54	10:54	4.9862	2.100	1.065232829	1.032101172	2.034684251	0.034
11/09/2013 10:55	10:55	3.5511	2.160	1.095668053	1.046741636	2.063546462	0.034
11/09/2013 10:56	10:56	4.1208	2.110	1.070305367	1.034555637	2.039522983	0.034
11/09/2013 10:57	10:57	4.1039	2.120	1.075377904	1.037004293	2.044350264	0.034
11/09/2013 10:58	10:58	4.6293	2.160	1.095668053	1.046741636	2.063546462	0.034
11/09/2013 10:59	10:59	3.3057	2.030	1.029725088	1.014753698	2.000485441	0.033
11/09/2013 11:00	11:00	2.9175	2.040	1.034797606	1.017250021	2.005406692	0.033
11/09/2013 11:01	11:01	3.8239	2.040	1.034797606	1.017250021	2.005406692	0.033
11/09/2013 11:02	11:02	3.9596	2.060	1.044942680	1.022224379	2.015213140	0.034
11/09/2013 11:03	11:03	4.0898	2.130	1.080450441	1.039417181	2.049160172	0.034
11/09/2013 11:04	11:04	3.3801	2.110	1.070305367	1.034555637	2.039522983	0.034
11/09/2013 11:05	11:05	4.2431	2.140	1.085522979	1.041884340	2.053970788	0.034
11/09/2013 11:06	11:06	4.2562	2.090	1.060160292	1.029640856	2.029833983	0.034
11/09/2013 11:07	11:07	4.2562	2.060	1.044942680	1.022224379	2.015213140	0.034
11/09/2013 11:08	11:08	4.2562	2.100	1.065232829	1.032101172	2.034684251	0.034
11/09/2013 11:09	11:09	4.2562	2.060	1.044942680	1.022224379	2.015213140	0.034
11/09/2013 11:10	11:10	4.2562	2.100	1.065232829	1.032101172	2.034684251	0.034
11/09/2013 11:11	11:11	4.2562	2.100	1.065232829	1.032101172	2.034684251	0.034
11/09/2013 11:12	11:12	4.2562	2.030	1.029725088	1.014753698	2.000485441	0.033
11/09/2013 11:13	11:13	4.2562	2.030	1.029725088	1.014753698	2.000485441	0.033
11/09/2013 11:14	11:14	4.2562	2.040	1.034797606	1.017250021	2.005406692	0.033
11/09/2013 11:15	11:15	4.2562	2.090	1.060160292	1.029640856	2.029833983	0.034
11/09/2013 11:16	11:16	4.2562	2.030	1.029725088	1.014753698	2.000485441	0.033
11/09/2013 11:17	11:17	4.2562	1.990	1.009434919	1.004706385	1.980678167	0.033
11/09/2013 11:18	11:18	4.2562	2.030	1.029725088	1.014753698	2.000485441	0.033
11/09/2013 11:19	11:19	4.2562	1.990	1.009434919	1.004706385	1.980678167	0.033
11/09/2013 11:20	11:20	4.2562	1.980	1.004362382	1.002178817	1.975695321	0.033
11/09/2013 11:21	11:21	4.2562	1.970	0.999288945	0.999614859	1.970699876	0.033
11/09/2013 11:22	11:22	4.2562	2.060	1.044942680	1.022224379	2.015213140	0.034
11/09/2013 11:23	11:23	4.2562	2.040	1.034797606	1.017250021	2.005406692	0.033
11/09/2013 11:24	11:24	4.2562	2.010	1.019579994	1.009742538	1.990606440	0.033
11/09/2013 11:25	11:25	4.2562	2.020	1.024652531	1.012251219	1.995552054	0.033
11/09/2013 11:26	11:26	4.2562	2.040	1.034797606	1.017250021	2.005406692	0.033
11/09/2013 11:27	11:27	4.2562	2.090	1.060160292	1.029640856	2.029833983	0.034
11/09/2013 11:28	11:28	4.2562	2.090	1.060160292	1.029640856	2.029833983	0.034
11/09/2013 11:29	11:29	4.2562	2.090	1.060160292	1.029640856	2.029833983	0.034
11/09/2013 11:30	11:30	4.2562	2.030	1.029725088	1.014753698	2.000485441	0.033
		Estimated Leakage Rate (m^3/day)				**48.234**	**0**
System Input Volume		105.82 m3/day					

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
3/10/2013 12:34	12:04	4.1448	3.440	0.963585434	0.981623876	0.967390304	0.016
3/10/2013 12:35	12:05	4.3530	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:36	12:06	2.8547	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:37	12:07	3.1385	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:38	12:08	3.2352	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:39	12:09	3.8085	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:40	12:10	3.4588	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:41	12:11	3.8528	3.510	0.983193277	0.991561031	0.977183390	0.016
3/10/2013 12:42	12:12	3.1221	3.550	0.994397759	0.997194945	0.982736196	0.016
3/10/2013 12:43	12:13	3.0982	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:44	12:14	2.8870	3.550	0.994397759	0.997194945	0.982736196	0.016
3/10/2013 12:45	12:15	3.8198	3.550	0.994397759	0.997194945	0.982736196	0.016
3/10/2013 12:46	12:16	1.8748	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:47	12:17	4.2458	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:48	12:18	3.3008	3.550	0.994397759	0.997194945	0.982736196	0.016
3/10/2013 12:49	12:19	5.4114	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:50	12:20	4.1297	3.510	0.983193277	0.991561031	0.977183390	0.016
3/10/2013 12:51	12:21	4.1010	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:52	12:22	3.7505	3.490	0.977591036	0.988732035	0.974385420	0.016
3/10/2013 12:53	12:23	3.8639	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:54	12:24	3.8944	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:55	12:25	5.4117	3.500	0.980392157	0.990147543	0.975750404	0.016
3/10/2013 12:56	12:26	3.8564	3.450	0.966386555	0.983109620	0.968754802	0.016
3/10/2013 12:57	12:27	3.6035	3.490	0.977591036	0.988732035	0.974385420	0.016
3/10/2013 12:58	12:28	3.5025	3.450	0.966386555	0.983109620	0.968754802	0.016
3/10/2013 12:59	12:29	3.4108	3.440	0.963585434	0.981623876	0.967390304	0.016
3/10/2013 13:00	12:30	4.5914	3.440	0.963585434	0.981623876	0.967390304	0.016
3/10/2013 13:01	12:31	3.4275	3.470	0.971988796	0.985894921	0.971599445	0.016
3/10/2013 13:02	12:32	4.0022	3.430	0.960784314	0.980196059	0.965983216	0.016
3/10/2013 13:03	12:33	3.1028	3.410	0.955182073	0.977331656	0.963128231	0.016
3/10/2013 13:04	12:34	4.0713	3.430	0.960784314	0.980196059	0.965983216	0.016
3/10/2013 13:05	12:35	3.1917	3.460	0.969187675	0.984473288	0.970198435	0.016
3/10/2013 13:06	12:36	3.7998	3.470	0.971988796	0.985894921	0.971599445	0.016
3/10/2013 13:07	12:37	5.2208	3.470	0.971988796	0.985894921	0.971599445	0.016
3/10/2013 13:08	12:38	4.2713	3.460	0.969187675	0.984473288	0.970198435	0.016
3/10/2013 13:09	12:39	4.2186	3.430	0.960784314	0.980196059	0.965983216	0.016
3/10/2013 13:10	12:40	3.3136	3.490	0.977591036	0.988732035	0.974385420	0.016
3/10/2013 13:11	12:41	3.3541	3.480	0.974789916	0.987314497	0.972998437	0.016
3/10/2013 13:12	12:42	4.2537	3.470	0.971988796	0.985894921	0.971599445	0.016
3/10/2013 13:13	12:43	4.4656	3.440	0.963585434	0.981623876	0.967390304	0.016
3/10/2013 13:14	12:44	5.0048	3.470	0.971988796	0.985894921	0.971599445	0.016
3/10/2013 13:15	12:45	3.8185	3.440	0.963585434	0.981623876	0.967390304	0.016
3/10/2013 13:16	12:46	4.2273	3.440	0.963585434	0.981623876	0.967390304	0.016
3/10/2013 13:17	12:47	3.7088	3.430	0.960784314	0.980196059	0.965983216	0.016
3/10/2013 13:18	12:48	3.4967	3.420	0.957983193	0.978766159	0.964574085	0.016
3/10/2013 13:19	12:49	4.8498	3.370	0.943977591	0.971585062	0.957497186	0.016
3/10/2013 13:20	12:50	3.4657	3.420	0.957983193	0.978766159	0.964574085	0.016
3/10/2013 13:21	12:51	3.5168	3.380	0.946778711	0.973025545	0.958916674	0.016
3/10/2013 13:22	12:52	3.0866	3.440	0.963585434	0.981623876	0.967390304	0.016
3/10/2013 13:23	12:53	3.9198	3.440	0.963585434	0.981623876	0.967390304	0.016
3/10/2013 13:24	12:54	4.8222	3.430	0.960784314	0.980196059	0.965983216	0.016
3/10/2013 13:25	12:55	4.1196	3.350	0.938375350	0.968697760	0.954656442	0.016
3/10/2013 13:26	12:56	4.5489	3.400	0.952380952	0.975900073	0.961749223	0.016
3/10/2013 13:27	12:57	3.4868	3.430	0.960784314	0.980196059	0.965983216	0.016
3/10/2013 13:28	12:58	3.5539	3.480	0.974789916	0.987314497	0.972998437	0.016
3/10/2013 13:29	12:59	3.4212	3.430	0.960784314	0.980196059	0.965983216	0.016
3/10/2013 13:30	13:00	3.6015	3.745	1.047619048	1.023332631	1.008691488	0.017
		Estimated Leakage Rate (m^3/day)				**23.074**	
System Input Volume		64.26 m3/day					

TUVARUHU 1 METER INACCURACY TEST (Before Countermeasure)

No.	Account	Customer	Location_2	St	Meter ID	Meter Working	PILOT SITE	Initial Reading		Final Reading		Difference		
								Tested Meter	TR-III Machine	Tested Meter	TR-III Machine	Meter	Machine	error
1	7001	JOSEPH WALE	TUVARUHU ESTATE		07-000022	Meter	T1	3612.6099	11.151	3622.711	11.251	0.1011	0.1	-0.01%
2	7003	DIANA ROIUMANA	TUVARUHU		07-001133	meter	T1	1645.7032	10.735	1645.8059	10.837	0.1027	0.102	-0.01%
3	7004	WILLIAM NALO	TUVARUHU	D	545479	D/ILLEGAL	T1					0	0	0.00%
4	07004-01	JANE FENA	TUVARUHU HILL SIDE		D/LINE							0	0	0.00%
5	07004-02	BETSY HOLI			11A000673							0	0	0.00%
6	07004-3	HILDA TAKAROBO	LOT/NO		07-000792	Meter	T1					0	0	0.00%
7	07004-2	NELSON FRASER			05A018591	Meter	T1					0	0	0.00%
8	07004-3	HENRY NALLANLLO			05A018352							0	0	0.00%
9	7005	FRANCIS HOASIPUA	TUVARUHU		07-000103	meter	T1	1697.6343	10.431	1697.7407	10.531	0.1064	0.1	-0.06%
10	7006	EDWARD HORIA	TUVARUHU		383115494	meter	T1	2052.591	10.3262	2052.606	10.4262	0.015	0.1	0.82%
11	7010	FANNY KILUA	TUVARUHU		545451	meter	T1	534.986	10.1245	535.003	10.2245	0.017	0.1	0.81%
12	7027	PETER RAPASIA	TUVARUHU		545483	METER BURIED	T1	2049.502	11.038	2079.524	11.138	30.022	0.1	
13	07028-1	MILDRED TAHIMARE	TUVARUHU	V	07-000123	SUSPEND	T1	1504.5897	11.225	1504.6964	11.325	0.1067	0.1	-0.06%
14	7029	BOBBY KELLY	TUVARUHU		12A005025	metered	T1	263.922	11.125	264.02	11.225	0.098	0.1	0.02%
15	7033	RICHARD TARO	TUVARUHU		07-000179	Metered	T1	3197.239	10.921	3197.3387	11.021	0.0997	0.1	0.00%
16	7037	GABRIEL KONARE	TUVARUHU		493396	Metered	T1	4837.0213	10.9371	4837.151	11.037	0.1297	0.0999	-0.27%
17	7040	ISHMAEL EMIGRASOFA	TUVARUHU		05B826567	**NEW METER 12B010878**	T1	91.375	10.6363	91.482	10.7363	0.107	0.1	-0.07%
18	07040-1	DOREEN DONNE	TUVARUHU		09B053492	Metered	T1	1855.935	10.5353	1856.045	10.6323	0.11	0.097	-0.12%
19	7041	ATKIN FAKAIA	TUVARUHU		12A004854	Metered	T1	504.235	10.7382	504.334	10.7382	0.099	0	-0.92%
20	7042	JINGQUAN TAN	TUVARUHU		07-000353	Metered	T1	6906.9748	10.1074	6907.032	10.1144	0.0572	0.007	-0.50%
21	7044	NESTA TOLOBUA	TUVARUHU		08B904894	METER BURIED	T1	172.03	10.8365	172.04	10.936	0.01	0.0995	0.82%
22	7047	PRISCILLA RAUPASI	TUVARUHU		12B01969	Meter	T1	1631.663	11.024	1631.763	11.124	0.1	0.1	0.00%
23	7084	TUVARUHU SCHOOL	TUVARUHU SCHOOL		09A000209	METER	T1	3713.409	10.82	3713.509	10.92	0.1	0.1	0.00%
													Average	0.02%

S64-L-18

AFTER COUNTERMEASURES NEW METER RAISING _TUVARUHU 1 sample of 5 meter

No	Meter_ID	Account_Na	Account_Nu	Account_Ty	Meter_Size	DATE	TIME	Initial Reading		Final Reading		difference		Error	Error %
1	09B053492	DOREEN DONNE	07040-1	Domestic	20		4.11	1878.931	0.652	1879.029	0.752	0.098	0.1	0.002	2.00%
2	138019503	DIANA ROIUMANA	7003	Domestic	20		3.25	25.125	0.353	25.224	0.453	0.099	0.1	0.001	1.00%
3	138019444	RICHARD TARO	7033	Domestic	20		4.06	35.934	0.454	36.036	0.554	0.102	0.1	-0.002	-2.00%
4	12B010969	PRISCILLA RAUPASI	7047	Domestic	20		4.52	1129.994	0.554	1130.095	0.654	0.101	0.1	-0.001	-1.00%
5	13A000757	PETER RAPASIA	7027	Domestic	15		5.56	29.452	0.755	29.554	0.855	0.1	0.1	0	0.00%
												average			0.00%

Actual Measurement of Leakage and Open-end Flow **5 No. 1 Tuvaruhu-1**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			User Type (excl. Leakage on Main lines)		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom.: 32m^3 Non-D: 45m^3	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom	Non-D	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1																											
2																											
3																											
4																											
5																											
6	*			*							*		*		*					*		0.02	0.48				
7																											
8																											
9																											
10																											
11																											
12	*			*						*			*		*						*	0.30	7.2				
13	*			*					*				*		*					*		0.25	6				
14	*			*						*			*		*						*	0.15	3.6				
15	*			*						*			*		*						*	0.14	3.36				
16	*			*					*				*		*					*		0.12	2.88				
17	*			*						*			*		*						*	0.11	2.64				
18	*			*					*				*		*				*			0.15	3.6				
19	*			*						*			*		*						*	0.12	2.88				
Total	**9**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**3**	**5**	**1**	**0**	**9**	**0**	**9**	**0**	**0**	**0**	**1**	**3**	**5**		**32.64**			**0.00**	**0.00**
	9		**9**		**0**				**9**				**9**		**9**				**9**								

Note:

Change in Status of Connections (Customers, Users and Unconnection) 6 No. 15 Tuvaruhu-2

No.	Account No.	Account Name	Location	Before Countermeasures																						After Countermeasures																							
				Registered		Non-Regist.	Illegal	Un-	Consumer Type			Meter ID	Meter						Service Pipe End	If open,	Meter Reading (m3)			New/Re	Legalized	Disconnection		Un-	Meter Raising		Consumer Type			Meter ID	Meter (m3 unit)						Meter Reading (m3)		
				Meter	D/L	Direct	Indirect	Connect.	Dom.	Com.	?	Number	15	20	32	40	50	?	Closed	Open	m3/day	2013/9/9	2013/10/10	Consumption	Regist.		Illegal	Registered	Connect.	No-Change	Replace	New	Dom.	Com.	?	Number	15	20	32	40	50	?	2013/10/8	2013/10/9	Consumption
1	7012	SUKUNA SABELI	TUVARUHU ESTATE	1							1	07-000176					1				1,163.945	1,164.349	0.404				1																				
2	7013	GODWIN OGE	TUVARUHU		1						1	544413															1																			
3	07013-I	CHRISTINA TAWA	TUVARUHU		1						1	99B149899															1																			
4	7014	THOMAS KNOX	TUVARUHU		1						1	DILINE																		1			13D019437	1						1,344	2,430	1,086
5	07014-I	SHARON PITAKAKA	TUVARUHU		1						1	13A001091																		1			13A001091	1						4,632	4,743	0,111
6	7015	MAXSWEENY KEKEVERA	TUVARUHU	1							1	12A001324					1				215.322	216.649	1,327							1			13D019664	1						13.068	15.270	2,202
7	7016	LINDSAY PITAVOLOMO	TUVARUHU	1							1	07-000666					1				1,332.217	1,332.812	0,595							1			13D019667	1						3,712	4,559	0,847
8	7017	JAMES RIZU	TUVARUHU ESTATE		1						1	719788															1																			
9	7018	ALFRED WILLIE	TUVARUHU		1						1	07-000465																		1			13D019665	1						13,585	15,385	1,800
10	7019	LAZARUS KAUHIONA	TUVARUHU			1					1	882115														1																			
11	7020	JOSEPH KALEVALAKA	TUVARUHU		1						1	04A018200																		1			13D019493	1						4,520	4,835	0,315
12	7021	EMMY KOE	TUVARUHU ESTATE	1							1	12B011144					1				85,003	85,489	0,486							1			12B11144	1						867,010	867,684	0,674
13	07021-2	PETER PITAMUVA	TUVARUHU	1							1	12A004839					1				574,601	575,826	1,225							1			13D019580	1						5,432	7,363	1,931
14	7022	TIMOTHY KAUHIONA	TUVARUHU	1							1	544421					1				57,520	57,786	0,266							1			13D019432	1						12,041	13,632	1,591
15	7023	LUCY LAFEA	TUVARUHU ESTATE		1						1	160145																		1			13D019579	1						8,803	11,003	2,200
16	7024	JOYCE BUGA	TUVARUHU ESTATE		1						1	07-000224																		1			13D019431	1						6,819	7,635	0,816
17	7025	ILEEN SUSAN	TUVARUHU ESTATE					1			1	10A005212																	1																
18	7026	MOFFAT HROPUHI	TUVARUHU HOUSING ESTAT					1			1	05BB81666																	1																
19	07026-I	ROTA BATAVINDIA	TUVARUHU		1						1	07-000175																		1			13D019429	1						13,904	15,504	1,600
20	7052	MARY DONA	TUVARUHU ESTATE					1			1	07-000464																	1																
21	7053	PAUL BULU	TUVARUHU			1					1	07-000484														1				1			13D0111150	1						17,926	19,064	1,138
22	7054	DR SOLOMON ALBERT	TUVARUHU		1						1	540500															1																			
23	7055	JOY HRUAPU	TUVARUHU			1					1	06A021880														1				1			13B011271	1						29,714	33,320	3,606
24	7056	DAVID RIRIMANA	TUVARUHU					1			1	07-000501																1																
25	7057	JACK WATEHA'A	TUVARUHU			1					1	06A021881															1																			
26	7058	ALBERT WALE	TUVARUHU		1						1	543395															1																			
27	7059	TOM ROUHAU	TUVARUHU ESTATE	1							1	09A000280					1				784.642	****								1			13D019430	1						6,436	6,948	0,512
28	7060	JOHN MARK LANGU	HONIARA					1			1	07-000118																	1																
29	7061	CHRISTIAN NIENG	TUVARUHU	1							1	12B010970					1				362.756	363.290	0,534							1			12D010970	1						383.075	385.197	2,122
30	7062	BEN DEDE	TUVARUHU		1						1	545462																		1			13D019582	1						1,492	1,623	0,131
31	7063	HENSON BO	TUVARUHU	1							1	07-000556					1				1,265.548	****								1			13D019357	1						4,648	5,047	0,399
32	7064	HILDA ANIHONIARA	TUVARUHU			1					1	10A005211					1				1,004.606	1,005.459	0,853		1					1			13D019732	1						6,175	6,618	0,443
33	7065	DAN ALICK MISBAH	HINO 67			1					1	0107-000478															1																			
34	7066	JENNIFER ATOREA	TUVARUHU		1						1	544663																		1			13D019474	1						3,240	3,668	0,428
35	7067	LESLEY SWANN	TUVARUHU		1						1	545482															1																			
36	7068	JAVAN DONI	TUVARUHU					1			1	AF395824																	1																
37	7069	CLEMENT BASE	TUVARUHU	1							1	06A021726					1				835.624	****								1			13D019475	1						16,583	18,359	1,766
38	7070	CHARLES BAKO	TUVARUHU	1							1	05B881643					1				1,917.346	1,918.360	1,014							1			05B881643	1						1953.027	1954.054	1,027
39	7071	BEATRICE SUNARI	TUVARUHU	1							1	97B033793					1				7,178.877	7,179.780	0,903							1			97B033793	1						7207.322	7208.419	1,098
40	7072	JOHN FOTELIWALE	TUVARUHU		1						1	12A005387																1																
41	7073	WILLIAM WALEKWATE	TUVARUHU	1							1	07-000745					1				2,909.953	****								1			13D019730	1						2,783	3,143	0,360
42	7074	PATRICIAH GEORGE	TUVARUHU			1					1	950498														1																			
43	7075	ERIC HURUTARAU	TUVARUHU		1						1	07-000552																		1			13D019583	1						7,805	8,699	0,894
44	7076	LIONEL PUHMANA	TUVURUHU	1							1	07-000991					1				1,569.016	****								1																
45	7077	MARTINA BITA	TUVARUHU	1							1	0106A021723					1				2,412.646	2,413.800	1,154				1																			
46	07077-01	ALBY HAM	TUVARUHU		1						1	12A005035															1																			
47	07077-1	DAVID WAKASI	TUVARUHU		1						1	97C0451															1																			
48	07077-2	ERIC TEMA	LOT		1						1	DILINE																		1			13D019490	1						11,309	15,708	4,399
49	07077-3	MARTINA BITA						1				STILL NOT CONNE												1						1			13D019492	1						6,754	8,339	1,585
50	07077-4	MATHIAS NONI	LOTINO	1							1	09A000170					1				1,066.372	1,066.941	0,569							1			13D19489	1						16,734	19,888	3,154
51	7078	RAMO TIANA	TUVARUHU					1			1	77129404																		1																
52	7079	CHRISTIAN NIENG	TUVARUHU	1							1	216					1				6,707.000	****								1			13D019730	1						14,941	16,687	1,746
53	7080	HELLEN HUNUEHU	TUVARUHU STORE					1			1	95358910																		1																
54	07080-I	HELLEN HUNUEHU	TUVARUHU LOUGE	1							1	06B940522					1				6,813.256	****								1			06B940522	1						6724.518	6727.181	2,663
55	7081	TUVARUHU VESTRY AGUON CHURCH	TUVARUHU CHURCH AREA	1							1	12B086834					1				43,133	43,430	0,297							1			12B086834	1						50,423	50,605	0,182
56	07081-01	TUVARUHU PARISH	TUVARUHU		1						1	07-000080																		1			13A000790	1						17,073	18,097	1,024
57	7082	THE CONSUMER	TEACHERS HOUSE TUVARUH			1					1	370508														1																			
58	7083	HERA LINTON	TEACHERS HOUE TUVARUHU			1					1	07-000587														1																			
59	7084	TUVARUHU SCHOOL	TUVARUHU SCHOOL		1						1	09A000209															1																			
60	7085	LAWRENCE HASI	OFFICE BLOCK TUVARUHU					1			1	DILINE																	1																
61		JOHN MAGA	TUVARUHU			1					1															1																			
62		RICHARD TARO				1					1															1																			
63																																																	
64																																																	
65																																																	
				19	22	11	0	10	0	0	45		0	0	0	0	0	20	0	0	0			9.626	1	3	8	13	9	0	16	16	0	0	0		32	0	0	0	0	0			43.950

Category in Water Audit Table

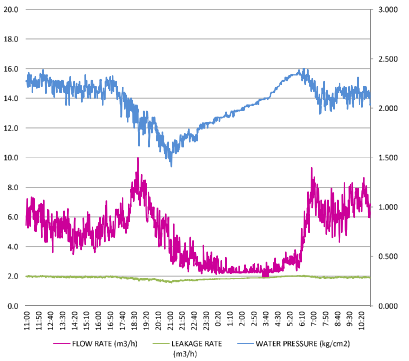
	A	B	D+E	F	I		A					I	A			A		
	19	22	11	0	10	45	20		9.626	1	3	30	32	0	32		43.950
Total HH	62							No of the meter read	13	Total HH	62				No of the meter read	32	
								Average	0.740						Average	1.373	
								Assumed consumption of all meters	14.089						Assumed consumption of all meters	43.950	

* Each indirect un-registered (parasite) user cannot be recognized, so only the total should be entered manually.

MNF Measure before countermeasure in Tuvaruhu 2

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
11-Sep	3:37	1.9045	2.100	45.284

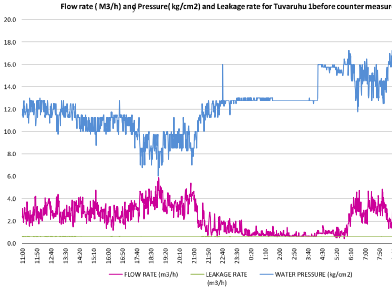
Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
9/09/2013 11:00	11:00	5.4787	2.270	1.080952381	1.039688598	1.980086935	0.033
9/09/2013 11:01	11:01	5.8902	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:02	11:02	6.0525	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:03	11:03	6.2106	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:04	11:04	6.7319	2.270	1.080952381	1.039688598	1.980086935	0.033
9/09/2013 11:05	11:05	7.2181	2.240	1.066666667	1.032795559	1.966959142	0.033
9/09/2013 11:06	11:06	5.5731	2.220	1.057142857	1.028174527	1.958158386	0.033
9/09/2013 11:07	11:07	5.8010	2.220	1.057142857	1.028174527	1.958158386	0.033
9/09/2013 11:08	11:08	6.3663	2.340	1.114285714	1.055597326	2.010385107	0.034
9/09/2013 11:09	11:09	5.2521	2.210	1.052380952	1.025856205	1.953743142	0.033
9/09/2013 11:10	11:10	6.1964	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:11	11:11	6.6080	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:12	11:12	5.6992	2.360	1.123809524	1.060098827	2.018958217	0.034
9/09/2013 11:13	11:13	5.8595	2.340	1.114285714	1.055597326	2.010385107	0.034
9/09/2013 11:14	11:14	5.7484	2.340	1.114285714	1.055597326	2.010385107	0.034
9/09/2013 11:15	11:15	6.6779	2.230	1.061904762	1.030487633	1.962563697	0.033
9/09/2013 11:16	11:16	6.0510	2.220	1.057142857	1.028174527	1.958158386	0.033
9/09/2013 11:17	11:17	5.6219	2.320	1.104761905	1.051076546	2.001775281	0.033
9/09/2013 11:18	11:18	5.3754	2.300	1.095238095	1.046536237	1.993128263	0.033
9/09/2013 11:19	11:19	6.4512	2.330	1.109523810	1.053339361	2.006084813	0.033
9/09/2013 11:20	11:20	6.7413	2.340	1.114285714	1.055597326	2.010385107	0.034
9/09/2013 11:21	11:21	6.4827	2.340	1.114285714	1.055597326	2.010385107	0.034
9/09/2013 11:22	11:22	6.8756	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:23	11:23	7.3392	2.250	1.071428571	1.035098339	1.971344787	0.033
9/09/2013 11:24	11:24	7.2654	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:25	11:25	7.2414	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:26	11:26	7.1373	2.200	1.047619048	1.023532631	1.949317897	0.032
9/09/2013 11:27	11:27	6.5251	2.160	1.028571429	1.014185106	1.931515534	0.032
9/09/2013 11:28	11:28	6.3544	2.270	1.080952381	1.039688598	1.980086935	0.033
9/09/2013 11:29	11:29	7.1243	2.220	1.057142857	1.028174527	1.958158386	0.033
9/09/2013 11:30	11:30	7.1099	2.220	1.057142857	1.028174527	1.958158386	0.033
9/09/2013 11:31	11:31	7.2881	2.230	1.061904762	1.030487633	1.962563697	0.033
9/09/2013 11:32	11:32	5.8352	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:33	11:33	6.9757	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:34	11:34	7.2299	2.300	1.095238095	1.046536237	1.993128263	0.033



MNF Measure After countermeasure in Tuvaruhu 2

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
9-Oct	2:46	0.6100	3.610	14.410

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
8/10/2013 11:00	11:00	2.3928	3.560	0.986149586	0.993059645	0.697568894	0.010
8/10/2013 11:01	11:01	2.3048	3.560	0.986149586	0.993059645	0.697568894	0.010
8/10/2013 11:02	11:02	3.0830	3.570	0.988919688	0.994444401	0.698571885	0.010
8/10/2013 11:03	11:03	2.2561	3.580	0.991689751	0.995836207	0.697460886	0.010
8/10/2013 11:04	11:04	2.3898	3.550	0.983379501	0.991654931	0.694909598	0.010
8/10/2013 11:05	11:05	1.8584	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:06	11:06	2.3293	3.610	1.000000000	1.000000000	0.610000000	0.010
8/10/2013 11:07	11:07	2.6301	3.610	1.000000000	1.000000000	0.610000000	0.010
8/10/2013 11:08	11:08	3.2025	3.570	0.988919688	0.994444401	0.696611085	0.010
8/10/2013 11:09	11:09	2.6815	3.590	0.994459834	0.997226078	0.698307702	0.010
8/10/2013 11:10	11:10	3.1873	3.560	0.986149586	0.993059645	0.697568894	0.010
8/10/2013 11:11	11:11	2.1520	3.560	0.986149586	0.993059645	0.697568894	0.010
8/10/2013 11:12	11:12	2.6090	3.570	0.988919688	0.994444401	0.696611085	0.010
8/10/2013 11:13	11:13	2.4685	3.570	0.988919688	0.994444401	0.696611085	0.010
8/10/2013 11:14	11:14	2.7517	3.570	0.988919688	0.994444401	0.696611085	0.010
8/10/2013 11:15	11:15	1.6838	3.590	0.994459834	0.997226078	0.698307702	0.010
8/10/2013 11:16	11:16	2.7723	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:17	11:17	3.7125	3.590	0.994459834	0.997226078	0.698307702	0.010
8/10/2013 11:18	11:18	3.1667	3.550	0.983379501	0.991654931	0.694909598	0.010
8/10/2013 11:19	11:19	2.0010	3.560	0.986149586	0.993059645	0.695768894	0.010
8/10/2013 11:20	11:20	2.2284	3.580	0.991689751	0.995836207	0.697460886	0.010
8/10/2013 11:21	11:21	2.8708	3.560	0.986149586	0.993059645	0.695768894	0.010
8/10/2013 11:22	11:22	2.3080	3.560	0.986149586	0.993059645	0.695768894	0.010
8/10/2013 11:23	11:23	2.6574	3.550	0.977839335	0.988857595	0.693201101	0.010
8/10/2013 11:24	11:24	2.4910	3.560	0.986149586	0.993059645	0.695768894	0.010
8/10/2013 11:25	11:25	1.5805	3.560	0.986149586	0.993059645	0.695768894	0.010
8/10/2013 11:26	11:26	1.5814	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:27	11:27	1.5117	3.620	1.002770085	1.001384084	0.610841291	0.010
8/10/2013 11:28	11:28	2.9682	3.610	1.000000000	1.000000000	0.610000000	0.010
8/10/2013 11:29	11:29	1.9589	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:30	11:30	2.4277	3.570	0.988919688	0.994444401	0.696611085	0.010
8/10/2013 11:31	11:31	1.7954	3.610	1.000000000	1.000000000	0.610000000	0.010
8/10/2013 11:32	11:32	2.4684	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:33	11:33	2.3134	3.590	0.994459834	0.997226078	0.698307702	0.010
8/10/2013 11:34	11:34	2.5610	3.610	1.000000000	1.000000000	0.610000000	0.010
8/10/2013 11:35	11:35	2.5178	3.570	0.988919688	0.994444401	0.696611085	0.010
8/10/2013 11:36	11:36	1.5771	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:37	11:37	2.7351	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:38	11:38	2.8928	3.610	1.000000000	1.000000000	0.610000000	0.010
8/10/2013 11:39	11:39	3.2470	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:40	11:40	1.9828	3.560	0.986149586	0.993059645	0.695768894	0.010
8/10/2013 11:41	11:41	2.2378	3.560	0.986149586	0.993059645	0.695768894	0.010
8/10/2013 11:42	11:42	3.0147	3.580	0.991689751	0.995836207	0.697460886	0.010



S64-1-20

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
10/09/2013 10:19	10:19	6.7397	2.160	1.028571429	1.014185106	1.931515534	0.032
10/09/2013 10:20	10:20	6.7851	2.160	1.028571429	1.014185106	1.931515534	0.032
10/09/2013 10:21	10:21	6.7178	2.150	1.023809524	1.011834731	1.927039246	0.032
10/09/2013 10:22	10:22	7.0401	2.150	1.023809524	1.011834731	1.927039246	0.032
10/09/2013 10:23	10:23	6.8747	2.100	1.000000000	1.000000000	1.904500000	0.032
10/09/2013 10:24	10:24	6.3603	2.100	1.000000000	1.000000000	1.904500000	0.032
10/09/2013 10:25	10:25	7.4842	2.010	0.957142857	0.978336781	1.863242399	0.031
10/09/2013 10:26	10:26	7.7779	2.160	1.028571429	1.014185106	1.931515534	0.032
10/09/2013 10:27	10:27	7.7522	2.070	0.985714286	0.992831449	1.890847494	0.032
10/09/2013 10:28	10:28	7.3086	2.150	1.023809524	1.011834731	1.927039246	0.032
10/09/2013 10:29	10:29	7.5248	2.170	1.033333333	1.016530045	1.935981472	0.032
10/09/2013 10:30	10:30	8.2905	2.160	1.028571429	1.014185106	1.931515534	0.032
10/09/2013 10:31	10:31	7.5649	2.160	1.028571429	1.014185106	1.931515534	0.032
10/09/2013 10:32	10:32	8.6519	2.200	1.047619048	1.023532631	1.949317897	0.032
10/09/2013 10:33	10:33	8.3187	2.220	1.057142857	1.028174527	1.958158386	0.033
10/09/2013 10:34	10:34	8.1590	2.180	1.038095238	1.018869588	1.940437131	0.032
10/09/2013 10:35	10:35	8.1330	2.090	0.995238095	0.997616206	1.899660055	0.032
10/09/2013 10:36	10:36	8.0942	2.200	1.047619048	1.023532631	1.949317897	0.032
10/09/2013 10:37	10:37	7.7395	2.220	1.057142857	1.028174527	1.958158386	0.033
10/09/2013 10:38	10:38	7.3602	2.160	1.028571429	1.014185106	1.931515534	0.032
10/09/2013 10:39	10:39	7.8433	2.220	1.057142857	1.028174527	1.958158386	0.033
10/09/2013 10:40	10:40	6.9302	2.130	1.014285714	1.007117528	1.918055331	0.032
10/09/2013 10:41	10:41	6.8824	2.220	1.057142857	1.028174527	1.958158386	0.033
10/09/2013 10:42	10:42	7.1611	2.100	1.000000000	1.000000000	1.904500000	0.032
10/09/2013 10:43	10:43	7.6753	2.200	1.047619048	1.023532631	1.949317897	0.032
10/09/2013 10:44	10:44	8.0995	2.180	1.038095238	1.018869588	1.940437131	0.032
10/09/2013 10:45	10:45	7.1818	2.120	1.009523810	1.004750621	1.913547557	0.032
10/09/2013 10:46	10:46	7.3849	2.160	1.028571429	1.014185106	1.931515534	0.032
10/09/2013 10:47	10:47	7.1998	2.150	1.023809524	1.011834731	1.927039246	0.032
10/09/2013 10:48	10:48	6.6945	2.150	1.023809524	1.011834731	1.927039246	0.032
10/09/2013 10:49	10:49	7.5087	2.170	1.009523810	1.004750621	1.913547557	0.032
10/09/2013 10:50	10:50	7.1002	2.170	1.033333333	1.016530045	1.935981472	0.032
10/09/2013 10:51	10:51	6.9705	2.160	1.028571429	1.014185106	1.931515534	0.032
10/09/2013 10:52	10:52	6.2537	2.180	1.038095238	1.018869588	1.940437131	0.032
10/09/2013 10:53	10:53	6.3803	2.150	1.023809524	1.011834731	1.927039246	0.032
10/09/2013 10:54	10:54	5.9555	2.100	1.000000000	1.000000000	1.904500000	0.032
10/09/2013 10:55	10:55	6.7286	2.160	1.028571429	1.014185106	1.931515534	0.032
10/09/2013 10:56	10:56	5.9401	2.110	1.004761905	1.002378125	1.909029138	0.032
10/09/2013 10:57	10:57	6.3425	2.120	1.009523810	1.004750621	1.913547557	0.032
10/09/2013 10:58	10:58	6.1459	2.160	1.028571429	1.014185106	1.931515534	0.032
10/09/2013 10:59	10:59	6.8712	2.030	0.966666667	0.983192080	1.872489317	0.031
10/09/2013 11:00	11:00	6.7933	2.040	0.971428571	0.985610761	1.877095694	0.031
Estimated Leakage Rate (m^3/day)						**45.284**	**0**
System Input Volume		113.86 m3/day					

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
9/10/2013 10:07	10:07	2.9698	3.760	1.041551247	1.020564181	0.622544150	0.010
9/10/2013 10:08	10:08	3.7369	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:09	10:09	2.8135	3.730	1.033240997	1.016484627	0.620055231	0.010
9/10/2013 10:10	10:10	2.7075	3.770	1.044321330	1.021920413	0.623374452	0.010
9/10/2013 10:11	10:11	2.8844	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:12	10:12	3.3107	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:13	10:13	3.5580	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:14	10:14	3.2824	3.730	1.033240997	1.016484627	0.620055231	0.010
9/10/2013 10:15	10:15	3.2166	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:16	10:16	4.1208	3.750	1.038781163	1.019206144	0.621717548	0.010
9/10/2013 10:17	10:17	3.5324	3.680	1.019390582	1.009648742	0.615885732	0.010
9/10/2013 10:18	10:18	3.3385	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:19	10:19	4.4054	3.760	1.041551247	1.020564181	0.622544150	0.010
9/10/2013 10:20	10:20	3.0943	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:21	10:21	2.3217	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:22	10:22	2.3542	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:23	10:23	2.4584	3.770	1.044321330	1.021920413	0.623374452	0.010
9/10/2013 10:24	10:24	2.5829	3.770	1.044321330	1.021920413	0.623374452	0.010
9/10/2013 10:25	10:25	2.6984	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:26	10:26	2.9213	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:27	10:27	2.8023	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:28	10:28	3.3716	3.750	1.038781163	1.019206144	0.621717548	0.010
9/10/2013 10:29	10:29	3.5737	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:30	10:30	2.9504	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:31	10:31	2.6603	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:32	10:32	2.7750	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:33	10:33	3.7152	3.760	1.041551247	1.020564181	0.622544150	0.010
9/10/2013 10:34	10:34	4.7613	3.730	1.033240997	1.016484627	0.620055231	0.010
9/10/2013 10:35	10:35	3.5348	3.680	1.019390582	1.009648742	0.615885732	0.010
9/10/2013 10:36	10:36	2.5576	3.680	1.019390582	1.009648742	0.615885732	0.010
9/10/2013 10:37	10:37	2.2275	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:38	10:38	1.8886	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:39	10:39	2.2707	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:40	10:40	2.6951	3.760	1.041551247	1.020564181	0.622544150	0.010
9/10/2013 10:41	10:41	2.2032	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:42	10:42	2.7671	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:43	10:43	3.5733	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:44	10:44	3.2628	3.680	1.019390582	1.009648742	0.615885732	0.010
9/10/2013 10:45	10:45	2.4733	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:46	10:46	3.6008	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:47	10:47	3.3099	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:48	10:48	2.2828	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:49	10:49	2.7427	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:50	10:50	3.3397	3.760	1.041551247	1.020564181	0.622544150	0.010
9/10/2013 10:51	10:51	1.9502	3.730	1.033240997	1.016484627	0.620055231	0.010
9/10/2013 10:52	10:52	2.4153	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:53	10:53	2.3650	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:54	10:54	3.1024	3.730	1.033240997	1.016484627	0.620055231	0.010
9/10/2013 10:55	10:55	3.3419	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:56	10:56	2.5895	3.680	1.019390582	1.009648742	0.615885732	0.010
9/10/2013 10:57	10:57	2.9130	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:58	10:58	4.0014	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:59	10:59	2.7261	3.710	1.027700831	1.013754804	0.618391041	0.010
9/10/2013 11:00	11:00	3.0128	3.740	1.036011080	1.017846295	0.620886240	0.010
Estimated Leakage Rate (m^3/day)						**14.410**	**0**
System Input Volume		55.25 m3/day					

TUVARUHU 2 METER INACCURACY TEST (Before Countermeasure)

No	Account	Customer	Location 2	St	Meter ID	Meter Workin	PILOT SIT	Initial Reading		Final Reading		Difference		
								Tested Meter	TR-III Machine	Tested Meter	TR-III Machine	Meter	Machine	error
1	7012	SUKUNA SABELI	TUVARUHU ESTATE		07-000176	metered	T2					0	0	
2	7013	GODWIN OGE	TUVARUHU		544413	DL	T2					0	0	
3	0703.1-1	CHRISTINA TAWA	TUVARUHU		998149899	DL	T2					0	0	
4	7014	THOMAS KNOX	TUVARUHU		D/LINE	DL	T2					0	0	
5	07014-1	SHARON PITAKAKA	TUVARUHU		13A001001	Meter	T2					0	0	
6	7015	MAKSWEENY KEKEVERA	TUVARUHU		12A001324	Meter	T2	219.005	9.674	219.156	9.776	0.151	0.102	-0.50%
7	7016	LINDSAY PITAVOLOMO	TUVARUHU		07-000666	Meter	T2	1333.858	9.776	1333.899	9.816	0.041	0.04	-0.01%
8	7017	JAMES RIZU	TUVARUHU ESTATE		719788	METTER BURIED	T2					0	0	
9	7018	ALFRED WILLIE	TUVARUHU	D	07-000495	DISCO	T2					0	0	
10	7019	LAZARUS KAUHIONA	TUVARUHU	D	882135	DL/ILLEGAL	T2					0	0	
11	7020	JOSEPH KALEVALAKA	TUVARUHU		044018200	METTER BURIED	T2					0	0	
12	7021	EMMY KOE	TUVARUHU ESTATE		12B011144	Meter	T2	851.734	9.819	851.801	9.886	0.067	0.067	0.00%
13	07021-1	DAVID WAKASI	TUVARUHU ESTATE		07-000784							0	0	
14	07021-2	PETER PITAMUVA	TUVARUHU		12A004839	Meter	T2	578.205	10.0039	578.745	10.0438	0.54	0.0399	-4.98%
15	7022	TIMOTHY KAUHIONA	TUVARUHU		544431	METER NOT C	T2					0	0	
16	7023	LUCY LAFEA	TUVARUHU ESTATE		160145	Meter	T2					0	0	
17	7024	JOYCE BUGA	TUVARUHU ESTATE		07-000224	Meter	T2	1300.1274	10.0457	1300.1274	10.0975	0	0.0518	0.51%
18	7025	ILEEN SUSAN	TUVARUHU ESTATE	D	104005212	DISCO	T2					0	0	
19	7026	MOFFAT HIROPUHI	TUVARUHU HOUSING ESTAT	D	058881666	DISCO	T2					0	0	
20	07026-1	ROTA BATA'ANISIA	TUVARUHU		07-000175	METER STOP	T2					0	0	
21	7052	MARY DONIA	TUVARUHU ESTATE	D	07-000464	DISCO	T2					0	0	
22	7053	PAUL BULU	TUVARUHU		07-000484	DL/ILLEGAL	T2					0	0	
23	7054	DR SOLOMON ALBERT	TUVARUHU	V	545300	VACANT	T2					0	0	
24	7055	JOY HIRUAPU	TUVARUHU	D	064021880	DL/ILLEGAL	T2					0	0	
25	7056	DAVID FIGIRIMANA	TUVARUHU	D	07-000501	DISCO	T2					0	0	
26	7057	JACK WATEHA'A	TUVARUHU	D	064021681	DL/ILLEGAL	T2					0	0	
27	7058	ALBERT WALE	TUVARUHU	D	543395	DISCO	T2					0	0	
28	7059	TOM ROLIHAU	TUVARUHU ESTATE		094000280	METER STOP	T2					0	0	
29	7060	JOHN MARK LANGU	HONIARA	D	07-000118	DISCO	T2					0	0	
30	7061	CHRISTIAN NIENG	TUVURUHU		12B010970	Meter	T2	364.395	11.531	364.492	11.631	0.097	0.1	0.03%
31	7062	BEN DEDE	TUVARUHU		545462	METER STOP	T2					0	0	
32	7063	WINSON IIO	TUVARUHU		07-000556	Meter	T2	1266.9166	11.424	1267.0186	11.524	0.102	0.1	-0.02%
33	7064	HILDA ANHONIARA	TUVARUHU	D	104005211	ILLEGAL METE	T2	1008.2548	11.325	1008.3544	11.425	0.0996	0.1	0.00%
34	7065	DAN ALICK MISIBINI	H/NO 67	D	0107-000478	DL/ILLEGAL	T2					0	0	
35	7066	JENNIFER AITOREA	TUVARUHU		544663	DL	T2					0	0	
36	7067	LESLEY SIARANI - Gabriel Si	TUVARUHU		545482	METER STOP	T2	269.105	0.444	269.105	0.544	0	0.1	
37	7068	JAVAN DONI	TUVARUHU	D	AF595824	DISCO	T2					0	0	
38	7069	CLEMENT BASE	TUVARUHU		064021726	METER STOP	T2	3835.624	11.735	3835.624	11.835	0	0.1	0.84%
39	07069-1	MARY RICHARDSON FAROBO		V								0	0	
40	7070	CHARLES BAKO	TUVARUHU		058881643	meter	T2	1921.144	11.634	1921.245	11.735	0.101	0.101	0.00%
41	07070-1	ROBERT SAMANI	TUVARUHU	V	978033335							0	0	
42	7071	BEATRICE SIUNARI	TUVARUHU		978033793	Meter	T2	7181.9516	0.233	7182.0513	0.333	0.0997	0.1	0.09%
43	7072	JOHN FOTELIWALE	TUVARUHU		12A005387	METER STOP	T2	99999.989	0.34	99999.989	0.441	0	0.101	
44	7073	WILLIAM WALEKWATE	TUVARUHU		07-000745	Meter	T2	2302.8389	12.056	2302.8389	12.156	0	0.1	0.82%
45	7074	PATRICIAH GEORGE	TUVARUHU		950496	DL/ILLEGAL	T2					0	0	
46	7075	ERIC HURUTARAU	TUVARUHU		07-000552	METER BURIED	T2	1446.1037	11.946	1446.2048	12.046	0.1011	0.1	-0.01%
47	7076	LIONEL PUHIMANA	TUVURUHU		07-000991	METER STOP	T2					0	0	
48	07076-1	C/- JOHN WASI	TUVARUHU(ABOVE RHODA MA		054018762							0	0	
49	7077	MARTINA BITA	TUVARUHU		0106A021723	Meter	T2	2417.195	9.9403	2417.876	10.0012	0.681	0.0609	-6.20%
50	07077-01	ALBY HAM	TUVARUHU		124005035	DL	T2					0	0	
51	07077-1	DAVID WAKASI	TUVARUHU		97C0451	DL	T2					0	0	
52	07077-2	ERIC TEMA	LOT		D/LINE	DL	T2					0	0	
53	07077-3	MARTINA BITA		D	STILL NOT CON	DISCO	T2					0	0	
54	07077-4	MATHIAS NONI	LOT/NO		094000170	METTER	T2	1068.6465	9.8867	1068.7005	9.9403	0.054	0.0536	0.00%
55	7079	CHRISTIAN NIENG	TUVARUHU		216	RMC METER	T2					0	0	0.00%
56	7080	HELLEN HUNUEHU	TUVARUHU STORE	D	95358910	DISCO	T2					0	0	
57	07080-1	HELLEN HUNUEHU	TUVARUHU LOUGE		068940522	METER	T2	6628.101	11.841	6628.118	11.941	0.017	0.1	0.70%
58	7081	TUVARUHU VESTRY (AGLIC	TUVARUHU CHURCH AREA		128086834	METER	T2	44.311	0.132	44.411	0.232	0.1	0.1	0.00%
59	07081-01	TUVARUHU PARISH	TUVARUHU		07-000080	METER	T2	2140.7735	0.028	2140.8752	0.128	0.1017	0.1	-1.33%
60	7082	THE CONSUMER	TEACHERS HOUSE TUVARUH	V	370508	DL/ILLEGAL	T2					0	0	
61	7083	HERA LINTON	TEACHERS HOUE TUVARUH	D	07-000587	DL/ILLEGAL	T2					0	0	
64		JOHN MAGA	TUVARUHU			DL/ILLEGAL (un	T2					0	0	
65		RICHARD TARO				DL/ILLEGAL(un	T2					0	0	
												Average		1.49%

TUVARUHU 2 METER INACCURACY TEST (After Countermeasure)

No:	Account	Customer	Location 2	St	Meter ID		PILOT SITE	Time(min	Initial Reading		Final Reading		Difference		error	error%
									Tested Meter	TR-III Machine	Tested Meter	TR-III Machine	Meter	Machine		
1	7022	TIMOTHY KAUHIONA	TUVARUHU		544431	13B019579	T2		16.194	130.818	16.277	130.901	0.083	0.083	-3.55271E-15	0.00%
2	7023	LUCY LAFEA	TUVARUHU ESTATE		160145	13B019431	T2		8.936	130.712	9.042	130.818	0.106	0.106	2.30926E-14	0.00%
3	7026	MOFFAT HIROPUHI	TUVARUHU HOUSING ES	D	058881666	13B019429	T2		19.165	130.464	19.276	130.712	0.111	0.248	0.137	
4	7060	JOHN MARK LANGU	HONIARA	D	07-000118	12B010970	T2		43.406	130.324	43.547	130.464	0.141	0.14	-0.001	-0.71%
5	7073	WILLIAM WALEKWATE	TUVARUHU		07-000745		T2		3.662	130.464	3.802	130.598	0.14	0.134	-0.006	-4.48%
														average		-1.30%

S64-1-121

Actual Measurement of Leakage and Open-end Flow **6 No. 1 Tuvaruhu-2**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			User Type (excl. Leakage on Main lines)		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom.: 32m^3 Non-D: 45m^3	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom	Non-D	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1	*		*						*				*					*				0.10	2.4				
2	*		*						*				*						*			0.11	2.64				
3	*			*			*						*		*					*		0.02	0.48				
4	*			*				*					*		*					*		0.01	0.24				
5	*			*							*		*		*			*				0.13	3.12				
6																											
7	*			*						*			*		*						*	0.02	0.48				
8	*			*							*		*		*					*		0.05	1.20				
9		*			*		*						*		*					*		0.23		5.52	1.06	4.46	
10	*			*						*			*		*						*	0.01	0.24				
11	*			*					*				*		*					*		0.25	6				
Total	9	1	2	7	1	0	2	1	3	2	2	0	8	0	8	0	0	2	1	5	2		16.80			4.46	0.00
	10		9		1		10					8			8		10										

Note:

Change in Status of Connections (Customers, Users and Unconnection) 7 No, 6 Vavaea Ridge

| No. | Account No. | Account Name | Location | Status | Before Countermeasures | | |

MNF Measure before countermeasure in Vavaya ridge

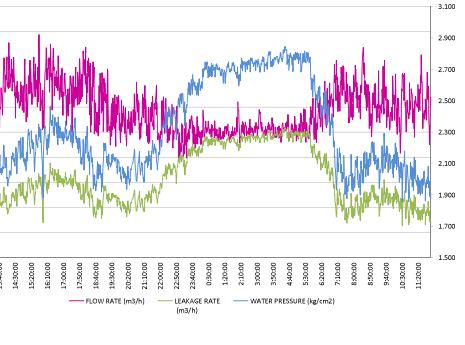
Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
1-Oct	4:28	20.1692	2.846	434.375

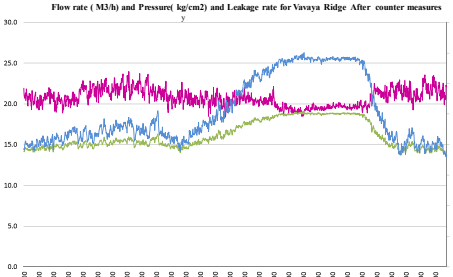
Date	Time	FLOW RATE (m^3/h)	WATER PRESSUR E (kg/cm^2)	WATER PRESSURE/ WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{-2}$	[5]=[4] x [7]	[6]=[5]/60
2013/9/30 12:00	12:00:00	21.3234	1.869	0.656711174	0.810377180	16.34465945	0.272
2013/9/30 12:01	12:01:00	22.1792	1.847	0.648981026	0.805593586	16.24817857	0.271
2013/9/30 12:02	12:02:00	22.0141	1.846	0.648629656	0.805375475	16.24379029	0.271
2013/9/30 12:03	12:03:00	21.7195	1.840	0.646521434	0.804065565	16.21739203	0.270
2013/9/30 12:04	12:04:00	21.4705	1.845	0.644413212	0.802755109	16.19089626	0.270
2013/9/30 12:05	12:05:00	21.4440	1.852	0.661278988	0.813190622	16.40140299	0.273
2013/9/30 12:06	12:06:00	21.4011	1.866	0.655657063	0.809726586	16.33156443	0.272
2013/9/30 12:07	12:07:00	21.2681	1.846	0.648629656	0.805375475	16.24377029	0.271
2013/9/30 12:08	12:08:00	21.5850	1.909	0.670765987	0.819003045	16.51863621	0.275
2013/9/30 12:09	12:09:00	22.2442	1.936	0.680252987	0.824774507	16.43504977	0.273
2013/9/30 12:10	12:10:00	21.5178	1.879	0.660224877	0.812542231	16.3883267	0.273
2013/9/30 12:11	12:11:00	21.5178	1.879	0.660224877	0.812542231	16.3883267	0.273
2013/9/30 12:12	12:12:00	21.2157	1.862	0.654251581	0.808585186	16.31402726	0.272
2013/9/30 12:13	12:13:00	21.3406	1.900	0.667603654	0.817070165	16.47965168	0.275
2013/9/30 12:14	12:14:00	22.0991	1.962	0.689735906	0.830505661	16.75063021	0.279
2013/9/30 12:15	12:15:00	22.0991	1.962	0.689735906	0.830505661	16.75063021	0.279
2013/9/30 12:16	12:16:00	21.9487	1.975	0.693956308	0.833104737	16.80177993	0.280
2013/9/30 12:17	12:17:00	22.0991	1.962	0.689735906	0.830505661	16.75063021	0.279
2013/9/30 12:18	12:18:00	21.9487	1.975	0.693956308	0.833104737	16.80177993	0.280
2013/9/30 12:19	12:19:00	23.0970	2.014	0.707659874	0.841255222	16.96603740	0.283
2013/9/30 12:20	12:20:00	22.5680	1.971	0.678496132	0.823306768	16.61354089	0.277
2013/9/30 12:21	12:21:00	23.0980	2.004	0.697621604	0.835351122	16.84884053	0.281
2013/9/30 12:22	12:22:00	21.4950	1.946	0.683766690	0.826901862	16.67794944	0.278
2013/9/30 12:23	12:23:00	21.6454	1.958	0.688957573	0.829520046	16.64363240	0.277
2013/9/30 12:24	12:24:00	22.0517	1.980	0.695713282	0.834094288	16.82301420	0.280
2013/9/30 12:25	12:25:00	21.2190	1.992	0.699929726	0.836618029	16.87391634	0.281
2013/9/30 12:26	12:26:00	20.9986	1.998	0.702037948	0.837977606	16.89930762	0.282
2013/9/30 12:27	12:27:00	20.63108	2.004	0.704146170	0.839134779	16.92466979	0.282
2013/9/30 12:28	12:28:00	21.59042	2.010	0.716092762	0.846255435	17.06763774	0.284
2013/9/30 12:29	12:29:00	20.43031	1.981	0.696064852	0.834304952	16.82736225	0.280
2013/9/30 12:30	12:30:00	21.05677	2.004	0.704146170	0.839134779	16.92466979	0.282
2013/9/30 12:31	12:31:00	21.73442	1.932	0.678047905	0.823525026	16.61764137	0.277
2013/9/30 12:32	12:32:00	21.15875	1.908	0.670414617	0.818785506	16.51430912	0.275
2013/9/30 12:33	12:33:00	20.78425	1.950	0.685172717	0.827751742	16.69508994	0.278
2013/9/30 12:34	12:34:00	21.90681	1.911	0.690064052	0.831544892	16.82726220	0.280
2013/9/30 12:35	12:35:00	21.3914	1.957	0.687631764	0.829235630	16.7250196	0.279
2013/9/30 12:36	12:36:00	20.88208	1.944	0.683063949	0.826476829	16.66937646	0.278
2013/9/30 12:37	12:37:00	21.71331	1.908	0.670414617	0.818785506	16.51430912	0.275
2013/9/30 12:38	12:38:00	20.99779	1.896	0.666598373	0.816396630	16.4822954 27	0.274
2013/9/30 12:39	12:39:00	22.38808	1.871	0.657413914	0.810810655	16.35340223	0.273
2013/9/30 12:40	12:40:00	21.83452	1.832	0.643710871	0.802315693	16.18206570	0.270
2013/9/30 12:41	12:41:00	21.14831	1.816	0.638085845	0.798804427	16.11124666	0.269
2013/9/30 12:42	12:42:00	21.7339	1.847	0.648981026	0.805593586	16.24817857	0.271
2013/9/30 12:43	12:43:00	21.17423	1.872	0.658116655	0.811238941	16.36214039	0.273

: After countermeasure in Vavaya ridge

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
7-Nov	1:54:00	19.0856	35.07	387.902

Time	FLOW RATE (m^3/h)	WATER PRESSUR E (kg/cm^2)	WATER PRESSURE/ WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
	[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{-2}$	[5]=[4] x [7]	[6]=[5]/60
10:00:00	21.8952	19.280	0.549737628	0.741456423	14.15114407	0.236
10:01:00	21.0637	19.290	0.550042772	0.741648685	14.15481038	0.236
10:02:00	20.8108	19.180	0.546906186	0.739531095	14.11439985	0.235
10:03:00	20.6734	19.920	0.568006843	0.753662297	14.38409952	0.240
10:04:00	20.9411	20.260	0.577990879	0.759896677	14.4848372	0.241
10:05:00	21.7051	20.580	0.587083776	0.765301696	14.60629384	0.243
10:06:00	21.3709	20.600	0.587396655	0.766418055	14.68274486	0.244
10:07:00	20.3403	20.420	0.582264043	0.763062280	14.56350145	0.243
10:08:00	20.7577	20.040	0.571428573	0.755928946	14.42757302	0.240
10:09:00	21.8552	20.180	0.575426567	0.758026423	14.47560247	0.241
10:10:00	21.1483	20.150	0.574561595	0.758000742	14.46689931	0.241
10:11:00	21.2228	20.160	0.574850947	0.758188828	14.47048587	0.241
10:12:00	20.8885	19.920	0.568006843	0.753662297	14.38409952	0.240
10:13:00	19.9144	20.160	0.574850947	0.758188828	14.47048587	0.241
10:14:00	19.7254	19.760	0.563159395	0.750439408	14.32358715	0.239
10:15:00	20.8968	19.560	0.557741660	0.746821036	14.25332756	0.238
10:16:00	20.7917	19.900	0.567436555	0.753283848	14.37687420	0.240
10:17:00	20.506	19.680	0.561163388	0.749108395	14.29718316	0.238
10:18:00	21.2706	19.500	0.556030796	0.745674725	14.22316955	0.237
10:19:00	20.8335	19.930	0.568291907	0.753854436	14.38730986	0.240
10:20:00	21.1063	19.850	0.565440547	0.751957878	14.35156397	0.239
10:21:00	21.2346	20.140	0.574280011	0.757912649	14.46330909	0.241
10:22:00	20.9978	20.230	0.576846307	0.759609181	14.49538598	0.242
10:23:00	20.7602	19.550	0.557456516	0.746630106	14.24986816	0.237
10:24:00	19.6972	19.460	0.565725691	0.752347397	14.35318166	0.239
10:25:00	19.7202	19.690	0.572954291	0.756873184	14.44434488	0.241
10:26:00	19.8198	19.630	0.560381123	0.7472739	14.30855868	0.238
10:27:00	20.6261	19.860	0.566259979	0.751263696	14.38441798	0.240
10:28:00	20.6726	19.660	0.561141491	0.748025109	14.32276196	0.239
10:29:00	20.9172	19.900	0.567436555	0.753283848	14.37687420	0.240
10:30:00	20.9729	20.430	0.582549187	0.763249099	14.56706700	0.243
10:31:00	20.9978	20.230	0.576846307	0.759609181	14.49538598	0.242
10:32:00	19.8289	19.530	0.557409468	0.746796149	14.25098408	0.235
10:33:00	19.8289	19.530	0.557409468	0.746796149	14.25098408	0.235
10:34:00	20.2401	20.520	0.585927196	0.766795729	14.5810239	0.243
10:35:00	19.9999	19.490	0.555736503	0.745403912	14.22709922	0.237
10:36:00	20.0193	19.710	0.562018280	0.749679149	14.32441487	0.239
10:37:00	20.8255	19.040	0.542914727	0.736827698	14.06787533	0.234
10:38:00	20.99985	19.870	0.566581123	0.752718632	14.36660132	0.239
10:39:00	21.7552	19.810	0.564865427	0.751579736	14.34443695	0.239
10:40:00	21.4383	19.860	0.566312769	0.752539111	14.36299449	0.239
10:41:00	20.9558	19.960	0.570002851	0.754985332	14.40932605	0.240
10:42:00	19.7727	19.580	0.558311948	0.747202549	14.26081257	0.238
10:43:00	19.7282	20.170	0.575135443	0.758376848	14.47407716	0.241
10:44:00	20.3355	20.890	0.595665811	0.771793892	14.73014989	0.246
10:45:00	19.4948	20.870	0.595095523	0.771424347	14.72309618	0.245
10:46:00	19.4419	20.750	0.591671796	0.769203515	14.68078734	0.245
10:47:00	20.7681	20.550	0.585970915	0.765487171	14.60973837	0.243
10:48:00	20.0805	20.130	0.573942867	0.757624496	14.45971761	0.241





Date	Time	FLOW RATE (m^3/h)	WATER PRESSUR E (kg/cm^2)	WATER PRESSURE/ WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{-2}$	[5]=[4] x [7]	[6]=[5]/60
2013/10/1 11:12	11:12:00	21.1613	2.002	0.724529698	0.851190725	17.16783596	0.286
2013/10/1 11:13	11:13:00	21.4368	2.119	0.744553768	0.862852986	17.40350424	0.290
2013/10/1 11:14	11:14:00	21.3027	1.991	0.70028 10990	0.836427997	16.87015124	0.281
2013/10/1 11:15	11:15:00	21.1873	1985	0.697470134	0.835146774	16.844242307	0.281
2013/10/1 11:16	11:16:00	21.1197	1.992	0.699929726	0.836618029	16.8739163 44	0.281
2013/10/1 11:17	11:17:00	21.0405	1.986	0.691496838	0.831562089	16.771958212	0.280
2013/10/1 11:18	11:18:00	21.0872	1.957	0.687631764	0.829235630	16.7250196 80	0.279
2013/10/1 11:19	11:19:00	20.9578	2.015	0.710822207	0.843025726	17.66079795	0.295
2013/10/1 11:20	11:20:00	21.8861	1.905	0.669366506	0.818144535	16.5013210 74	0.275
2013/10/1 11:21	11:21:00	21.0858	2.009	0.705903023	0.840180351	16.945765330	0.282
2013/10/1 11:22	11:22:00	20.8275	1.950	0.685172717	0.827751742	16.695089941	0.278
2013/10/1 11:23	11:23:00	21.6413	1.908	0.670414617	0.818785506	16.5143091 28	0.275
2013/10/1 11:24	11:24:00	21.7064	1.923	0.675685172	0.822000713	16.579096781	0.276
2013/10/1 11:25	11:25:00	20.9381	1.942	0.690091356	0.830717574	16.740648701	0.279
2013/10/1 11:26	11:26:00	20.9574	1.989	0.698875615	0.835987608	16.861205294	0.281
2013/10/1 11:27	11:27:00	20.8513	1.991	0.699578356	0.836408008	16.869680392	0.281
2013/10/1 11:28	11:28:00	22.2396	1.921	0.674982431	0.821573144	16.570473063	0.276
2013/10/1 11:29	11:29:00	21.5535	1.897	0.666549543	0.816424855	16.466636179	0.274
2013/10/1 11:30	11:30:00	21.9575	1.987	0.698172874	0.835567397	16.852725935	0.281
2013/10/1 11:31	11:31:00	23.0720	1.972	0.692907319	0.832407546	16.788994233	0.280
2013/10/1 11:32	11:32:00	21.9722	1.957	0.70168865 78	0.837667343	16.8958801 76	0.282
2013/10/1 11:33	11:33:00	21.9843	1.907	0.670063247	0.818572910	16.509980912	0.275
2013/10/1 11:34	11:34:00	22.2446	1.976	0.694387808	0.833251343	16.806012985	0.280
2013/10/1 11:35	11:35:00	20.1296	1.999	0.702389318	0.838086701	16.910538289	0.282
2013/10/1 11:36	11:36:00	20.4555	2.005	0.704497540	0.839345338	16.936887274	0.282
2013/10/1 11:37	11:37:00	20.7254	1.961	0.689037245	0.830082674	16.742103463	0.279
2013/10/1 11:38	11:38:00	20.5835	2.030	0.7132817995	0.844560122	17.03410200 5	0.284
2013/10/1 11:39	11:39:00	20.8168	2.012	0.720669576	0.848917296	17.12198276	0.285
2013/10/1 11:40	11:40:00	20.9977	1.995	0.699578356	0.836408008	16.869680392	0.281
2013/10/1 11:41	11:41:00	20.5122	1.975	0.693956308	0.833104737	16.801759913	0.280
2013/10/1 11:42	11:42:00	20.7907	1.971	0.692550948	0.832196460	16.784736849	0.280
2013/10/1 11:43	11:43:00	20.9797	1.955	0.686929023	0.828811814	16.716471241	0.279
2013/10/1 11:44	11:44:00	21.3154	1.861	0.653900211	0.808640965	16.309641358	0.272
2013/10/1 11:45	11:45:00	20.8140	1.978	0.695010541	0.833672922	16.814515901	0.280
2013/10/1 11:46	11:46:00	20.4789	1.945	0.683415320	0.826689373	16.673663306	0.278
2013/10/1 11:47	11:47:00	21.2122	1.992	0.699929726	0.836618029	16.873916344	0.281
2013/10/1 11:48	11:48:00	21.8299	1.904	0.669149838	0.831562089	16.771958212	0.280
2013/10/1 11:49	11:49:00	22.3769	2.010	0.706254392	0.840389429	16.949982468	0.282
2013/10/1 11:50	11:50:00	21.8169	1.997	0.70168865 78	0.837667343	16.8958801 76	0.282
2013/10/1 11:51	11:51:00	21.2990	1.975	0.693253858	0.832165874	16.790250538	0.280
2013/10/1 11:52	11:52:00	21.3147	2.080	0.730850316	0.854897840	17.24260550 7	0.287
2013/10/1 11:53	11:53:00	21.8209	1.957	0.687631764	0.829235630	16.7250196 80	0.279
2013/10/1 11:54	11:54:00	20.3791	1.943	0.682712579	0.826264231	16.665088523	0.278
2013/10/1 11:55	11:55:00	20.1922	1.987	0.698172874	0.835567397	16.852725935	0.281
2013/10/1 11:56	11:56:00	19.4975	1.945	0.683415320	0.826689373	16.673663306	0.278
2013/10/1 11:57	11:57:00	19.7919	1.889	0.663735880	0.814701520	16.431878068	0.274
2013/10/1 11:58	11:58:00	20.2999	1.919	0.674279699	0.821145353	16.561844854	0.276
2013/10/1 11:59	11:59:00	20.9248	1.928	0.674631063	0.821359277	16.566159520	0.276
2013/10/1 12:00	12:00:00	21.3979	1.879	0.660224877	0.812542231	16.388326764	0.273
		Estimated Leakage Rate (m^3/day)				**434.375**	**0**
		18.905	2.846 m				

Date	Time	FLOW RATE (m^3/h)	WATER PRESSUR E (kg/cm^2)	WATER PRESSURE/ WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{-2}$	[5]=[4] x [7]	[6]=[5]/60
2013/11/7 9:27	9:27:00	20.3526	20.110	0.571424579	0.757520030	14.45253300 7	0.241
2013/11/7 9:28	9:28:00	21.0729	20.830	0.593954847	0.770884726	14.78898411	0.246
2013/11/7 9:29	9:29:00	21.3333	21.320	0.607927803	0.779009788	14.88998000	0.248
2013/11/7 9:30	9:30:00	21.4009	20.240	0.577133491	0.759891682	14.49917360	0.242
2013/11/7 9:31	9:31:00	20.3026	20.640	0.588553721	0.767161760	14.64174380	0.244
2013/11/7 9:32	9:32:00	21.0293	21.050	0.600323813	0.774749035	14.78645233	0.246
2013/11/7 9:33	9:33:00	22.6483	21.030	0.599813268	0.774191672	14.77591181	0.246
2013/11/7 9:34	9:34:00	22.5481	20.620	0.587966933	0.766790813	14.63484756	0.244
2013/11/7 9:35	9:35:00	22.3016	20.970	0.597626686	0.773152930	14.75832771	0.246
2013/11/7 9:36	9:36:00	20.9474	20.470	0.583689976	0.763995918	14.58132050	0.243
2013/11/7 9:37	9:37:00	21.5691	19.820	0.565155403	0.751780185	14.34784665	0.239
2013/11/7 9:38	9:38:00	20.4381	20.460	0.581695755	0.762688505	14.55636773	0.243
2013/11/7 9:39	9:39:00	21.1681	20.270	0.577986883	0.760254486	14.50991301	0.242
2013/11/7 9:40	9:40:00	21.5126	19.980	0.569717707	0.754790840	14.40574540	0.240
2013/11/7 9:41	9:41:00	21.713	19.620	0.559425254	0.747965590	14.27537206	0.238
2013/11/7 9:42	9:42:00	20.5667	20.360	0.580553179	0.761940404	14.54208977	0.242
2013/11/7 9:43	9:43:00	21.0677	20.090	0.572652492	0.756871394	14.44534480	0.241
2013/11/7 9:44	9:44:00	20.7032	19.690	0.561448532	0.749289691	14.30081513	0.238
2013/11/7 9:45	9:45:00	21.9279	19.690	0.561448532	0.749289691	14.30081513	0.238
2013/11/7 9:46	9:46:00	21.4974	19.910	0.567659107	0.753453436	14.38710096	0.240
2013/11/7 9:47	9:47:00	22.5235	19.090	0.544054748	0.737000870	14.07751338	0.235
2013/11/7 9:48	9:48:00	21.2946	18.630	0.531223268	0.728050948	13.90855938	0.232
2013/11/7 9:49	9:49:00	20.7942	18.460	0.526377825	0.724707291	13.84699912	0.231
2013/11/7 9:50	9:50:00	21.4262	18.410	0.524954006	0.723724492	13.82817084	0.230
2013/11/7 9:51	9:51:00	20.9583	18.380	0.524100206	0.723135822	13.81689225	0.230
2013/11/7 9:52	9:52:00	20.8815	18.390	0.524385036	0.723332064	13.82065911	0.230
2013/11/7 9:53	9:53:00	20.8193	18.950	0.540347876	0.735083944	14.02951125	0.234
2013/11/7 9:54	9:54:00	20.9492	18.630	0.531223268	0.728050948	13.90855938	0.232
2013/11/7 9:55	9:55:00	21.6621	18.610	0.530653016	0.727658221	13.93013	0.232
2013/11/7 9:56	9:56:00	20.5473	18.580	0.529797548	0.727071931	13.89187253	0.232
2013/11/7 9:57	9:57:00	20.8431	17.970	0.512403762	0.715025307	13.66925	0.228
2013/11/7 9:58	9:58:00	22.2939	18.370	0.523809524	0.722736864	13.81314136	0.230
2013/11/7 9:59	9:59:00	22.0913	18.490	0.527231525	0.726106915	13.85816634	0.231
2013/11/7 10:00	10:00:00	22.1707	18.020	0.513829684	0.716819044	13.68092017	0.228
		Estimated Leakage Rate (m^3/day)					**387.902**
	Total Flow.	497.466					

S64-1-123

VAVAYA RIDGE: METER INACCURACY TEST BEFORE COUNTERMEASURE

CYCLE 5ZONE: 23

No	Account	Customer	Location 2	Meter ID	Time	Initial Reading Tested Metr	Initial Reading TR-III Metr	Final Reading Tested Metr	Final Reading TR-III Metr	Integrated Value Test Meter	TR-III Meter	Difference (litres)	Error (%)
					(MIN)	A	B	C	D	C-A = E	D - B = F	E-F = G	G/F
2	5202	D M I ROSARY HOUSE	LOWER VAVAYA RIDGE	12A0005349	0.38	870.121	130.094	870.141	130.114	0.02	0.02	-2.84E-14	0.00%
4	5204	UNITED CHURCH TRANSIT STAFF HOUSE	LOWER/VAVAYA RIDGE	12A005348	1.7	2547.32	130.134	2547.341	130.154	0.021	0.02	0.001	5.00%
7	5207	CECILIA AUWAKEA	STAFF QRT LOWER VAVAYA	05A018549	4.55	2289.83	130.16	2289.85	130.18	0.02	0.02	-2.84E-14	0.00%
8	05207-1	JOE TAKELI	LOWER VAVAYA RIDGE C.O	05A018530	0.45	196.253	130.18	196.273	130.2	0.02	0.02	2.84E-14	0.00%
12	05210-1	SELWYN TIARO	LOWER VAVAYA RICGE	99B141757	1.09	4224.23	129.942	4224.218	129.912	-0.012	-0.03	0.018	-60.00%
14	5212	ALL SAINT PARISH HALL	LOWER VAVAYA RIDGE	99B141961	0.49	104.034	130.22	104.055	130.24	0.021	0.02	0.001	5.00%
26	5220	DIOCESE OF GUADALCANAL	LOWER VAVAYA RIDGE	05A018531	1.52	6951.496	130.2	6951.496	130.22	0	0.02	-0.02	-100.00%
35	5304	LEE KWOK KUEN	LOWER VAVAYA RIDGE	03B605361	2.03	491.989	130.26	492.007	130.28	0.018	0.02	-0.002	-10.00%
36	5305	TONY LEE	LOWER VAVAYA RIDGE	03B605380(M/ST	2.33	0.942	130.24	0.961	130.26	0.019	0.02	-0.001	-5.00%
37	5306	KYAW MIN SOE	BEHIND SOUTH SEA TRADE	05A0188774	1.1	5814.27	130.29	5814.284	130.31	0.014	0.02	-0.006	-30.00%
71	5330	ST AGNES TRANSIT	VAVAYA RIDGE	10B056056	0.32	3974.867	130.034	3974.884	130.054	0.017	0.02	-0.003	-15.00%
80	5338	JACOB NGALI	LOWER VAVAYA RIDGE	12A004497	1.32	232.014	129.82	232.034	129.84	0.02	0.02	-2.84E-14	0.00%
83	5341	GRACE RANI	LOWER VAVAYA RIDGE	05A018320	2.57	1986.666	129.8	1986.684	129.82	0.018	0.02	-0.002	-10.00%
85	5343	ADRIANA KOGA	VAVAYA RIDGE	12A004499	3.18	241.848	129.965	241.867	129.985	0.019	0.02	-0.001	-5.00%
88	5347	CAPTAIN VITALE TANGIS	LOWER VAVAYA RIDGE	12A005137	2.07	1452.918	129.76	1452.938	129.78	0.02	0.02	1.99E-13	0.00%
90	5348	JUDAH KULABULE	VAVAYA RIDGE	99B141404	0.33	2010.864	129.689	2010.891	129.704	0.0271	0.015	0.0121	80.67%
97	5351	JOHN TEALIKLAVA	VAVAYA RIDGE	12A004498	1.5	627.9286	129.72	627.9489	129.74	0.0203	0.02	0.0003	1.50%
103	5353	EDDIE MANUGA	VAVAYA RIDGE	D/LINE	2.2	991.69	0.15	991.74	0.2	0.05	0.05	-4.55E-14	0.00%
116	05362-4	ROBERT KALITA		12A004786	1.55	486.496	0.05	486.547	0.102	0.051	0.052	-0.001	-1.92%
												average	-7.62%

Actual Measurement of Leakage and Open-end Flow **7 No. 6 Vavaea Ridge**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			User Type (excl. Leakage on Main lines)		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom.: 32m^3 Non-D: 45m^3	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom	Non-D	CIP	uPVC	GP	PB	Others	[1]	[2]−[1]x24	[2]−[1]x24	[3]	[4]−[2]-[3]	[5]−[2]
1	*			*							*	*			*					*							
2	*			*						*		*			*		*					0.00	0.00				
3	*			*							*	*			*					*							
4	*			*							*	*			*					*							
5	*			*					*			*			*					*		0.00	0.04				
6	*			*							*	*			*					*		0.00	0.04				
7	*			*					*			*			*			*				0.00	0.02				
8	*			*							*	*			*					*		0.00	0.04				
9	*			*						*			*		*						*	0.00	0.03				
10	*			*						*		*			*						*	0.00	0.02				
11	*			*					*			*			*					*							
Total	**11**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**3**	**3**	**5**	**10**	**1**	**0**	**11**	**0**	**1**	**1**	**0**	7	**2**		**0.19**			**0.00**	**0.00**
	11		**11**		**0**		**11**					**11**			**11**		**11**										

Note:

S64-1-24

METER INSPECTION SHEET

PILOT SITE NAME : VAVAYA RIDGE AFTER COUNTERMEASURE

No	Account No	Customer Name	House Location	After Countermeasures: New Meter ID	Initial Reading Tested Meter	Initial Reading TR-III Machine	Final Reading Tested Meter	Final Reading TR-III Machine	Integrated Value Meter	Integrated Value Machine	Difference (Litres)	error %
					A	B	C	D	C-A=E	D-B=F	E-F=G	G/F
1	5361	HENRY QUAN	VAVAYA RIDGE	13B019718	47.315	115.027	47.378	115.646	0.063	0.0619	0.0011	1.78%
2	5362	QUAN HONG	VAVAYA RIDGE	13B019380	0.386	114.256	0.463	115.022	0.077	0.0766	0.0004	0.52%
3	5358	ROY FUNU FILOA	VAVAYA RIDGE	13B019575	19.379	114.011	19.401	114.226	0.022	0.0215	0.0005	2.33%
4	05362-1	REGINAL CHRISTIAN KUKUBO	VAVAYA RIDGE	13B019574	14.201	113.745	14.227	113.998	0.026	0.0253	0.0007	2.77%
5	05362-2	CHRISTIAN KUKUBO	VAVAYA RIDGE	13B019563	9.163	113.483	9.189	113.733	0.026	0.025	0.001	4.00%
6	5221	SISTERS OF THE CHURCH	VAVAYA RIDGE	12B086747	10.821	115.684	10.865	116.066	0.044	0.0382	0.0058	15.18%
7	5212	ALL SAINT PARISH HALL	VAVAYA RIDGE	13B019637	193.273	116.119	193.382	117.18	0.109	0.1061	0.0029	2.73%
8	5306	KYAW MIN SOE	VAVAYA RIDGE	12B086853	26.04	117.193	26.075	117.551	0.035	0.0358	-0.0008	-2.23%
											Average	3.38%

Change in Status of Connections (Customers, Users and Unconnection) — 8 No.4 Mbokona

No.	Account No.	Account Name	Location	status	Before Countermeasures: Registered Meter	D/L	Non-Regist./Illegal Direct	Indirect	Un-Connect.	Consumer Type Dom.	Com.	?	Meter ID Number	Meter 15	20	32	40	50	?	Service Pipe End Closed	Open	If open, m3/day	Meter Reading (m3) 2013/10/17	2013/10/18	Consumption	After Countermeasures: New/Re Regist.	Legalized	Disconnection Illegal	Registered	Un-Connect.	Meter Raising No-Change	Replace	New	Consumer Type Dom.	Com.	Meter ID Number	Meter (m3 unit) 15	20	32	40	50	?	Meter Reading (m3) 2013/10/17	2013/12/18	Consumption
1	4000	JOHN BUAEWO	MBOKONA VALLEY (ABOVE)			1							D/LINE																					1		D/LINE	1							99,822	102,412	2,590
2	04003-01	JOHN TAVIAVA	MBKONA BEHIND CBSI OTRS		1								86814/947										1250,025	1290,100	0,075						1					86814/947	1						17,185	17,688	0,391
3	04003-02	NORMAN VAVAHA	MBOKONA VALLEY STAFF Q		1								05A018578										2702,502	****						1					05A018578	05A018578	1						80,287	82,926	2,639
4	04003-03	CHRISTINA RAENAITORO	MBOKONA		1								05A018577										2850,490	2850,856	0,366						1					05A018577	138019509	1						53,017	54,179	1,162
5	04003-04	CAROLYN IRO	MBOKONA	D				1					13A005334																							13A005204	138019513	1						92,814	93,418	0,604
6	04003-05	ROBERT TELA		1	D				1				16A005182																							16A005182										
7	04003-1	JOHN SELWYN TOAKI	MBOKONA VALLEY ABOVE		D				1				M/STOP														1									M/STOP	138008944	1						18,644	18,464	0,850
8	04003-10	BRADLEY TEDDY	MBOKONA CBSI ESTATE			1							13A009913										166,482	167,076	0,594						1					13A009913	13A009913	1	1					264,000	265,399	1,399
9	04003-11	MAVE ADOMANA	MBOKONA VALLEY			1							12B089813										162,873	163,400	0,527						1					12B089813	12B089813	1						210,518	210,976	0,458
10	04003-12	GEORGE MANEHO	ABOVE MBOKONA		D		1						11B091722																							11B091722										
11	04003-13	TITUS PELIKE	MBOKONA			1							12A004550										1360,964	1361,280	0,726				1																	
12	04003-14	FRED HALI					1																																							
13	04003-2	TREVOR MANEMAHAGA	MBOKONA CBSI HOUSING E			1							03B905383										3938,390	3937,996	1,606								1			03B905383	128011041	1						55,802	57,001	1,199
14	04003-3	SONIA TAVOA MARAHARE	MBOKONA CBSI HOUSING E				1						03B905397																				1			03B905397	128010941	1						41,656	42,743	1,087
15	04003-4	DENSON DONNI	MBOKONA CBSI HOUSING E				1						03B905387																				1			03B905387	138019512	1						54,782	55,573	0,811
16	04003-5	CENTRAL BANK OF SOLOMON ISLANDS	MBOKONA CBSI HOUSING E		D					1			180																1							180										
17	04003-6	CBSI BOYS HOSTEL	MBOKONA HOSTEL NO (2)			1							07-000036										1218,405	1218,518	0,053								1			07-000036	138019510	1						72,639	72,983	0,344
18	04003-7	GIRLS HOSTEL	5 NOS	D					1				05A018576														1									05A018576	138019511	1						22,378	22,633	0,255
19	04003-8	ENOCH ILEIA	MBOKONA CBSI ESTATE			1							13A010109										41,975	42,449	0,474								1			13A001019	138019438	1						43,000	46,964	3,964
20	04003-9	SAMUEL WARUNIMA	MBOKONA CBSI ESTATE			1							03-000807										2386,286	2386,702	0,416								1			07-000807	138019408	1						40,000	41,838	1,838
21	4001	RACHEL STEWARD	MBOKONA VALLEY			1							05A021605										1582,800	1584,352	0,402								1			05A021605	138019407	1						31,000	33,812	1,812
22	4002	JARED FAGASI	MBOKONA VALLEY			1							05A018003										1728,532	1729,520	0,988								1			05A018003	128011042	1						43,000	45,034	2,034
23	04002-1	CENTRAL BANK OF SOLOMON ISLANDS	MBOKONA - CBSI ESTATE			1							12B089978										108,538	111,039	2,501								1			12B089978	138019430	1						19,000	19,299	0,299
24	04002-2	CENTRAL BANK OF SOLOMON ISLANDS	MBOKONA - CBSI ESTATE			1							12B089981										139,148	142,182	3,034						1					12B089981	128008981	1						259,000	260,217	1,217
25	04002-3	CENTRAL BANK OF SOLOMON ISLANDS	MBOKONA - CBSI ESTATE			1							12B08680										103,105	104,726	1,621						1					12B89890	128008680	1						172,000	174,112	2,112
26	4003	MARGRET MELUE	MBOKONA VALLEY				1						05A018902																				1			05A018902	138019469	1						12,000	12,515	0,515
27	4004	JOHN MARK NAYAMANA	MBOKONA VALLEY			1							13B019890										54,997	55,372	0,375						1					13B019890	138019660	1						126,000	127,244	1,244
28	4005	LYNNE DAGA	MBOKONA VALLEY			1							05A018900										3174,000	3190,125							1					05A018900	128010942	1						20,417	21,949	1,532
29	4006	ANGEL YN KOFAE DENTANA	MBOKONA VALLEY			1							13A001080										46,072	46,474	0,402								1			13A001080	128010943	1						19,129	19,919	0,790
30	4007	FREDDIE AITOREA	MBOKONA VALLEY			1							12A005023										662,950	664,989	2,039								1			12A005023	128011266	1						174,343	179,310	4,967
31	4008	CBSI CDI HOUSE	MBOKONA VALLEY				1						87/08428																				1			87/08428	128011269	1						18,660	18,887	0,227
32	4009	SIXTUS TORAKANA	MBOKONA VALLEY				1						05A018904																				1			05A018904	128011267	1						33,734	34,386	0,652
33	4010	LOUISA SULEGA	MBOKONA VALLEY					1					M/STOP															1					1			M/STOP	128011266	1						85,790	87,856	2,066
34	4011	GREGORY WILSON	MBOKONA VALLEY				1						37587																				1			37587	128011270	1						47,112	48,567	0,955
35	0401-1	CLEOPHAS VAVE	MBOKONA VALLEY				1						M/STOP																				1			M/STOP	128011200	1						615,698	618,034	2,036
36	0401-2	C S I SECURITY HOUSE	MBOKONA				1						07-001245																				1			07-001245	128010944	1						28,000	27,060	1,060
37	0401-3	MBOKONA SDA CHURCH	MBOKONA				1						13A009723																				1			13A009723										
38	4012	KNOXLY OTO (CLERICAL)	MBOKONA VALLEY		V			1					10B005222														1							1			10B005222	128010945	1						80,027	82,316	1,389
39	0401-01	BRYAN PITAKIA	MBOKONA			1							D/LINE																				1			D/LINE	128008457	1						59,090	61,268	2,178
40	0401-02	RUSSELL LENGA	MBOKONA (HILL SIDE)		V		1																					1																	
41	0401-1	MOSES FANARARA	LOTINO		D				1				D/LINE																			1			D/LINE										
42	0401-2	RANDY WATE	MBOKONA VALLEY		D				1				12A004776										****	****								1			12A004776										
43	0401-3	DOROTHY SULE	MBOKONA						1				11A009930														1							1			11A009930	128010946	1						802,707	804,810	2,103
44	0401-4	RAY K SALE	MBOKONA VALLEY CLINIC		D				1														****	****			1							1			128008757	1						152,188	154,918	2,730
45	4013	MBOKONA CLINIC	MBOKONA VALLEY				1						05B881830																				1			05B881830	05B881830	1						2698,548	2698,548	0,000
46	0401-5	THOMAS ANDRESEN	MBOKONA VALLEY					1					D/LINE														1							1			D/LINE	128008446	1						73,060	75,814	1,824
47	4014	GODWIN FAGATEA	MBOKONA VALLEY			1							05A021603										986,250	987,504	1,254				1								05A021603										
48	4015	JAMES FUNA	MBOKONA VALLEY		D	1							12B089815										630,599	631,470	0,880						1					12B089815	128008815	1						1086,189	1087,104	0,935
49	4016	ALFRED SARE	MBOKONA VALLEY				1						12A005258																				1			12A005258	128008815	1						719,842	721,106	2,264
50	4017	MARY TATE	MBOKONA VALLEY				1						D/LINE																				1			D/LINE	128008589	1						47,749	49,257	1,508
51	4018	GLORIA ALU	MBOKONA VALLEY			1							12B010951										6564,184	6564,176				1								12B010051										
52	4019	LOVESON JOHN	MBOKONA VALLEY				1						94208429																				1			94208429	138008601	1						79,506	82,248	2,738
53	4020	ALFRED PALO	MBOKONA VALLEY				1						12A005274																				1			12A005274	12A005274	1						1134,722	1135,057	0,335
54	4021	PAUL WAHO	MBOKONA VALLEY			1							12A005273										2882,703	2883,081	0,378								1			12A005273	128008843	1						67,389	70,029	2,640
55	4022	MICHAEL MENAPI	MBOKONA VALLEY			1							8012915										2293,671	2295,084	1,413								1			8012915	128011043	1						76,211	78,106	1,895
56	4023	MATHEW WAKATO	MBOKONA VALLEY				1						07-000179																				1			07-000179	29301/3	1						2357,005	2357,062	0,057
57	4024	CHARLIE TUZAKANA	MBOKONA VALLEY			1							12A005183										2870,380	****								1			12A005183	13A000622	1						12,821	13,496	0,675
58	04024-04	FRANCIS MANORU	MBOKONA VALLEY			1							GKM04000231										1076,874	****								1			GKM04000231	138019405	1						64,207	66,556	1,949
59	04024-3	GORGE MNELALO	MBOKONA VALLEY			1							57																				1			57	128172442	1						10,218	10,722	0,504
60	04024-6	DAVID & CHRISTINA DEVA	MBOKONA VALLEY			1							16A005138										****	****								1			16A005138	16A001138	1						1197,220	1199,274	2,054
61	4033	LINA ELLISON	MBOKONA VALLEY			1							87/08611																				1			87/08611	128172443	1								
62	4033-2	JOEL ARIHANA	MBOKONA VALLEY			1							M/STOP																				1			M/STOP	128172501	1						80,408	88,879	8,471
63	4035	EDNA TOVASI OLOBENI	MBOKONA VALLEY			1							05A021765										3155,991	3159,411	2,420								1			05A021765	05A021765	1	1					3385,191	3386,310	1,239
64	4036	FREDDY SAENILE	MBOKONA VALLEY				1						87/02431															1					1			87/02431	128172479	1						0,353	0,366	0,013
65	04036-1	SOLOMON TELEKOM COMPANY LTD	SOLTEL MIGTR				1						MNOT CLEAR																				1			MNOT CLEAR	128011226	1						2,514	2,516	0,002
66	4037	JOHN MAKWALE	MBOKONA VALLEY			1							05-000754										881,541	881,541								1			07-000154	128011227	1						27,894	28,656	0,762
67	4038	OLIVER OTUANA	MBOKONA			1							12A005431										393,570	395,067	1,497								1			12A005431	12A005431	1						479,078	480,517	1,439
68	4039	PRISCILLA WATE	MBOKONA VALLEY			1							03-000155										2158,691	****								1			07-000155	128008844	1						102,997	105,465	2,438
69	4040	ANDREW PAULSEN	MBOKONA VALLEY			1							12B010955										343,691	344,450	0,757								1			12B010955	128010953	1						394,074	395,670	0,596
70	4041	YANNY RAMHOTO	MBOKONA VALLEY			1							03-000473										2220,499	****								1			07-000473	128011230	1						20,250	20,764	0,514
71	4042	JIMMY TETEKA	MBOKONA VALLEY			1							12A004843										145,817	146,261	0,444								1			12A004843	12A004843	1						173,494	173,735	0,241
72	4043	DENOK PAKO	MBOKONA VALLEY		D			1					81139811																1							81139811										
73	4044	DEXTER MADAVA	MBOKONA VALLEY		D			1					03-000098																1							07-000098										
74	04049-01	ELIZABETH RAGIMANA	MBOKONA				1						86814/930																				1			86814/930	128008845	1						29,739	30,654	0,935
75	04049-02	HARRY RAMO	LOTINO				1						03-00099																				1			07-00099	128011229	1						59,437	60,188	0,751
76	04049-05	JOHN WAMANE	MBOKONA VALLEY				1						12A000750																				1			12A000750	12A000755	1						228,462	229,069	0,607
77	04049-1	FRANCIS KELESI	MBOKONA HEIGTH				1						D/LINE																				1			D/LINE	128008602	1						47,005	48,010	1,005
78	04049-2	ROSALIE MASU SADE	MBOKONA				1						86814/599																				1			86814/599	128008599	1						71,549	72,956	1,407
79	04049-3	ELLISON HARU	MBOKONA HEIGHT				1						GKM04C0051																				1			GKM04C006	128011228	1						47,420	49,167	1,747
80	4045	D ADO SOLOMON CORP LTD	MBOKONA VALLEY				1						D/LINE															1								D/LINE										
81	4046	ESTHER TEGU	MBOKONA VALLEY			1							78251520										3144,620	3146,771	0,151								1			7825 1520	13A000624	1						10,607	11,465	0,858
82	4047	VERONICA MANEI	MBOKONA VALLEY			1							12A005451										1232,219	****							1					12A005451	12A005451	1						1472,742	1475,698	2,956
83	4048	PHILIP MANETCHUA	MBOKONA VALLEY			1							12B089889										166,233	167,114	0,881						1					12B089889	128008889	1						252,391	253,170	0,779
84	4049	WALTER VEKE	MBOKONA VALLEY				1						2115																				1			2115	138019434	1						47,714	48,424	0,690
85	04049-1	WALTER VEKE	MBOKONA VALLEY			1							8752368										8383,473	8383,841	0,368											8752368										

No.	Account No.	Account Name	Location	status	Before Countermeasures: Registered Meter	D/L	Non-Regist./Illegal Direct	Indirect	Un-Connect.	Consumer Type Dom.	Com.	?	Meter ID Number	Meter 15	20	32	40	50	?	Service Pipe End Closed	Open	If open, m3/day	Meter Reading (m3) 2013/10/17	2013/10/18	Consumption	After Countermeasures: New/Re Regist.	Legalized	Disconnection Illegal	Registered	Un-Connect.	Meter Raising No-Change	Replace	New	Consumer Type Dom.	Com.	Meter ID Number	Meter (m3 unit) 15	20	32	40	50	?	Meter Reading (m3) 2013/10/17	2013/12/18	Consumption
88	4050	LESLIE BUNAONE	MBOKONA VALLEY			1							12B010953										2,072	2,195	0,123								1			12B010053	138019748	1						51,041	53,583	0,822
87	4051	FRED GIVIRO	MBOKONA VALLEY				1						12B089599																				1			12B089599	138008599	1						639,164	640,041	1,877
88	04051-5	EDDIE KOUTO	PANATINA CHOLA				1						D/LINE																	1							D/LINE										
89	4052	MELDEN MELDEN HALL	MBOKONA VALLEY				1						12A005121																				1			12A005121	12A005121	1						712,360	713,813	1,453
90	4053	BEVERLY MUAVA	MBOKONA VALLEY				1						07-000520																				1			07-000520	128008844	1						92,041	93,661	1,620
91	4054	BWAN P RUKU	MBOKONA VALLEY		D			1					D/LINE																1							D/LINE										
92	4056	JOSEPH ISAEKI	MBOKONA VALLEY		D			1					D/LINE																1							D/LINE										
93	4057	JOANA TOLEI	MBOKONA VALLEY		D			1					M/STOP															1					1			M/STOP	128008600	1						71,658	74,671	3,013
94	4058	MARY NAMAASI	MBOKONA VALLEY				1						01B27/MNOT CL															1								01B27/MNOT CL										
95	4059	BILLY LESU	MBOKONA VALLEY		D			1					13B019776																				1			13B019776	138019776	1						147,739	148,554	0,815
96	4060	SAM TAGANA	MBOKONA VALLEY				1						06B940446																				1			06B940446	06B940446	1						1611,594	1613,950	2,356
97	4065	MICHAEL MHOKEM	MBOKONA VALLEY		D				1				76033823																	1							76033823										
98	04065-01	SIMON RAMOFAI	MBOKONA		D				1				12A005228																	1							12A005228										
99	04065-02	HARRY MORGAN	LENGAHAN		V		1																						1																	
100	04065-03	TIMOTHY MAWABI	MBOKONA			1							13A001018										****	****								1			13A001018	128008445	1						84,268	86,001	1,823
101	04065-1	RODNEY SALE	DOMIN VALLEY		V		1						05B881516														1									05B881516										
102	04065-2	RANDY ALABAE			D			1					06B053361															1					1			06B053361	128008443	1						40,720	42,136	1,416
103	4066	ELIZABETH RIRIA	MBOKONA VALLEY			1							87/033975										4440,427	4442,154	1,727								1			87/033975	128011044	1						29,466	30,487	0,991
104	4067	ANDREW OROSUA	MBOKONA VALLEY		D		1						12A005194																1							12A005194										
105	4068	EDWARD BAMU	MBOKONA VALLEY										11A000982										****	****								1			11A000982	128008453	1						35,723	37,738	2,015
106	4069	BADDLEY AMASIA	MBOKONA VALLEY			1							D/LINE																				1			D/LINE	128008454	1						85,584	88,839	3,255
107	4070	SOLOMON AKWAI	MBOKONA VALLEY			1							06A002394										1382,334	****								1			06A002394	128008847	1						25,758	26,188	0,430
108	4071	ALARIC RORE	MBOKONA VALLEY			1							M/STOP										5577,891	5577,891								1			M/STOP	128011045	1						53,822	55,389	1,567
109	04093-1	AUSPAC	MBOKONA VALLEY			1							05-001256										2765,598	2766,570	1,002								1			07-001256	128172473	1						292,220	302,068	9,848
110		Michael Dick	MBOKONA VALLEY				1																										1				128008846	1						72,234	74,784	2,550
					45	43	10	0	12	0	0	0		0	0	0	0	0	0	0	0	0		29,4829			6	5	5	13	6	13	28	45	86	0			2	84	0	0	0	0			132,8973

Category in Water Audit Table

	A	B	D+E	F	I		A		I		A		A	
Total HH	45	43	10	0	12	0	0	29,4829	6	5	24	86	86	86	132,807
	110							No of the meter read	31	Total HH	110			No of the meter read	85
								Average	0,951					Average	1,562
								Assumed consumption of all meters	42,798					Assumed consumption of all meters	134,370

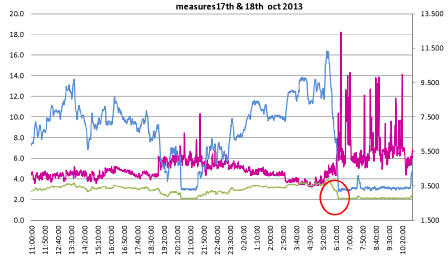
* Each indirect un-registered (parasite) user cannot be recognized, so only the total should be entered manually.

S64-1-26

MNF Measure before countermeasure in Mbokona ridge

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
18-Oct	4:29:00 AM	3.3260	8.290	68.637

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]÷[2][8]	[4]-[3]$^{1/2}$	[5]÷[4] x [7]	[6]÷[5]/60
2013/10/17 11:00	11:00:00	4.6021	5.850	0.705669481	0.840041357	2.793977553	0.047
2013/10/17 11:01	11:01:00	4.4214	5.850	0.705669481	0.840041357	2.793977553	0.047
2013/10/17 11:02	11:02:00	4.3914	5.930	0.715319662	0.845765725	2.813016803	0.047
2013/10/17 11:03	11:03:00	4.6589	5.990	0.722557298	0.850033704	2.827212100	0.047
2013/10/17 11:04	11:04:00	4.6749	5.980	0.721351025	0.849323864	2.824851170	0.047
2013/10/17 11:05	11:05:00	4.4016	5.990	0.722557298	0.850033704	2.827212100	0.047
2013/10/17 11:06	11:06:00	4.3969	5.990	0.722557298	0.850033704	2.827212100	0.047
2013/10/17 11:07	11:07:00	4.3532	5.970	0.720144753	0.848613429	2.822488266	0.047
2013/10/17 11:08	11:08:00	4.1804	6.030	0.727382388	0.852867158	2.836636166	0.047
2013/10/17 11:09	11:09:00	3.9807	6.110	0.737032569	0.858506010	2.855390990	0.048
2013/10/17 11:10	11:10:00	3.9227	6.220	0.750301568	0.866199497	2.880979526	0.048
2013/10/17 11:11	11:11:00	3.9956	6.570	0.792521110	0.890236547	2.960926756	0.049
2013/10/17 11:12	11:12:00	3.6576	6.740	0.813027744	0.901680511	2.998989380	0.050
2013/10/17 11:13	11:13:00	3.5759	6.940	0.837153197	0.914960762	3.043159496	0.051
2013/10/17 11:14	11:14:00	3.9058	7.060	0.851628468	0.922837184	3.069356474	0.051
2013/10/17 11:15	11:15:00	4.1551	7.170	0.864897467	0.929998638	3.093175470	0.052
2013/10/17 11:16	11:16:00	3.7289	7.210	0.869722557	0.932589169	3.101791575	0.052
2013/10/17 11:17	11:17:00	4.3951	7.220	0.870928830	0.933235678	3.103941864	0.052
2013/10/17 11:18	11:18:00	4.3871	7.140	0.861278649	0.928050995	3.086697609	0.051
2013/10/17 11:19	11:19:00	4.2994	6.950	0.838359469	0.915619719	3.045351184	0.051
2013/10/17 11:20	11:20:00	4.1732	6.950	0.838359469	0.915619719	3.045351184	0.051
2013/10/17 11:21	11:21:00	4.2039	6.870	0.828709288	0.910334712	3.027773253	0.050
2013/10/17 11:22	11:22:00	4.5911	6.720	0.810615199	0.900341712	2.994536535	0.050
2013/10/17 11:23	11:23:00	4.2691	6.400	0.772014475	0.878643543	2.922368423	0.049
2013/10/17 11:24	11:24:00	4.2834	6.310	0.761158022	0.872443707	2.901747769	0.048
2013/10/17 11:25	11:25:00	4.2721	6.380	0.769601930	0.877269588	2.917798650	0.049
2013/10/17 11:26	11:26:00	4.0569	6.410	0.773220748	0.879329715	2.924650632	0.049
2013/10/17 11:27	11:27:00	4.1438	6.460	0.779253111	0.882752576	2.936035069	0.049
2013/10/17 11:28	11:28:00	4.0585	6.550	0.790108565	0.888930512	2.956416583	0.049
2013/10/17 11:29	11:29:00	4.2403	6.680	0.805790109	0.897658125	2.985610922	0.050
2013/10/17 11:30	11:30:00	3.8873	6.820	0.822677925	0.907015945	3.016735034	0.050
2013/10/17 11:31	11:31:00	4.3240	6.940	0.837153197	0.914960762	3.043159496	0.051
2013/10/17 11:32	11:32:00	4.1605	7.030	0.848009650	0.920874394	3.062828236	0.051
2013/10/17 11:33	11:33:00	4.1122	6.980	0.841978287	0.917593748	3.051916807	0.051
2013/10/17 11:34	11:34:00	4.0295	6.820	0.822677925	0.907015945	3.016735034	0.050
2013/10/17 11:35	11:35:00	4.2716	6.810	0.821471653	0.906350734	3.014522540	0.050
2013/10/17 11:36	11:36:00	4.5665	6.740	0.813027744	0.901680511	2.998989380	0.050
2013/10/17 11:37	11:37:00	4.3951	6.640	0.800965018	0.894966490	2.976658546	0.050
2013/10/17 11:38	11:38:00	4.1336	6.370	0.768398657	0.876581803	2.915511077	0.049
2013/10/17 11:39	11:39:00	4.0464	6.200	0.747889023	0.864805772	2.876343997	0.048
2013/10/17 11:40	11:40:00	4.0421	6.260	0.755126659	0.868980241	2.890228280	0.048
2013/10/17 11:41	11:41:00	3.9152	6.320	0.762364294	0.873134752	2.904046184	0.048
2013/10/17 11:42	11:42:00	4.3343	6.430	0.775633293	0.880700456	2.929209717	0.049



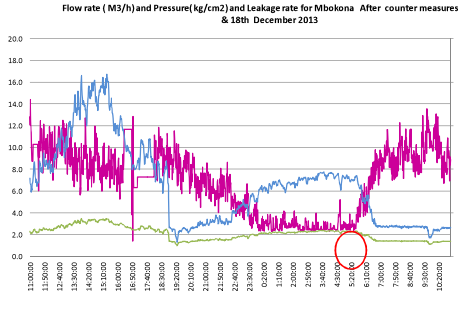
Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]÷[2][8]	[4]-[3]$^{1/2}$	[5]÷[4] x [7]	[6]÷[5]/60
2013/10/18 10:28	10:29:00	6.8053	3.300	0.398069964	0.630927859	2.098466060	0.035
2013/10/18 10:29	10:30:00	6.3967	3.330	0.401688782	0.633789225	2.107982962	0.035
2013/10/18 10:30	10:31:00	6.4957	3.370	0.406513872	0.637584404	2.120605727	0.035
2013/10/18 10:31	10:32:00	5.7275	3.380	0.407720145	0.638529674	2.123749696	0.035
2013/10/18 10:32	10:33:00	5.0990	3.340	0.402895054	0.634740147	2.111145729	0.035
2013/10/18 10:33	10:34:00	4.7100	3.350	0.404101327	0.635689647	2.114303765	0.035
2013/10/18 10:34	10:35:00	4.3859	3.430	0.413751508	0.643235189	2.139400237	0.036
2013/10/18 10:35	10:36:00	4.7564	3.420	0.412545235	0.642296844	2.136279302	0.036
2013/10/18 10:36	10:37:00	5.4173	3.420	0.412545235	0.642296844	2.136279302	0.036
2013/10/18 10:37	10:38:00	5.9053	3.380	0.407720145	0.638529674	2.123749696	0.035
2013/10/18 10:38	10:39:00	5.3499	3.390	0.408926417	0.639473547	2.126889017	0.035
2013/10/18 10:39	10:40:00	5.5069	3.380	0.407720145	0.638529674	2.123749696	0.035
2013/10/18 10:40	10:41:00	5.0463	3.380	0.407720145	0.638529674	2.123749696	0.035
2013/10/18 10:41	10:42:00	5.3175	3.380	0.407720145	0.638529674	2.123749696	0.035
2013/10/18 10:42	10:43:00	6.0740	3.380	0.407720145	0.638529674	2.123749696	0.035
2013/10/18 10:43	10:44:00	5.2872	3.330	0.401688782	0.633789225	2.107982962	0.035
2013/10/18 10:44	10:45:00	5.5586	3.350	0.404101327	0.635689647	2.114303765	0.035
2013/10/18 10:45	10:46:00	5.8823	3.370	0.406513872	0.637584404	2.120605727	0.035
2013/10/18 10:46	10:47:00	5.4861	3.370	0.406513872	0.637584404	2.120605727	0.035
2013/10/18 10:47	10:48:00	5.3081	3.370	0.406513872	0.637584404	2.120605727	0.035
2013/10/18 10:48	10:49:00	5.3237	3.380	0.407720145	0.638529674	2.123749696	0.035
2013/10/18 10:49	10:50:00	5.3442	3.350	0.404101327	0.635689647	2.114303765	0.035
2013/10/18 10:50	10:51:00	5.5719	3.380	0.407720145	0.638529674	2.123749696	0.035
2013/10/18 10:51	10:52:00	5.8815	3.380	0.407720145	0.638529674	2.123749696	0.035
2013/10/18 10:52	10:53:00	5.4993	3.550	0.428226779	0.654390387	2.176502429	0.036
2013/10/18 10:53	10:54:00	5.3392	3.680	0.443908323	0.666264454	2.215995576	0.037
2013/10/18 10:54	10:55:00	6.1896	3.920	0.472858866	0.687647341	2.287115057	0.038
2013/10/18 10:55	10:56:00	5.7978	4.180	0.504221954	0.710085878	2.361745630	0.039
2013/10/18 10:56	10:57:00	6.1308	4.220	0.509047045	0.713475329	2.373019943	0.040
2013/10/18 10:57	10:58:00	6.0410	4.270	0.515078408	0.717689632	2.387035716	0.040
2013/10/18 10:58	10:59:00	6.6519	4.340	0.523522316	0.723548420	2.406522045	0.040
2013/10/18 10:59	11:00:00	6.7973	4.260	0.513872135	0.716848753	2.384238953	0.040
Estimated Leakage Rate (m^3/day)							**68.637**

3.204 11.320 m
124.024 from Logger
120.2000 actual reading

MNF Measure After countermeasure in Mbokona ridge

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
18-Oct	2:37:00 AM	2.2970	0.905	50.549

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]÷[2][8]	[4]-[3]$^{1/2}$	[5]÷[4] x [7]	[6]÷[5]/60
2013/12/17 11:00	11:00:00	12.8318	0.899	0.993370166	0.996679570	2.289372973	0.038
2013/12/17 11:01	11:01:00	12.0438	0.842	0.930386740	0.964565571	2.215607116	0.037
2013/12/17 11:02	11:02:00	14.3919	0.826	0.912707182	0.955357097	2.194455251	0.037
2013/12/17 11:03	11:03:00	12.4764	0.825	0.911602210	0.954778618	2.193126486	0.037
2013/12/17 11:04	11:04:00	11.6137	0.766	0.846408840	0.920004804	2.113251035	0.035
2013/12/17 11:05	11:05:00	11.3757	0.738	0.815469613	0.903033562	2.074268091	0.035
2013/12/17 11:06	11:06:00	9.8263	0.781	0.862983425	0.928969012	2.133841821	0.036
2013/12/17 11:07	11:07:00	8.8148	0.759	0.838674033	0.915791479	2.103573027	0.035
2013/12/17 11:08	11:08:00	8.7272	0.837	0.924861878	0.961697394	2.209018915	0.037
2013/12/17 11:09	11:09:00	8.7272	0.844	0.932596685	0.965710456	2.218236918	0.037
2013/12/17 11:10	11:10:00	8.7272	0.860	0.950276243	0.974821134	2.239164145	0.037
2013/12/17 11:11	11:11:00	10.2662	0.900	0.994475138	0.997233743	2.290645908	0.038
2013/12/17 11:12	11:12:00	10.2676	0.952	1.051933702	1.025631892	2.355890928	0.039
2013/12/17 11:13	11:13:00	10.2676	1.036	1.144751381	1.069930550	2.457630473	0.041
2013/12/17 11:14	11:14:00	10.2676	1.067	1.179005525	1.085832028	2.494129019	0.042
2013/12/17 11:15	11:15:00	10.2676	1.085	1.198895028	1.094940650	2.515078674	0.042
2013/12/17 11:16	11:16:00	10.2676	1.029	1.137016575	1.066309793	2.449313594	0.041
2013/12/17 11:17	11:17:00	10.2676	0.946	1.045303867	1.022401031	2.348455167	0.039
2013/12/17 11:18	11:18:00	10.2676	0.915	1.011049724	1.005509684	2.309655743	0.038
2013/12/17 11:19	11:19:00	10.2676	0.897	0.991160221	0.995570299	2.286824978	0.038
2013/12/17 11:20	11:20:00	10.2676	0.851	0.940331492	0.969706910	2.227416773	0.037
2013/12/17 11:21	11:21:00	10.2676	0.885	0.977900552	0.988885844	2.271476986	0.038
2013/12/17 11:22	11:22:00	10.2676	0.884	0.976795580	0.988329692	2.270193303	0.038
2013/12/17 11:23	11:23:00	10.2676	0.831	0.918232044	0.958244251	2.201087044	0.037
2013/12/17 11:24	11:24:00	10.2676	0.808	0.888397790	0.942548561	2.165034045	0.036
2013/12/17 11:25	11:25:00	10.2676	0.827	0.913812155	0.955935225	2.195783212	0.037
2013/12/17 11:26	11:26:00	10.2676	0.854	0.943646409	0.971414643	2.231339435	0.037
2013/12/17 11:27	11:27:00	9.2015	0.854	0.943646409	0.971414643	2.231339435	0.037
2013/12/17 11:28	11:28:00	9.0424	0.847	0.935911602	0.967425244	2.222175785	0.037
2013/12/17 11:29	11:29:00	6.0122	0.843	0.931491713	0.965131813	2.216922407	0.037
2013/12/17 11:30	11:30:00	10.5568	0.858	0.948066298	0.973686961	2.236538950	0.037
2013/12/17 11:31	11:31:00	9.1359	1.000	1.104972376	1.051176662	2.414552794	0.040
2013/12/17 11:32	11:32:00	9.1269	1.096	1.211049724	1.100477044	2.527795769	0.042
2013/12/17 11:33	11:33:00	9.9344	1.066	1.177900552	1.085312720	2.492959987	0.042
2013/12/17 11:34	11:34:00	9.8059	1.068	1.180110497	1.086328908	2.495297503	0.042
2013/12/17 11:35	11:35:00	11.4719	1.050	1.160220994	1.077135551	2.474180360	0.041
2013/12/17 11:36	11:36:00	12.4600	1.069	1.181215470	1.086837370	2.496465440	0.042
2013/12/17 11:37	11:37:00	9.6892	1.049	1.1591 16022	1.076622507	2.473001898	0.041
2013/12/17 11:38	11:38:00	9.6858	0.969	1.070718232	1.034755156	2.376832592	0.040
2013/12/17 11:39	11:39:00	11.7739	0.994	1.098342541	1.048018388	2.407298237	0.040
2013/12/17 11:40	11:40:00	11.6933	1.015	1.121546961	1.059031143	2.432594555	0.041
2013/12/17 11:41	11:41:00	11.6891	0.965	1.066298343	1.032617229	2.371921776	0.040
2013/12/17 11:42	11:42:00	10.4346	0.968	1.069613260	1.034221088	2.375605840	0.040
2013/12/17 11:43	11:43:00	10.3902	1.013	1.119337017	1.057987248	2.430196708	0.041
2013/12/17 11:44	11:44:00	7.6474	1.055	1.165745856	1.079697113	2.480064269	0.041
2013/12/17 11:45	11:45:00	10.3306	1.093	1.207734807	1.098969884	2.524333824	0.042
2013/12/17 11:46	11:46:00	10.4642	1.189	1.313812155	1.146214452	2.632859190	0.044
2013/12/17 11:47	11:47:00	12.1220	1.183	1.307182320	1.143320743	2.626207746	0.044



Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]÷[2][8]	[4]-[3]$^{1/2}$	[5]÷[4] x [7]	[6]÷[5]/60
2013/12/18 10:19	10:19:00	8.9678	0.294	0.324861878	0.569965559	1.309213186	0.022
2013/12/18 10:20	10:20:00	10.9261	0.289	0.319337017	0.565099121	1.298032681	0.022
2013/12/18 10:21	10:21:00	9.0630	0.289	0.319337017	0.565099121	1.298032681	0.022
2013/12/18 10:22	10:22:00	11.0602	0.299	0.330386740	0.574792780	1.320299016	0.022
2013/12/18 10:23	10:23:00	10.4317	0.302	0.333701657	0.577669159	1.326906059	0.022
2013/12/18 10:24	10:24:00	9.4038	0.304	0.335911602	0.579578814	1.331292537	0.022
2013/12/18 10:25	10:25:00	9.6283	0.307	0.339226519	0.582431558	1.337845288	0.022
2013/12/18 10:26	10:26:00	9.4480	0.312	0.344751381	0.587155330	1.348695792	0.022
2013/12/18 10:27	10:27:00	10.5126	0.319	0.352486188	0.593705472	1.363741470	0.023
2013/12/18 10:28	10:28:00	8.9740	0.319	0.352486188	0.593705472	1.363741470	0.023
2013/12/18 10:29	10:29:00	9.0285	0.320	0.353591160	0.594633517	1.365877323	0.023
2013/12/18 10:30	10:30:00	7.2053	0.329	0.363535912	0.602939393	1.384951786	0.023
2013/12/18 10:31	10:31:00	8.3413	0.334	0.369060773	0.607503723	1.395436052	0.023
2013/12/18 10:32	10:32:00	7.5049	0.331	0.365745856	0.604769259	1.389154987	0.023
2013/12/18 10:33	10:33:00	9.2345	0.332	0.366850829	0.605682119	1.391251826	0.023
2013/12/18 10:34	10:34:00	7.9963	0.325	0.359116022	0.599262899	1.376506879	0.023
2013/12/18 10:35	10:35:00	8.0319	0.336	0.371270718	0.609319882	1.399607768	0.023
2013/12/18 10:36	10:36:00	6.7030	0.325	0.359116022	0.599262899	1.376506879	0.023
2013/12/18 10:37	10:37:00	8.7115	0.332	0.366850829	0.605682119	1.391251826	0.023
2013/12/18 10:38	10:38:00	9.6262	0.329	0.363535912	0.602939393	1.384951786	0.023
2013/12/18 10:39	10:39:00	7.9018	0.325	0.359116022	0.599262899	1.376506879	0.023
2013/12/18 10:40	10:40:00	8.4321	0.331	0.365745856	0.604769259	1.389154987	0.023
2013/12/18 10:41	10:41:00	7.9103	0.330	0.364640884	0.603855019	1.387054979	0.023
2013/12/18 10:42	10:42:00	8.6395	0.329	0.363535912	0.602939393	1.384951786	0.023
2013/12/18 10:43	10:43:00	7.7545	0.330	0.364640884	0.603855019	1.387054979	0.023
2013/12/18 10:44	10:44:00	8.1403	0.330	0.364640884	0.603855019	1.387054979	0.023
2013/12/18 10:45	10:45:00	7.6944	0.331	0.365745856	0.604769259	1.389154987	0.023
2013/12/18 10:46	10:46:00	8.1072	0.331	0.365745856	0.604769259	1.389154987	0.023
2013/12/18 10:47	10:47:00	7.5200	0.329	0.363535912	0.602939393	1.384951786	0.023
2013/12/18 10:48	10:48:00	9.9689	0.323	0.356906077	0.597416168	1.372264937	0.023
2013/12/18 10:49	10:49:00	10.2128	0.327	0.361325967	0.601103957	1.380735789	0.023
2013/12/18 10:50	10:50:00	10.8877	0.330	0.364640884	0.603855019	1.387054979	0.023
2013/12/18 10:51	10:51:00	10.1800	0.325	0.359116022	0.599262899	1.376506879	0.023
2013/12/18 10:52	10:52:00	9.0420	0.325	0.359116022	0.599262899	1.376506879	0.023
2013/12/18 10:53	10:53:00	9.7252	0.328	0.362430939	0.602022374	1.382845394	0.023
2013/12/18 10:54	10:54:00	9.4428	0.331	0.365745856	0.604769259	1.389154987	0.023
2013/12/18 10:55	10:55:00	9.0736	0.325	0.359116022	0.599262899	1.376506879	0.023
2013/12/18 10:56	10:56:00	6.9325	0.325	0.359116022	0.599262899	1.376506879	0.023
2013/12/18 10:57	10:57:00	8.0212	0.326	0.360220994	0.600184134	1.378622955	0.023
2013/12/18 10:58	10:58:00	9.1325	0.332	0.366850829	0.605682119	1.391251826	0.023
2013/12/18 10:59	10:59:00	8.3903	0.331	0.365745856	0.604769259	1.389154987	0.023
2013/12/18 11:00	11:00:00	8.8555	0.331	0.365745856	0.604769259	1.389154987	0.023
Estimated Leakage Rate (m^3/day)							**50.549**

1.417 2.089 m
166.024 from Logger
147.2000 actual reading

MBOKONA METER INACCURACY TEST BEFORE COUNTERMEASURE

No:	Account	Customer	Location Address 2	Meter ID-01	Initial Reading time(mins)	Initial Reading Tested Metr	Final Reading TR-III Metr	Final Reading Tested Metr	Integrated Value TR-III Metr	Integrated Value t Meter (litr	Difference (litr II Meter (litres)		Error (%)
						A	B	C	D	C-A = E	D - B = F	E-F = G	G/F
1	04000-02	NORMAN VAVAHA	MBOKONA VALLEY STAFF Q	05A018578		2651.727	1.176	2651.808	1.224	0.081	0.048	0.033	
2	04000-03	CHRISTINA RAENAITORO	MBOKONA	05A018577		591.958	1.102	592.031	1.176	0.073	0.074	-0.001	-1.35%
3	04000-11	MAVIS ADOMANA	MBOKONA VALLEY	12B086813		164.044	1.224	164.069	1.251	0.025	0.027	-0.002	-7.41%
4	4001	RACHEL STEWARD	MBOKONA VALLEY	06A021605		1584.577	0.904	1584.918	0.947	0.043	0.043	0.000	0.00%
5	4002	JARED FAGASI	MBOKONA VALLEY	05A018603		1730.977	0.859	1731.020	0.904	0.043	0.045	-0.002	-4.44%
6	4004	JOHN MARK NA'AMANA	MBOKONA VALLEY	05A018601		56.079	0.947	56.141	1.000	0.062	0.053	0.009	16.98%
7	4005	LYNNE DAGA	MBOKONA VALLEY	05A018600		3760.271	1.051	3761.119	1.102	0.848	0.051	0.797	
8	4006	ANGELYN KOFAE DENTANA	MBOKONA VALLEY	13A001080		48.702	1.000	48.754	1.050	0.052	0.050	0.002	4.00%
9	4007	LOUISA BARAGAMU	MBOKONA VALLEY	12A005023		668.104	1.885	668.161	1.939	0.057	0.054	0.003	5.56%
10	4008	CBSI ODI HOUSE	MBOKONA VALLEY	97208428		610.255	1.939	610.255	1.992	0.000	0.053	-0.053	
11	4009	SIXTUS TORAKANA	MBOKONA VALLEY	05A018604		6111.447	2.002	6111.472	2.058	0.025	0.056	-0.031	-55.20%
12	4012	THE CONSUMER	MBOKONA VALLEY	10B005222		1405.914	2.058	1405.959	2.107	0.045	0.049	-0.004	-7.35%
13	4015	JAMES FUNA	MBOKONA VALLEY	12B086815		991.824	2.258	991.844	2.265	0.020	0.007	0.013	
14	4016	ALFRED SARE	MBOKONA VALLEY	12A005258		633.502	2.265	633.612	2.304	0.110	0.039	0.071	
15	4019	LOVESON JOHN	MBOKONA VALLEY	94208429		6566.560	1.387	6566.570	1.390	0.010	0.003	0.007	
16	4020	ALFRED PALO	MBOKONA VALLEY	12A005274		1091.683	1.317	1091.755	1.387	0.072	0.070	0.002	2.86%
17	4022	MICHAEL MENAPI	MBOKONA VALLEY	8012915		2883.261	1.251	2883.304		0.043	-1.251	1.294	
18	4035	EDNA TOKASI OLOBENI	MBOKONA VALLEY	06A021765		3161.937	2.304	3162.000	2.368	0.063	0.064	-0.001	-1.56%
19	4039	PRISCILA WATE	MBOKONA VALLEY	12B010955		2526.068	1.639	2526.156	1.736	0.089	0.097	-0.008	-8.66%
20	4040	ANDREW PAULSEN	MBOKONA VALLEY	128010955		345.340	1.557	345.476	1.638	0.136	0.081	0.055	
21	4041	YANNY RAM HOTO	MBOKONA VALLEY	07-000473		2226.297	1.348	2226.345	1.554	0.049	0.206	-0.157	
22	4046	ESTHER TEGU	MBOKONA VALLEY	79251520		3147.250	2.368	3147.261	2.383	0.011	0.015	-0.004	-26.67%
23	4047	VERONICA MANISI	MBOKONA VALLEY	12A005451		1264.924	1.736	1264.986	1.798	0.062	0.062	0.000	0.00%
24	4048	PHILIP MANETOHUA	MBOKONA VALLEY	12B086889		168.439	1.736	168.516	1.878	0.077	0.142	-0.065	-45.77%
25	04049-1	WALTER VEKE	MBOKONA VALLEY	9752269		9385.749	1.878	9385.760	1.885	0.011	0.007	0.004	
26	4050	LESLIE BUNAONE	MBOKONA VALLEY	12B010953		5.446	2.383	5.523	2.453	0.077	0.070	0.007	10.00%
27	4051	FRED GAVIRO	MBOKONA VALLEY	12B086559		531.862	2.453	531.928	2.518	0.066	0.065	0.001	1.54%
28	4053	BEVERLY MUVA	MBOKONA VALLEY	07-000520		2442.992	2.522	2443.034	2.557	0.042	0.035	0.007	20.00%
												average	-5.42%

Actual Measurement of Leakage and Open-end Flow **8 No.4 Mbokona**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			User Type (excl. Leakage on Main lines)		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom.: 32m^3 Non-D: 45m^3	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom	Non-D	CIP	uPVC	GP	PB	Others	[1]	[2]−[1]x24	[2]−[1]x24	[3]	[4]−[2]-[3]	[5]−[2]
1	*			*					*				*		*					*							
2	*			*					*				*		*				*								
3	*			*						*			*		*				*			0.04	0.96				
4	*			*						*			*		*					*		0.05	1.23				
5	*			*						*		*			*						*	0.04	0.86				
6	*			*						*		*			*						*	0.01	0.35				
7	*			*						*		*			*						*	0.01	0.29				
8	*			*						*		*			*						*	0.01	0.35				
9	*			*						*		*			*						*	0.12	2.88				
10	*			*						*		*			*						*	0.03	0.78				
11	*			*						*		*			*						*	0.02	0.59				
12	*			*						*		*			*						*						
13	*			*						*		*			*						*						
14	*			*					*				*		*					*							
15	*			*					*			*			*					*		0.07	1.73				
16	*			*					*				*		*					*							
17	*			*							*		*		*				*			0.04	1.01				
18	*			*							*		*		*					*		0.01	0.29				
19	*			*					*				*		*					*		0.01	0.35				
20	*			*							*		*		*					*							
21	*			*							*	*			*					*							
22	*			*							*	*			*					*		0.01	0.35				
23	*			*							*	*			*					*		0.06	1.44				
24	*			*					*			*			*				*			0.01	0.35				
25	*			*							*	*			*						*						
Total	25	0		25	0	0	0	0	7	12	6	15	10	0	25	0	0	0	4	11	10		13.81			0.00	0.00
	25		25		0		25					25			25		25										

Note:

MBOKONA METER INACCURACY TEST after counter measues

No:	Account	Customer	Location Address 2	Trf	Meter ID-01	time(mins)	Initial Reading Tested Metr	Initial Reading TR-III Metr	Final Reading Tested Metr	Final Reading TR-III Metr	Integrated Value Test Meter (litres)	Integrated Value TR-III Meter (litres)	Difference (litres)	Error (%)
						5 minutes	A	B	C	D	C-A = E	D - B = F	E-F = G	G/F
1	4000	JOHN BUAEWO	MBOKONA VALLEY (ABOVE	1	12B086456	5	**106.445**	**11.9843**	**106.528**	**12.0658**	0.083	0.082	0.002	1.840%
2	04000-01	JOHN TAKIARA	MBKONA BEHIND CBSI OTRS	1	12B086447	5	66.23	12.0671	66.37	12.2093	0.144	0.142	0.002	1.266%
23	04002-1	CENTRAL BANK OF SOLOMON ISLANDS	MBOKONA - CBSI ESTATE	1	13B019436	5	19.549	11.861	19.660	11.981	0.111	0.120	-0.009	-7.807%
33	4010	LOUISA SULEGA	MBOKONA VALLEY	1	12B011266	5	70.658	12.211	70.830	12.383	0.172	0.172	0.000	-0.116%
44	04012-4	RAY K SALE	MBOKONA VALLEY CLINIC	6	12B086757	5	162.420	12.385	162.535	12.496	0.115	0.111	0.004	3.324%
48	4015	JAMES FUNA	MBOKONA VALLEY	1	12B086815	5	1088.789	12.505	1088.937	12.649	0.148	0.144	0.004	2.635%
													average	0.19%

S64-1-27

Change in Status of Connections (Customers, Users and Unconnection) — 9 No.8 — Mbaranamba

No.	Account No.	Account Name	Location	status	Before Countermeasures: Registered Meter	Reg. Dd.	Non-Regist. Illegal Direct	Illegal Indirect	Un-Connect.	Consumer Type Dom.	Com.	?	Meter ID Number	Meter 15	20	32	40	50	?	Service Pipe End Closed	Open	If open. m3/day	Meter Reading (m3) 2013/10/17	2013/10/18	Consumption	After Countermeasures: New/Re Regist.	Legalized	Disconnection Illegal	Registered	Un-Connect.	Meter Raising No-Change	Replace	New	Consumer Type Dom.	Com.	?	Meter ID Number	Meter (m3 unit) 15	20	32	40	50	?	Meter Reading (m3) 2013/11/6	2013/11/7	Consumption
1	14000	DANIEL TOLOMEA	MBARANABA		1								12B019924										181,775	182,717	942						1					12B019936		1						216,584	217,920	1,336
2	14000-1	SOLOMON HELI	MBARANABA		1								12A005230										440,412	441,133	1,721							1					12B00939		1						37,436	38,299	0,863
3	14000-2	WILLY MAOMA	BARANAMBA	V					1																					1																
4	14000-3	JAMES L TEWAANI & JESSIE TEWAANI	MBARANAMBA	D					1																																				
5	14000-4	SERAH WAHANO	MBARANAMBA	V					1																					1																
6	14001	PHILIP APELA	MBARANABA VALLEY		1								12A004440										239,513	241,067	1,554						1					12A004448	1							302,415	304,042	1,627
7	14002	ALICK & WENDY BUTALA	MBARANABA VALLEY		1								12A009118										187,289	189,715	2,426						1					12A006118	1							323,234	326,781	3,547
8	14003-1	RINNAH SOLOMON	MBARANABA		1								13B010916										416,047	417,811	1,764						1					12B010916	1							455,081	455,780	0,719
9	14003	CHRIS MASERUI	MBARANABA VALLEY		1								13B019781										151,513	154,136	2,623							1				12B009932	1							135,598	141,083	4,484
10	14004	TONY SANTA	MBARANABA VALLEY		1								12A004462										326,005	327,152	1,147							1				12B009938	1							41,257	42,812	1,555
11	14005	TANA HITI	MBARANABA VALLEY		1								86123616										2012,555	2012,555								1				12B009941	1							29,323	30,472	1,149
12	14006	JOHN MICHAEL BALE	MBARANABA VALLEY		1								13A001074										114,214	114,809	0,594							1				12B009930	1							16,315	16,968	0,575
13	14006-1	JOHN JUNIOR FINAU	P.NO 191-043-74LOT 62		1								09A000211										1289,568	1291,842	1,274							1				12B006799	1							30,037	31,405	1,368
14	14006-2	MEMBLEY HITI	BARANAMBA		1								12A005256										73,959	74,619	0,660							1				12B009942	1							9,541	9,838	0,297
15	14007	EVERLYN MNGKALA	MBARANABA VALLEY		1								81132148										1348,680	1348,808	0,128							1				12B009901	1							17,282	17,583	0,321
16	14008	MURIEL MANA	MBARANABA VALLEY		1								13B019564										98,136	99,197	3,061							1				12B016944	1							185,852	187,713	2,861
17	14009	AUSTIN SAU	MBARANABA		1								13A000887										635,470	639,100	3,690							1				12B006778	1							229,789	235,520	5,731
18	14009-1	TEKAI TEREKA	MBARANABA		1								0107-00573										3613,598	3614,444	0,845							1				12B006798	1							35,836	38,802	2,966
19	14010	GINIA HAROLD	MBARANABA VALLEY		1								13B019822										1913,217	1913,217								1				12B006782	1							55,318	56,752	1,434
20	14011	EDWARD MANEDIKA	MBARANABA VALLEY		1								83115486										1302,871	1303,709	0,838							1				12B006587	1							40,210	41,056	0,846
21	14012	AGNES KELA	MBARANABA VALLEY		1								13B019822										38,801	39,780	0,959							1				13B019822	1							64,976	65,154	1,978
22	14012-1	DAVID HIRIAUA	MBARANABA		1								99358916										6671,000	6673,000	2,000							1				12B006781	1							112,088	117,428	4,741
23	14013	KRISTINA SOGAVARE	MBARANABA VALLEY		1								81132139										3018,802	3018,941	0,339							1				12B006779	1							14,893	14,960	0,067
24	14015	DOUGLAS KIMI	MBARANABA VALLEY		1								13B0199569										55,047	56,877	1,830						1					13B016966	1							136,073	137,342	1,269
25	14015-01	ERIC HIVAE	HONIARA	V					1																					1																
26	14016	WILSON HAROLD	MBARANABA VALLEY		1								13B019823										97,961	100,135	2,174						1					13B019823	1							170,009	171,950	1,941
27	14016-1	STANLEY KOFELA	LOTANO		1								09B940560										2851,493	2852,807	1,314							1				12B006780	1							50,291	51,929	1,638
28	14017	WARREN CASTRO	MBARANABA VALLEY	D					1				07-000842																	1																
29	14018	PETER UMEA	MBARANABA VALLEY		1								13B019809										129,542	133,147	3,605						1					13B019809		1						269,229	261,962	1,733
30	14018-1	RODNEY SALE	MBARANABA VALLEY		1								13A001063										54,002	54,290	0,288						1					13A001063	1							75,068	75,325	0,257
31	14018-2	ERIC SURI	MBARANABA VALLEY	D					1				09A000252																	1																
32	14019	PAUL ISIHANUA	MBARANABA VALLEY			1							DULINE																			1			12B006455	1							23,840	25,552	1,712
33	14020	JACK USULI	MBARANABA VALLEY	D					1				83178956																	1																
34	14021	MOSES KAUKUI	MBARANABA VALLEY		1								12A004660										328,052	328,439	0,387							1				12A004660	1							367,515	368,526	1,011
35	14022	LAWRENCE SAMANI	MBARANABA VALLEY		1								07-000741										3692,250	3694,945	2,795							1				12B006585	1							80,633	81,412	2,779
36	14023	RUSSELL TAGINI	MBARANABA VALLEY		1								07-000879										2108,322	2109,630	1,308							1				12B006584	1							28,831	29,532	0,701
37	14024	CALVIN & KATH ZIRU	MBARANABA VALLEY		1								13B019785										89,409	91,012	1,603							1				13B019785								156,277	157,885	1,608
38	14025	AUDREY TAKOLA	MBARANABA VALLEY		1								17333										****	****								1				12B006840	1							7,274	7,298	0,024
39	14026	WELSHMAN KASOA	MBARANABA VALLEY		1								12A006117										302,267	303,453	1,256							1				12A006117	1							346,245	350,211	0,966
40	14027	AUBREY ZEKE	MBARANABA VALLEY		1								13B019779										49,000	50,705	1,705							1				13B019779	1							77,830	78,459	0,629
41	14028	NATHAN MALE	MBARANABA VALLEY		1								12A006119										598,477	599,897	3,420							1				12A006119	1							654,159	654,409	0,250
42	14029	BILLY MAMALONI	MBARANABA VALLEY		1								09A021822										1302,598	1304,317	1,721							1				09A021822	1							1320,831	1320,982	0,231
43	14030	TEX TAHOMAURI	MBARANABA VALLEY		1								13B019835										729,489	729,489								1				13B019835	1							729,489	729,489	0,000
44	14031	PHILIP PITAVOGA	MBARANABA VALLEY		1								12A006120										650,296	652,870	3,574							1				12A006120	1							741,452	743,010	1,558
45	14032	EDWARD THEGNA	MBARANABA VALLEY		1								09A021733										1655,474	1656,549	1,075							1				09A021733	1							1682,504	1682,581	0,077
46	14033	MERCY WINIFRED HOU	MBARANBA VALLEY		1								81132150										4317,530	4318,389	0,859							1				12B006596	1							98,734	105,897	7,163
47	14034	THOMAS SALOPUKA	MBARANABA VALLEY		1								83078018										2727,893	2728,078	0,185							1				12B006593	1							10,095	10,530	0,435
48	14035	LESLIE LAZARUS	MBARANABA VALLEY		1								83078928										2131,029	2132,159	0,230							1				12B172443	1							28,802	30,446	1,644
49	14036	SALO AFIA	MBARANABA VALLEY		1								12A000696										215,843	217,029	1,186							1				12B011102	1							24,206	25,012	0,806
50	14037	BETTY BU	MBARANABA VALLEY		1								545131										2855,530	2855,944	0,414							1				12B011103	1							45,218	46,873	1,655
51	14038	ROBERT MUNE PONGI	MBARANABA VALLEY		1								5434400										2202,195	2202,424	0,229							1				12B011101	1							20,953	21,675	0,722
52	14039	WILSON KIKOLO	MBARANABA VALLEY		1								12A006097										576,504	577,131	0,627							1				12A006097	1							903,009	904,366	1,357
53	14040	RODNEY MURRAY	MBARANABA VALLEY		1								99357										****	****								1				12B011104	1							28,388	29,320	0,932
54	14041	ANNE TONGAN	MBARANABA VALLEY		1								13B019780										50,533	51,538	0,995							1				13B019780	1							76,483	76,709	0,226
55	14042	ELIZABETH MELUE	MBARANABA VALLEY		1								83078022										2244,295	2246,477	0,182							1				13A000923	1							26,788	27,821	1,033
56	14043	CHRISTIAN MESEPITU	MBARANABA VALLEY		1								883871										3957,841	3957,799	0,158							1				13A000925	1							20,139	20,541	0,402
57	14044	SAMSON KAULI	MBARANABA VALLEY		1								12A000698										459,520	461,038	1,518							1				12A000698	1							558,900	561,262	2,362
58	14044-1	JOHN TALOI	MBARANABA VALLEY		1								13B019496										109,944	113,279	3,335							1				13B019496	1							231,363	233,747	2,484
59	14044-2	CASPER SADE	MBARANABA	V					1																					1																
60	14045	FRANCISCA AUVOLO	MBARANABA VALLEY		1								13B098613										14,297	14,567	0,270							1				12B006613	1							31,665	31,896	0,231
61	14046	TORIKA KIBULE	MBARANABA VALLEY		1								11A000739										2025,269	2026,742	2,873							1				11A000739	1							2128,436	2132,126	3,690
62	14047	DANIEL SIO	MBARANABA VALLEY		1								12A006099										242,433	242,764	0,331							1				12A000099	1							272,383	273,983	1,270
63	14047-1	DAVID MAESUA	MBARANABA VALLEY		1								12B098614										112,802	118,847	6,245							1				12B098614	1							230,398	231,413	1,014
64	14047-2	MASON WATE							1				09A000155																	1																
65	14047-3	BATHOLOMEW SINAU	JACKSON RIDGE						1				07-001451																	1																
66	14047-4	DICK MARE							1				07-001452																	1																
67	14047-5	ECO LAGOON HOUSE 3							1				13B098615																	1																
68	14048	FAMILY FEDERATION FOR WORLD PEACE	MBARANABA	V					1				DULINE																	1																
69	14048-1	NOELYN RUAVA	BMERANABA		1								12A005305										848,919	850,563	1,644							1				12B172476	1							37,926	38,592	0,766
70	14048-2	NEOLYN RUAVA	BARANABA	V					1																					1																
71	14049	FAMILY FEDERATION FOR WORLD PEACE	MBARANABA		1			1					13A000920																				1		12B011155	1							41,004	44,959	3,955
72	14049-1	NAELYN BINTA	LOTANO		1			1					DULINE																				1		12B172484	1							11,203	13,892	2,689
73	14049-2	MARGARET BAMBU	PAC NO.191-043-0140LOT NO.: 2052					1					DULINE																				1		12B172446	1							36,577	36,618	1,041
74	14049-3	EDGAR TAKELI	JACKSON RIDGE					1					13A005320																				1		12B172481	1							10,021	10,361	0,340
75	14049-4	JOY KAFO							1				07-000802																	1																
76	14049-5	NICHOL & ANNIE BIRD	JACKSON RIDGE						1				12A005306																	1																
77	14049-6	IAN ALICK	JACKSON RIDGE						1				12B098616																	1																
78	14050	FAMILY FEDERATION	MBARANABA	D					1				DULINE																	1																
79	14050-1	MAENA RADE	DOWN VALLEY		1			1					13B098617																				1		12B098617	1							245,342	250,106	4,764
80	14050-2	JOHN GILBERT	MBARANABA		1								13B019497																				1		12B172478	1							25,916	27,301	1,385
81	14050-3	ALICK BOBBY											13B019498										115,847	119,701	3,854								1		12B172482	1							56,782	59,339	2,558
82	14050-4	TEDDY KAMA		V					1																					1																
83	14051	RACHEL FERA	MBARANABA		1								192										17992,000	17992,000												12B172483	1							36,084	39,197	1,023
84	14051-01	SYLVESTER LAE	OHUIOLA VILLAGE		1								05A01884C9										671,912	671,912								1		12B172475	1							20,111	20,813	0,702
85	14051-02	REGINALD MEKE			1								13B019494										95,479	98,375	2,896							1		13B019494	1							216,889	220,393	3,464
86	14051-03	FRED KARAI	MBARANABA		1								13A000770										15,689	18,144	2,155							1		13A000770	1							46,567	47,935	1,368
87	14051-04	ROBERT JOSIAH AU	MBARANABA						1				DULINE																	1																

No.	Account No.	Account Name	Location	status	Before Countermeasures: Registered Meter	Reg. Dd.	Non-Regist. Illegal Direct	Illegal Indirect	Un-Connect.	Consumer Type Dom.	Com.	?	Meter ID Number	Meter 15	20	32	40	50	?	Service Pipe End Closed	Open	If open. m3/day	Meter Reading (m3) 2013/10/17	2013/10/18	Consumption	After Countermeasures: New/Re Regist.	Legalized	Disconnection Illegal	Registered	Un-Connect.	Meter Raising No-Change	Replace	New	Consumer Type Dom.	Com.	?	Meter ID Number	Meter (m3 unit) 15	20	32	40	50	?	Meter Reading (m3) 2013/11/6	2013/11/7	Consumption
88	14051-05	NEWTON MAGI	MBARANABA		1								13B019783										29,490	29,490							1					13B019783	1							29,490	29,490	0,000
89	14051-06	MARGARET KUSILIFU	LOTANO			1							DULINE																				1		12B01159	1							0,994	0,994	0,000
90	14051-07	CHIRILE ALEXONA	MBARANABA		1								12A004479										136,803	137,247	0,444							1				12A004479	1							150,720	151,139	0,419
91	14051-08	JONATHAN STEPHEN	MBARANABA		1								12B010913										810,190	812,921	2,731							1				12B010913	1							920,238	921,839	1,601
92	14051-1	PETER MBENUU	MBARANABA RIDGE/OHOLA VG			1							DULINE																				1		12B172445	1							0,938	0,994	0,056
93	14051-2	STEVEN NUNUMIE	MBARANABA		1								294										3043,000	3043,000								1		12B172447	1							10,672	11,179	0,507
94	14051-3	TIMMY TOATA	OHOLA VILLAGE			1							13B019640										29,503	29,503								1		13B019640	1							35,110	35,330	0,220
95	14051-4	BATHOLOMEW SINAU	MBARANABA		1								09A000126										685,723	685,723							1				09A000126	1							708,401	709,964	1,563
96	14052	BENJAMIN HOU	OHUIOLA VILLAGE/MBARAN		1								07-0001099										6854,117	6854,117							1				13A172021	1							53,328	55,065	1,737
97	14053	FESTUS ANCHERE	OHUIOLA		1								09B932547										2140,268	2142,198	3,742							1				09B932547	1							2359,471	2363,642	5,171
98	14054	ROBERT JOSIAH AU	PNO.192-016-065		1								09A000225										603,394	603,759	2,375							1				12011105	1							36,432	40,762	4,330
99		Rachel Fera					1																										1		12B172448	1							32,381	34,733	2,352
100		Rachel Fera					1																										1		12B172471	1							2,902	3,142	0,240
					69	9	2	0	20	0	0	0		0	0	0	0	0	0	0	0	0	93,3889			0	2	0	0	20	30	39	11	0	0	0		23	57	0	0	0	0			123,2453

Category in Water Audit Table

	A	B	D+E	F	I	A
	69	9	2	0	20	0
Total HH			100			

* Each indirect un-registered (parasite) user cannot be recognized, so only the total should be entered manually.

	A
	0

	93,3889
No.of the meter read	57
Average	1,637
Assumed consumption of all meters	112,953

	I	A	
	20	80	0
Total HH	100		

0

	A
	80

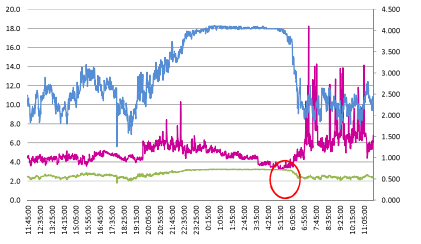
	123,245
No.of the meter read	80
Average	1,541
Assumed consumption of all meters	123,245

MNF Measure before countermeasure in Mbaranamba

Date of MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
26-Nov	5:19:00 AM	3.2044	4.030	65.536

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
2013/11/25 11:45	11:45:00	4.6021	2.470	0.612903226	0.782881361	2.508665034	0.042
2013/11/25 11:46	11:46:00	4.4214	2.450	0.607940437	0.779705359	2.498487852	0.042
2013/11/25 11:47	11:47:00	4.3914	2.210	0.548387097	0.740531631	2.372959559	0.040
2013/11/25 11:48	11:48:00	4.6589	2.340	0.580645161	0.762000762	2.441755242	0.041
2013/11/25 11:49	11:49:00	4.6749	2.400	0.595533499	0.771708169	2.472861658	0.041
2013/11/25 11:50	11:50:00	4.4016	2.290	0.568238213	0.753815769	2.413572750	0.040
2013/11/25 11:51	11:51:00	4.3969	2.280	0.565756824	0.752168082	2.410247402	0.040
2013/11/25 11:52	11:52:00	4.3532	2.220	0.550868486	0.742205151	2.378322186	0.040
2013/11/25 11:53	11:53:00	4.1804	2.210	0.548387097	0.740531631	2.372959559	0.040
2013/11/25 11:54	11:54:00	3.9807	2.220	0.550868486	0.742205151	2.378322186	0.040
2013/11/25 11:55	11:55:00	3.9227	2.030	0.503722084	0.709733812	2.272271028	0.038
2013/11/25 11:56	11:56:00	3.9956	1.910	0.473945409	0.688436932	2.206027305	0.037
2013/11/25 11:57	11:57:00	3.6576	1.830	0.454094293	0.673865189	2.159333611	0.036
2013/11/25 11:58	11:58:00	3.5759	1.960	0.486352357	0.697389674	2.234715471	0.037
2013/11/25 11:59	11:59:00	3.9058	1.880	0.4665501241	0.683008961	2.188633914	0.036
2013/11/25 12:00	12:00:00	4.1551	2.030	0.503722084	0.709733812	2.272271028	0.038
2013/11/25 12:01	12:01:00	3.7289	1.980	0.491315136	0.700938754	2.246088142	0.037
2013/11/25 12:02	12:02:00	4.3951	2.030	0.503722084	0.709733812	2.272271028	0.038
2013/11/25 12:03	12:03:00	4.3871	1.970	0.488833747	0.699166466	2.240409023	0.037
2013/11/25 12:04	12:04:00	4.2994	2.160	0.535980149	0.732106651	2.345962553	0.039
2013/11/25 12:05	12:05:00	4.1732	1.980	0.491315136	0.700938754	2.246088142	0.037
2013/11/25 12:06	12:06:00	4.2039	2.210	0.548387097	0.740531631	2.372959559	0.040
2013/11/25 12:07	12:07:00	4.5911	1.960	0.486352357	0.697389674	2.234715471	0.037
2013/11/25 12:08	12:08:00	4.2691	2.030	0.503722084	0.709733812	2.272271028	0.038
2013/11/25 12:09	12:09:00	4.2834	2.100	0.521091811	0.721866893	2.313150272	0.039
2013/11/25 12:10	12:10:00	4.2721	2.160	0.535980149	0.732106651	2.345962553	0.039
2013/11/25 12:11	12:11:00	4.0569	2.090	0.518610422	0.720146111	2.307636200	0.038
2013/11/25 12:12	12:12:00	4.1438	2.070	0.513647643	0.716692153	2.296568336	0.038
2013/11/25 12:13	12:13:00	4.0585	2.090	0.518610422	0.720146111	2.307636200	0.038
2013/11/25 12:14	12:14:00	4.2403	2.330	0.553349876	0.743874906	2.383627249	0.040
2013/11/25 12:15	12:15:00	3.8873	2.030	0.503722084	0.709733812	2.272271028	0.038
2013/11/25 12:16	12:16:00	4.3240	2.200	0.545905707	0.738854321	2.367584785	0.039
2013/11/25 12:17	12:17:00	4.1605	2.280	0.565756824	0.752168082	2.410247402	0.040
2013/11/25 12:18	12:18:00	4.1122	2.280	0.565756824	0.752168082	2.410247402	0.040
2013/11/25 12:19	12:19:00	4.0295	2.490	0.617866005	0.786044531	2.518801096	0.042
2013/11/25 12:20	12:20:00	4.2716	2.400	0.595533499	0.771708169	2.472861658	0.041
2013/11/25 12:21	12:21:00	4.5665	2.400	0.595533499	0.771708169	2.472861658	0.041
2013/11/25 12:22	12:22:00	4.3951	2.520	0.625310174	0.790765562	2.533929166	0.042
2013/11/25 12:23	12:23:00	4.1336	2.420	0.600496278	0.774916949	2.483143872	0.041
2013/11/25 12:24	12:24:00	4.0464	2.520	0.625310174	0.790765562	2.533929166	0.042
2013/11/25 12:25	12:25:00	4.0421	2.590	0.642679901	0.801673188	2.568881564	0.043
2013/11/25 12:26	12:26:00	3.9152	2.520	0.625310174	0.790765562	2.533929166	0.042
2013/11/25 12:27	12:27:00	4.3343	2.530	0.627791563	0.792332988	2.538951826	0.042
2013/11/25 12:28	12:28:00	4.6439	2.460	0.610421836	0.781294974	2.503581614	0.042
2013/11/25 12:29	12:29:00	4.4821	2.320	0.575682383	0.758737360	2.431297998	0.041
2013/11/25 12:30	12:30:00	4.4259	2.150	0.533498795	0.730409994	2.340525785	0.039

1.5 old pipe line length
0.7000 new pipe line length.
2.0000 km
1.456545 m^3/hr/km

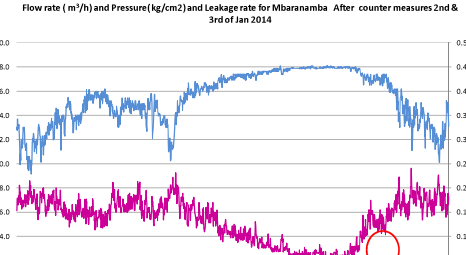


MNF Measure After countermeasure in Mbaranamba

Date of MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
3-Jan	3:21:00 AM	2.3666	0.451	52.401

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
2014/1/2	11:00:00	6.1086	0.325	0.720620843	0.848893894	2.008992289	0.033
2014/1/2	11:01:00	7.0815	0.319	0.707173073	0.841021142	1.990361355	0.033
2014/1/2	11:02:00	7.1768	0.342	0.758318456	0.870827765	2.060806345	0.034
2014/1/2	11:03:00	6.6973	0.325	0.720620843	0.848893894	2.008992289	0.033
2014/1/2	11:04:00	6.5800	0.324	0.718403548	0.847586897	2.005899150	0.033
2014/1/2	11:05:00	6.6420	0.325	0.720620843	0.848893894	2.008992289	0.033
2014/1/2	11:06:00	7.3555	0.331	0.733923612	0.856694910	2.027452024	0.034
2014/1/2	11:07:00	6.8157	0.318	0.705099778	0.839702196	1.987239217	0.033
2014/1/2	11:08:00	8.2098	0.304	0.674057650	0.821101140	1.943002597	0.032
2014/1/2	11:09:00	7.9670	0.286	0.634146341	0.796330509	1.884601818	0.031
2014/1/2	11:10:00	7.4412	0.296	0.656319290	0.810067757	1.917079853	0.032
2014/1/2	11:11:00	7.6447	0.270	0.598669623	0.773719438	1.831172021	0.031
2014/1/2	11:12:00	6.8100	0.250	0.554323725	0.744535178	1.841172021	0.031
2014/1/2	11:13:00	6.9570	0.257	0.569944789	0.7548806	1.786500356	0.030
2014/1/2	11:14:00	7.0401	0.297	0.658536585	0.811502671	1.925052273	0.032
2014/1/2	11:15:00	6.9400	0.295	0.654101996	0.808765724	1.914024961	0.032
2014/1/2	11:16:00	6.2662	0.288	0.638580931	0.799112596	1.891179855	0.032
2014/1/2	11:17:00	6.8070	0.282	0.625277162	0.790744688	1.871376379	0.031
2014/1/2	11:18:00	6.5054	0.300	0.666740576	0.816694986	1.953391643	0.033
2014/1/2	11:19:00	6.4163	0.290	0.643015521	0.801882486	1.897735091	0.032
2014/1/2	11:20:00	6.9835	0.313	0.694013304	0.833074699	1.971554369	0.033
2014/1/2	11:21:00	6.6724	0.325	0.720620843	0.848893894	2.008992289	0.033
2014/1/2	11:22:00	6.4715	0.319	0.707173073	0.841021140	1.990361355	0.033
2014/1/2	11:23:00	6.5213	0.319	0.707173073	0.841021140	1.990361355	0.033
2014/1/2	11:24:00	6.7567	0.325	0.720620843	0.848893894	2.008992289	0.033
2014/1/2	11:25:00	7.0074	0.313	0.694013304	0.833074699	1.971554369	0.033
2014/1/2	11:26:00	7.0074	0.303	0.671840355	0.819658682	1.939804237	0.032
2014/1/2	11:27:00	6.8092	0.284	0.629711752	0.793543793	1.878000741	0.031
2014/1/2	11:28:00	6.7878	0.292	0.647458111	0.804628237	1.904267761	0.032
2014/1/2	11:29:00	6.4414	0.277	0.614190687	0.783703184	1.854711965	0.031
2014/1/2	11:30:00	6.6277	0.289	0.640798226	0.800498736	1.894460308	0.032
2014/1/2	11:31:00	7.0245	0.293	0.647458111	0.804628237	1.904267761	0.032
2014/1/2	11:32:00	7.1624	0.293	0.649067406	0.806621943	1.909019307	0.032
2014/1/2	11:33:00	6.8791	0.264	0.585365854	0.765092036	1.810666859	0.030
2014/1/2	11:34:00	7.0074	0.313	0.694013304	0.833074699	1.971554369	0.033
2014/1/2	11:35:00	6.9571	0.264	0.585365854	0.765092036	1.810666859	0.030
2014/1/2	11:36:00	7.7625	0.240	0.532150776	0.729486652	1.726403113	0.029
2014/1/2	11:37:00	6.6320	0.257	0.569944789	0.754880654	1.786500356	0.030
2014/1/2	11:38:00	7.1593	0.236	0.523281596	0.723382054	1.711959798	0.029
2014/1/2	11:39:00	6.9484	0.264	0.585365854	0.765092036	1.810666859	0.030
2014/1/2	11:40:00	7.1719	0.261	0.578713969	0.760732521	1.800349585	0.030
2014/1/2	11:41:00	7.5431	0.264	0.585365854	0.765092036	1.810666859	0.030
2014/1/2	11:42:00	8.5672	0.253	0.560975610	0.748983050	1.772543287	0.030
2014/1/2	11:43:00	8.1413	0.255	0.565410200	0.751937630	1.779535595	0.030
2014/1/2	11:44:00	7.9475	0.236	0.523281596	0.723382054	1.711959798	0.029
2014/1/2	11:45:00	8.0481	0.255	0.565410200	0.751937630	1.779535595	0.030

1.5 old pipe line length
0.7000 new pipe line length.
2.2000 km
leakage rate 1.075727 m^3/hr/km



S64-1-29

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
2013/11/26 11:05	11:05:00	8.5771	2.150	0.533498795	0.730409994	2.340525785	0.039
2013/11/26 11:06	11:06:00	14.1362	2.150	0.533498795	0.730409994	2.340525785	0.039
2013/11/26 11:07	11:07:00	7.3155	2.400	0.595533499	0.771708169	2.472861658	0.041
2013/11/26 11:08	11:08:00	6.6446	2.430	0.602977671	0.776516367	2.488269045	0.041
2013/11/26 11:09	11:09:00	6.6536	2.300	0.5707196032	0.755459862	2.420795582	0.040
2013/11/26 11:10	11:10:00	6.7631	2.400	0.595533499	0.771708169	2.472861658	0.041
2013/11/26 11:11	11:11:00	6.7743	2.560	0.635235732	0.797016770	2.553960538	0.043
2013/11/26 11:12	11:12:00	7.0135	2.520	0.625310174	0.790765562	2.533929166	0.042
2013/11/26 11:13	11:13:00	6.7923	2.460	0.6104218362	0.781294974	2.503581614	0.042
2013/11/26 11:14	11:14:00	6.8053	2.530	0.6277915632	0.792332988	2.538951826	0.042
2013/11/26 11:15	11:15:00	6.3967	2.520	0.625310174	0.790765562	2.533929166	0.042
2013/11/26 11:16	11:16:00	6.4957	2.700	0.6699751862	0.818520120	2.622865871	0.044
2013/11/26 11:17	11:17:00	6.7370	2.710	0.6724565766	0.820034497	2.627718541	0.044
2013/11/26 11:18	11:18:00	5.0990	2.660	0.6600439628	0.812434384	2.603364739	0.043
2013/11/26 11:19	11:19:00	4.7100	2.760	0.6848635241	0.827564815	2.651848694	0.044
2013/11/26 11:20	11:20:00	4.3859	2.500	0.6203473951	0.787621352	2.523853861	0.042
2013/11/26 11:21	11:21:00	4.7564	2.640	0.6550868489	0.8093743561	2.593559187	0.043
2013/11/26 11:22	11:22:00	5.4173	2.790	0.6923076923	0.8320502941	2.666221963	0.044
2013/11/26 11:23	11:23:00	5.9053	2.700	0.6699751862	0.818520120	2.622865871	0.044
2013/11/26 11:24	11:24:00	5.3499	2.630	0.6526054795	0.807839996	2.588424243	0.043
2013/11/26 11:25	11:25:00	5.5069	2.490	0.6178660057	0.786044531	2.511801096	0.042
2013/11/26 11:26	11:26:00	5.0463	2.400	0.595533499	0.771708169	2.472861658	0.041
2013/11/26 11:27	11:27:00	5.3175	2.400	0.595533499	0.771708169	2.472861658	0.041
2013/11/26 11:28	11:28:00	6.0740	2.450	0.6079404477	0.779705359	2.498487852	0.042
2013/11/26 11:29	11:29:00	5.2872	2.400	0.595533499	0.771708169	2.472861658	0.041
2013/11/26 11:30	11:30:00	5.5586	2.320	0.575682383	0.758737360	2.431297998	0.041
2013/11/26 11:31	11:31:00	5.8823	2.380	0.590570720	0.768485992	2.462536513	0.041
2013/11/26 11:32	11:32:00	5.4861	2.340	0.5806451612	0.762000762	2.441755242	0.041
2013/11/26 11:33	11:33:00	5.3081	2.270	0.5632754342	0.750516778	2.404955964	0.040
2013/11/26 11:34	11:34:00	5.3237	2.320	0.5756823821	0.758737360	2.431297998	0.041
2013/11/26 11:35	11:35:00	5.3442	2.370	0.5880893300	0.766869826	2.457357670	0.041
2013/11/26 11:36	11:36:00	5.5719	2.350	0.5831265510	0.763627233	2.446967105	0.041
2013/11/26 11:37	11:37:00	5.8815	2.350	0.5831265512	0.763627231	2.446967105	0.041
2013/11/26 11:38	11:38:00	5.4993	2.220	0.5508684861	0.742205151	2.378322186	0.040
2013/11/26 11:39	11:39:00	5.3392	2.110	0.5235732011	0.723583583	2.318651232	0.039
2013/11/26 11:40	11:40:00	6.1896	2.280	0.5657568242	0.752168082	2.410247402	0.040
2013/11/26 11:41	11:41:00	5.7978	2.400	0.595533499	0.771708169	2.472861658	0.041
2013/11/26 11:42	11:42:00	6.1308	2.400	0.595533499	0.771708169	2.472861658	0.041
2013/11/26 11:43	11:43:00	6.0410	2.430	0.6029750573	0.776512967	2.488269045	0.041
2013/11/26 11:44	11:44:00	6.6519	2.390	0.593052109	0.770098766	2.467704485	0.041
2013/11/26 11:45	11:45:00	6.7973	2.360	0.5856079402	0.765250247	2.452167891	0.041
Estimated Leakage Rate (m^3/day)							**65.536**

3.204 4.110 m
124.100 m^3 from Logger
159.4000 m^3 actual reading

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
2014/1/3	10:10:00	6.9584	0.325	0.720620843	0.848893894	2.008992289	0.033
2014/1/3	10:11:00	7.7489	0.326	0.722839117	0.850199881	2.012089672	0.034
2014/1/3	10:12:00	7.4554	0.307	0.6807099534	0.825051231	1.952566244	0.033
2014/1/3	10:13:00	7.9603	0.322	0.713968958	0.8449668138	1.999698520	0.033
2014/1/3	10:14:00	6.9221	0.293	0.654101996	0.808765724	1.914024961	0.032
2014/1/3	10:15:00	6.5222	0.279	0.6186252777	0.7865273533	1.861395634	0.031
2014/1/3	10:16:00	7.6487	0.295	0.654101996	0.808765724	1.914024961	0.032
2014/1/3	10:17:00	6.7167	0.303	0.6818403551	0.8256021251	1.955562444	0.033
2014/1/3	10:18:00	6.6562	0.289	0.640798226	0.8004987361	1.894460308	0.032
2014/1/3	10:19:00	7.5716	0.312	0.691796009	0.8317425734	1.966402402	0.033
2014/1/3	10:20:00	6.8649	0.313	0.6940133041	0.8330746991	1.971554369	0.033
2014/1/3	10:21:00	7.4923	0.308	0.6829268768	0.8263938713	1.957417344	0.033
2014/1/3	10:22:00	7.4554	0.307	0.6807099534	0.8250512311	1.952566244	0.033
2014/1/3	10:23:00	7.8779	0.295	0.654101996	0.808765724	1.914024961	0.032
2014/1/3	10:24:00	8.2681	0.304	0.674057650	0.821101140	1.943002597	0.032
2014/1/3	10:25:00	8.8250	0.290	0.643015521	0.801882486	1.897735091	0.032
2014/1/3	10:26:00	9.0589	0.271	0.6008886918	0.7751689613	1.834514863	0.031
2014/1/3	10:27:00	8.2512	0.269	0.5964852528	0.7723032265	1.827732899	0.030
2014/1/3	10:28:00	8.3039	0.263	0.5831348539	0.7636416145	1.807234312	0.030
2014/1/3	10:29:00	7.6857	0.253	0.560975610	0.7489830509	1.772543287	0.030
2014/1/3	10:30:00	7.4992	0.254	0.5631957859	0.7504776772	1.775912875	0.030
2014/1/3	10:31:00	7.1825	0.289	0.640798226	0.8004987361	1.894460308	0.032
2014/1/3	10:32:00	6.5209	0.289	0.640798226	0.8004987361	1.894460308	0.032
2014/1/3	10:33:00	7.1698	0.299	0.6629157705	0.8143410645	1.956695910	0.033
2014/1/3	10:34:00	6.8331	0.309	0.6853444124	0.8277334332	1.958916070	0.033
2014/1/3	10:35:00	6.4991	0.280	0.6208425725	0.7879356424	1.864278485	0.031
2014/1/3	10:36:00	7.3263	0.283	0.627494457	0.7921454777	1.874691486	0.031
2014/1/3	10:37:00	6.8708	0.284	0.6297117521	0.7935437935	1.878000741	0.031
2014/1/3	10:38:00	6.8915	0.295	0.6546674206	0.8090194152	1.909757970	0.032
2014/1/3	10:39:00	7.4143	0.301	0.6674057650	0.8171494056	1.931091624	0.032
2014/1/3	10:40:00	7.4677	0.337	0.7472528181	0.8644237736	2.043745194	0.034
2014/1/3	10:41:00	6.5469	0.306	0.6784922339	0.8237064943	1.949383575	0.032
2014/1/3	10:42:00	6.8739	0.282	0.6252771621	0.7907446881	1.871376379	0.031
2014/1/3	10:43:00	6.7104	0.306	0.6784922339	0.8237064943	1.949383575	0.032
2014/1/3	10:44:00	6.1523	0.298	0.6607538800	0.8128676695	1.923732673	0.032
2014/1/3	10:45:00	7.3300	0.319	0.7071730731	0.8410211402	1.990361355	0.033
2014/1/3	10:46:00	7.2839	0.301	0.6696233060	0.8183049951	1.936608594	0.032
2014/1/3	10:47:00	7.5529	0.303	0.671840355	0.8196586821	1.939804237	0.032
2014/1/3	10:48:00	7.7139	0.333	0.7383595202	0.8592783612	2.033560032	0.034
2014/1/3	10:49:00	6.2948	0.307	0.6807099534	0.8250512311	1.955562444	0.033
2014/1/3	10:50:00	6.0966	0.317	0.7028824881	0.8383808170	1.984112167	0.033
2014/1/3	10:51:00	6.6966	0.316	0.7006614907	0.8370537177	1.980279313	0.033
2014/1/3	10:52:00	6.2539	0.345	0.7738539826	0.8796421	2.081849361	0.035
2014/1/3	10:53:00	6.6071	0.380	0.8452720626	0.9191724	2.172342944	0.036
2014/1/3	10:54:00	5.7362	0.362	0.8026960754	0.8959513165	2.120285865	0.035
2014/1/3	10:55:00	6.3084	0.367	0.8137472228	0.9020079917	2.134861088	0.036
2014/1/3	10:56:00	6.6648	0.376	0.8337028882	0.9130733171	2.160879313	0.036
2014/1/3	10:57:00	7.0023	0.356	0.7893569844	0.8884576244	2.102623859	0.035
2014/1/3	10:58:00	7.5470	0.375	0.8270508998	0.9094273442	2.152251519	0.036
2014/1/3	10:59:00	6.6178	0.343	0.7600552111	0.8716849	2.063876230	0.034
2014/1/3	11:00:00	7.2249	0.327	0.7250554321	0.8515018695	2.015164322	0.034
Estimated Leakage Rate (m^3/day)							**52.401**

2.344 0.452 m
127.689 m^3 from Logger
127.7000 m^3 actual reading

MBARANAMBA INACCURACY TEST BEFORE COUNTERMEASURE- 27/11/2013 to 28/11/2013

				Before Countermeasures									
				New Meter ID	Average	Initial Reading		Final Reading		Integrated Value		Difference (Litres)	error %
No	Account No	Customer Name	House Location		Time (sec)	Tested Meter	TR-III Machine	Tested Meter	TR-III Machine	Meter	Machine		
						A	B	C	D	C-A=E	D-B=F	E-F=G	G/F
1	14000	DANIEL TOLOMEA	MBARANABA	12B010924	66	183.694	0.62	183.716	0.640	0.022	0.02	0.0020	0.1
2	14000-1	SOLOMON HEU	MBARANABA	12A005230	47	450.010	0.494	450.030	0.514	0.020	0.020	0.0000	0.00
6	14001	PHILIP APELA	MBARANABA VALLEY	12A004449	69	243.853	0.578	243.873	0.598	0.02	0.02	0.0000	0.00
7	14002	ALICK & WENDY	MBARANABA VALLEY	12A006118	106	196.912	0.577	196.932	0.557	0.02	-0.02	0.0400	-2.00
8	14002-1	RINNAH SOLOMON	MBARANABA	12B010916	98	420.157	0.558	420.177	0.578	0.02	0.02	0.0000	0.00
9	14003	CHRIS MAEBIRU	MBARANABA VALLEY	13B019781	61	159.978	0.515	160.002	0.535	0.024	0.02	0.0040	0.20
10	14004	TONY SANTA	MBARANABA VALLEY	12A004662	37	329.044	0.380	329.065	0.400	0.021	0.020	0.0010	0.05
11	14006	JOHN MICHAEL BALE	MBARANAMBA	13A001074	70	115.607	0.340	115.627	0.360	0.020	0.020	0.0000	0.00
12	14006-1	JOHN JUNIOR FINAU	P NO: 191-043-76/LOT 62	09A000211	88	1283.1685	0.320	1283.1861	0.340	0.0176	0.020	-0.0024	-0.12
13	14006-2	MEMBLEY HITI	BARANAMBA	12A005256	86	75.241	0.360	75.261	0.380	0.02	0.020	0.0000	0.00
14	14007	EVERLYN KINGKALA	MBARANABA VALLEY	81132146	98	1348.924	0.300	1348.932	0.320	0.008	0.020	-0.0120	-0.60
15	14008	MURIEL MANA	MBARANABA VALLEY	13B019564	41	101.243	0.280	101.263	0.300	0.02	0.020	0.0000	0.00
16	14009	AUSTIN SAU	MBARANABA	13A000887	52	645.069	0.260	645.089	0.280	0.02	0.020	0.0000	0.00
17	14009-1	TEKAI TEREKA	MBARANABA	0107-00573	43	3615.5956	0.240	3615.6141	0.260	0.0185	0.020	-0.0015	-0.08
18	14011	EDWARD MANEDIKA	MBARANABA VALLEY	83115486	42	1364.369	0.200	1364.370	0.220	0.001	0.020	-0.0190	-0.95
19	14012	AGNES KELA	MBARANABA VALLEY	13B019622	38	40.847	0.160	40.868	0.180	0.021	0.020	0.0010	0.05
20	14012-1	DAVID FIRISUA	MBARANAMBA	95358916	46	6674	0.180	6674	0.200	0	0.020	-0.0200	-1.00
21	14013	KRISTINA SOGAVARE	MBARANABA VALLEY	81132136	38	3017.145	0.140	3017.149	0.160	0.004	0.020	-0.0160	-0.80
22	14015	DOUGLAS KIMI	MBARANABA VALLEY	13B0199566	43	58.849	0.120	58.869	0.140	0.02	0.020	0.0000	0.00
24	14016	WILSON HAROLD	MBARANABA VALLEY	13B019623	30	103.012	**0.053**	103.032	**0.052**	0.02	-0.001	0.0210	**-21.00**
25	14016-1	STANLEY KOFELA	LOT/NO	06B940560	67	2854.808	0.100	2854.821	0.120	0.013	0.020	-0.0070	-0.35
27	14018	PETER UMEA	MBARANABA VALLEY	13B019809	54	136.989	0.093	137.009	0.113	0.02	0.02	0.0000	0.00
28	14018-1	RODNEY SALE	MBARANABA VALLEY	13A001063	109	54.636	0.113	54.655	0.113	0.019	0	0.0190	0.00
29	14021	MOSES KAUKUI	MBARANABA VALLEY	12A004660	60	329.272	0.000	329.292	0.020	0.02	0.020	0.0000	0.00
30	14022	LAWRENCE SAMANI	MBARANABA VALLEY	07-000741	60	3697.1703	0.020	3697.1889	0.040	0.0186	0.020	-0.0014	-0.07
31	14023	RUSSELL TAGINI	MBARANABA VALLEY	07-000979	46	2111.1922	0.040	2111.2113	0.060	0.0191	0.020	-0.0009	-0.05
32	14024	CALVIN & KATA ZIRU	MBARANABA VALLEY	13B019768	34	92.605	0.060	92.624	0.080	0.019	0.020	-0.0010	-0.05
33	14026	WELSHMAN KASOA	MBARANABA VALLEY	12A006117	51	304.415	0.080	304.436	0.100	0.021	0.020	0.0010	0.05
34	14027	AUBREY ZEKE	MBARANABA VALLEY	13B019779	51	**51.655**	0.233	**51.488**	0.253	-0.167	0.02	-0.1870	**-9.35**
35	14028	NATHAN WALE	MBARANABA VALLEY	12A006119	74	602.092	0.213	602.113	0.233	0.021	0.02	0.0010	0.05
36	14029	BILLY MAMALONI	MBARANABA VALLEY	06A021822	57	1305.887	0.193	1305.906	0.213	0.019	0.02	-0.0010	-0.05
37	14030	TEX TAHOMAURI	MBARANABA VALLEY	12B010935	70	726.410	0.173	726.480	0.193	0.070	0.02	0.0500	2.50

S64-1-30

				Before Countermeasures									
				New Meter ID	Average	Initial Reading		Final Reading		Integrated Value		Difference (Litres)	error %
No	Account No	Customer Name	House Location		Time (sec)	Tested Meter	TR-III Machine	Tested Meter	TR-III Machine	Meter	Machine		
						A	B	C	D	C-A=E	D-B=F	E-F=G	G/F
38	14031	PHILIP PITAVOQA	MBARANABA VALLEY	12A006120	42	655.838	0.153	655.859	0.173	0.021	0.02	0.0010	0.05
39	14032	EDWARD THEGNA	MBARANABA VALLEY	06A021733	30	1651.655	0.133	1651.673	0.153	0.018	0.02	-0.0020	-0.10
40	14034	THOMAS SALOPUKA	MBARANABA VALLEY	83079018	33	2728.189	0.293	2728.193	0.313	0.004	0.02	-0.0160	-0.80
41	14035	LESLIE LAZARUS	MBARANABA VALLEY	83078926	36	2132.546	0.314	2132.550	0.334	0.004	0.02	-0.0160	-0.80
42	14036	SALO AFIA	MBARANABA VALLEY	12A006096	46	218.471	0.334	218.493	0.354	0.022	0.02	0.0020	0.10
43	14039	WILSON KIKOLO	MBARANABA VALLEY	12A006097	50	577.886	0.354	577.906	0.374	0.02	0.02	0.0000	0.00
44	14043	CHRISTIAN MESEPITU	MBARANABA VALLEY	883871	29	3957.963	0.374	3957.967	0.394	0.004	0.02	-0.0160	-0.80
45	14044	SAMSON KAULI	MBARANABA VALLEY	12A006098	34	465.311	0.454	465.331	0.474	0.02	0.02	0.0000	0.00
46	14044-1	JOHN TALOI	MBARANABA VALLEY	13B019498	69	117.650	0.474	117.670	0.494	0.020	0.02	0.0000	0.00
47	14045	FRANCISCA AUVOLO	MBARANABA VALLEY	12B086613	20	15.010	0.434	15.030	0.454	0.020	0.02	0.0000	0.00
48	14046	TORIKA KIBULE	MBARANABA VALLEY	11A000738	42	2032.329	0.394	2032.349	0.414	0.02	0.02	0.0000	0.00
49	14047	DANIEL SIO	MBARANABA VALLEY	12A006099	69	243.549	0.414	243.570	0.434	0.021	0.02	0.0010	0.05
50	14050-3	ALICK BOBBY	MBARANABA	13B019496	130	124.087	0.704	124.108	0.724	0.021	0.02	0.0010	0.05
51	14053	FESTUS ANOHERE	OHUIOLA	09B053547	130	2159.601	0.683	2159.621	0.703	0.02	0.02	0.0000	0.00
52	14054	ROBERT JOSIAH AU	P/NO.192-016-005	09A000225	116	607.8858	0.663	607.9056	0.683	0.0198	0.02	-0.0002	-0.01
											Average		-0.69

Maranamba meter inaccuracy Test after counter measues

No:	Account	Customer	Location Address 2	Meter ID-01	time(mins)	Initial Reading		Final Reading		Integrated Value		Difference (litres)	Error (%)
					5 minutes	Tested Metr A	TR-III Metr B	Tested Metr C	TR-III Metr D	Test Meter (litres) C-A = E	TR-III Meter D - B = F	E-F = G	G/F
1	14001	PHILIP APELA	MBARANABA VALLEY	12A004449	5	106.528	12.0658	106.611	12.1473	0.083	0.082	0.002	1.840%
2	14002	ALICK & WENDY BUTALA	MBARANABA VALLEY	12A006118	5	66.37	12.2093	66.514	12.3515	0.144	0.142	0.002	1.266%
3	14002-1	RINNAH	MBARANABA	12B010916	5	19.660	11.981	19.771	12.101	0.111	0.120	-0.009	-7.807%
4	14003	CHRIS MAEBIRU	MBARANABA VALLEY	13B019781	5	70.830	12.383	71.002	12.555	0.172	0.172	0.000	-0.116%
5	14004	TONY SANTA	MBARANABA VALLEY	12A004662	5	162.535	12.496	162.650	12.607	0.115	0.111	0.004	3.324%
6	14005	TANIA HITI	MBARANABA VALLEY	86127616	5	1088.937	12.649	1089.085	12.793	0.148	0.144	0.004	2.635%
												average	0.19%

Actual Measurement of Leakage and Open-end Flow 9 No.8 Mbaranamba

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			Customer Type		Pipe Material						Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom. : 32m^3 Non-D. :45m^3	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom	Non-D	CIP	uPVC	GP	PE	Others		[1]	[2]-[1]x24	[2]-[1]x24	[3]	[4]-[2]-[3]	[5]-[2]
1	*			*							*	*			*						*	0.02	0.55				
2	*			*						*		*			*						*	0.00	0				
3	*			*					*			*			*					*		0.09	2.16				
4	*			*						*		*			*						*	0.02	0.36				
5	*			*							*	*			*					*		0.00	0.04				
6	*			*					*			*			*					*		0.14	3.46				
7	*			*							*	*			*					*							
8	*			*						*			*		*						*	0.00	0.04				
9	*			*					*			*			*					*		0.00	0.03				
10	*			*							*		*		*					*		0.12	2.88				
11	*			*					*				*		*					*		0.00	0.11				
12	*			*					*				*		*					*		0.08	1.92				
Total	**12**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**5**	**3**	**4**	**8**	**4**	**0**	**12**	**0**	**0**	**0**	**0**	**8**	**4**		**11.55**			**0.00**	**0.00**
	12		**12**		**0**		**12**					**12**			**12**		**12**										

Note:

Change in Status of Connections (Customers, Users and Unconnection)

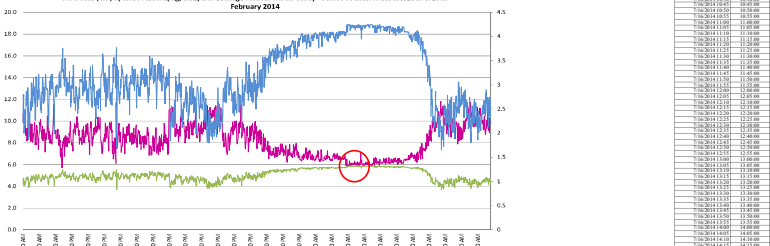
10 No,2 Mbua Valley

| No. | Account No. | Account Name | Location | status | Before Countermeasures | | |

MNF Measure before countermeasure in Mbua Valley

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
27-Feb-14	3:21:00 AM	5.8648	4.252	121.268

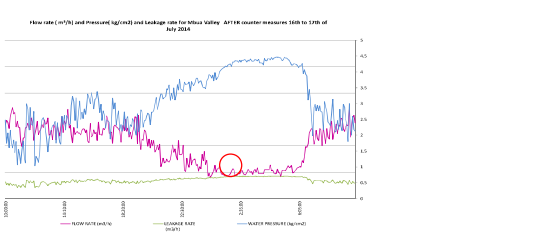
Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[1]$^{1.5}$	[5]=[4] x [7]	[6]=[5]/60
2/26/2014	9:40:00 AM	9.942	2.21	0.519755409	0.720940642	4.2281726677	0.070
2/26/2014	9:41:00 AM	10.727	2.802	0.658984098	0.81177599	4.760917371	0.079
2/26/2014	9:42:00 AM	9.910	2.533	0.595719661	0.771827877	4.526621413	0.075
2/26/2014	9:43:00 AM	9.784	1.992	0.468485419	0.684559947	4.0142206951	0.067
2/26/2014	9:44:00 AM	9.777	2.213	0.521401693	0.722081508	4.234863584	0.071
2/26/2014	9:45:00 AM	9.570	2.485	0.584438856	0.764880775	4.4853268852	0.075
2/26/2014	9:46:00 AM	10.897	2.383	0.560442145	0.748628849	4.3905446689	0.073
2/26/2014	9:47:00 AM	9.751	2.388	0.561618062	0.74941181	4.395150388	0.073
2/26/2014	9:48:00 AM	9.815	2.158	0.507527878	0.713408509	4.1831333648	0.070
2/26/2014	9:49:00 AM	8.671	2.63	0.618827896	0.786472263	4.5940080126	0.077
2/26/2014	9:50:00 AM	8.783	2.854	0.671213547	0.819276233	4.8048912533	0.080
2/26/2014	9:51:00 AM	9.293	2.869	0.674741298	0.821426589	4.817501435	0.080
2/26/2014	9:52:00 AM	8.167	2.782	0.654268039	0.808875972	4.7439558603	0.079
2/26/2014	9:53:00 AM	8.242	2.562	0.602539961	0.776234409	4.5524680828	0.076
2/26/2014	9:54:00 AM	9.335	2.942	0.691909690	0.831811090	4.8784056831	0.081
2/26/2014	9:55:00 AM	11.279	2.784	0.654745786	0.80916656	4.7456007057	0.079
2/26/2014	9:56:00 AM	10.418	2.486	0.584666040	0.76463459	4.4844287879	0.075
2/26/2014	9:57:00 AM	10.381	1.864	0.438381938	0.662304475	3.8833085563	0.065
2/26/2014	9:58:00 AM	10.764	2.376	0.558795861	0.74752649	4.3840933388	0.073
2/26/2014	9:59:00 AM	10.524	2.205	0.518379492	0.720124636	4.2233869868	0.070
2/26/2014	10:00:00 AM	10.324	1.938	0.45578551	0.67511888	3.959417253	0.066
2/26/2014	10:01:00 AM	9.217	2.194	0.515993474	0.718326161	4.2128539271	0.070
2/26/2014	10:02:00 AM	8.954	2.449	0.575962452	0.75892308	4.4509321271	0.074
2/26/2014	10:03:00 AM	9.746	2.659	0.625352775	0.7909749	4.637839843	0.077
2/26/2014	10:04:00 AM	8.127	2.649	0.622800941	0.789304986	4.6291130696	0.077
2/26/2014	10:05:00 AM	8.853	2.473	0.581669655	0.762632713	4.4724685334	0.075
2/26/2014	10:06:00 AM	9.597	3.038	0.71448788	0.845273596	4.9573640859	0.083
2/26/2014	10:07:00 AM	9.729	2.9	0.682031985	0.82585227	4.8435854408	0.081
2/26/2014	10:08:00 AM	9.399	2.699	0.634760113	0.796718348	4.6729937197	0.078
2/26/2014	10:09:00 AM	8.060	2.547	0.59901229	0.773953884	4.5391138991	0.076
2/26/2014	10:10:00 AM	8.149	2.719	0.639463782	0.799664703	4.6893074801	0.078
2/26/2014	10:11:00 AM	8.412	3.023	0.711072465	0.843844699	4.9442385532	0.082
2/26/2014	10:12:00 AM	8.834	3.13	0.736124177	0.85797693	5.0318622794	0.084
2/26/2014	10:13:00 AM	8.647	2.913	0.685089701	0.827701256	4.8540202326	0.081
2/26/2014	10:14:00 AM	9.278	2.766	0.650817404	0.806854959	4.7302134447	0.079
2/26/2014	10:15:00 AM	9.269	2.706	0.636711809	0.797852453	4.6774177935	0.078
2/26/2014	10:16:00 AM	9.884	2.625	0.617356536	0.78572019	4.6080922969	0.077
2/26/2014	10:17:00 AM	9.705	2.747	0.646048918	0.80377168	4.7139601666	0.079
2/26/2014	10:18:00 AM	7.807	2.266	0.532925682	0.73001798	4.281407163	0.071
2/26/2014	10:19:00 AM	8.051	2.561	0.602304708	0.77608298	4.551371483	0.076
2/26/2014	10:20:00 AM	7.819	3.164	0.744128414	0.86262144	5.059113080	0.084
2/26/2014	10:21:00 AM	8.763	3.106	0.730479774	0.85468109	5.0123536886	0.084
2/26/2014	10:22:00 AM	9.599	3.145	0.739651929	0.86085019	5.0479035611	0.084
2/26/2014	10:23:00 AM	8.758	2.79	0.656161806	0.810038151	4.7507117748	0.079
2/26/2014	10:24:00 AM	9.158	2.547	0.59901229	0.773958804	4.539113591	0.076
2/26/2014	10:25:00 AM	8.405	2.882	0.67779865	0.82328529	4.8284036209	0.080
2/26/2014	10:26:00 AM	7.960	2.71	0.637347131	0.798340235	4.682105810	0.078
2/26/2014	10:27:00 AM	7.368	2.96	0.696142992	0.834351859	4.893306666	0.082
2/26/2014	10:28:00 AM	8.303	3.015	0.709078081	0.842067741	4.9385538889	0.082
2/26/2014	10:29:00 AM	8.546	3.223	0.75799623	0.870629793	5.1060696112	0.085
2/26/2014	10:30:00 AM	8.852	2.947	0.693085607	0.83251 3632	4.8825948005	0.081
2/26/2014	10:31:00 AM	9.013	2.851	0.670507996	0.818645526	4.8023652644	0.080
2/26/2014	10:32:00 AM	9.907	2.79	0.656161806	0.810038151	4.7507117748	0.079
2/26/2014	10:33:00 AM	9.706	2.698	0.634924929	0.796570731	4.671728023	0.078
2/26/2014	10:34:00 AM	10.135	2.489	0.58537196	0.765093804	4.487133873	0.075
2/26/2014	10:35:00 AM	9.384	2.583	0.607478833	0.779492855	4.571079574	0.076
2/26/2014	10:36:00 AM	9.008	2.418	0.568673565	0.754104479	4.422671949	0.074
2/26/2014	10:37:00 AM	9.119	2.76	0.649196303	0.805671337	4.725101256	0.079
2/26/2014	8:59:00 AM	11.283	2.226	0.523518344	0.723458675	4.243458677	0.071
2/27/2014	9:00:00 AM	9.455	1.927	0.453198495	0.673200189	3.948184470	0.066
2/27/2014	9:01:00 AM	9.991	1.857	0.436753654	0.660859784	3.8758104601	0.065



MNF Measure After countermeasure in Mbua Valley

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
17-Jul-14	1:49:00 AM	4.233	4.420	17.272

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[1]$^{1.5}$	[5]=[4] x [7]	[6]=[5]/60
7/16/2014 10:00	10:00:00	14.000	2.479	0.560859729	0.748905647	3.1703177794	0.053
7/16/2014 10:05	10:05:00	14.000	1.749	0.395735127	0.62965977	2.6657689857	0.044
7/16/2014 10:10	10:10:00	14.000	1.749	0.395735127	0.62965977	2.6657689857	0.044
7/16/2014 10:15	10:15:00	11.310	1.412	0.319503452	0.565988836	2.3963464101	0.040
7/16/2014 10:20	10:20:00	15.500	2.16	0.48904775	0.699062676	2.9592129726	0.049
7/16/2014 10:25	10:25:00	16.350	1.821	0.411999591	0.641863121	2.7170136462	0.045
7/16/2014 10:30	10:30:00	17.250	1.799	0.407017498	0.638146798	2.7012837198	0.045
7/16/2014 10:35	10:35:00	16.350	1.44	0.325796231	0.570789305	2.4161473736	0.040
7/16/2014 10:40	10:40:00	16.350	1.446	0.327153886	0.571837006	2.4205852724	0.040
7/16/2014 10:45	10:45:00	15.570	1.803	0.407910555	0.638685038	2.7103536681	0.045
7/16/2014 10:50	10:50:00	14.430	1.665	0.376707227	0.614172177	2.6070936103	0.043
7/16/2014 10:55	10:55:00	13.510	1.56	0.352941176	0.594089526	2.5174774746	0.042
7/16/2014 11:00	11:00:00	12.870	1.488	0.336650832	0.580258755	2.4588983529	0.041
7/16/2014 11:05	11:05:00	10.850	1.356	0.306818182	0.553845455	2.3470949526	0.039
7/16/2014 11:10	11:10:00	9.890	1.237	0.279775577	0.529098748	2.2436164972	0.042
7/16/2014 11:15	11:15:00	11.430	1.352	0.412227195	0.642081427	2.7177763262	0.045
7/16/2014 11:20	11:20:00	11.600	1.280	0.292531937	0.540864065	2.289417587	0.038
7/16/2014 11:25	11:25:00	11.600	1.289	0.325420644	0.570549696	2.4170611491	0.040
7/16/2014 11:30	11:30:00	13.510	1.666	0.376995176	0.614169632	2.6017490443	0.043
7/16/2014 11:35	11:35:00	13.510	1.666	0.376995176	0.614169632	2.6017490443	0.043
7/16/2014 11:40	11:40:00	13.520	2.163	0.489384747	0.699547101	2.9621783906	0.049
7/16/2014 11:45	11:45:00	13.040	2.887	0.653167421	0.808187779	3.4235859697	0.057
7/16/2014 11:50	11:50:00	15.290	2.24	0.529411765	0.727508655	3.0705195602	0.051
7/16/2014 11:55	11:55:00	16.260	2.152	0.512173626	0.715839645	3.0956482946	0.052
7/16/2014 12:00	12:00:00	15.290	2.015	0.477203647	0.690799492	2.9387419169	0.049
7/16/2014 12:05	12:05:00	12.250	1.810	0.410144441	0.640436148	2.7186381548	0.045
7/16/2014 12:10	12:10:00	13.180	1.320	0.308675737	0.554834981	2.3211398851	0.039
7/16/2014 12:15	12:15:00	14.420	1.276	0.298375296	0.546237855	2.3129395958	0.039
7/16/2014 12:20	12:20:00	12.080	1.145	0.25969978	0.509694925	2.1594671351	0.036
7/16/2014 12:25	12:25:00	12.080	1.145	0.25969978	0.509694925	2.1594671351	0.036
7/16/2014 12:30	12:30:00	12.020	1.141	0.265410637	0.515451765	2.1839147486	0.036
7/16/2014 12:35	12:35:00	14.040	2.482	0.583809995	0.763866749	3.2374180161	0.053
7/16/2014 12:40	12:40:00	13.480	2.339	0.578959156	0.760969736	3.2260661381	0.054
7/16/2014 12:45	12:45:00	14.890	2.413	0.545025682	0.73836931	3.1276138057	0.052
7/16/2014 12:50	12:50:00	14.890	2.413	0.545025682	0.73836931	3.1276138057	0.052
7/16/2014 12:55	12:55:00	14.180	2.169	0.487376583	0.697775587	2.7716716681	0.046
7/16/2014 13:00	13:00:00	15.274	1.477	0.334162956	0.578068247	2.4496962681	0.041
7/16/2014 13:05	13:05:00	15.069	1.691	0.384728369	0.620058681	2.6268746611	0.044
7/16/2014 13:10	13:10:00	12.286	2.052	0.464525198	0.681581827	2.8982029729	0.048
7/16/2014 13:15	13:15:00	12.366	2.101	0.475414494	0.68954227	2.9317796202	0.049
7/16/2014 13:20	13:20:00	11.164	2.169	0.521949726	0.721831587	3.0555127248	0.051
7/16/2014 13:25	13:25:00	11.164	2.169	0.521949726	0.721831587	3.0555127248	0.051
7/16/2014 13:30	13:30:00	11.351	2.437	0.571377446	0.756134588	3.2011484868	0.053
7/16/2014 13:35	13:35:00	11.688	1.734	0.396832579	0.629964489	2.6666563489	0.044
7/16/2014 13:40	13:40:00	14.454	2.4	0.574966451	0.75807616	3.2090796482	0.053
7/16/2014 13:45	13:45:00	12.791	2.047	0.486286805	0.697398268	2.9527783671	0.049
7/16/2014 13:50	13:50:00	13.740	2.045	0.484362081	0.695961	2.9446918125	0.049
7/16/2014 13:55	13:55:00	13.740	1.72	0.389140271	0.624201357	2.6419518235	0.044
7/16/2014 14:00	14:00:00	15.530	2.688	0.638465138	0.767172688	3.2479187877	0.054
7/16/2014 14:05	14:05:00	13.480	2.339	0.553918455	0.737471187	3.1220301103	0.052
7/16/2014 14:10	14:10:00	14.740	2.625	0.593891481	0.77064499	3.262139922	0.054
7/16/2014 14:15	14:15:00	14.740	2.625	0.593891481	0.77064499	3.262139922	0.054
7/16/2014 14:20	14:20:00	14.039	2.639	0.567615197	0.753407248	3.1896463646	0.053
7/16/2014 14:25	14:25:00	16.940	2.535	0.578054299	0.760289222	3.2186349871	0.054
7/16/2014 14:30	14:30:00	13.360	2.101	0.523375636	0.723396491	3.0634136394	0.051
7/16/2014 14:35	14:35:00	13.960	2.271	0.57128266	0.75603781	3.1962145381	0.053
7/16/2014 14:40	14:40:00	14.040	2.482	0.583809995	0.763866749	3.2316180161	0.054
7/16/2014 14:45	14:45:00	16.680	2.223	0.519193735	0.721441668	3.0414496315	0.051
7/16/2014 14:50	14:50:00	13.470	2.663	0.619298425	0.78745962	3.3239794977	0.055
7/16/2014 14:55	14:55:00	12.180	2.481	0.583570736	0.763803	3.2313978196	0.054
7/16/2014 15:00	15:00:00	12.460	3.188	0.721260968	0.84927478	3.5949738481	0.060
7/16/2014 15:05	15:05:00	12.460	2.248	0.508164721	0.712850581	3.0165344708	0.050
7/16/2014 15:10	15:10:00	12.410	2.698	0.610452741	0.781285161	3.3073828502	0.055
7/16/2014 15:15	15:15:00	12.410	2.698	0.610452741	0.781285161	3.3073828502	0.055
7/16/2014 15:20	15:20:00	12.040	2.681	0.625203736	0.79069	3.3472242796	0.056
7/16/2014 15:25	15:25:00	12.930	2.729	0.617420814	0.785761296	3.3261273566	0.055
7/16/2014 15:30	15:30:00	13.250	2.529	0.573171946	0.75663681	3.2019707881	0.053
7/16/2014 15:35	15:35:00	13.170	2.034	0.4611 76471	0.6907 34997	3.1995118171	0.056
7/16/2014 15:40	15:40:00	13.170	2.034	0.4611 76471	0.6907 34997	3.1995118171	0.056
7/16/2014 15:45	15:45:00	12.980	2.02	0.458176638	0.677596287	3.1488578538	0.052
7/16/2014 15:50	15:50:00	10.860	2.169	0.748642516	0.865244115	3.4625644698	0.061
7/16/2014 15:55	15:55:00	10.680	2.179	0.7 1826 7301	0.848037451	3.5899930186	0.060
7/16/2014 16:00	16:00:00	14.280	2.996	0.677920956	0.823303196	3.4859429156	0.058
7/16/2014 16:05	16:05:00	11.160	2.96	0.701 1 1 1 1	0.837 4 1 1 1 1	3.5425 1 1 1 1	0.059
7/16/2014 16:10	16:10:00	11.980	3.118	0.708171041	0.841647833	3.5624495159	0.059
7/17/2014 4:37	4:37:00	5.470	4.35	0.984163896	0.992049645	4.1993449896	0.070
7/17/2014 4:38	4:38:00	5.470	4.422	1.000845409	1.000126239	4.2339175361	0.071
7/17/2014 4:39	4:39:00	5.470	4.427	1.001 9 1 7 1 0	1.000795742	4.2 3635 8507	0.071
7/17/2014 4:40	4:40:00	5.470	4.427	1.001 9 1 7 1 0	1.000795742	4.2 3635 8507	0.071
7/17/2014 4:45	4:45:00	5.280	4.453	1.007 1 6 1 0 4	1.003 1 6 1 0 4	4.2 4 7 7 2 7 2	0.071
7/17/2014 4:50	4:50:00	5.420	4.35	0.992 5 3 1 0 7	0.996 2 2 9 9 6	4.2 7 1 6 4 7 5 0	0.071
7/17/2014 4:55	4:55:00	5.420	4.441	1.004 7 7 1 1 1	1.002 3 7 2 7 7 1	4.2 4 1 6 4 8 5 5	0.071
7/17/2014 4:20	4:20:00	4.720	4.454	1.007 4 7 2 4 8	1.004 3 3 8 7 8 6	4.2 4 9 2 4 9 8 0	0.071
7/17/2014 4:25	4:25:00	5.280	4.467	1.010 6 1 0 4 8	1.005 9 5 0 5 8 7	4.2 5 9 8 6 9 2 7	0.071
7/17/2014 4:30	4:30:00	5.620	4.465	1.010 3 8 9 5 7	1.005 9 7 5 6 0 7	4.2 5 4 9 7 5 9 0	0.071
7/17/2014 4:35	4:35:00	5.620	4.465	1.010 3 8 9 5 7	1.005 9 7 5 6 0 7	4.2 5 4 9 7 5 9 0	0.071
7/17/2014 4:40	4:40:00	5.620	4.448	1.006 2 6 1 0 8 6	1.003 2 7 2 1 8 5	4.2 4 8 6 8 6 3 5	0.071
7/17/2014 4:45	4:45:00	4.159	4.444	1.004 7 1 1 1 1	1.002 3 7 2 7 7 1	4.2 4 1 6 4 8 5 5	0.071
7/17/2014 4:50	4:50:00	5.250	4.355	0.985 2 9 4 1 3 1	0.992 6 9 8 0 2 5	4.2 0 1 7 9 7 2 1	0.070
7/17/2014 4:55	4:55:00	5.460	4.38	0.990 9 5 0 2 6	0.995 4 4 8 2 0	4.2 1 1 8 0 2 6 2	0.070



Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[1]$^{1.5}$	[5]=[4] x [7]	[6]=[5]/60
7/17/2014 5:00	5:00:00	5.390	4.45	1.008 1 6 1 6 8 6	1.005 2 6 8 6 3	4.2 5 6 7 4 2 5	0.071
7/17/2014 5:05	5:05:00	5.280	4.439	1.006 2 9 6 6 1	1.002 1 9 7 0 3 1	4.2 4 2 6 8 1 2 1	0.071
7/17/2014 5:10	5:10:00	5.750	4.44	1.006 5 2 6 9 3	1.002 2 5 9 9 3 0	4.2 4 2 7 6 4 1 1	0.071
7/17/2014 5:15	5:15:00	6.250	4.351	0.9939 9 1 6 2 1	0.996 9 9 1 6 2 1	4.2 2 0 5 1 6 8 1	0.070
7/17/2014 5:20	5:20:00	5.450	4.349	0.993 8 5 5 8 3 1	0.993 8 5 5 8 3 1	4.1 8 8 6 4 2 4 5	0.070
7/17/2014 5:25	5:25:00	5.450	4.34	0.991 8 0 3 4 1 3	0.991 8 0 3 4 1 3	4.1 8 0 3 4 5 8 8	0.070
7/17/2014 5:30	5:30:00	6.250	4.234	0.9 6 5 4 4 4 1 7	0.9 6 5 4 4 4 1 7	4.1 3 4 1 6 6 8 7	0.069
7/17/2014 5:35	5:35:00	4.850	4.211	0.9 5 1 6 1 9 9 1 0	0.9 7 6 5 3 9 6 4 5	4.1 1 2 6 7 1 4 7	0.069
7/17/2014 5:40	5:40:00	5.240	4.264	0.9 6 6 9 3 9 5 0 2	0.9 6 8 1 1 9 1 1 7	4.1 3 7 6 2 9 0 8 0	0.069
7/17/2014 5:45	5:45:00	5.250	4.246	0.9 6 0 6 3 3 4 8 6	0.9 6 0 1 1 9 1 1 7	4.1 4 0 4 4 2 3 6	0.069
7/17/2014 5:50	5:50:00	5.240	4.246	0.9 6 0 6 3 3 4 8 6	0.9 6 7 1 3 1 3 6 5	4.1 4 2 9 7 7 0 6	0.069
7/17/2014 5:55	5:55:00	5.850	4.242	0.9 5 9 9 9 9 9 1 2	0.9 7 3 1 4 5 9 5	4.1 2 7 8 7 2 4 3	0.068
7/17/2014 6:00	6:00:00	5.850	4.2	0.9 5 0 8 0 4 8 2 1	0.9 5 0 8 0 4 8 2 1	4.1 0 2 5 2 2 2 1	0.068
7/17/2014 6:05	6:05:00	6.100	4.2	0.9 5 0 2 2 6 2 4 1	0.9 5 7 9 5 9 1 6 8	4.1 2 6 3 8 9 5 0	0.069
7/17/2014 6:10	6:10:00	5.950	4.182	0.9 4 6 8 2 3 7 9	0.9 7 1 6 5 3 2 2 5	4.1 0 9 3 4 4 8 1	0.068
7/17/2014 6:15	6:15:00	5.180	4.253	0.9 6 7 8 9 8 0 3 0	0.9 8 3 9 8 7 0 3 0	4.1 3 9 2 9 7 6 9	0.069
7/17/2014 6:20	6:20:00	6.000	3.943	0.8 9 3 8 3 4 4 8	0.9 4 4 5 8 6 3 4	3.9 8 0 7 7 3 4	0.066
7/17/2014 6:25	6:25:00	5.730	4.049	0.9 1 6 9 2 2 2 6	0.9 5 6 7 3 9 2 2	4.0 8 6 1 2 6 6	0.068
7/17/2014 6:30	6:30:00	5.620	3.939	0.8 9 2 0 2 2 4 1	0.9 4 7 9 7 6 8 8	4.1 2 6 3 9 8 5 0	0.069
7/17/2014 6:35	6:35:00	5.730	3.879	0.8 7 7 6 9 5 1 9	0.9 3 6 3 8 0 4 8 0	3.9 8 5 9 9 5 8 5	0.066
7/17/2014 6:40	6:40:00	10.200	2.113	0.4 7 8 0 7 2 1 8	0.6 8 9 9 8 2 3	3.5 3 1 9 6 6 0 4	0.059
7/17/2014 6:45	6:45:00	12.420	3.447	0.7 7 9 6 6 2 5 1	0.8 8 1 6 9 8 2 2	3.7 3 6 1 7 8 6 9	0.062
7/17/2014 6:50	6:50:00	12.420	3.447	0.7 7 9 6 6 2 5 1	0.8 8 1 6 9 8 2 2	3.7 3 6 1 7 8 6 9	0.062
7/17/2014 6:55	6:55:00	11.250	3.358	0.7 5 7 3 1 5 0 2	0.8 7 4 0 7 4 5 0 5	3.7 2 0 2 3 7 5 8	0.062
7/17/2014 7:00	7:00:00	13.060	3.982	0.8 8 4 0 4 6 2 0	0.9 6 9 6 3 8 9 2 5	4.3 4 5 9 1 5 6 9	0.072
7/17/2014 7:05	7:05:00	16.160	2.81	0.6 5 1 7 8 7 3 1	0.8 0 7 2 8 7 2 5	3.4 6 9 9 8 7 2 6	0.057
7/17/2014 7:10	7:10:00	10.280	2.982	0.6 7 6 6 6 8 3 1	0.8 2 3 1 7 7 2 6	3.4 7 8 3 9 8 3 9	0.058
7/17/2014 7:15	7:15:00	10.280	2.982	0.6 7 6 6 6 8 3 1	0.8 2 3 1 7 7 2 6	3.4 7 8 3 9 8 3 9	0.058
7/17/2014 7:20	7:20:00	10.280	2.941	0.6 6 5 1 7 1 0 4	0.8 1 5 0 4 4 5 5	3.4 6 0 7 3 6 9 8	0.058
7/17/2014 7:25	7:25:00	10.020	2.172	0.4 8 2 7 4 9 2 3	0.6 9 4 7 0 7 9 9	3.5 3 2 2 9 8 3 6	0.059
7/17/2014 7:30	7:30:00	9.890	2.189	0.4 8 6 2 6 4 9 0	0.6 9 6 3 4 9 0	3.4 4 9 3 5 3 8 0	0.057
7/17/2014 7:35	7:35:00	13.110	2.749	0.6 2 1 4 6 7 4 1	0.7 8 9 6 3 5 4 1	3.5 8 2 9 1 3 9 9	0.060
7/17/2014 7:40	7:40:00	13.110	2.749	0.6 2 1 4 6 7 4 1	0.7 8 9 6 3 5 4 1	3.5 8 2 9 1 3 9 9	0.060
7/17/2014 7:45	7:45:00	13.060	2.159	0.4 8 0 4 0 1 3 8	0.6 9 5 0 6 0 4 5	3.3 9 0 4 6 6 9 7	0.057
7/17/2014 7:50	7:50:00	11.590	2.063	0.4 6 9 8 6 4 2 5	0.6 8 2 4 5 4 8 6	3.3 2 7 9 4 9 7 7	0.055
7/17/2014 7:55	7:55:00	10.450	2.041	0.4 6 3 6 7 8 7 3	0.6 8 0 4 2 6 4 1	3.3 4 0 2 3 6 0 9	0.056
7/17/2014 8:00	8:00:00	13.280	2.736	0.6 0 9 8 3 5 2 8	0.7 8 7 2 8 6 2 8	3.5 2 3 1 6 8 2 1	0.059
7/17/2014 8:05	8:05:00	13.280	2.736	0.6 0 9 8 3 5 2 8	0.7 8 7 2 8 6 2 8	3.5 2 3 1 6 8 2 1	0.059
7/17/2014 8:10	8:10:00	11.290	2.344	0.5 1 0 4 1 2 8 6	0.7 1 1 2 8 6 7 4	3.3 9 5 7 4 2 7 6	0.057
7/17/2014 8:15	8:15:00	11.290	2.344	0.5 1 0 4 1 2 8 6	0.7 1 1 2 8 6 7 4	3.3 9 5 7 4 2 7 6	0.057
7/17/2014 8:20	8:20:00	11.780	2.431	0.5 3 8 0 4 9 7 1 1	0.7 3 0 4 8 6 2 4	3.4 4 0 2 7 3 9 2	0.057
7/17/2014 8:25	8:25:00	11.250	3.139	0.7 1 0 1 8 9 9 5	0.8 4 7 2 7 2 7 2	3.5 8 7 2 4 7 9 9	0.059
7/17/2014 8:30	8:30:00	11.250	2.326	0.5 2 6 1 4 9 2 3	0.7 2 9 7 1 7 3 5	3.2 8 0 6 2 4 3 0	0.055
7/17/2014 8:35	8:35:00	13.160	2.101	0.4 7 5 7 8 1 3 5	0.6 8 9 7 7 6 3 1	3.2 0 5 2 9 6 4 6	0.053
7/17/2014 8:40	8:40:00	13.160	2.101	0.4 7 5 7 8 1 3 5	0.6 8 9 7 7 6 3 1	3.2 0 5 2 9 6 4 6	0.053
7/17/2014 8:45	8:45:00	12.410

PILOT NAME: MBUA VALELEY METER INACCURACY TEST BEFORE COUNTER MEASURES

Date: 28/02/2013

METER TESTING SHEET

								BEFORE COUNTERMEASURES							
								Initial Reading		Final Reading		Integrated Value			
No.	Account	Customer	Location Address	Status	Metered	Meter ID	Time(sec)	Tested Metr	TR-II Metr	Tested Metr	TR-II Metr	Test Meter (litres)	TR-II Meter (litres)	Difference (litres)	Error (%)
								A	B	C	D	C - A = E	D - B = F	E - F = G	G/F
1	19005	SAMO	KUKUM AREA		1	12A004466	32	563,673	13,7054	563,688	13,7185	0,015	0,0131	0,0019	14,50%
2	19006	REGINALD LAMANI	KUKUM AREA		1	05A018386	32	2490,064	13,7337	2490,08	13,7489	0,016	0,0152	0,0008	5,26%
3	19007	FREDRICK IRO	KUKUM AREA		1	13A000728	23	282,982	13,7408	282,996	13,7629	0,014	0,0221	-0,00801	-36,39%
4	19013-01	TEILOS SHOP	KUKUM		1	13B019770	120	77,819	13,8228	77,834	13,8379	0,015	0,0151	-1E-04	-0,66%
5	19013-2	PHILELL SHOP	KUKUM STORE (OLD LKP Q		1	13B019504	110	179,822	13,8379	179,838	13,8528	0,014	0,0149	-0,0009	-6,04%
6	19013-3	BILLY MISI	KUKUM STORE (OLD PRR B		1	97107128	102	3726,207	13,8528	3726,223	13,8669	0,016	0,0141	0,0018	13,48%
7	19013-5	ROSE BATAVINSIA	PARCEL 191-035-33		1	05A018676	118	162,124	13,7778	162,138	13,793	0,014	0,0152	-0,0012	-7,89%
8	19013-6	ETHEL NAITORO	PARCEL 191-035-33		1	12A006153	267	150,974	13,717	150,98	13,8078	0,006	0,0908	-0,0848	-93,39%
9	19013-7	SOLORITE INTERNET CAFE	PARCEL NO.191-035-33		1	06A021602	101	2301,864	13,7637	2301,878	13,7778	0,014	0,0141	-1E-04	-0,71%
10	19013-8	ABRAHAM TAKIPO	PARCEL NO.191-035-33		1	05A019990	288	1625,829	13,8078	1625,846	13,8091	0,017	0,0013	0,0157	
11	19014	K T T SHOP	KUKUM LAINE		1	12B086479	122	329,728	13,8078	329,743	13,8228	0,015	0,015	-1,4211E-14	0,00%
12	19016	FLORENCE YOUNG SCHOOL	KUKUM SCHOOL		1	12B086482	195	5485,127	14,1388	5485,156	14,1547	0,029	0,0159	0,0131	82,39%
13	19017	S S E C	KUKUM AREA	D		07-000373	30	2803,9378	13,9248	2803,9578	13,9387	0,02	0,0139	0,0061	43,88%
14	19019	ALLAN MUANIMAE	MBUA VALLEY		1	12A004467	26	1337,856	13,9387	1337,874	13,9539	0,018	0,0152	0,0028	18,42%
15	19023-01	JAMES MEMUA	MBUA VALLEY		1	05A013067	24	1434,28	14,1258	1434,294	14,1393	0,014	0,0137	0,0003	2,19%
16	19023-1	ERIC TAKILA	MBUA VALLEY		1	12A004447	19	203,293	14,1038	203,309	14,1198	0,016	0,0158	0,0002	1,27%
17	19024	RUSSELL BULE	MBUA VALLEY		1	12A009063	56	3083,072	14,89	3083,086	14,1036	0,014	-0,7864	0,8004	-101,78%
18	19026	TALAPE TOMASI	MBUA VALLEY		1	07-000396	32	772,1536	14,0725	772,1685	14,0881	0,0149	0,0156	-0,0007	-4,49%
19	19026-1	NASALETA ZAMA	MBUA VALLEY		1	13A001023	35	45,181	14,0581	45,195	14,0725	0,014	0,0144	-0,0004	-2,78%
20	19028	FRANCIS RAMO	MBUA VALLEY		1	99B142040	28	6393,1017	14,0402	6393,1153	14,0581	0,0136	0,0179	-0,0043	-24,02%
21	19030	ROBERT SULIMAE	MBUA VALLEY New id S13A00514	D		07-000040	300	28,3145	3,965	28,4374	3,086	0,1229	-0,879	1,0019	-113,98%
22	19031	ANTHONY AGIOMEA	MBUA VALLEY		1	05A018323	300	5404,374	3,544	5404,561	3,735	0,187	0,191	-0,004	-2,09%
23	19032	FAY FRANCIS	MBUA VALLEY		1	12A005110	300	585,834	3,375	586,08	3,965	0,246	0,59	-0,344	-58,31%
24	19035	JESSE DORAUVO	MBUA VALLEY		1	12A004469	300	333,472	3,396	333,625	3,544	0,153	0,148	0,005	3,38%
25	19038	JOY ANITAU ANGI	MBUA VALLEY			77129504	23	2242,279	14,0258	2242,282	14,0402	0,003	0,0144	-0,0114	-79,17%
26	19039	DR HENRY KAKO	MBUA VALLEY		1	97B033432	28	5648,2327	14,0121	5648,2458	14,0258	0,0131	0,0137	-0,0006	-4,38%
27	19039-1	JIMMY MASA	MBUA VALLEY DOWN STAIRS		1	05A019065	29	2074,127	13,9981	2074,141	14,0141	0,014	0,016	-0,002	-12,50%
28	19039-2	JIMMY MASA	MBUA VALLEY		1	09B053437	31	632,957	13,9839	632,965	13,9981	0,008	0,0142	-0,0062	-43,66%
29	19041	M S RADDIE	MBUA VALLEY			493323	71	2893,29	13,9687	2893,294	13,9839	0,004	0,0152	-0,0112	-73,68%
30	19042	KAIEA KILIFI OBRIEN	MBUA VALLEY			370548	35	3565,666	13,9545	3565,669	13,9687	0,003	0,0142	-0,0112	-78,87%
31	19043	LOMA TANITO	MBUA VALLEY		1	12B010983	300	243,54	3,164	243,66	3,284	0,12	0,12	4,884981E-15	0,00%
32	19043-1	CHERRY TANITO	BUA VALLEY AREA		1	12A004468	300	498,804	3,039	498,929	3,164	0,125	0,125	0	0,00%
33	19044	JOEL NEUSIA			1	13A000613	300	366,894	2,945	366,981	3,039	0,087	0,094	-0,007	-7,45%
34	19046-02	HELLEN AOFIA			1	13A000781	300	177,869	2,81	177,991	2,944	0,122	0,134	-0,012	-8,96%
35	19053	SAMANTHA CLOUGH	MBUA VALLEY		1	12A005464	300	241,41	2,68	241,553	2,819	0,143	0,139	0,004	2,88%
36	19053-1	STELLA DELAIVERATA	LOT/NO.792		1	13A000938	300	433,769	2,565	433,883	2,679	0,114	0,114	-2,3981E-14	0,00%
37	19054	EDWIN ERO	MBUA VALLEY		1	12A004841	300	467,966	2,476	468,06	2,565	0,094	0,089	0,005	5,62%
38	19055	MARIAN ORU	8579		1	13A001110	300	214,98	2,286	215,07	2,475	0,09	0,189	-0,099	-52,38%
39	19056	AEDALYN WINI	MBUA VALLEY		1	06A021849	300	2223,81	2,286	2223,9	2,382	0,09	0,096	-0,006	-6,25%
40	19057-2	GABRIEL MANELUSI	MBUA VALLEY		1	12B086660	300	119,417	3,285	119,523	3,39	0,106	0,105	0,001	0,95%
41	19058	JOSEPH RIBINI	MBUA VALLEY		1	05A01851	300	2862,179	2,216	2862,247	2,286	0,068	0,07	-0,002	-2,86%
42	19059	ABRAHAM TAKIPO	MBUA VALLEY		1	97B033757	300	852,8206	2,185	852,8517	2,216	0,0311	0,031	0,0001	0,32%

S64-1-133

43	19061	KAREN & JOHN FOIMUA	MBUA VALLEY		1	97B033560	300	1839,242	2,134	1839,287	2,183	0,045	0,049	-0,004	-8,16%
44	19063	TONY TEPE	MBUA VALLEY		1	97B033693	17	6292,5272	2,107	6292,5404	2,121	0,0132	0,014	-0,0008	-5,71%
45	19065-1	FALASI KIRIAU	MBUA VALLEY		1	12A004560	57	195,336	2,121	195,337	2,132	0,001	0,011	-0,01	-90,91%
46	19067	CASPER SONIYA	MBUA VALLEY		1	07-000028	33	1587,5662	2,092	1587,5662	2,106	0,013	0,014	-0,001	-7,14%
47	19069	CLAUDIUS HORIWAPU	MBUA VALLEY		1	97B033566	25	6337,1507	2,07	6337,1645	2,085	0,0138	0,015	-0,0012	-8,00%
48	19071	RAELYN DENI	LOT 809 MBUA VALLEY			529512	30	2097,181	2,054	2097,184	2,07	0,003	0,016	-0,013	-81,25%
49	19078	GIDEON KHALE	MBUA VALLEY		1	12A004563	41	672,843	2,04	672,857	2,054	0,014	0,014	1,0214E-14	0,00%
50	19079	LONSDALE MANASE	MBUA VALLEY		1	12A004562	44	816,796	2,023	816,811	2,04	0,015	0,017	-0,002	-11,76%
51	19082	ABRAHAM KUMTI	**MBUA VALLEY (illegal connection to tank B4 meter)**		1	12B011193	43	381,56	2,011	381,583	2,024	0,023	0,013	0,01	76,92%
52	19083	JOHN RUGE	MBUA VALLEY		1	12A005453	300	560,814	1,902	560,693	1,98	0,079	0,078	0,001	1,28%
53	19083-1	BADDLEY,G. ALAHA	MBUA VALLEY		1	12B011194	300	511,216	1,665	511,693	1,745	0,477	0,08	0,397	
54	19083-2	RICKSON WATE	MBUA VALLEY		1	99B14977	300	4198,0502	1,745	4198,9267	1,823	0,8765	0,078	0,7985	
55	19084	JOSEPH ZIKU	MBUA VALLEY		1	12A004561	300	415,508	1,824	415,585	1,901	0,077	0,077	-1,7764E-15	0,00%
56	19085	STANLEY & JOY RIOLO	MBUA VALLEY		1	07-001078	300	3054,5799	1,572	3054,6562	1,488	0,0763	-0,073	0,1513	
57	19086	NANCY MANU	MBUA VALLEY		1	06A021696	300	2418,66	1,493	2418,741	1,572	0,081	0,079	0,002	2,53%
58	19088-1	DOMINIC FALEUSIA	MBUA VALLEY		1	99B134322	300	525,7229	1,413	525,7539	1,493	0,031	0,08	-0,049	-61,25%
59	19089	ELIZABETH SANAU	MBUA VALLEY		1	12A004771	300	557,458	1,331	557,539	1,413	0,081	0,082	-0,001	-1,22%
60	19090	DESMOND RINI HUNKIRA	MBUA VALLEY		1	12A005454	300	828,174	1,251	828,252	1,331	0,078	0,08	-0,002	-2,50%
61	19091	RICHARD VAHA	MBUA VALLEY		1	12A005106	300	540,063	1,172	540,142	1,251	0,079	0,079	6,4615E-14	0,00%
62	19091-1	Fr Stanly	MBUA VALLEY		1	97B033780	300	5807,9437	1,016	5808,0163	1,091	0,0726	0,075	-0,0024	-3,20%
63	19092	ROSEMELLY WARDEN	MBUA VALLEY		1	11A000772	300	539,417	1,091	539,497	1,172	0,08	0,081	-0,001	-1,23%
64	19095	BEN SEKA (JNR)	MBUA VALLEY		1	12A005022	300	215,199	0,921	215,296	0,016	0,097	-0,905	1,002	-110,72%
65	19096	REGGIE IEMANE	MBUA VALLEY		1	12A004830	300	557,152	0,887	557,185	0,921	0,033	0,034	-0,001	-2,94%
66	19098	JEFF VAI LAUMEA	MBUA VALLEY		1	544358	300	5228,355	0,814	5228,427	0,887	0,072	0,073	-0,001	-1,37%
67	19099	ALLAN TINONI	MBUA VALLEY		1	12B011123	300	252,568	0,759	252,623	0,814	0,055	0,055	-2,1538E-14	0,00%
68	13260-01	Richard Bawick	KUKUM		1	12A005379	37	470,843	13,8915	470,859	13,9103	0,016	0,0188	-0,0028	-14,89%
69	13226-02	Nelly Fakaia	KUKUM		1	12B011027	40	572,267	13,8811	572,282	13,8915	0,015	0,0104	0,0046	44,23%
												0	0	0	
														Average of Meter Inaccuracy	**-14.08%**

PILOT NAME: MBUA VALLEY METER INACCURACY TEST AFTER CONTER MEASURES

Date 18 /07/2013

METER TESTING SHEET

								AFTER COUNTERMEASURES							
								Initial Reading		Final Reading		Integrated Value			
No	Account	Customer	Location Address	Status	Metered	Meter ID	Time(sec)	Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	TR-II Meter (litres)	Difference (litres)	Error (%)
								A	B	C	D	C - A = E	D - B = F	E - F = G	G/F
1	19039	DR HENRY KAKO	MBUA VALLEY		1	S13A00315	300	53,8467	0,9255	53,9543	1,0333	0,1076	0,1078	-0,0002	-0,19%
2	19053	SAMANTHA CLOUGH	MBUA VALLEY		1	S13A00310	300	52,8639	0,7828	53,0065	0,9254	0,1426	0,1426	1,66533E-15	0,00%
3	19094	EMMANUEL KOUTA	MBUA VALLEY		1	S13A00213	300	93,4652	0,6722	93,5757	0,7828	0,1105	0,1106	-1E-04	-0,09%
4	19099	ALLAN TINONI	MBUA VALLEY		1	S13A00254	300	22,8044	0,6007	22,8756	0,6719	0,0712	0,0712	-2,5535E-15	0,00%
5	13260-02	Nelly Fakaia	KUKUM		**1**	S13A00233	300	51,2585	0,0336	51,428	0,2034	0,1695	0,1698	-0,0003	-0,18%
												0	0	0	
														Average of Meter Inaccuracy	**-0.09%**

Actual Measurement of Leakage and Open-end Flow **10 No.2 Mbua Valley**

No	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			Customer Type		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom . 32m^3 Non-D .45m^3	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom.	Non-D.	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1	*			*						*		*			*					*		0.02	0.55				
2	*			*							*	*			*					*		0.00	0				
3	*			*							*	*			*				*			0.09	2.16				
4	*			*						*		*			*					*		0.02	0.56				
5	*			*							*	*			*					*		0.00	0.04				
6	*			*						*		*			*					*		0.14	3.46				
7	*			*						*		*			*					*							
8	*			*					*				*		*				*			0.00	0.04				
9	*			*						*		*			*					*		0.00	0.03				
10	*			*					*				*		*					*		0.12	2.88				
11	*			*					*				*		*					*		0.00	0.11				
12	*			*					*				*		*			*				0.08	1.92				
13	*			*					*				*		*						*						
14	*			*					*				*		*						*						
15	*		*						*				*		*			*									
16	*			*							*		*		*						*						
17	*			*							*		*		*						*						
18	*		*						*				*			*				*							
Total	18	0	2	16	0	0	0	0	8	7	3	8	10	0	17	1	0	2	1	4	11		11.55	0.00	0.00	0.00	0.00
	18		18		0		18					18			18		18										

Note:

Change in Status of Connections (Customers, Users and Unconnection) **11 No.1 Bahai Kukum**

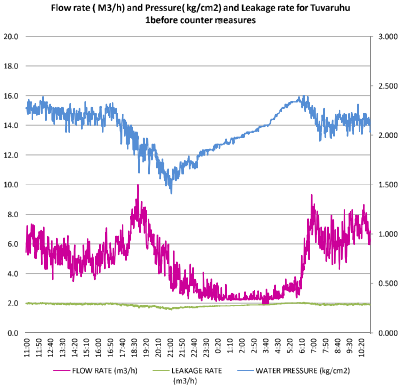
| No. | Account No. | Account Name | Location | status | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

| | | |

MNF Measure before countermeasure in Tuvaruhu 2

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
11-Sep	3:37	1.9045	2.100	45.284

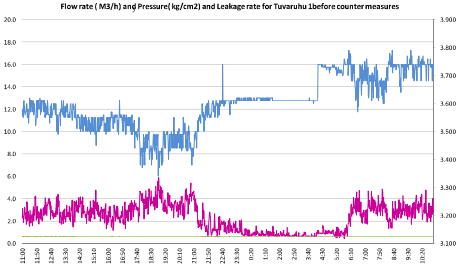
Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
9/09/2013 11:00	11:00	5.4787	2.270	1.080952381	1.039688598	1.980086935	0.033
9/09/2013 11:01	11:01	5.8902	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:02	11:02	6.0525	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:03	11:03	6.2106	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:04	11:04	6.7319	2.270	1.080952381	1.039688598	1.980086935	0.033
9/09/2013 11:05	11:05	7.2181	2.240	1.066666667	1.032795559	1.966959142	0.033
9/09/2013 11:06	11:06	5.5731	2.220	1.057142857	1.028174527	1.958158386	0.033
9/09/2013 11:07	11:07	5.8010	2.220	1.057142857	1.028174527	1.958158386	0.033
9/09/2013 11:08	11:08	6.3663	2.340	1.114285714	1.055597326	2.010385107	0.034
9/09/2013 11:09	11:09	5.2521	2.210	1.052380952	1.025856205	1.953743142	0.033
9/09/2013 11:10	11:10	6.1964	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:11	11:11	6.6080	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:12	11:12	5.6992	2.360	1.123809524	1.060098827	2.018958217	0.034
9/09/2013 11:13	11:13	5.8595	2.340	1.114285714	1.055597326	2.010385107	0.034
9/09/2013 11:14	11:14	5.7484	2.340	1.114285714	1.055597326	2.010385107	0.034
9/09/2013 11:15	11:15	6.6779	2.230	1.061904762	1.030487633	1.962563697	0.033
9/09/2013 11:16	11:16	6.0510	2.220	1.057142857	1.028174527	1.958158386	0.033
9/09/2013 11:17	11:17	5.6219	2.320	1.104761905	1.051076546	2.001775281	0.033
9/09/2013 11:18	11:18	5.3754	2.300	1.095238095	1.046536237	1.993128263	0.033
9/09/2013 11:19	11:19	6.4512	2.330	1.109523810	1.053339361	2.006084813	0.033
9/09/2013 11:20	11:20	6.7413	2.340	1.114285714	1.055597326	2.010385107	0.034
9/09/2013 11:21	11:21	6.4827	2.340	1.114285714	1.055597326	2.010385107	0.034
9/09/2013 11:22	11:22	6.8756	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:23	11:23	7.3392	2.250	1.071428571	1.035098339	1.971344787	0.033
9/09/2013 11:24	11:24	7.2654	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:25	11:25	7.2414	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:26	11:26	7.1373	2.200	1.047619048	1.023532631	1.949317897	0.032
9/09/2013 11:27	11:27	6.5251	2.160	1.028571429	1.014185106	1.931515334	0.032
9/09/2013 11:28	11:28	6.3544	2.270	1.080952381	1.039688598	1.980086935	0.033
9/09/2013 11:29	11:29	7.1243	2.220	1.057142857	1.028174527	1.958158386	0.033
9/09/2013 11:30	11:30	7.1099	2.220	1.057142857	1.028174527	1.958158386	0.033
9/09/2013 11:31	11:31	7.2881	2.230	1.061904762	1.030487633	1.962563697	0.033
9/09/2013 11:32	11:32	5.8352	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:33	11:33	6.9757	2.280	1.085714286	1.041976145	1.984443567	0.033
9/09/2013 11:34	11:34	7.2299	2.300	1.095238095	1.046536237	1.993128263	0.033



MNF Measure After countermeasure in Tuvaruhu 2

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
9-Oct	2:46	0.6100	3.610	14.410

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
8/10/2013 11:00	11:00	2.3928	3.560	0.986149586	0.993059645	0.697568894	0.010
8/10/2013 11:01	11:01	2.3048	3.560	0.986149586	0.993059645	0.697568894	0.010
8/10/2013 11:02	11:02	3.0830	3.570	0.988919688	0.994444401	0.698571885	0.010
8/10/2013 11:03	11:03	2.2561	3.580	0.991689751	0.995836207	0.697460886	0.010
8/10/2013 11:04	11:04	2.3898	3.550	0.983379501	0.991654931	0.694909598	0.010
8/10/2013 11:05	11:05	1.8584	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:06	11:06	2.3293	3.610	1.000000000	1.000000000	0.610000000	0.010
8/10/2013 11:07	11:07	2.6301	3.610	1.000000000	1.000000000	0.610000000	0.010
8/10/2013 11:08	11:08	3.2025	3.570	0.988919688	0.994444401	0.696611085	0.010
8/10/2013 11:09	11:09	2.6815	3.590	0.994459834	0.997226078	0.698307702	0.010
8/10/2013 11:10	11:10	3.1873	3.560	0.986149586	0.993059645	0.695760894	0.010
8/10/2013 11:11	11:11	2.1520	3.560	0.986149586	0.993059645	0.695760894	0.010
8/10/2013 11:12	11:12	2.6090	3.570	0.988919688	0.994444401	0.696611085	0.010
8/10/2013 11:13	11:13	2.4685	3.570	0.988919688	0.994444401	0.696611085	0.010
8/10/2013 11:14	11:14	2.7517	3.570	0.988919688	0.994444401	0.696611085	0.010
8/10/2013 11:15	11:15	1.6838	3.590	0.994459834	0.997226078	0.698307702	0.010
8/10/2013 11:16	11:16	2.7723	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:17	11:17	3.7125	3.590	0.994459834	0.997226078	0.698307702	0.010
8/10/2013 11:18	11:18	3.1667	3.550	0.983379501	0.991654931	0.694909598	0.010
8/10/2013 11:19	11:19	2.0010	3.560	0.986149586	0.993059645	0.695760894	0.010
8/10/2013 11:20	11:20	2.2284	3.580	0.991689751	0.995836207	0.697460886	0.010
8/10/2013 11:21	11:21	2.8708	3.560	0.986149586	0.993059645	0.695760894	0.010
8/10/2013 11:22	11:22	2.3080	3.560	0.986149586	0.993059645	0.695760894	0.010
8/10/2013 11:23	11:23	2.6574	3.550	0.983379501	0.988857595	0.692301201	0.010
8/10/2013 11:24	11:24	2.4910	3.560	0.986149586	0.993059645	0.695760894	0.010
8/10/2013 11:25	11:25	1.5805	3.560	0.986149586	0.993059645	0.695760894	0.010
8/10/2013 11:26	11:26	1.5814	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:27	11:27	1.5317	3.620	1.002770083	1.001384084	0.610884291	0.010
8/10/2013 11:28	11:28	2.9682	3.610	1.000000000	1.000000000	0.610000000	0.010
8/10/2013 11:29	11:29	1.9589	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:30	11:30	2.4277	3.570	0.988919688	0.994444401	0.696611085	0.010
8/10/2013 11:31	11:31	1.7954	3.610	1.000000000	1.000000000	0.610000000	0.010
8/10/2013 11:32	11:32	2.4684	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:33	11:33	2.3134	3.590	0.994459834	0.997226078	0.698307702	0.010
8/10/2013 11:34	11:34	2.5610	3.610	1.000000000	1.000000000	0.610000000	0.010
8/10/2013 11:35	11:35	2.5178	3.570	0.988919688	0.994444401	0.696611085	0.010
8/10/2013 11:36	11:36	1.5771	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:37	11:37	2.7351	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:38	11:38	2.8928	3.610	1.000000000	1.000000000	0.610000000	0.010
8/10/2013 11:39	11:39	3.2470	3.600	0.997259017	0.998615998	0.699154599	0.010
8/10/2013 11:40	11:40	1.9828	3.560	0.986149586	0.993059645	0.695760894	0.010
8/10/2013 11:41	11:41	2.2378	3.560	0.986149586	0.993059645	0.695760894	0.010
8/10/2013 11:42	11:42	3.0147	3.580	0.991689751	0.995836207	0.697460886	0.010



Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
10/09/2013 10:19	10:19	6.7397	2.160	1.028571429	1.014185106	1.931515334	0.032
10/09/2013 10:20	10:20	6.7851	2.160	1.028571429	1.014185106	1.931515334	0.032
10/09/2013 10:21	10:21	6.7178	2.150	1.023809524	1.011834731	1.927039246	0.032
10/09/2013 10:22	10:22	7.0401	2.150	1.023809524	1.011834731	1.927039246	0.032
10/09/2013 10:23	10:23	6.8747	2.100	1.000000000	1.000000000	1.904500000	0.032
10/09/2013 10:24	10:24	6.3603	2.100	1.000000000	1.000000000	1.904500000	0.032
10/09/2013 10:25	10:25	7.4842	2.010	0.957142857	0.978336781	1.863242399	0.031
10/09/2013 10:26	10:26	7.7779	2.160	1.028571429	1.014185106	1.931515334	0.032
10/09/2013 10:27	10:27	7.7522	2.070	0.985714286	0.992831449	1.890847494	0.032
10/09/2013 10:28	10:28	7.3086	2.150	1.023809524	1.011834731	1.927039246	0.032
10/09/2013 10:29	10:29	7.5248	2.170	1.033333333	1.016530045	1.935981472	0.032
10/09/2013 10:30	10:30	8.2905	2.160	1.028571429	1.014185106	1.931515334	0.032
10/09/2013 10:31	10:31	7.5649	2.160	1.028571429	1.014185106	1.931515334	0.032
10/09/2013 10:32	10:32	8.6519	2.200	1.047619048	1.023532631	1.949317897	0.032
10/09/2013 10:33	10:33	8.3187	2.220	1.057142857	1.028174527	1.958158386	0.033
10/09/2013 10:34	10:34	8.1590	2.180	1.038095238	1.018869588	1.940437131	0.032
10/09/2013 10:35	10:35	8.1330	2.090	0.995238095	0.997616206	1.899660055	0.032
10/09/2013 10:36	10:36	8.0942	2.200	1.047619048	1.023532631	1.949317897	0.032
10/09/2013 10:37	10:37	7.7395	2.220	1.057142857	1.028174527	1.958158386	0.033
10/09/2013 10:38	10:38	7.3602	2.160	1.028571429	1.014185106	1.931515334	0.032
10/09/2013 10:39	10:39	7.8433	2.220	1.057142857	1.028174527	1.958158386	0.033
10/09/2013 10:40	10:40	6.9302	2.130	1.014285714	1.007117528	1.918055331	0.032
10/09/2013 10:41	10:41	6.8824	2.220	1.057142857	1.028174527	1.958158386	0.033
10/09/2013 10:42	10:42	7.1611	2.100	1.000000000	1.000000000	1.904500000	0.032
10/09/2013 10:43	10:43	7.6753	2.200	1.047619048	1.023532631	1.949317897	0.032
10/09/2013 10:44	10:44	8.0995	2.180	1.038095238	1.018869588	1.940437131	0.032
10/09/2013 10:45	10:45	7.1818	2.120	1.009523810	1.004750621	1.913547557	0.032
10/09/2013 10:46	10:46	7.3849	2.160	1.028571429	1.014185106	1.931515334	0.032
10/09/2013 10:47	10:47	7.1998	2.150	1.023809524	1.011834731	1.927039246	0.032
10/09/2013 10:48	10:48	6.6945	2.150	1.023809524	1.011834731	1.927039246	0.032
10/09/2013 10:49	10:49	7.5087	2.120	1.009523810	1.004750621	1.913547557	0.032
10/09/2013 10:50	10:50	7.1002	2.170	1.033333333	1.016530045	1.935981472	0.032
10/09/2013 10:51	10:51	6.9705	2.160	1.028571429	1.014185106	1.931515334	0.032
10/09/2013 10:52	10:52	6.2537	2.180	1.038095238	1.018869588	1.940437131	0.032
10/09/2013 10:53	10:53	6.3803	2.150	1.023809524	1.011834731	1.927039246	0.032
10/09/2013 10:54	10:54	5.9555	2.100	1.000000000	1.000000000	1.904500000	0.032
10/09/2013 10:55	10:55	6.7286	2.160	1.028571429	1.014185106	1.931515334	0.032
10/09/2013 10:56	10:56	5.9401	2.110	1.004761905	1.002378125	1.909029138	0.032
10/09/2013 10:57	10:57	6.3425	2.120	1.009523810	1.004750621	1.913547557	0.032
10/09/2013 10:58	10:58	6.1459	2.160	1.028571429	1.014185106	1.931515334	0.032
10/09/2013 10:59	10:59	6.8712	2.030	0.966666667	0.983192080	1.872489317	0.031
10/09/2013 11:00	11:00	6.7933	2.040	0.971428571	0.985610761	1.877095694	0.031
Estimated Leakage Rate (m^3/day)						**45.284**	**0**
System Input Volume		113.86 m3/day					

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
9/10/2013 10:07	10:07	2.9608	3.760	1.041551247	1.020564181	0.622544150	0.010
9/10/2013 10:08	10:08	3.7369	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:09	10:09	2.8135	3.730	1.033240997	1.016484627	0.620055231	0.010
9/10/2013 10:10	10:10	2.7075	3.770	1.044321330	1.021920413	0.623374452	0.010
9/10/2013 10:11	10:11	2.8844	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:12	10:12	3.3107	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:13	10:13	3.5580	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:14	10:14	3.2824	3.730	1.033240997	1.016484627	0.620055231	0.010
9/10/2013 10:15	10:15	3.2166	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:16	10:16	4.1208	3.750	1.038781163	1.019206144	0.621715748	0.010
9/10/2013 10:17	10:17	3.5324	3.680	1.019390582	1.009648742	0.615885732	0.010
9/10/2013 10:18	10:18	3.3385	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:19	10:19	4.4054	3.760	1.041551247	1.020564181	0.622544150	0.010
9/10/2013 10:20	10:20	3.0943	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:21	10:21	2.1217	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:22	10:22	2.3542	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:23	10:23	2.4584	3.770	1.044321330	1.021920413	0.623374452	0.010
9/10/2013 10:24	10:24	2.5829	3.770	1.044321330	1.021920413	0.623374452	0.010
9/10/2013 10:25	10:25	2.6984	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:26	10:26	2.9213	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:27	10:27	2.8023	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:28	10:28	3.3716	3.750	1.038781163	1.019206144	0.621715748	0.010
9/10/2013 10:29	10:29	3.5737	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:30	10:30	2.9504	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:31	10:31	2.6603	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:32	10:32	2.7750	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:33	10:33	3.7152	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:34	10:34	4.7613	3.730	1.033240997	1.016484627	0.620055231	0.010
9/10/2013 10:35	10:35	3.5348	3.680	1.019390582	1.009648742	0.615885732	0.010
9/10/2013 10:36	10:36	2.5576	3.680	1.019390582	1.009648742	0.615885732	0.010
9/10/2013 10:37	10:37	2.2275	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:38	10:38	1.8886	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:39	10:39	2.2707	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:40	10:40	2.6951	3.760	1.041551247	1.020564181	0.622544150	0.010
9/10/2013 10:41	10:41	2.2032	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:42	10:42	2.7671	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:43	10:43	3.5733	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:44	10:44	3.2628	3.680	1.019390582	1.009648742	0.615885732	0.010
9/10/2013 10:45	10:45	2.4733	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:46	10:46	3.6008	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:47	10:47	3.3099	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:48	10:48	2.2828	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:49	10:49	2.7427	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:50	10:50	3.3397	3.760	1.041551247	1.020564181	0.622544150	0.010
9/10/2013 10:51	10:51	1.9502	3.730	1.033240997	1.016484627	0.620055231	0.010
9/10/2013 10:52	10:52	2.4153	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:53	10:53	2.3650	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:54	10:54	3.1024	3.730	1.033240997	1.016484627	0.620055231	0.010
9/10/2013 10:55	10:55	3.3419	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:56	10:56	2.5895	3.680	1.019390582	1.009648742	0.615885732	0.010
9/10/2013 10:57	10:57	2.9130	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:58	10:58	4.0014	3.740	1.036011080	1.017846295	0.620886240	0.010
9/10/2013 10:59	10:59	2.7261	3.710	1.027700831	1.013754804	0.618391041	0.010
9/10/2013 11:00	11:00	3.0128	3.740	1.036011080	1.017846295	0.620886240	0.010
Estimated Leakage Rate (m^3/day)						**14.410**	**0**
System Input Volume		55.25 m3/day					

S64-1-136

TUVARUHU 2 METER INACCURACY TEST (Before Countermeasure)

No	Account	Customer	Location 2	St	Meter ID	Meter Workin	PILOT SIT	Initial Reading		Final Reading		Difference		
								Tested Meter	TR-III Machine	Tested Meter	TR-III Machine	Meter	Machine	error
1	7012	SUKUNA SABELI	TUVARUHU ESTATE		07-000176	metered	T2					0	0	
2	7013	GODWIN OGE	TUVARUHU		544413	DL	T2					0	0	
3	0703.1-1	CHRISTINA TAWA	TUVARUHU		998149899	DL	T2					0	0	
4	7014	THOMAS KNOX	TUVARUHU		D/LINE	DL	T2					0	0	
5	07014-1	SHARON PITAKAKA	TUVARUHU		13A001001	Meter	T2					0	0	
6	7015	MAKSWEENY KEKEVERA	TUVARUHU		12A001324	Meter	T2	219.005	9.674	219.156	9.776	0.151	0.102	-0.50%
7	7016	LINDSAY PITAVOLOMO	TUVARUHU		07-000666	Meter	T2	1333.858	9.776	1333.899	9.816	0.041	0.04	-0.01%
8	7017	JAMES RIZU	TUVARUHU ESTATE		719788	METTER BURIED	T2					0	0	
9	7018	ALFRED WILLIE	TUVARUHU	D	07-000495	DISCO	T2					0	0	
10	7019	LAZARUS KAUHIONA	TUVARUHU	D	882135	DL/ILLEGAL	T2					0	0	
11	7020	JOSEPH KALEVALAKA	TUVARUHU		044018200	METTER BURIED	T2					0	0	
12	7021	EMMY KOE	TUVARUHU ESTATE		12B011144	Meter	T2	851.734	9.819	851.801	9.886	0.067	0.067	0.00%
13	07021-1	DAVID WAKASI	TUVARUHU ESTATE		07-000784							0	0	
14	07021-2	PETER PITAMUVA	TUVARUHU		12A004839	Meter	T2	578.205	10.0039	578.745	10.0438	0.54	0.0399	-4.98%
15	7022	TIMOTHY KAUHIONA	TUVARUHU		544431	METER NOT C	T2					0	0	
16	7023	LUCY LAFEA	TUVARUHU ESTATE		160145	Meter	T2					0	0	
17	7024	JOYCE BUGA	TUVARUHU ESTATE		07-000224	Meter	T2	1300.1274	10.0457	1300.1274	10.0975	0	0.0518	0.51%
18	7025	ILEEN SUSAN	TUVARUHU ESTATE	D	104005212	DISCO	T2					0	0	
19	7026	MOFFAT HIROPUHI	TUVARUHU HOUSING ESTAT	D	058881666	DISCO	T2					0	0	
20	07026-1	ROTA BATA'ANISIA	TUVARUHU		07-000175	METER STOP	T2					0	0	
21	7052	MARY DONIA	TUVARUHU ESTATE	D	07-000464	DISCO	T2					0	0	
22	7053	PAUL BULU	TUVARUHU		07-000484	DL/ILLEGAL	T2					0	0	
23	7054	DR SOLOMON ALBERT	TUVARUHU	V	545300	VACANT	T2					0	0	
24	7055	JOY HIRUAPU	TUVARUHU	D	064021880	DL/ILLEGAL	T2					0	0	
25	7056	DAVID FIGIRIMANA	TUVARUHU	D	07-000501	DISCO	T2					0	0	
26	7057	JACK WATEHA'A	TUVARUHU	D	064021681	DL/ILLEGAL	T2					0	0	
27	7058	ALBERT WALE	TUVARUHU	D	543395	DISCO	T2					0	0	
28	7059	TOM ROLIHAU	TUVARUHU ESTATE		094000280	METER STOP	T2					0	0	
29	7060	JOHN MARK LANGU	HONIARA	D	07-000118	DISCO	T2					0	0	
30	7061	CHRISTIAN NIENG	TUVURUHU		12B010970	Meter	T2	364.395	11.531	364.492	11.631	0.097	0.1	0.03%
31	7062	BEN DEDE	TUVARUHU		545462	METER STOP	T2					0	0	
32	7063	WINSON IIO	TUVARUHU		07-000556	Meter	T2	1266.9166	11.424	1267.0186	11.524	0.102	0.1	-0.02%
33	7064	HILDA ANHONIARA	TUVARUHU	D	104005211	ILLEGAL METE	T2	1008.2548	11.325	1008.3544	11.425	0.0996	0.1	0.00%
34	7065	DAN ALICK MISIBINI	H/NO 67	D	0107-000478	DL/ILLEGAL	T2					0	0	
35	7066	JENNIFER AITOREA	TUVARUHU		544663	DL	T2					0	0	
36	7067	LESLEY SIARANI - Gabriel Si	TUVARUHU		545482	METER STOP	T2	269.105	0.444	269.105	0.544	0	0.1	
37	7068	JAVAN DONI	TUVARUHU	D	AF595824	DISCO	T2					0	0	
38	7069	CLEMENT BASE	TUVARUHU		064021726	METER STOP	T2	3835.624	11.735	3835.624	11.835	0	0.1	0.84%
39	07069-1	MARY RICHARDSON FAROBO		V								0	0	
40	7070	CHARLES BAKO	TUVARUHU		058881643	meter	T2	1921.144	11.634	1921.245	11.735	0.101	0.101	0.00%
41	07070-1	ROBERT SAMANI	TUVARUHU	V	978033335							0	0	
42	7071	BEATRICE SIUNARI	TUVARUHU		978033793	Meter	T2	7181.9516	0.233	7182.0513	0.333	0.0997	0.1	0.09%
43	7072	JOHN FOTELIWALE	TUVARUHU		12A005387	METER STOP	T2	99999.989	0.34	99999.989	0.441	0	0.101	
44	7073	WILLIAM WALEKWATE	TUVARUHU		07-000745	Meter	T2	2302.8389	12.056	2302.8389	12.156	0	0.1	0.82%
45	7074	PATRICIAH GEORGE	TUVARUHU		950496	DL/ILLEGAL	T2					0	0	
46	7075	ERIC HURUTARAU	TUVARUHU		07-000552	METER BURIED	T2	1446.1037	11.946	1446.2048	12.046	0.1011	0.1	-0.01%
47	7076	LIONEL PUHIMANA	TUVURUHU		07-000991	METER STOP	T2					0	0	
48	07076-1	C/- JOHN WASI	TUVARUHU(ABOVE RHODA MA		054018762							0	0	
49	7077	MARTINA BITA	TUVARUHU		0106A021723	Meter	T2	2417.195	9.9403	2417.876	10.0012	0.681	0.0609	-6.20%
50	07077-01	ALBY HAM	TUVARUHU		124005035	DL	T2					0	0	
51	07077-1	DAVID WAKASI	TUVARUHU		97C0451	DL	T2					0	0	
52	07077-2	ERIC TEMA	LOT		D/LINE	DL	T2					0	0	
53	07077-3	MARTINA BITA		D	STILL NOT COI	DISCO	T2					0	0	
54	07077-4	MATHIAS NONI	LOT/NO		094000170	METTER	T2	1068.6465	9.8867	1068.7005	9.9403	0.054	0.0536	0.00%
55	7079	CHRISTIAN NIENG	TUVARUHU		216	RMC METER	T2					0	0	0.00%
56	7080	HELLEN HUNUEHU	TUVARUHU STORE	D	95358910	DISCO	T2					0	0	
57	07080-1	HELLEN HUNUEHU	TUVARUHU LOUGE		068940522	METER	T2	6628.101	11.841	6628.118	11.941	0.017	0.1	0.70%
58	7081	TUVARUHU VESTRY (AGU	TUVARUHU CHURCH AREA		128086834	METER	T2	44.311	0.132	44.411	0.232	0.1	0.1	0.00%
59	07081-01	TUVARUHU PARISH	TUVARUHU		07-000080	METER	T2	2140.7735	0.028	2140.8752	0.128	0.1017	0.1	-1.33%
60	7082	THE CONSUMER	TEACHERS HOUSE TUVARUH	V	370508	DL/ILLEGAL	T2					0	0	
61	7083	HERA LINTON	TEACHERS HOUE TUVARUH	D	07-000587	DL/ILLEGAL	T2					0	0	
64		JOHN MAGA	TUVARUHU			DL/ILLEGAL (un	T2					0	0	
65		RICHARD TARO				DL/ILLEGAL(un	T2					0	0	
												Average		1.49%

TUVARUHU 2 METER INACCURACY TEST (After Countermeasure)

No:	Account	Customer	Location 2	St	Meter ID		PILOT SITE	Time(min	Initial Reading		Final Reading		Difference		error	error%
									Tested Meter	TR-III Machine	Tested Meter	TR-III Machine	Meter	Machine		
1	7022	TIMOTHY KAUHIONA	TUVARUHU		544431	13B019579	T2		16.194	130.818	16.277	130.901	0.083	0.083	-3.55271E-15	0.00%
2	7023	LUCY LAFEA	TUVARUHU ESTATE		160145	13B019431	T2		8.936	130.712	9.042	130.818	0.106	0.106	2.30926E-14	0.00%
3	7026	MOFFAT HIROPUHI	TUVARUHU HOUSING ES	D	058881666	13B019429	T2		19.165	130.464	19.276	130.712	0.111	0.248	0.137	
4	7060	JOHN MARK LANGU	HONIARA	D	07-000118	12B010970	T2		43.406	130.324	43.547	130.464	0.141	0.14	-0.001	-0.71%
5	7073	WILLIAM WALEKWATE	TUVARUHU		07-000745		T2		3.662	130.464	3.802	130.598	0.14	0.134	-0.006	-4.48%
														average		-1.30%

S64-1-137

Actual Measurement of Leakage and Open-end Flow **6 No. 1 Tuvaruhu-2**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			User Type (excl. Leakage on Main lines)		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom.: 32m^3 Non-D: 45m^3	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom	Non-D	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1	*		*						*				*					*				0.10	2.4				
2	*		*						*				*						*			0.11	2.64				
3	*			*			*						*		*					*		0.02	0.48				
4	*			*				*					*		*					*		0.01	0.24				
5	*			*							*		*		*			*				0.13	3.12				
6																											
7	*			*						*			*		*						*	0.02	0.48				
8	*			*							*		*		*					*		0.05	1.20				
9		*			*		*						*		*					*		0.23		5.52	1.06	4.46	
10	*			*						*			*		*						*	0.01	0.24				
11	*			*					*				*		*					*		0.25	6				
Total	9	1	2	7	1	0	2	1	3	2	2	0	8	0	8	0	0	2	1	5	2		16.80			4.46	0.00
	10		9		1		10					8			8		10										

Note:

Change in Status of Connections (Customers, Users and Unconnection) 12 No.7 Panatina Valley

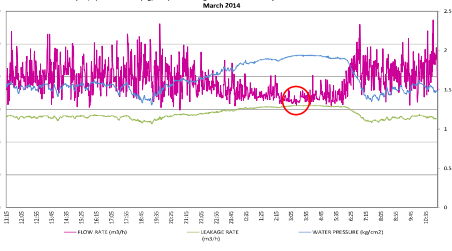
| No. | Account No. | Account Name | Location | status | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

S64-1139

MNF Measure before countermeasure in Panatina Valley

	Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
			[7]	[8]	
	29-Mar-14	3:24:00 AM	3.1081	1.933	68.642

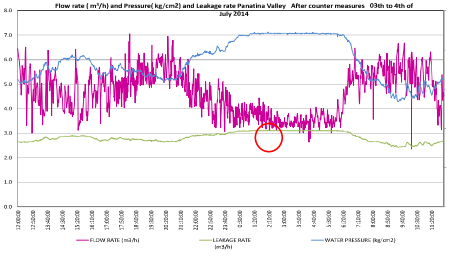
Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{2.5}$	[5]=[4]x[7]	[6]=[5]/60
3/24/2014 11:15	11:15	3.4041	1.549	0.801345059	0.89517876	2.782851586	0.046
3/24/2014 11:16	11:16	3.4041	1.549	0.801345059	0.89517876	2.782851586	0.046
3/24/2014 11:17	11:17	3.3726	1.538	0.795654423	0.89199632	2.773408515	0.046
3/24/2014 11:18	11:18	4.2624	1.561	0.807553026	0.89863094	2.793961568	0.047
3/24/2014 11:19	11:19	3.8203	1.577	0.815830316	0.90323256	2.807339244	0.047
3/24/2014 11:20	11:20	3.1447	1.568	0.811174340	0.90063217	2.799317025	0.047
3/24/2014 11:21	11:21	3.8464	1.566	0.810159679	0.90007596	2.797511777	0.047
3/24/2014 11:22	11:22	3.4219	1.572	0.813243663	0.90180234	2.802885308	0.047
3/24/2014 11:23	11:23	3.8017	1.58	0.817382387	0.90409197	2.810088261	0.047
3/24/2014 11:24	11:24	3.2966	1.573	0.813760993	0.90208702	2.803776670	0.047
3/24/2014 11:25	11:25	4.0723	1.577	0.815830316	0.90323256	2.807339244	0.047
3/24/2014 11:26	11:26	3.9816	1.577	0.815830316	0.90323256	2.807339244	0.047
3/24/2014 11:27	11:27	4.0644	1.576	0.815347546	0.90315956	2.806229252	0.047
3/24/2014 11:28	11:28	4.4566	1.579	0.816864977	0.90380529	2.809118897	0.047
3/24/2014 11:29	11:29	3.5826	1.565	0.809356902	0.89973175	2.796441685	0.047
3/24/2014 11:30	11:30	3.702	1.603	0.829286911	0.91064821	2.833869978	0.047
3/24/2014 11:31	11:31	4.3932	1.567	0.810657010	0.90056493	2.798424244	0.047
3/24/2014 11:32	11:32	4.1711	1.577	0.815830316	0.90323256	2.807339244	0.047
3/24/2014 11:33	11:33	5.3668	1.579	0.816864977	0.90380529	2.809118897	0.047
3/24/2014 11:34	11:34	4.3939	1.576	0.815312985	0.90294638	2.806449555	0.047
3/24/2014 11:35	11:35	3.8148	1.569	0.811691671	0.90093927	2.800209522	0.047
3/24/2014 11:36	11:36	4.8056	1.566	0.810159679	0.90007596	2.797511777	0.047
3/24/2014 11:37	11:37	4.558	1.567	0.810657010	0.90056493	2.798424244	0.047
3/24/2014 11:38	11:38	4.2152	1.553	0.803143382	0.89631586	2.785091558	0.046
3/24/2014 11:39	11:39	4.1521	1.543	0.798241076	0.89343382	2.776911374	0.046
3/24/2014 11:40	11:40	3.6936	1.536	0.794619762	0.89141473	2.770693522	0.046
3/24/2014 11:41	11:41	3.6496	1.525	0.788929126	0.88821824	2.760866709	0.046
3/24/2014 11:42	11:42	3.7923	1.528	0.790481177	0.88909859	2.763380795	0.046
3/24/2014 11:43	11:43	3.9812	1.519	0.785825142	0.88646799	2.755295837	0.046
3/24/2014 11:44	11:44	3.8611	1.52	0.786342473	0.88675835	2.756137311	0.046
3/24/2014 11:45	11:45	3.9032	1.532	0.792550440	0.89025302	2.766995412	0.046
3/24/2014 11:46	11:46	3.7414	1.53	0.791515779	0.88967172	2.765186049	0.046
3/24/2014 11:47	11:47	4.3249	1.518	0.785307812	0.88617948	2.754323466	0.046
3/24/2014 11:48	11:48	3.9173	1.53	0.791515779	0.88967172	2.765186049	0.046
3/24/2014 11:49	11:49	4.0598	1.534	0.793585103	0.89083936	2.768809955	0.046
3/24/2014 11:50	11:50	4.9132	1.544	0.798758407	0.89373856	2.777811070	0.046
3/24/2014 11:51	11:51	4.8639	1.526	0.789446456	0.88850799	2.761571698	0.046
3/24/2014 11:52	11:52	4.6810	1.512	0.782203826	0.88442879	2.748874749	0.046
3/24/2014 11:53	11:53	4.399	1.482	0.766683911	0.87566833	2.721467537	0.045
3/24/2014 11:54	11:54	3.809	1.469	0.759959864	0.87175652	2.709369494	0.045
3/24/2014 11:55	11:55	4.0019	1.457	0.753758647	0.86818814	2.698415558	0.045
3/24/2014 11:56	11:56	3.644	1.45	0.750129353	0.86610407	2.691925830	0.045
3/24/2014 11:57	11:57	3.6868	1.452	0.751163994	0.86669775	2.693781491	0.045
3/24/2014 11:58	11:58	3.68	1.452	0.751163994	0.86669775	2.693781491	0.045
3/24/2014 11:59	11:59	3.842	1.475	0.763061392	0.87353454	2.715012712	0.045
3/24/2014 12:00	12:00	3.7617	1.479	0.765131926	0.88119859	2.738877213	0.046
3/24/2014 12:01	12:01	3.9056	1.527	0.789965787	0.88479907	2.750247698	0.046
3/24/2014 12:02	12:02	3.9938	1.539	0.796171754	0.89223457	2.771309672	0.046
3/24/2014 12:03	12:03	3.7665	1.542	0.797725745	0.89313826	2.774011387	0.046
3/24/2014 12:04	12:04	3.6901	1.542	0.797725745	0.89313826	2.774011387	0.046
3/24/2014 12:05	12:05	4.2361	1.542	0.797725745	0.89313826	2.774011387	0.046
3/24/2014 12:06	12:06	3.9718	1.544	0.798758407	0.89373856	2.777811070	0.046
3/24/2014 12:07	12:07	4.1978	1.509	0.801345059	0.89517876	2.782851586	0.046
3/24/2014 12:08	12:08	3.9826	1.542	0.797725745	0.89313826	2.774011387	0.046
3/24/2014 12:09	12:09	4.4009	1.542	0.797725745	0.89313826	2.774011387	0.046
3/24/2014 12:10	12:10	4.4377	1.535	0.794102831	0.89112425	2.767932268	0.046
3/24/2014 12:11	12:11	3.9566	1.531	0.792033109	0.88996328	2.766092186	0.046
3/24/2014 12:12	12:12	4.0632	1.506	0.779099845	0.88266327	2.743415211	0.046
3/24/2014 12:13	12:13	3.9979	1.504	0.778065184	0.88208032	2.741592949	0.046
3/24/2014 12:14	12:14	3.8476	1.495	0.773409208	0.87945878	2.733277736	0.046
3/24/2014 12:15	12:15	3.8923	1.506	0.779099845	0.88266327	2.743415211	0.046
3/24/2014 10:11	10:11	4.1242	1.582	0.818416968	0.90486406909	2.811786269	0.047
3/24/2014 10:12	10:12	4.7188	1.594	0.824624935	0.90808816	2.821830229	0.047
3/24/2014 10:13	10:13	4.1485	1.59	0.822555613	0.90694803137	2.818086087	0.047
3/24/2014 10:14	10:14	4.1073	1.62	0.838075530	0.91564655	2.845355687	0.047
3/24/2014 10:15	10:15	3.8365	1.579	0.816864977	0.90380529	2.809118897	0.047
3/24/2014 10:16	10:16	3.8635	1.578	0.816347646	0.90351958	2.808229232	0.047



MNF Measure After countermeasure in Panatina Valley

	Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
			[7]	[8]	
	04-Jun-14	4-6/2014 2:11	3.11	2.211	68.225

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{2.5}$	[5]=[4]x[7]	[6]=[5]/60
7/3/2014	12:00:00	6.450	1.623	0.733942	0.81962	2.6026	0.044
7/3/2014	12:01:00	6.330	1.617	0.7312	0.8252	2.6209	0.044
7/3/2014	12:02:00	6.230	1.616	0.7309	0.8249	2.6198	0.044
7/3/2014	12:03:00	6.110	1.613	0.7295	0.8241	2.6163	0.044
7/3/2014	12:04:00	6.020	1.597	0.7223	0.8099	2.6431	0.044
7/3/2014	12:05:00	5.970	1.591	0.7196	0.8463	2.6362	0.044
7/3/2014	12:06:00	5.800	1.588	0.7182	0.8475	2.6357	0.044
7/3/2014	12:07:00	5.680	1.584	0.7164	0.8464	2.6323	0.044
7/3/2014	12:08:00	5.580	1.579	0.7142	0.8451	2.6282	0.044
7/3/2014	12:09:00	5.450	1.572	0.7110	0.8432	2.6224	0.044
7/3/2014	12:10:00	5.300	1.570	0.7137	0.8448	2.6274	0.044
7/3/2014	12:11:00	4.830	1.562	0.7150	0.8459	2.6307	0.044
7/3/2014	12:12:00	4.560	1.565	0.7169	0.8467	2.6332	0.044
7/3/2014	12:13:00	4.780	1.572	0.7110	0.8432	2.6224	0.044
7/3/2014	12:14:00	5.300	1.588	0.7182	0.8475	2.6357	0.044
7/3/2014	12:15:00	5.750	1.590	0.7191	0.8480	2.6373	0.044
7/3/2014	12:16:00	5.650	1.591	0.7196	0.8483	2.6382	0.044
7/3/2014	12:17:00	5.460	1.599	0.7232	0.8504	2.6448	0.044
7/3/2014	12:18:00	5.320	1.597	0.7223	0.8499	2.6431	0.044
7/3/2014	12:19:00	5.020	1.589	0.7132	0.8384	2.6048	0.043
7/3/2014	12:20:00	5.230	1.585	0.7169	0.8467	2.6332	0.044
7/3/2014	12:21:00	5.650	1.591	0.7196	0.8483	2.6373	0.044
7/3/2014	12:22:00	5.500	1.616	0.7309	0.8549	2.6588	0.044
7/3/2014	12:23:00	5.000	1.596	0.7218	0.8496	2.6423	0.044
7/3/2014	12:24:00	5.420	1.601	0.7241	0.8509	2.6464	0.044
7/3/2014	12:25:00	5.780	1.579	0.7142	0.8451	2.6282	0.044
7/3/2014	12:26:00	6.350	1.589	0.7187	0.8477	2.6365	0.044
7/3/2014	12:27:00	6.510	1.584	0.7173	0.8469	2.6340	0.044
7/3/2014	12:28:00	5.590	1.585	0.7169	0.8467	2.6332	0.044
7/3/2014	12:29:00	4.370	1.591	0.7196	0.8483	2.6382	0.044
7/3/2014	12:30:00	4.350	1.590	0.7191	0.8480	2.6373	0.044
7/3/2014	12:31:00	3.890	1.580	0.7146	0.8453	2.6289	0.044
7/3/2014	12:32:00	4.560	1.579	0.7142	0.8451	2.6282	0.044
7/3/2014	12:33:00	4.950	1.584	0.7164	0.8464	2.6323	0.044
7/3/2014	12:34:00	4.680	1.591	0.7196	0.8483	2.6382	0.044
7/3/2014	12:35:00	4.800	1.598	0.7227	0.8501	2.6440	0.044
7/3/2014	12:36:00	4.690	1.591	0.7196	0.8483	2.6382	0.044
7/3/2014	12:37:00	4.880	1.605	0.7259	0.8520	2.6497	0.044
7/3/2014	12:38:00	5.300	1.605	0.7259	0.8520	2.6497	0.044
7/3/2014	12:39:00	5.690	1.619	0.7322	0.8557	2.6613	0.044
7/3/2014	12:40:00	5.680	1.619	0.7322	0.8553	2.6359	0.044
7/3/2014	12:41:00	5.780	1.615	0.7304	0.8547	2.6580	0.044
7/3/2014	12:42:00	5.840	1.613	0.7295	0.8541	2.6563	0.044
7/3/2014	12:43:00	5.670	1.612	0.7291	0.8539	2.6555	0.044
7/3/2014	12:44:00	5.330	1.615	0.7304	0.8547	2.6580	0.044
7/3/2014	12:45:00	4.890	1.619	0.7322	0.8557	2.6613	0.044
7/3/2014	12:46:00	4.440	1.622	0.7336	0.8565	2.6637	0.044
7/3/2014	12:47:00	4.130	1.615	0.7304	0.8547	2.6580	0.044
7/3/2014	12:48:00	3.000	1.616	0.7309	0.8549	2.6588	0.044
7/3/2014	12:49:00	3.870	1.622	0.7336	0.8565	2.6637	0.044
7/3/2014	12:50:00	4.450	1.640	0.7417	0.8612	2.6785	0.045
7/3/2014	12:51:00	4.620	1.633	0.7386	0.8594	2.6726	0.045
7/3/2014	12:52:00	4.780	1.646	0.7445	0.8628	2.6834	0.045
7/3/2014	12:53:00	4.500	1.640	0.7417	0.8612	2.6785	0.045
7/3/2014	12:54:00	4.300	1.634	0.7390	0.8597	2.6736	0.045
7/3/2014	12:55:00	5.230	1.642	0.7427	0.8618	2.6801	0.045
7/3/2014	12:56:00	5.330	1.652	0.7472	0.8644	2.6883	0.045
7/3/2014	12:57:00	5.540	1.663	0.7521	0.8673	2.6972	0.045
7/3/2014	12:58:00	5.490	1.679	0.7594	0.8714	2.7101	0.045
7/3/2014	12:59:00	5.050	1.676	0.7580	0.8706	2.7077	0.045
7/4/2014	10:56:00	4.750	1.603	0.7250	0.8515	2.6481	0.044
7/4/2014	10:57:00	4.080	1.609	0.7277	0.8531	2.6530	0.044
7/4/2014	10:58:00	5.130	1.604	0.7255	0.8517	2.6489	0.044
7/4/2014	10:59:00	5.960	1.597	0.7223	0.8499	2.6431	0.044
7/4/2014	11:00:00	5.970	1.591	0.7196	0.8463	2.6362	0.044
7/4/2014	11:01:00	5.810	1.583	0.7160	0.8461	2.6315	0.044
7/4/2014	11:02:00	5.730	1.560	0.7056	0.8400	2.6123	0.044



Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{2.5}$	[5]=[4]x[7]	[6]=[5]/60
3/25/2014 10:17	10:17	4.4943	1.578	0.816347646	0.90351958	2.808229232	0.047
3/25/2014 10:18	10:18	4.2641	1.579	0.816864977	0.90380529	2.809118897	0.047
3/25/2014 10:19	10:19	4.2629	1.583	0.818554299	0.90484983	2.812974746	0.047
3/25/2014 10:20	10:20	4.5566	1.579	0.816864977	0.90380529	2.809118897	0.047
3/25/2014 10:21	10:21	4.6238	1.579	0.816864977	0.90380529	2.809118897	0.047
3/25/2014 10:22	10:22	5.0296	1.577	0.815830316	0.90323256	2.807339244	0.047
3/25/2014 10:23	10:23	4.4373	1.576	0.815312985	0.90294638	2.806449555	0.047
3/25/2014 10:24	10:24	4.3533	1.572	0.813243663	0.90180234	2.802885308	0.047
3/25/2014 10:25	10:25	4.3316	1.566	0.810159679	0.90007596	2.797511777	0.047
3/25/2014 10:26	10:26	4.0836	1.563	0.808587686	0.89921804	2.794926265	0.047
3/25/2014 10:27	10:27	3.9176	1.555	0.804449043	0.89691833	2.787885561	0.046
3/25/2014 10:28	10:28	4.4512	1.552	0.802597051	0.89604229	2.784991174	0.046
3/25/2014 10:29	10:29	4.1346	1.548	0.800827729	0.89489766	2.781406944	0.046
3/25/2014 10:30	10:30	3.3763	1.544	0.798758407	0.89373856	2.777811070	0.046
3/25/2014 10:31	10:31	4.4459	1.543	0.798241076	0.89343382	2.776911374	0.046
3/25/2014 10:32	10:32	4.5481	1.55	0.801862980	0.89546703	2.783203138	0.046
3/25/2014 10:33	10:33	4.8314	1.551	0.802379721	0.89575037	2.784080803	0.046
3/25/2014 10:34	10:34	4.2949	1.542	0.797725745	0.89313826	2.774011387	0.046
3/25/2014 10:35	10:35	4.4389	1.53	0.791515779	0.88967172	2.763186049	0.046
3/25/2014 10:36	10:36	4.541	1.524	0.788411795	0.88792557	2.757951424	0.046
3/25/2014 10:37	10:37	4.1229	1.517	0.784790481	0.88588411	2.753416095	0.046
3/25/2014 10:38	10:38	3.7681	1.506	0.779099845	0.88266327	2.743415211	0.046
3/25/2014 10:39	10:39	3.4303	1.493	0.772374547	0.87884842	2.731548778	0.046
3/25/2014 10:40	10:40	4.1085	1.501	0.776513192	0.88119859	2.739877263	0.046
3/25/2014 10:41	10:41	4.9229	1.519	0.785825142	0.88646799	2.755295837	0.046
3/25/2014 10:42	10:42	5.4807	1.541	0.797208451	0.89284164	2.775111057	0.046
3/25/2014 10:43	10:43	4.3898	1.538	0.795654423	0.89199632	2.772408515	0.046
3/25/2014 10:44	10:44	3.5396	1.518	0.785307812	0.88617948	2.754323466	0.046
3/25/2014 10:45	10:45	3.8493	1.508	0.780134506	0.88325232	2.745326263	0.046
3/25/2014 10:46	10:46	3.7435	1.524	0.788411795	0.88792557	2.757951424	0.046
3/25/2014 10:47	10:47	4.4854	1.536	0.794619762	0.89141473	2.770693522	0.046
3/25/2014 10:48	10:48	4.0897	1.544	0.798758407	0.89373856	2.777811070	0.046
3/25/2014 10:49	10:49	4.4858	1.555	0.804449043	0.89691833	2.787885561	0.046
3/25/2014 10:50	10:50	4.6021	1.556	0.804965174	0.89719935	2.788784780	0.046
3/25/2014 10:51	10:51	4.3716	1.555	0.804449043	0.89691833	2.787885561	0.046
3/25/2014 10:52	10:52	3.8187	1.54	0.796689984	0.89257641	2.774210556	0.046
3/25/2014 10:53	10:53	4.2756	1.537	0.795137093	0.89170699	2.771507655	0.046
3/25/2014 10:54	10:54	4.5589	1.542	0.797725745	0.89313826	2.774011387	0.046
3/25/2014 10:55	10:55	4.7758	1.542	0.797725745	0.89313826	2.774011387	0.046
3/25/2014 10:56	10:56	4.0034	1.528	0.790481177	0.88909859	2.763380785	0.046
3/25/2014 10:57	10:57	4.3272	1.524	0.788411795	0.88792557	2.757951424	0.046
3/25/2014 10:58	10:58	4.1629	1.525	0.788929126	0.88821824	2.760866709	0.046
3/25/2014 10:59	10:59	3.8077	1.533	0.793067770	0.89054525	2.767898331	0.046
3/25/2014 11:00	11:00	5.7336	1.517	0.784790481	0.88588411	2.753416095	0.046
3/25/2014 11:01	11:01	4.6412	1.506	0.779099845	0.88266327	2.743415211	0.046
3/25/2014 11:02	11:02	4.3043	1.489	0.770305225	0.87767034	2.727887183	0.045
3/25/2014 11:03	11:03	4.3996	1.468	0.759441283	0.87145924	2.708362599	0.045
3/25/2014 11:04	11:04	4.2596	1.479	0.765131919	0.87471819	2.718711039	0.045
3/25/2014 11:05	11:05	4.4117	1.488	0.769787894	0.8773755	2.726971016	0.045
3/25/2014 11:06	11:06	4.3694	1.482	0.766683911	0.87566833	2.721467537	0.045
3/25/2014 11:07	11:07	4.6596	1.466	0.758466222	0.87086544	2.706758687	0.045
3/25/2014 11:08	11:08	4.5059	1.481	0.766160380	0.87535942	2.720545208	0.045
3/25/2014 11:09	11:09	4.6118	1.482	0.766683911	0.87566833	2.721467537	0.045
3/25/2014 11:10	11:10	4.8092	1.481	0.766160380	0.87535942	2.720545208	0.045
3/25/2014 11:11	11:11	4.2249	1.482	0.766683911	0.87566833	2.721467537	0.045
3/25/2014 11:12	11:12	4.4934	1.478	0.764614589	0.87442242	2.717792359	0.045
3/25/2014 11:13	11:13	3.9643	1.475	0.763062997	0.87353454	2.715012712	0.045
3/25/2014 11:14	11:14	3.8998	1.475	0.763062997	0.87353454	2.715012712	0.045
3/25/2014 11:15	11:15	3.5436	1.4671	0.758927054	0.87088705	2.726854541	0.045
Estimated Leakage Rate (m^3/day)							**68.642**
		2.977	1.938	m			
		93.396	m^3	from Logger			
		93.2000	m^3	from Totalizer			

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{2.5}$	[5]=[4]x[7]	[6]=[5]/60
7/4/2014	11:03:00	5.610	1.549	0.7096	0.8378	2.6051	0.043
7/4/2014	11:04:00	5.430	1.538	0.6976	0.8340	2.5938	0.043
7/4/2014	11:05:00	5.550	1.543	0.6870	0.8348	2.5964	0.043
7/4/2014	11:06:00	5.700	1.528	0.6911	0.8313	2.5854	0.043
7/4/2014	11:07:00	5.480	1.513	0.6934	0.8321	2.5879	0.043
7/4/2014	11:08:00	5.230	1.542	0.6974	0.831	2.5972	0.043
7/4/2014	11:09:00	5.160	1.548	0.7001	0.8367	2.6023	0.043
7/4/2014	11:10:00	5.680	1.536	0.6947	0.8335	2.5922	0.043
7/4/2014	11:11:00	5.810	1.530	0.6920	0.8319	2.5871	0.043
7/4/2014	11:12:00	6.070	1.512	0.6839	0.8270	2.5718	0.043
7/4/2014	11:13:00	5.990	1.499	0.6780	0.8234	2.5607	0.043
7/4/2014	11:14:00	6.180	1.482	0.6703	0.8187	2.5462	0.042
7/4/2014	11:15:00	6.320	1.454	0.6576	0.8109	2.5220	0.042
7/4/2014	11:16:00	6.010	1.445	0.6536	0.8084	2.5142	0.042
7/4/2014	11:17:00	5.880	1.446	0.6540	0.8087	2.5151	0.042
7/4/2014	11:18:00	5.790	1.441	0.6517	0.8073	2.5107	0.042
7/4/2014	11:19:00	5.520	1.421	0.6427	0.8017	2.4932	0.042
7/4/2014	11:20:00	5.170	1.427	0.6454	0.8034	2.4985	0.042
7/4/2014	11:21:00	4.930	1.439	0.6508	0.8067	2.5090	0.042
7/4/2014	11:22:00	4.890	1.455	0.6581	0.8112	2.5229	0.042
7/4/2014	11:23:00	5.040	1.478	0.6685	0.8176	2.5427	0.042
7/4/2014	11:24:00	5.160	1.481	0.6698	0.8184	2.5453	0.042
7/4/2014	11:25:00	5.030	1.491	0.6744	0.8212	2.5539	0.043
7/4/2014	11:26:00	4.870	1.500	0.6784	0.8237	2.5616	0.043
7/4/2014	11:27:00	4.920	1.520	0.6875	0.8291	2.5786	0.043
7/4/2014	11:28:00	4.830	1.519	0.6911	0.8343	2.5947	0.043
7/4/2014	11:29:00	4.320	1.536	0.6947	0.8335	2.5922	0.043
7/4/2014	11:30:00	4.950	1.512	0.6839	0.8270	2.5718	0.043
7/4/2014	11:31:00	4.670	1.506	0.6811	0.8253	2.5667	0.043
7/4/2014	11:32:00	5.120	1.517	0.6862	0.8283	2.5763	0.043
7/4/2014	11:33:00	5.050	1.530	0.6920	0.8319	2.5871	0.043
7/4/2014	11:34:00	4.870	1.536	0.6947	0.8335	2.5922	0.043
7/4/2014	11:35:00	4.990	1.543	0.6979	0.8354	2.5981	0.043
7/4/2014	11:36:00	4.820	1.548	0.7001	0.8367	2.6023	0.043
7/4/2014	11:37:00	4.240	1.563	0.7069	0.8408	2.6148	0.044
7/4/2014	11:38:00	4.020	1.573	0.7114	0.8435	2.6232	0.044
7/4/2014	11:39:00	3.960	1.590	0.7191	0.8480	2.6373	0.044
7/4/2014	11:40:00	3.670	1.572	0.7110	0.8432	2.6224	0.044
7/4/2014	11:41:00	3.330	1.579	0.7142	0.8451	2.6282	0.044
7/4/2014	11:42:00	4.350	1.584	0.7164	0.8464	2.6323	0.044
7/4/2014	11:43:00	3.790	1.573	0.7114	0.8435	2.6232	0.044
7/4/2014	11:44:00	3.680	1.591	0.7196	0.8483	2.6382	0.044
7/4/2014	11:45:00	3.810	1.589	0.7187	0.8477	2.6365	0.044
7/4

PILOT SITE: PANATINA VALLEY METER INACCURACY TEST BEFORE COUNTERMEASURE

DATE: 20/06/2014

METER TESTING SHEET

							BEFORE COUNTERMEASURES							
							Initial Reading		Final Reading		Integrated Value			
No:	Account	Customer	Location Address	Status	Meter ID	Time(min)	Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	TR-III Meter (litres)	Difference (litres)	Error (%)
							A	B	C	D	C - A = E	D - B = F	E - F = G	G / F
1	13001	PANATINA COMMUNITY SCHOOL	PANATINA VALLEY		06B942103	5	6964.39	16.4596	6964.453	16.5229	0.063	0.0633	-0.0003	-0.47%
2	13005	MICHAEL NOMISASA	PANATINA VALLEY		12A004524	5	398.502	16.4078	398.554	16.4592	0.052	0.0514	0.0006	1.17%
3	13007-1	RONALD FUGUI	PANATINA VALLEY		07-000901	5	596.6893	16.3709	596.7268	16.4077	0.0375	0.0368	0.0007	1.90%
4	13010	PSALM SAMUELLE SOSIMO	PANATINA VALLEY		12A004523	5	202.363	16.3044	202.394	16.3371	0.031	0.0327	-0.0017	-5.20%
5	13013-1	ALICE & BOB POLLARD	PANATINA		99B149789	5	2171.6926	16.2192	2171.7748	16.3014	0.0822	0.0822	2.84225-13	0.00%
6	13015	JAMES TEOBASI	PANATINA VALLEY		8013183	5	2438.886	15.2538	2438.895	15.2949	0.009	0.0411	-0.0321	-78.10%
7	13017	DR KENTON SADE	PANATINA VALLEY		882161	5	283.859	16.0916	283.884	16.2187	0.025	0.1271	-0.1021	-80.33%
8	13018	IRENE CAMPBELL	PANATINA VALLEY		12A004521	5	266.729	16.0116	266.808	16.0975	0.079	0.0859	-0.0069	-8.03%
9	13019	IRO TOLAENI			544513	5	1634.731	15.1797	1634.746	15.2938	0.015	0.1141	-0.0991	-86.85%
10	13020	PETER TAMU	PANATINA VALLEY		12A005103	5	233.71	15.0872	233.807	15.1797	0.097	0.0925	0.0045	4.86%
11	13021	PAUL MANU	PANATINA VALLEY		07-200007	5	1778.4805	15.0073	1778.5547	15.0872	0.0742	0.0799	-0.0057	-7.13%
12	13023	HON.ANDREW MANEPORA'A	PANATINA VALLEY (New Tenant)		13B019764	5	654.755	15.8461	654.87	15.9596	0.115	0.1135	0.0015	1.32%
13	13024-1	DAVINIA OSIRAMO	PANATINA VALLEY		43	5	4715.973	15.7327	4715.997	15.8459	0.024	0.1132	-0.0892	-78.80%
14	13025	TOATA BUGA	PANATINA VALLEY		99B14670	5	6875.0483	14.9736	6875.0823	15.0078	0.034	0.0342	-0.0002	-0.58%
15	13026	NELSON OTO	PANATINA VALLEY		12A004520	5	1239.347	14.9167	1239.407	14.9736	0.06	0.0569	0.0031	5.45%
16	13028	HON VARIAN LONGAMEI	PANATINA VALLEY		782597	5	2908.454	15.4579	2908.468	15.5263	0.014	0.0684	-0.0544	-79.53%
17	13028-1	MELISSA SUIBAEA			07-001023	5	2154.9809	14.8347	2155.0564	14.9167	0.0755	0.082	-0.0065	-7.93%
18	13029	FRED BOSETO	PANATINA VALLEY		13B019565	5	352.647	14.7997	352.68	14.8349	0.033	0.0352	-0.0022	-6.25%
19	13030	SELWYN SAHU	PANATINA VALLEY		86127556	5	3269.826	15.5288	3269.85	15.6395	0.024	0.1107	-0.0867	-78.32%
20	13030-1	GIBSON GARABA	PANATINA VILLAGE		11B091707	5	344.046	15.6418	344.136	15.7327	0.09	0.0909	-0.0009	-0.99%
21	13031	BETSY KIMISI	PANATINA VALLEY		544675	5	877.801	15.322	877.815	15.3869	0.014	0.0649	-0.0509	-78.43%
22	13032	MARGARET SIBANA	PANATINA VALLEY		13B019766	5	162.636	15.3873	162.7	15.4492	0.064	0.0619	0.0021	3.39%
23	13035	PETER SOQOILO	PANATINA VALLEY		07-000006	5	5495.2336	14.1542	5495.2943	14.2178	0.0607	0.0636	-0.0029	-4.56%
24	13035-1	PETER SOQOILO	PANATINA VALLEY		13A001005	5	59.865	14.2178	59.938	14.29	0.073	0.0722	0.0008	1.11%
25	13035-2	PETER SOQOILO	PANATINA VALLEY		13A001091	5	67.712	14.29	67.772	14.3494	0.06	0.0594	0.0006	1.01%
26	13038	SALOME EREKALI	PANATINA VALLEY		77393	5	2803.67	14.721	2803.679	14.7639	0.009	0.0429	-0.0339	-79.02%
27	13039	JANET WATE	PANATINA VALLEY		99B149572	5	7669.1617	14.6376	7669.2422	14.7212	0.0805	0.0836	-0.0031	-3.71%
28	13041	REDLEY CLEMENT	PANATINA VALLEY		07-000932	5	1245.6281	14.5222	1245.6916	14.59881	0.0635	0.07661	-0.01311	-17.11%
29	13042	LEONARD AUKONA	PANATINA VALLEY		12A004785	5	486.453	14.4411	486.534	14.5216	0.081	0.0805	0.0005	0.62%
30	13042-1	MARTIN RAMO	PANATINA VALLEY		13B019765	5	117.992	14.3498	118.085	14.4409	0.093	0.0911	0.0019	2.09%
													Average	-22.61%

Actual Measurement of Leakage and Open-end Flow 12 No.7 Panatina Valley

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			Customer Type		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom : $32m^3$ Non-D :$45m^3$	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom.	Non-D	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1	*			*						*		*			*		*					0.01	0.25				
2	*			*					*			*			*			*				0.01	0.15				
3	*			*					*			*			*					*		0.03	0.72				
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											
13																											
14																											
Total	3	0	0	3	0	0	0	0	2	1	0	3	0	0	3	0	1	1	0	1	0		1.12			0.00	0.00
	3		3		0		3					3			3		3										

Note:

S64-T-140

PILOT SITE: PANATINA VALLEY METER INACCURACY TEST AFTER COUNTERMEASURE

DATE: 18/07/2014

METER TESTING SHEET

							AFTER COUNTERMEASURES							
							Initial Reading		Final Reading		Integrated Value			
No:	Account	Customer	Location Address	Status	Meter ID	Time(min)	Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	TR-III Meter (litres)	Difference (litres)	Error (%)
							A	B	C	D	C - A = E	D - B = F	E - F = G	G / F
1	?	John Clifort Pikacha	Panantina Valley		S13A00414	300	40.533	0.1896	40.5961	0.2532	0.0631	0.0636	-0.0005	-0.79%
2	13019	Iro Tolaeni	Panantina Valley		S13A00362	300	41.9342	0.2532	42.0224	0.3413	0.0882	0.0881	0.0001	0.11%
3	13022	Rebecca Teai	Panatina Valley		S13A00372	300	134.1147	0.3413	134.1919	0.4195	0.0772	0.0782	-0.001	-1.28%
4	13024	Lilian Dagi	Panantina Valley		S13A00336	300	5.2143	0.4195	5.2937	0.499	0.0794	0.0795	-1E-04	-0.13%
5	13041	Redley Clement	Panantina Valley		S13A00575	300	195.759	0.499	195.8598	0.6007	0.1008	0.1017	-0.0009	-0.88%
													Average	-0.59%

Change in Status of Connections (Customers, Users and Unconnection) 13 No.12 Naha-2

| No. | Account No. | Account Name | Location | status | Before Countermeasures | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

S64-1-142

MNF Measure before countermeasure in Naha 2

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
21-May	12:48:00 AM	2.553	2.833	58.545

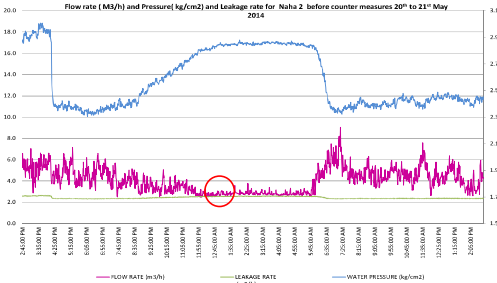
Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE/ WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]-[2][8]	[4]-[3]$^{1/2}$	[5]-[4] x [7]	[6]-[5]/60
5/20/2014 14:45	2:45:00 PM	5.3256	2.869	1.012707377	1.006333631	2.569471661	0.043
5/20/2014 14:46	2:46:00 PM	6.5852	2.882	1.012796152	1.008611002	2.572864070	0.043
5/20/2014 14:47	2:47:00 PM	5.2862	2.866	1.011684629	1.005807352	2.568127912	0.043
5/20/2014 14:48	2:48:00 PM	5.7657	2.854	1.008118602	1.004051095	2.563643662	0.043
5/20/2014 14:49	2:49:00 PM	5.0882	2.894	1.021531945	1.010708635	2.580842358	0.043
5/20/2014 14:50	2:50:00 PM	6.0746	2.928	1.032827391	1.016281158	2.594870680	0.043
5/20/2014 14:51	2:51:00 PM	5.4112	2.930	1.033439322	1.016975576	2.596643758	0.043
5/20/2014 14:52	2:52:00 PM	4.9975	2.931	1.034952305	1.017749107	2.597868614	0.043
5/20/2014 14:53	2:53:00 PM	4.9305	2.915	1.029044582	1.014369056	2.589985511	0.043
5/20/2014 14:54	2:54:00 PM	4.352	2.949	1.040945994	1.020267689	2.605049286	0.043
5/20/2014 14:55	2:55:00 PM	5.9862	2.918	1.030003530	1.014898096	2.591320924	0.043
5/20/2014 14:56	2:56:00 PM	5.2463	2.937	1.036710203	1.018189669	2.599743681	0.043
5/20/2014 14:57	2:57:00 PM	4.9511	2.898	1.022943876	1.011406879	2.582425185	0.043
5/20/2014 14:58	2:58:00 PM	5.2012	2.891	1.020472957	1.010146635	2.579304429	0.043
5/20/2014 14:59	2:59:00 PM	4.9197	2.906	1.025767737	1.012801924	2.585987153	0.043
5/20/2014 15:00	3:00:00 PM	5.2734	2.897	1.022908693	1.011232364	2.581979594	0.043
5/20/2014 15:01	3:01:00 PM	6.0641	2.888	1.019814849	1.009660363	2.577963805	0.043
5/20/2014 15:02	3:02:00 PM	5.421	2.899	1.023926858	1.011581365	2.582870700	0.043
5/20/2014 15:03	3:03:00 PM	4.9826	2.892	1.020825988	1.010359332	2.579750482	0.043
5/20/2014 15:04	3:04:00 PM	5.3335	2.899	1.023926858	1.011581365	2.582870700	0.043
5/20/2014 15:05	3:05:00 PM	4.8405	2.875	1.014825274	1.007385365	2.572157062	0.043
5/20/2014 15:06	3:06:00 PM	4.6824	2.869	1.012707377	1.006333631	2.569471661	0.043
5/20/2014 15:07	3:07:00 PM	5.2176	2.881	1.016943176	1.008416082	2.574839643	0.043
5/20/2014 15:08	3:08:00 PM	5.4674	2.918	1.030003530	1.014898096	2.591320924	0.043
5/20/2014 15:09	3:09:00 PM	5.1689	2.915	1.029044582	1.014369056	2.589985511	0.043
5/20/2014 15:10	3:10:00 PM	5.709	2.894	1.021531945	1.010708635	2.580842358	0.043
5/20/2014 15:11	3:11:00 PM	7.0465	2.910	1.027179668	1.013498726	2.587766298	0.043
5/20/2014 15:12	3:12:00 PM	5.5508	2.917	1.029650547	1.014716979	2.590876862	0.043
5/20/2014 15:13	3:13:00 PM	5.2538	2.923	1.031768443	1.015760032	2.593540091	0.043
5/20/2014 15:14	3:14:00 PM	4.8252	2.911	1.027650547	1.014716979	2.590876862	0.043
5/20/2014 15:15	3:15:00 PM	5.243	2.912	1.027885634	1.013846948	2.588655412	0.043
5/20/2014 15:16	3:16:00 PM	5.1077	2.902	1.024377115	1.012055992	2.584085664	0.043
5/20/2014 15:17	3:17:00 PM	4.6527	2.936	1.036575718	1.018016315	2.599301058	0.043
5/20/2014 15:18	3:18:00 PM	5.4864	2.954	1.042710907	1.021132169	2.607256768	0.043
5/20/2014 15:19	3:19:00 PM	5.2842	2.938	1.036239322	1.018097576	2.596643738	0.043
5/20/2014 15:20	3:20:00 PM	5.7671	2.929	1.033886340	1.016802016	2.593203587	0.043
5/20/2014 15:21	3:21:00 PM	4.5405	2.941	1.038122132	1.018882786	2.603151340	0.043
5/20/2014 15:22	3:22:00 PM	3.8516	2.938	1.037063184	1.018362992	2.600186228	0.043
5/20/2014 15:23	3:23:00 PM	4.3357	2.942	1.038475115	1.019055992	2.601955664	0.043
5/20/2014 15:24	3:24:00 PM	4.082	2.937	1.036710201	1.018189669	2.599743681	0.043
5/20/2014 15:25	3:25:00 PM	3.4849	2.936	1.036575718	1.018016315	2.599301058	0.043
5/20/2014 15:26	3:26:00 PM	5.761	2.944	1.039181080	1.019402515	2.602839931	0.043
5/20/2014 15:27	3:27:00 PM	4.7241	2.936	1.036575718	1.018016315	2.599301058	0.043
5/20/2014 15:28	3:28:00 PM	4.3697	2.903	1.024708789	1.012279808	2.584651990	0.043
5/20/2014 15:29	3:29:00 PM	5.7161	2.900	1.023649841	1.011755821	2.583316138	0.043
5/20/2014 15:30	3:30:00 PM	5.8095	2.903	1.024708789	1.012279808	2.584651990	0.043
5/20/2014 15:31	3:31:00 PM	5.6069	2.888	1.019414049	1.009660363	2.577963805	0.043
5/20/2014 15:32	3:32:00 PM	5.2746	2.925	1.032474409	1.016107479	2.594427226	0.043
5/20/2014 15:33	3:33:00 PM	5.5963	2.915	1.029044582	1.014369056	2.589985511	0.043
5/20/2014 15:34	3:34:00 PM	5.5316	2.926	1.032827391	1.016281158	2.594870680	0.043
5/20/2014 15:35	3:35:00 PM	4.0842	2.931	1.034952305	1.017749107	2.597868614	0.043
5/20/2014 15:36	3:36:00 PM	3.6648	3.003	1.060007060	1.029566442	2.628791998	0.044
5/20/2014 15:37	3:37:00 PM	6.1369	2.992	1.05612425E	1.027679069	2.623972943	0.044
5/20/2014 15:38	3:38:00 PM	4.487	2.985	1.053633371	1.026476191	2.620901659	0.044
5/20/2014 15:39	3:39:00 PM	5.1482	2.961	1.045181786	1.022341326	2.610344107	0.044
5/20/2014 15:40	3:40:00 PM	5.0388	2.979	1.051535475	1.025444018	2.618266262	0.044
5/20/2014 15:41	3:41:00 PM	5.6509	2.995	1.057183198	1.028191444	2.625288108	0.044
5/20/2014 15:42	3:42:00 PM	5.3998	3.008	1.061719373	1.030425201	2.630979559	0.044
5/20/2014 13:44	1:44:00 PM	3.8521	2.394	0.845048593	0.919260895	2.347148843	0.039
5/20/2014 13:45	1:45:00 PM	3.4473	2.402	0.847864455	0.920795555	2.351067291	0.039

Estimated Leakage Rate (m^3/day) **58.545**

2.469 3.008 m

96.932 from Logger

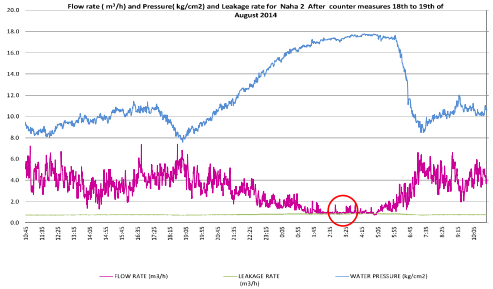
96.8000 real reading



MNF Measure After countermeasure in Naha 2

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
19-June-14	1:31:00	0.843	3.172	18.654

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE/ WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]-[2][8]	[4]-[3]$^{1/2}$	[5]-[4] x [7]	[6]-[5]/60
8/18/2014 10:45	10:45	5.0863	2.448	0.771752837	0.878494643	0.740195285	0.012
8/18/2014 10:46	10:46	5.483	2.418	0.762293062	0.873085116	0.738344964	0.012
8/18/2014 10:47	10:47	5.7822	2.422	0.763556116	0.873810981	0.738652951	0.012
8/18/2014 10:48	10:48	4.2465	2.407	0.758822728	0.871106904	0.734168099	0.012
8/18/2014 10:49	10:49	5.2307	2.388	0.752837327	0.86766 1089	0.731265524	0.012
8/18/2014 10:50	10:50	4.4262	2.400	0.756620429	0.869839112	0.733100572	0.012
8/18/2014 10:51	10:51	4.8736	2.409	0.759457755	0.871483755	0.734473850	0.012
8/18/2014 10:52	10:52	6.389	2.402	0.757250946	0.870201670	0.733403967	0.012
8/18/2014 10:53	10:53	5.6692	2.400	0.756620429	0.869839112	0.733100572	0.012
8/18/2014 10:54	10:54	6.2445	2.365	0.745586381	0.863473440	0.727735415	0.012
8/18/2014 10:55	10:55	4.2104	2.382	0.750945776	0.866571276	0.730346271	0.012
8/18/2014 10:56	10:56	5.6965	2.372	0.747793196	0.864750631	0.728811686	0.012
8/18/2014 10:57	10:57	5.6324	2.364	0.745271222	0.863290868	0.727581543	0.012
8/18/2014 10:58	10:58	6.2186	2.376	0.749054224	0.865479188	0.729428859	0.012
8/18/2014 10:59	10:59	7.2376	2.380	0.750315259	0.866207399	0.730039596	0.012
8/18/2014 11:00	11:00	5.7937	2.401	0.756953687	0.870020510	0.733251266	0.012
8/18/2014 11:01	11:01	4.9774	2.382	0.750945776	0.866571276	0.730346271	0.012
8/18/2014 11:02	11:02	1.5943	2.337	0.736759542	0.858346768	0.723413641	0.012
8/18/2014 11:03	11:03	2.9498	2.358	0.743379571	0.862104625	0.726657630	0.012
8/18/2014 11:04	11:04	3.4374	2.387	0.752522068	0.867480298	0.731112395	0.012
8/18/2014 11:05	11:05	2.86/9	2.394	0.754728578	0.868751332	0.732183623	0.012
8/18/2014 11:06	11:06	3.4777	2.382	0.750945776	0.866571276	0.730346271	0.012
8/18/2014 11:07	11:07	2.9033	2.369	0.74684 7415	0.864203341	0.728350576	0.012
8/18/2014 11:08	11:08	3.337	2.380	0.750315259	0.866207399	0.730039596	0.012
8/18/2014 11:09	11:09	2.47	2.363	0.744953864	0.863108527	0.727427839	0.012
8/18/2014 11:10	11:10	3.8656	2.365	0.745586381	0.863473440	0.727735415	0.012
8/18/2014 11:11	11:11	4.9659	2.346	0.739596469	0.859997947	0.724806270	0.012
8/18/2014 11:12	11:12	5.1304	2.321	0.731717006	0.855403417	0.720934000	0.012
8/18/2014 11:13	11:13	4.851	2.327	0.733606557	0.856503523	0.721865239	0.012
8/18/2014 11:14	11:14	4.8033	2.335	0.736128254	0.857979385	0.723110526	0.012
8/18/2014 11:15	11:15	5.5678	2.333	0.735493108	0.857611864	0.722795279	0.012
8/18/2014 11:16	11:16	5.0878	2.326	0.733373586	0.856384575	0.721863623	0.012
8/18/2014 11:17	11:17	4.875	2.340	0.737749918	0.858897501	0.723878814	0.012
8/18/2014 11:18	11:18	4.9348	2.337	0.736759542	0.858346768	0.723413641	0.012
8/18/2014 11:19	11:19	5.2708	2.351	0.741172762	0.860913911	0.725578244	0.012
8/18/2014 11:20	11:20	5.281	2.351	0.741172762	0.860913911	0.725578244	0.012
8/18/2014 11:21	11:21	5.1232	2.345	0.739281211	0.859814637	0.724651776	0.012
8/18/2014 11:22	11:22	5.4662	2.360	0.744010088	0.862560194	0.726963732	0.012
8/18/2014 11:23	11:23	5.1282	2.326	0.733293099	0.856324295	0.721710116	0.012
8/18/2014 11:24	11:24	5.717	2.334	0.735813367	0.85779644	0.722950169	0.012
8/18/2014 11:25	11:25	5.5699	2.362	0.744648605	0.862926698	0.727273703	0.012
8/18/2014 11:26	11:26	4.9782	2.376	0.749054224	0.865479188	0.729428859	0.012
8/18/2014 11:27	11:27	3.8012	2.367	0.746216898	0.863834867	0.728043069	0.012
8/18/2014 11:28	11:28	3.7665	2.366	0.745903639	0.863655973	0.727892954	0.012
8/18/2014 11:29	11:29	3.2402	2.370	0.74716 2673	0.864383720	0.728504285	0.012
8/18/2014 11:30	11:30	3.4173	2.352	0.741488020	0.861096987	0.725725240	0.012
8/18/2014 11:31	11:31	3.9549	2.353	0.741803279	0.861280023	0.725880604	0.012
8/18/2014 11:32	11:32	5.5464	2.382	0.750945776	0.866571276	0.730346271	0.012
8/18/2014 11:33	11:33	4.3712	2.378	0.749684741	0.865843370	0.729732792	0.012
8/18/2014 11:34	11:34	4.1151	2.368	0.746532156	0.864028924	0.728198834	0.012
8/18/2014 11:35	11:35	4.6278	2.352	0.741488020	0.861096987	0.725725240	0.012
8/18/2014 11:36	11:36	4.6484	2.346	0.739596469	0.859997947	0.724806270	0.012
8/18/2014 11:37	11:37	3.722	2.351	0.741172762	0.860913911	0.725578244	0.012
8/18/2014 11:38	11:38	2.9107	2.381	0.750630517	0.866386956	0.730192950	0.012
8/18/2014 11:39	11:39	2.6564	2.357	0.74308433 1	0.86 201782	0.726030730	0.012
8/18/2014 11:40	11:40	3.146	2.363	0.744953864	0.863108527	0.727427839	0.012
8/18/2014 11:41	11:41	3.5063	2.378	0.749684741	0.865843370	0.729732792	0.012
8/18/2014 11:42	11:42	4.3017	2.408	0.759142497	0.871287838	0.734321390	0.012
8/19/2014 9:55	9:55	4.6892	2.584	0.814627995	0.902587440	0.760083844	0.013
8/19/2014 9:56	9:56	4.8146	2.577	0.812421185	0.901344099	0.759652807	0.013
8/19/2014 9:57	9:57	5.0895	2.553	0.804854981	0.897137103	0.756107150	0.013



Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE E (kg/cm^2)	WATER PRESSURE/ WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]-[2][8]	[4]-[3]$^{1/2}$	[5]-[4] x [7]	[6]-[5]/60
8/19/2014 9:58	9:58	4.65	2.565	0.808638083	0.899243061	0.757882052	0.013
8/19/2014 9:59	9:59	3.3405	2.589	0.816204288	0.903446251	0.761419444	0.013
8/19/2014 10:00	10:00	4.2126	2.581	0.813682219	0.902043358	0.760242142	0.013
8/19/2014 10:01	10:01	3.9198	2.595	0.818093859	0.904486955	0.762012227	0.013
8/19/2014 10:02	10:02	4.1409	2.598	0.819041614	0.905009179	0.762741736	0.013
8/19/2014 10:03	10:03	4.0461	2.623	0.82692 3077	0.909353109	0.766402050	0.013
8/19/2014 10:04	10:04	3.9722	2.596	0.818411097	0.904668764	0.762448922	0.013
8/19/2014 10:05	10:05	1.2381	2.553	0.805485498	0.897483439	0.756403256	0.013
8/19/2014 10:06	10:06	4.1226	2.565	0.808638083	0.899243061	0.757882052	0.013
8/19/2014 10:07	10:07	3.6634	2.570	0.810214376	0.900119090	0.758620369	0.013
8/19/2014 10:08	10:08	5.1093	2.558	0.806431274	0.899015186	0.756847198	0.013
8/19/2014 10:09	10:09	5.4136	2.559	0.806746532	0.899199699	0.756955121	0.013
8/19/2014 10:10	10:10	5.5093	2.529	0.797289777	0.893910285	0.752447881	0.013
8/19/2014 10:11	10:11	5.2722	2.528	0.796973518	0.893733733	0.752359960	0.013
8/19/2014 10:12	10:12	4.5641	2.509	0.79098 3607	0.893372592	0.74956 3220	0.012
8/19/2014 10:13	10:13	4.593	2.516	0.793199416	0.895061283	0.750858116	0.013
8/19/2014 10:14	10:14	5.9296	2.510	0.791299865	0.893549810	0.749712580	0.012
8/19/2014 10:15	10:15	5.0843	2.528	0.796973518	0.893733733	0.752359960	0.013
8/19/2014 10:16	10:16	3.461	2.535	0.799180328	0.893963863	0.753436958	0.013
8/19/2014 10:17	10:17	4.1299	2.567	0.809263608	0.899593575	0.758179665	0.013
8/19/2014 10:18	10:18	5.1608	2.534	0.798865069	0.893792520	0.753283836	0.013
8/19/2014 10:19	10:19	3.8792	2.539	0.800441362	0.894672866	0.754031151	0.013
8/19/2014 10:20	10:20	5.0183	2.541	0.801071879	0.895024189	0.754328072	0.013
8/19/2014 10:21	10:21	4.7827	2.523	0.795393226	0.891850450	0.751651560	0.013
8/19/2014 10:22	10:22	4.643	2.526	0.796343001	0.892380525	0.752098306	0.013
8/19/2014 10:23	10:23	5.6693	2.515	0.792871558	0.890435575	0.750459914	0.013
8/19/2014 10:24	10:24	4.5729	2.523	0.795393226	0.891850450	0.751651560	0.013
8/19/2014 10:25	10:25	5.2682	2.523	0.795393226	0.891850450	0.751651560	0.013
8/19/2014 10:26	10:26	5.0754	2.515	0.792871558	0.890435575	0.750459914	0.013
8/19/2014 10:27	10:27	4.3931	2.516	0.793199416	0.890612383	0.750608116	0.013
8/19/2014 10:28	10:28	3.3482	2.540	0.800756620	0.894508951	0.754178626	0.013
8/19/2014 10:29	10:29	4.256	2.510	0.791299865	0.889549810	0.749712580	0.012
8/19/2014 10:30	10:30	3.7989	2.546	0.802648172	0.895506344	0.755069864	0.013
8/19/2014 10:31	10:31	3.5999	2.528	0.796973518	0.892733733	0.752959960	0.013
8/19/2014 10:32	10:32	3.6358	2.528	0.796973518	0.892733733	0.752959960	0.013
8/19/2014 10:33	10:33	4.1752	2.528	0.796973518	0.892733733	0.752959960	0.013
8/19/2014 10:34	10:34	5.0844	2.505	0.789723573	0.888663363	0.748965482	0.012
8/19/2014 10:35	10:35	4.7763	2.510	0.791299865	0.889549810	0.749712580	0.012
8/19/2014 10:36	10:36	5.06	2.531	0.797910294	0.893263284	0.752842295	0.013
8/19/2014 10:37	10:37	4.6778	2.512	0.791929382	0.889904142	0.75081 1211	0.013
8/19/2014 10:38	10:38	4.6894	2.526	0.796343001	0.892380525	0.752098306	0.013
8/19/2014 10:39	10:39	5.0925	2.546	0.802648172	0.895506344	0.755069864	0.013
8/19/2014 10:40	10:40	4.3534	2.569	0.809899117	0.899943952	0.758472763	0.013
8/19/2014 10:41	10:41	4.3171	2.605	0.821248424	0.906227578	0.763768603	0.013
8/19/2014 10:42	10:42	4.4247	2.566	0.808953342	0.899413353	0.758029773	0.013
8/19/2014 10:43	10:43	4.1577	2.571	0.810529634	0.900294103	0.758767946	0.013
8/19/2014 10:44	10:44	3.6875	2.577	0.812421185	0.901344099	0.759652807	0.013
8/19/2014 10:45	10:45	4.0902	2.558	0.806431274	0.899015186	0.756847198	0.013

Estimated Leakage Rate (m^3/day) **18.654**

0.714 3.277 m

75.845 from Logger

75.8000 real reading

PILOT NAME: NAHA 2 METER INACCURACY TEST BEFORE COUNTERMEASURE

Date:

METER TESTING SHEET

No	Account	Customer	Location Address	Status	Metered	Meter ID	Time(min)	BEFORE COUNTERMEASURES							
								Initial Reading		Final Reading		Integrated Value		Difference (litres)	Error (%)
								Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	TR-III Meter (litres)		
								A	B	C	D	C-A = E	D - B = F	E-F = G	G/F
1	11004	PERCY QUAN	NAHA VALLEY		1	07-000113	5	666,2847	17,0123	666,4299	17,1594	0,1452	0,1471	-0,0019	-1,29%
2	11006	KEVIN MISI	NAHA VALLEY		1	37900	5	2084,5721	17,1594	2085,6204	17,269	1,0483	0,1096	0,9387	856,48%
3	11007	JOHNSTILL TETEAU	NAHA VALLEY		1	13B019772	5	135,026	17,269	135,167	17,4072	0,141	0,1382	0,0028	2,03%
4	11008	NELSON NIMELEA	NAHA VALLEY	D		84033832	5	8615,043	17,4072	8615,043	17,455	0	0,0478	-0,0478	-100,00%
5	11009	LEONARD SANDE	NAHA VALLEY		1	833900	5	2176,48	17,455	2178,557	17,523	2,077	0,068	2,009	2954,41%
6	11013	GEORGE NGAINGERI	NAHA VALLEY		1	37958	5	8223,562	17,6659	8223,609	17,718	0,047	0,0521	-0,0051	-9,79%
7	11013-1	HELLEN TANISIARA			1	13B019422	5	108,423	17,5231	108,561	17,6659	0,138	0,1428	-0,0048	-3,36%
8	11014	CRISPUS FANAI	NAHA VALLEY		1	38020	5	3211,24	17,7164	3211,297	17,7615	0,057	0,0451	0,0119	26,39%
9	11015	PATRICK MAKINI	NAHA VALLEY		1	38023	5	68,281	17,7777	68,397	17,8941	0,116	0,1164	-0,0004	-0,34%
10	11016	STANLEY MULILOA	NAHA 2		1	12B172464	5	3593,034	18,1794	3593,047	18,2772	0,013	0,0978	-0,0848	-86,71%
11	11018	AGNES ROKONARI	NAHA VALLEY		1	13B019370	5	202,114	17,8945	202,16	17,9456	0,046	0,0511	-0,0051	-9,98%
12	11019	PATRICK ZIOKERA	NAHA VALLEY		1	37954	5	8523,356	18,2777	8523,356	18,3367	0	0,059	-0,059	-100,00%
13	11020	LISA OFA	NAHA		1	545400	5	1553,063	18,3369	1553,081	18,4248	0,018	0,0879	-0,0699	-79,52%
14	11021	NATHAN BRIAN MARA	NAHA VALLEY	D	1	07-000838	5	916,6308	18,0264	916,738	18,1168	0,1072	0,0904	0,0168	18,58%
15	11023	JONAH HONE	NAHA VALLEY		1	12A005101	5	160,95	18,1171	161,008	18,1723	0,058	0,0552	0,0028	5,07%
16	11024	ESTHER TEKULU	NAHA VALLEY		1	37957	5	7953,501	17,9458	7953,576	18,0258	0,075	0,08	-0,005	-6,25%
17	11027	PATTESON MATOKO	NAHA VALLEY		1	37989	5	719,566	18,4249	719,626	18,4833	0,06	0,0584	0,0016	2,74%
18	11027-1	LOVELYN SATORARA	NAHA 2 - UPSTAIRS			13B019763	5	101,691	18,4836	101,749	18,5354	0,058	0,0518	0,0062	11,97%
19	11028	PATTESON MATOKO	NAHA VALLEY		1	37720	5	2136,294	18,5463	2136,354	18,6118	0,06	0,0655	-0,0055	-8,40%
20	11029	GREG WATE	NAHA VALLEY		1	13B019749	5	107,712	18,6118	107,776	18,6743	0,064	0,0625	0,0015	2,40%
21	11030	BRALLY TAVALIA	NAHA VALLEY		1	37677	5	9682,436	18,6745	9682,436	18,7147	0	0,0402	-0,0402	-100,00%
22	11031	ABIGAIL RONGOAU	NAHA VALLEY		1	99B149933	5	1844,9165	18,7153	1844,9573	18,7569	0,0408	0,0416	-0,0008	-1,92%
23	11031-2	FAUSTINA HETOA	NAHA VALLEY		1	99B149930	5	2230,009	18,802	2230,009	18,8246	0	0,0226	-0,0226	-100,00%
24	11031-3	CLAUDE POSALA	NAHA 2		1	05B826440	5	1938,689	18,8247	1938,73	18,8664	0,041	0,0417	-0,0007	-1,68%
25	11031-5	RONALD TALASASA	NAHA FAR END		1	99B149914	5	3467,0176	18,8664	3467,0562	18,9068	0,0386	0,0404	-0,0018	-4,46%
26	11033	LEONIE WATE	NAHA VALLEY		1	12B172566	5	186,686	18,9077	186,735	18,9514	0,049	0,0437	0,0053	12,13%
27	11034	JAMES E & AGNES VOTAIA	NAHA VALLEY		1	07-000382	5	2781,909	18,9514	2781,9437	18,9864	0,0347	0,035	-0,0003	-0,86%
28	11035	DESMOND NIMEPO	NAHA VALLEY		1	99B141672	5	2217,7915	18,9893	2217,8629	19,0586	0,0714	0,0693	0,0021	3,03%
29	11036	JERRY RAFE	NAHA VALLEY		1	37798	5	5175,094	19,0589	5175,184	19,1152	0,09	0,0563	0,0337	59,86%

S64-1-143

30	11037-01	MADELINE ALALO	NAHA VALLEY		1	03B605298	5	4356,381	19,7573	4356,425	19,802	0,044	0,0447	-0,0007	-1,57%
31	11037-02	FREDA KOTTY	GEORGE KOTTY'S HOUSE- UPSTAIRS		1	12B011030	5	551,917	19,1557	558,03	19,2523	6,113	0,0966	6,0164	6228,16%
32	11037-1	JUDY MAISA	NAHA VALLEY		1	97C0489	5	6808,856	19,2527	6808,925	19,4584	0,069	0,2057	-0,1367	-66,46%
33	11037-3	HENRY MONA	NAHA 2		1	13B019760	5	133,736	19,2527	133,86	19,3855	0,124	0,1328	-0,0088	-6,63%
34	11038	DAVID SIATA	NAHA VALLEY		1	13B019753	5	191,835	19,4589	191,97	19,5935	0,135	0,1346	0,0004	0,30%
35	11039	DELIN TOATA	NAHA VALLEY		1	37951	5	9421,569	19,5938	9421,656	19,6826	0,087	0,0888	-0,0018	-2,03%
36	11040	ANNETTE BALE	NAHA VALLEY		1	13B019762	5	157,139	19,7762	157,253	19,8848	0,114	0,1086	0,0054	4,97%
37	11040-1	AMBROSE MALEFOASI	NAHA VALLEY		1	99B149765	5	4184,5481	19,6837	4184,6489	19,7761	0,1008	0,0924	0,0084	9,09%
														AVERAGE	256,93%

PILOT NAME: NAHA 2 METER INACCURACY TEST AFTER COUNTERMEASURES

Date: 04-8-14

WATER METER INACCURACY TEST SHEET: NAHA 2

NO:	ACCOUNT	CUSTOMER NAME	Meter ID	M/SIZE	TIME (Min)	AFTER COUNTERMEASURES							
						Initial Reading		Final Reading		Integrated Value		Difference (litres)	Error (%)
						Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	TR-III Meter (litres)		
						A	B	C	D	C - A = E	D - B = F	E - F = G	G / F
1	11015	Patrick Makini	S13A00397	15 mm	5 mins	14.903	3.1018	14.9284	3.1264	0.0254	0.0246	0.0008	3.25%
2	11013	George Ngaingeri	S13A00112	15 mm	5 mins	47.1852	3.1264	47.2688	3.2102	0.0836	0.0838	-0.0002	-0.24%
3	11036	Jerry Rafe	14A644453	15 mm	5 mins	11.1069	3.2103	11.1616	3.2648	0.0547	0.0545	0.0002	0.37%
4	11022-5	Kevin Kona	14A644454	15 mm	5 mins	36.3924	3.2654	36.4767	3.3492	0.0843	0.0838	0.0005	0.60%
5	11005	Percy Quan	S13A00382	15 mm	5 mins	8.0412	3.35	8.1479	3.4562	0.1067	0.1062	0.0005	0.47%
												average	0.89%

Actual Measurement of Leakage and Open-end Flow **13 No.12 Naha 2**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			Customer Type		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom . 32m^3 Non-D .45m^3	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Meterail	DL	Illegal	Dom.	Non-D	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1	*			*						*		*			*						*						
2	*			*						*		*			*						*	0.00	0.02				
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											
13																											
14																											
Total	2	0	0	2	0	0	0	0	0	2	0	2	0	0	2	0	0	0	0	0	2		0.02			0.00	0.00
	2		2		0				2				2		2				2								

Note:

Change in Status of Connections (Customers, Users and Unconnection) 14 No.13 Naha-3

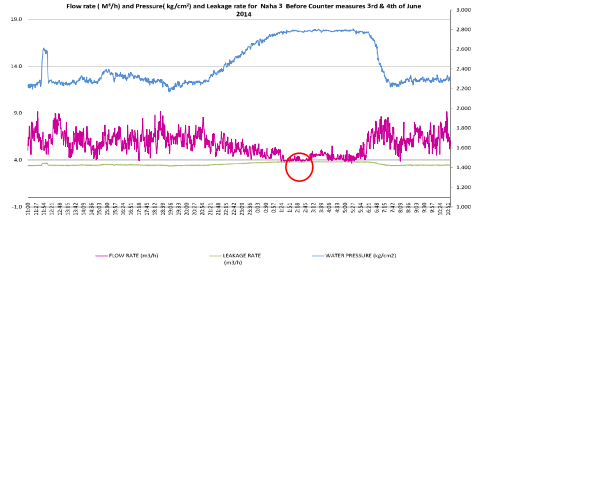
| No. | Account No. | Account Name | Location | status | Before Countermeasures | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

S64-1-145

MNF Measure before countermeasure in Naha 3

Date at MNF	Time at MNF	MNF (m³/h)	Water Pressure at MNF (kg/cm²)	Assumed Daily Leakage (m³/day)
		[7]	[8]	
6/4/2014	1:34:00 AM	3.808	2.771	85.786

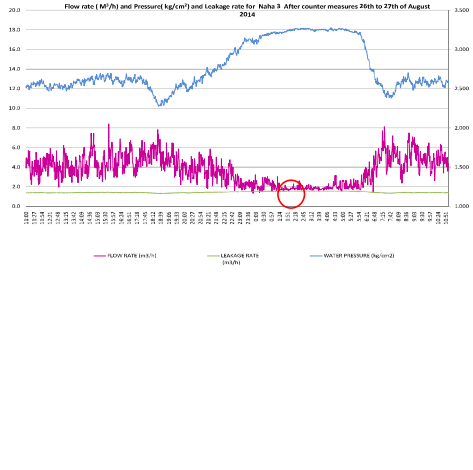
Date	Time	FLOW RATE (m³/h)	WATER PRESSURE (kg/cm²)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m³/h)	LEAKAGE RATE (m³/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{1.5}$	[5]=[4]×17]	[6]=[5]/60
6/3/2014 11:00	11:00	5.0316	2.235	0.806568826	0.806981324	1.413376691	0.057
6/3/2014 11:01	11:01	6.4431	2.221	0.801159698	0.895274091	1.402668238	0.057
6/3/2014 11:02	11:02	5.5468	2.209	0.797181132	0.892852845	1.393463528	0.057
6/3/2014 11:03	11:03	6.441	2.245	0.810178813	0.900309529	1.421003599	0.057
6/3/2014 11:04	11:04	6.248	2.236	0.806929697	0.898292577	1.414139226	0.057
6/3/2014 11:05	11:05	7.5775	2.236	0.806929697	0.898292577	1.414139226	0.057
6/3/2014 11:06	11:06	7.6377	2.242	0.809094198	0.899496833	1.418716847	0.057
6/3/2014 11:07	11:07	6.2389	2.206	0.796102498	0.892345797	1.391158447	0.057
6/3/2014 11:08	11:08	6.1149	2.231	0.805126504	0.897287303	1.410318952	0.057
6/3/2014 11:09	11:09	6.0813	2.225	0.802959228	0.896079919	1.405738947	0.057
6/3/2014 11:10	11:10	4.5463	2.248	0.811279473	0.900699456	1.423288345	0.057
6/3/2014 11:11	11:11	5.8488	2.248	0.811279473	0.900699456	1.423288345	0.057
6/3/2014 11:12	11:12	7.8827	2.227	0.803719589	0.896477005	1.406419937	0.057
6/3/2014 11:13	11:13	8.082	2.243	0.809455978	0.899697219	1.419479188	0.057
6/3/2014 11:14	11:14	7.5514	2.240	0.808373629	0.899085359	1.417191655	0.057
6/3/2014 11:15	11:15	7.86	2.220	0.801746123	0.895086885	1.409555463	0.057
6/3/2014 11:16	11:16	6.5687	2.226	0.803320101	0.896281262	1.406406193	0.057
6/3/2014 11:17	11:17	6.2911	2.194	0.791771923	0.889981568	3.381922410	0.056
6/3/2014 11:18	11:18	7.2959	2.242	0.809094198	0.899496833	1.418716847	0.057
6/3/2014 11:19	11:19	6.9535	2.242	0.809745625	0.899786189	1.419955963	0.057
6/3/2014 11:20	11:20	7.0054	2.231	0.805126504	0.897287303	1.410318952	0.057
6/3/2014 11:21	11:21	6.5672	2.242	0.809094198	0.899496833	1.418716847	0.057
6/3/2014 11:22	11:22	6.0416	2.244	0.809815951	0.899897585	1.420241358	0.057
6/3/2014 11:23	11:23	6.9835	2.242	0.809094198	0.899496833	1.418716847	0.057
6/3/2014 11:24	11:24	7.4439	2.241	0.809455978	0.899697219	1.419479188	0.057
6/3/2014 11:25	11:25	7.4947	2.221	0.79826777	0.893459322	1.397870685	0.057
6/3/2014 11:26	11:26	7.5355	2.242	0.809094198	0.899496833	1.418716847	0.057
6/3/2014 11:27	11:27	6.9257	2.240	0.808373629	0.899085359	1.417191655	0.057
6/3/2014 11:28	11:28	7.3613	2.236	0.806929697	0.898292577	1.414139226	0.057
6/3/2014 11:29	11:29	7.7401	2.237	0.807339788	0.898536836	1.415103167	0.057
6/3/2014 11:30	11:30	8.1347	2.259	0.815229159	0.902900431	1.431655097	0.057
6/3/2014 11:31	11:31	7.6962	2.232	0.805429695	0.897287303	1.410318952	0.057
6/3/2014 11:32	11:32	6.3438	2.236	0.806929697	0.898292577	1.414139226	0.057
6/3/2014 11:33	11:33	9.1768	2.266	0.817753123	0.904298246	1.436963355	0.057
6/3/2014 11:34	11:34	8.5073	2.257	0.814507598	0.902700836	1.430134167	0.057
6/3/2014 11:35	11:35	8.4255	2.272	0.819926686	0.905404825	1.441710117	0.057
6/3/2014 11:36	11:36	5.9253	2.260	0.815900448	0.903100258	1.432411074	0.057
6/3/2014 11:37	11:37	6.3459	2.256	0.814140118	0.902100681	1.429174195	0.057
6/3/2014 11:38	11:38	6.8893	2.267	0.818116204	0.904497703	1.437726648	0.057
6/3/2014 11:39	11:39	6.6845	2.260	0.815900448	0.903100258	1.432411074	0.057
6/3/2014 11:40	11:40	6.0283	2.266	0.817755323	0.904298249	1.436963355	0.057
6/3/2014 11:41	11:41	6.2948	2.250	0.824641656	0.900997450	1.455119472	0.058
6/3/2014 11:42	11:42	6.454	2.263	0.816672681	0.903699442	1.436938469	0.057
6/3/2014 11:43	11:43	5.4817	2.227	0.803719589	0.896477005	1.406419937	0.057
6/3/2014 11:44	11:44	5.5169	2.235	0.806929697	0.898292577	1.414139226	0.057
6/3/2014 11:45	11:45	6.1069	2.248	0.811259473	0.900899456	1.423288345	0.057
6/3/2014 11:46	11:46	5.5336	2.303	0.831107903	0.911451396	1.464912701	0.058
6/3/2014 11:47	11:47	5.1022	2.418	0.872690166	0.93415519	1.555036864	0.062
6/3/2014 11:48	11:48	5.9295	2.492	0.899314527	0.948121808	1.604286847	0.060
6/3/2014 11:49	11:49	6.6473	2.504	0.903648494	0.950502385	1.612954402	0.060
6/3/2014 11:50	11:50	6.468	2.550	0.920245199	0.959529215	1.645998139	0.061
6/3/2014 11:51	11:51	7.0169	2.595	0.936519788	0.966681923	1.671784838	0.062
6/3/2014 11:52	11:52	6.2691	2.599	0.937928546	0.96840171	1.680852690	0.062
6/3/2014 11:53	11:53	5.9383	2.601	0.938650307	0.968339670	1.682284955	0.061
6/3/2014 11:54	11:54	5.256	2.613	0.942988875	0.971072821	1.690715437	0.062
6/3/2014 11:55	11:55	5.017	2.594	0.936124143	0.967155886	1.677139682	0.061
6/3/2014 11:56	11:56	5.2369	2.588	0.935938860	0.966415469	1.675855275	0.061
6/3/2014 11:57	11:57	5.5125	2.589	0.934119740	0.966402162	1.677364838	0.061
6/3/2014 11:58	11:58	5.35	2.598	0.937567655	0.968120778	1.680146735	0.061
6/3/2014 11:59	11:59	5.3129	2.595	0.936483023	0.967721903	1.678019344	0.061
6/3/2014 12:00	12:00	5.9404	2.578	0.930530764	0.964568354	1.669905080	0.061
6/3/2014 12:01	12:01	6.1862	2.557	0.922771543	0.960609905	1.830990408	0.061
6/3/2014 12:02	12:02	5.3393	2.292	0.827138217	0.909471394	1.656627929	0.058
6/3/2014 12:03	12:03	6.8574	2.273	0.820281447	0.905493926	1.642278903	0.057
6/3/2014 12:04	12:04	6.627	2.290	0.826416656	0.909074503	1.655119472	0.058
6/3/2014 12:05	12:05	5.474	2.301	0.830388142	0.911253766	1.663487455	0.058



MNF Measure After countermeasure in Naha 3

Date at MNF	Time at MNF	MNF (m³/h)	Water Pressure at MNF (kg/cm²)	Assumed Daily Leakage (m³/day)
		[7]	[8]	
8/27/2014	1:55:00 AM	1.569	3.246	34.703

Date	Time	FLOW RATE (m³/h)	WATER PRESSURE E (kg/cm²)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m³/h)	LEAKAGE RATE (m³/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{1.5}$	[5]=[4]×17]	[6]=[5]/60
8/26/2014 11:00	11:00	4.9501	2.535	0.774979754	0.882227103	1.381076325	0.023
8/26/2014 11:01	11:01	3.8906	2.533	0.774272897	0.880322792	1.376462346	0.023
8/26/2014 11:02	11:02	4.9342	2.516	0.771507825	0.858452581	1.381358886	0.023
8/26/2014 11:03	11:03	4.8906	2.536	0.781202754	0.883994308	1.384830294	0.023
8/26/2014 11:04	11:04	4.8056	2.549	0.785274184	0.886156975	1.390180239	0.023
8/26/2014 11:05	11:05	4.3724	2.549	0.785274184	0.886156975	1.390180239	0.023
8/26/2014 11:06	11:06	4.5158	2.529	0.779112754	0.882673640	1.384914941	0.023
8/26/2014 11:07	11:07	4.3837	2.522	0.776958254	0.881451220	1.382990955	0.023
8/26/2014 11:08	11:08	5.7258	2.545	0.784041898	0.885461404	1.389289843	0.023
8/26/2014 11:09	11:09	4.8617	2.513	0.774183611	0.879775043	1.380273080	0.023
8/26/2014 11:10	11:10	4.755	2.496	0.768946396	0.876895886	1.375849646	0.023
8/26/2014 11:11	11:11	4.0871	2.487	0.766177552	0.875315577	1.373360508	0.023
8/26/2014 11:12	11:12	5.1817	2.501	0.770486753	0.877773748	1.377227011	0.023
8/26/2014 11:13	11:13	5.823	2.530	0.779428128	0.882848133	1.385188720	0.023
8/26/2014 11:14	11:14	5.9305	2.532	0.780041969	0.883197016	1.385736118	0.023
8/26/2014 11:15	11:15	5.3287	2.539	0.782393469	0.884417022	1.387650388	0.023
8/26/2014 11:16	11:16	2.748	2.528	0.778804683	0.882499112	1.384641107	0.023
8/26/2014 11:17	11:17	3.3382	2.588	0.7972951324	0.901763504	1.379427634	0.023
8/26/2014 11:18	11:18	2.2515	2.575	0.793284042	0.899664944	1.397433297	0.023
8/26/2014 11:19	11:19	2.2492	2.564	0.789892756	0.887505157	1.394465705	0.023
8/26/2014 11:20	11:20	3.9199	2.552	0.786159398	0.886678295	1.391198244	0.023
8/26/2014 11:21	11:21	4.6817	2.549	0.785274184	0.886156975	1.390180239	0.023
8/26/2014 11:22	11:22	5.2241	2.547	0.784658041	0.885809257	1.389834725	0.023
8/26/2014 11:23	11:23	5.4476	2.546	0.784351971	0.885635977	1.389508592	0.023
8/26/2014 11:24	11:24	5.9891	2.577	0.793904183	0.891010766	1.397995932	0.023
8/26/2014 11:25	11:25	5.9764	2.589	0.797787043	0.893082887	1.401247049	0.023
8/26/2014 11:26	11:26	5.9579	2.545	0.784041898	0.885461404	1.389289843	0.023
8/26/2014 11:27	11:27	5.8182	2.558	0.788046827	0.887720016	1.392832705	0.023
8/26/2014 11:28	11:28	5.6622	2.566	0.790511596	0.891010779	1.393009068	0.023
8/26/2014 11:29	11:29	5.3482	2.577	0.793904183	0.891010766	1.397995932	0.023
8/26/2014 11:30	11:30	4.7209	2.570	0.791763835	0.889799800	1.396093519	0.023
8/26/2014 11:31	11:31	4.303	2.568	0.791127542	0.889455307	1.395552353	0.023
8/26/2014 11:32	11:32	5.5268	2.578	0.794204827	0.891137883	1.398232705	0.023
8/26/2014 11:33	11:33	5.7469	2.527	0.778496813	0.882524502	1.384582739	0.023
8/26/2014 11:34	11:34	5.5161	2.544	0.783728326	0.885287426	1.388918651	0.023
8/26/2014 11:35	11:35	4.9312	2.572	0.792339827	0.890145959	1.396639009	0.023
8/26/2014 11:36	11:36	5.2328	2.542	0.783117833	0.884959947	1.388409847	0.023
8/26/2014 11:37	11:37	5.7804	2.547	0.784658041	0.885809257	1.389834725	0.023
8/26/2014 11:38	11:38	5.5096	2.589	0.797787043	0.893082887	1.401247049	0.023
8/26/2014 11:39	11:39	3.6395	2.566	0.790511596	0.891010779	1.393009068	0.023
8/26/2014 11:40	11:40	4.7494	2.573	0.792663896	0.891010987	1.396910495	0.023
8/26/2014 11:41	11:41	2.636	2.577	0.793904183	0.891010766	1.397995932	0.023
8/26/2014 11:42	11:42	2.8488	2.580	0.794824598	0.891535248	1.398809599	0.023
8/26/2014 11:43	11:43	2.9321	2.587	0.796980900	0.892737867	1.400705714	0.023
8/26/2014 11:44	11:44	2.2077	2.558	0.788046827	0.887720016	1.392832705	0.023
8/26/2014 11:45	11:45	1.3217	2.587	0.796981978	0.892803310	1.399288807	0.023
8/26/2014 11:46	11:46	4.9827	2.533	0.780439648	0.883371405	1.386009735	0.023
8/26/2014 11:47	11:47	2.3542	2.572	0.792339827	0.890145959	1.396639009	0.023
8/26/2014 11:48	11:48	2.5266	2.607	0.803142329	0.896182085	1.406109691	0.023
8/26/2014 11:49	11:49	4.9293	2.594	0.799117498	0.893944853	1.402599474	0.023
8/26/2014 11:50	11:50	4.8099	2.580	0.794824598	0.891535248	1.398809599	0.023
8/26/2014 11:51	11:51	3.1736	2.573	0.792663896	0.890318987	1.396910495	0.023
8/26/2014 11:52	11:52	5.1987	2.589	0.797787043	0.893082887	1.401247049	0.023
8/26/2014 11:53	11:53	3.2718	2.526	0.778189635	0.879943879	1.381224382	0.023
8/26/2014 11:54	11:54	3.7403	2.602	0.801501972	0.893153773	1.401928646	0.023
8/26/2014 11:55	11:55	3.8495	2.583	0.795748814	0.892047428	1.399622514	0.023
8/26/2014 11:56	11:56	3.741	2.570	0.791743835	0.889799800	1.396093587	0.023
8/26/2014 11:57	11:57	5.5335	2.565	0.790203327	0.889033163	1.394573135	0.023
8/26/2014 11:58	11:58	4.9326	2.566	0.790511596	0.891010779	1.393009068	0.023
8/26/2014 11:59	11:59	4.0836	2.567	0.790819478	0.889260310	1.393288807	0.023
8/27/2014 9:54	9:54	5.4625	2.539	0.783354898	0.887695317	1.393104929	0.023
8/27/2014 9:55	9:55	4.7948	2.542	0.783117883	0.884959367	1.388489807	0.023
8/27/2014 9:56	9:56	5.1641	2.540	0.782501548	0.884591171	1.387923548	0.023
8/27/2014 9:57	9:57	4.4288	2.534	0.780651112	0.883547761	1.386283299	0.023
8/27/2014 9:58	9:58	3.4633	2.527	0.778738755	0.882546481	1.392540828	0.023
8/27/2014 9:59	9:59	3.0991	2.561	0.788971041	0.888240419	1.393649217	0.023



Date at MNF	Time at MNF	MNF (m³/h)	Water Pressure at MNF (kg/cm²)	Assumed Daily Leakage (m³/day)
		[7]	[8]	
6/4/2014	1:34:00 AM	3.808	2.771	85.786

Date	Time	FLOW RATE (m³/h)	WATER PRESSURE E (kg/cm²)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m³/h)	LEAKAGE RATE (m³/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{1.5}$	[5]=[4]×17]	[6]=[5]/60
6/4/2014 10:00	10:00	5.6418	2.297	0.829416236	0.910362569	1.410398195	0.058
6/4/2014 10:07	10:07	5.3387	2.290	0.826941656	0.909074503	1.455119472	0.058
6/4/2014 10:08	10:08	5.2732	2.302	0.831074723	0.911453268	1.464160359	0.058
6/4/2014 10:09	10:09	5.3108	2.295	0.828228598	0.910066484	1.458089301	0.058
6/4/2014 10:10	10:10	6.2959	2.305	0.831282664	0.912040864	1.466416896	0.058
6/4/2014 10:11	10:11	5.7342	2.292	0.827138217	0.909471394	1.456627929	0.058
6/4/2014 10:12	10:12	5.2401	2.289	0.826055576	0.908837996	1.454364997	0.058
6/4/2014 10:13	10:13	4.5089	2.289	0.826055576	0.908837996	1.454364997	0.058
6/4/2014 10:14	10:14	5.0316	2.286	0.824972934	0.908200207	1.452180582	0.058
6/4/2014 10:15	10:15	6.4431	2.341	0.844231544	0.919341045	1.493703183	0.058
6/4/2014 10:16	10:16	5.5468	2.324	0.838686595	0.9317958228	1.488674326	0.058
6/4/2014 10:17	10:17	6.441	2.302	0.830747423	0.911453268	1.464160359	0.058
6/4/2014 10:18	10:18	6.248	2.305	0.831282664	0.912040864	1.466416896	0.058
6/4/2014 10:19	10:19	7.5775	2.285	0.824128353	0.90808155	1.451349447	0.058
6/4/2014 10:20	10:20	7.6377	2.276	0.821364128	0.906291415	1.444543780	0.057
6/4/2014 10:21	10:21	6.2389	2.282	0.823529412	0.907405251	1.449076949	0.057
6/4/2014 10:22	10:22	6.1149	2.266	0.817755323	0.904298249	1.436963355	0.057
6/4/2014 10:23	10:23	6.0813	2.267	0.818116204	0.904497703	1.437726648	0.057
6/4/2014 10:24	10:24	4.5463	2.271	0.819597728	0.905293580	1.440756152	0.057
6/4/2014 10:25	10:25	5.8488	2.261	0.815939620	0.903300817	1.433172174	0.057
6/4/2014 10:26	10:26	7.8827	2.303	0.831107903	0.911451396	1.464912701	0.058
6/4/2014 10:27	10:27	8.082	2.283	0.823898242	0.907504027	1.449836680	0.057
6/4/2014 10:28	10:28	7.5514	2.291	0.826777337	0.909272972	1.455877763	0.058
6/4/2014 10:29	10:29	7.86	2.291	0.826777337	0.909272972	1.455877763	0.058
6/4/2014 10:30	10:30	6.5687	2.267	0.818116204	0.904497703	1.437726648	0.057
6/4/2014 10:31	10:31	6.2911	2.273	0.820281447	0.905493926	1.442278903	0.057
6/4/2014 10:32	10:32	7.3959	2.283	0.823898242	0.907504027	1.449836680	0.057
6/4/2014 10:33	10:33	6.9245	2.267	0.818116204	0.904497703	1.437726648	0.057
6/4/2014 10:34	10:34	7.0026	2.279	0.822446758	0.906885810	1.446811161	0.057
6/4/2014 10:35	10:35	6.5672	2.262	0.816294632	0.903746521	1.440976949	0.057
6/4/2014 10:36	10:36	6.0416	2.297	0.828942626	0.910462860	1.460396195	0.058
6/4/2014 10:37	10:37	6.9835	2.261	0.815588337	0.903278356	1.440235565	0.057
6/4/2014 10:38	10:38	7.4439	2.291	0.826777337	0.909272972	1.455877763	0.058
6/4/2014 10:39	10:39	7.4947	2.291	0.826777337	0.909272972	1.455877763	0.058
6/4/2014 10:40	10:40	7.5355	2.279	0.822446758	0.906885810	1.446811161	0.057
6/4/2014 10:41	10:41	6.9257	2.275	0.820385590	0.906469522	1.446054867	0.057
6/4/2014 10:42	10:42	7.3613	2.286	0.825078151	0.907387455	1.447767289	0.057
6/4/2014 10:43	10:43	7.7401	2.296	0.828410456	0.909074503	1.455119472	0.058
6/4/2014 10:44	10:44	8.1347	2.286	0.824797294	0.908200207	1.452180582	0.058
6/4/2014 10:45	10:45	7.6962	2.303	0.831107903	0.911451396	1.464912701	0.058
6/4/2014 10:46	10:46	6.3438	2.297	0.828777337	0.909272972	1.455877763	0.058
6/4/2014 10:47	10:47	9.1769	2.304	0.831468784	0.911469101	1.465564880	0.059
6/4/2014 10:48	10:48	8.5073	2.329	0.840309798	0.916782853	1.484416585	0.059
6/4/2014 10:49	10:49	8.4255	2.338	0.843738722	0.918352515	1.491142543	0.059
6/4/2014 10:50	10:50	5.9253	2.327	0.839598836	0.916389256	1.482920164	0.058
6/4/2014 10:51	10:51	6.3459	2.314	0.835077589	0.913827896	1.473177711	0.058
6/4/2014 10:52	10:52	6.8893	2.291	0.826777337	0.909272972	1.455877763	0.058
6/4/2014 10:53	10:53	6.6845	2.288	0.825690495	0.908637443	1.455630357	0.058
6/4/2014 10:54	10:54	6.0283	2.279	0.822446758	0.906885810	1.446811161	0.057
6/4/2014 10:55	10:55	6.2948	2.281	0.823168531	0.907286356	1.448523252	0.057
6/4/2014 10:56	10:56	6.454	2.312	0.834535828	0.913450881	1.458167445	0.058
6/4/2014 10:57	10:57	5.4817	2.296	0.828583739	0.910264654	1.459426969	0.058
6/4/2014 10:58	10:58	5.5169	2.308	0.832912096	0.912460264	1.460657965	0.058
6/4/2014 10:59	10:59	6.1069	2.321	0.837603753	0.915306961	1.479427038	0.058
6/4/2014 11:00	11:00	5.5336	2.320	0.8403 29917	0.9163 56012	1.483668455	0.059
Estimated Leakage Rate (m³/day)							**85.786**

3.677 2.809 m
137.353 from Logger
132.2000 mal reading

Date at MNF	Time at MNF	MNF (m³/h)	Water Pressure at MNF (kg/cm²)	Assumed Daily Leakage (m³/day)
		[7]	[8]	
8/27/2014	1:55:00 AM	1.569	3.246	34.703

Date	Time	FLOW RATE (m³/h)	WATER PRESSURE E (kg/cm²)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m³/h)	LEAKAGE RATE (m³/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=[3]^{1.5}$	[5]=[4]×17]	[6]=[5]/60
8/27/2014 10:00	10:00	3.5756	2.605	0.802324186	0.895034259	1.405570220	0.023
8/27/2014 10:01	10:01	3.4986	2.593	0.798029328	0.893771226	1.402329895	0.023
8/27/2014 10:02	10:02	3.3673	2.614	0.805539826	0.897384438	1.407986183	0.023
8/27/2014 10:03	10:03	3.6002	2.579	0.79174369	0.889799800	1.396095587	0.023
8/27/2014 10:04	10:04	3.5746	2.590	0.797951314	0.893253746	1.401517650	0.023
8/27/2014 10:05	10:05	4.6249	2.550	0.785029228	0.885775256	1.390229693	0.023
8/27/2014 10:06	10:06	3.8537	2.611	0.804532744	0.896868141	1.407747966	0.023
8/27/2014 10:07	10:07	4.0312	2.597	0.800086154	0.894461034	1.403410310	0.023
8/27/2014 10:08	10:08	4.3998	2.588	0.797238977	0.892910394	1.400976408	0.023
8/27/2014 10:09	10:09	4.5431	2.598	0.788046827	0.887720016	1.392832705	0.023
8/27/2014 10:10	10:10	5.4116	2.592	0.798521257	0.895008166	1.403058661	0.023
8/27/2014 10:11	10:11	4.8339	2.583	0.795748814	0.892047428	1.399622514	0.023
8/27/2014 10:12	10:12	4.9873	2.600	0.800985829	0.894976116	1.404228605	0.023
8/27/2014 10:13	10:13	2.6154	2.632	0.810844116	0.900468383	1.412835596	0.024
8/27/2014 10:14	10:14	3.2658	2.617	0.806223044	0.897899239	1.408803906	0.023
8/27/2014 10:15	10:15	3.9264	2.623	0.808074478	0.898927507	1.410417905	0.024
8/27/2014 10:16	10:16	3.9378	2.595	0.799445471	0.894117146	1.402869805	0.023
8/27/2014 10:17	10:17	4.228	2.589	0.797787043	0.893082887	1.401247049	0.023
8/27/2014 10:18	10:18	4.2179	2.567	0.790819478	0.889260310	1.395288807	0.023
8/27/2014 10:19	10:19	4.2824	2.571	0.792051756	0.889972306	1.396263474	0.023
8/27/2014 10:20	10:20	5.0446	2.595	0.799445471	0.894117146	1.402869805	0.023
8/27/2014 10:21	10:21	4.9591	2.595	0.799445471	0.894117146	1.402869805	0.023
8/27/2014 10:22	10:22	4.4504	2.596	0.799753543	0.894289407	1.403140079	0.023
8/27/2014 10:23	10:23	4.1635	2.589	0.797787043	0.893082887	1.401247049	0.023
8/27/2014 10:24	10:24	4.9317	2.588	0.797238977	0.892910394	1.400976408	0.023
8/27/2014 10:25	10:25	5.7821	2.613	0.804950758	0.897212772	1.407724838	0.023
8/27/2014 10:26	10:26	5.5045	2.631	0.810358404	0.900297753	1.412567175	0.024
8/27/2014 10:27	10:27	5.404	2.664	0.820528681	0.905926203	1.421398314	0.024
8/27/2014 10:28	10:28	4.1213	2.613	0.804950758	0.897212772	1.407724839	0.023
8/27/2014 10:29	10:29	4.4425	2.627	0.81284487	0.901325754	1.414178038	0.024
8/27/2014 10:30	10:30	4.4604	2.636	0.812054692	0.901152818	1.413908772	0.024
8/27/2014 10:31	10:31	5.126	2.628	0.809961138	0.898784324	1.411176105	0.024
8/27/2014 10:32	10:32	4.3511	2.633	0.811152185	0.900635897	1.411039366	0.024
8/27/2014 10:33	10:33	5.3448	2.630	0.810439602	0.903542495	1.417658400	0.024
8/27/2014 10:34	10:34	5.6465	2.613	0.804950758	0.897212772	1.407724839	0.023
8/27/2014 10:35	10:35	5.8301	2.608	0.803410686	0.896281948	1.406437548	0.023
8/27/2014 10:36	10:36	6.2166	2.583	0.795748814	0.892047428	1.399622514	0.023
8/27/2

PILOT NAME: NAHA3 METER INACCURACY TEST BEFORE COUNTERMEASURE
Date: 4/06/2014
WATER METER INACCURACY TEST SHEET: NAHA 3

Meter Inaccuracy Test For Naha 3

		PILOT SITES (SUBURBS) : NAHA 3							Before Counter Measures							
										Initial Reading		Final Readings		Integrated Value		Difference (litres)	Error (%)
No	BID	Account No	Name	Location	Meter ID	Status	KI/G	Meter/Line Size	Times	Test Meter	Trill Metr	Tested Metr	Tri-III Meter	Test Meter (litres)	TR-III Meter (litres)		
										A	B	C	D	C - A = E	D - B = F	E - F = G	G / F
1	KB-043	11057	ROBERT FAARODO	NAHA VALLEY	99B149936		KL	20mm	5 mins	391	2212.68	466	2212.76	0.075	0.0752	-0.0002	-0.27%
2	KB-041	11058	C. PETER & GRACE DELIGHT PRICARD	NAHA VALLEY	84033745	Not functioning	KL	15mm	5mins	950	367.225	952	367.225	0.002	0	0.002	
3	KB-040	11059	Julian Pita		81139948		KL	20mm						0	0	0	
4	KB-033	11059-01	MINNIE NATEI	NAHA 3	NO		KL	20mm						0	0	0	
5	KB-031	11059-02	GREGORY OFIA	PARCEL NO.191-039-637	GKM04C00148		KL	20mm						0	0	0	
6	KB-034	11059-3	GRACE HA'AOTO	NAHA VALLEY	186		KL	RMC 15mm						0	0	0	
7	KB-035	11059-2	ISAAC MAEPANA	NAHA 3	CKM97C049		KL	20mm						0	0	0	
8	KB-039	11060	Willy Atu	NAHA VALLEY	544688		KL	15mm	5 mins	952	3034.41	1039	3034.42	0.087	0.018	0.069	
9	KB-037	11061	Christina Noaga	NAHA VALLEY	81139980		KL	15mm	5 mins	39	1995.39	101	1995.4	0.062	0.013	0.049	
10	KB-042	11062	JOHN MAFALASIA	NAHA VALLEY	37853		KL	15mm	5 mins	101	3143.46	180	3143.48	0.079	0.016	0.063	
11	KB-044	11063	INSP SIMEON GAZABATU	NAHA VALLEY	12A004438		KL	15mm	5 mins	230	109.022	292	109.083	0.062	0.061	0.001	1.64%
12	KB-033	11064	JANE WA'ETARA	NAHA VALLEY NEXT G.ASH	99B149935		KL	15mm	5 mins	181	2598.51	230	2598.55	0.049	0.0464	0.0026	5.60%
13	KB-045	11064-1	KEMUEL LAETA	NAHA VALLEY	37817		KL	15mm	5 mins	292	239.747	391	239.845	0.099	0.098	0.001	1.02%
14	KB-066	11065	MATAIASI VAVE	NAHA VALLEY	37810	Meter Stop	KL	15mm						0	0	0	
15	KB-065	11066	ELIZABERTH VAGI	NAHA VALLEY	99B149938		KL	20mm	5 mins	466	2913.98	546	2914.06	0.08	0.0811	-0.0011	-1.36%
16	KB-046	11067	DERICK WILLIE	NAHA VALLEY		Meter Stop	KL	15mm						0	0	0	
17	KB-047	11068	REENA LOLO	NAHA VALLEY	37834		KL	20mm	5 mins	4756	3346.15	4767	3346.16	0.011	0.01	0.001	10.00%
18	KB-064	11069	EMMANUEL ONAHIKENI	NAHA VALLEY	38028		KL	15mm	5 mins	546	131.097	677	131.227	0.131	0.13	0.001	0.77%
19	KB-063	11070	JAMES TORA	NAHA VALLEY	11A000579		KL	15mm						0	0	0	
20	KB-048	11071	OSWEL SUTU	NAHA VALLEY	37780		KL	15mm	5 mins	677	158.035	760	158.135	0.083	0.1	-0.017	-17.00%
21	KB-049	11072	REGINAL PISU	NAHA VALLEY	77129438		KL	15mm	5 mins	760	692.536	839	692.617	0.079	0.081	-0.002	-2.47%
22	KB-062	11073	STANLEY TEINODI	NAHA VALLEY	7267		KL	15mm	5 mins	4756	7429.63	4835	7429.71	0.079	0.077	0.002	2.60%
23	KB-061	11074	SALOME PUSAU	NAHA VALLEY	37833		KL	15mm	5 mins	1017	1042.29	1115	1042.31	0.098	0.017	0.081	
24	KB-050	11075	COLEMAN KABINI	NAHA VALLEY	38005		KL	15mm	5 mins	929	587.419	1016	587.499	0.087	0.08	0.007	8.75%
25	KB-051	11076	DANTE SUDA	NAHA VALLEY	57370		KL	15mm	5 mins	839	247.795	928	247.881	0.089	0.086	0.003	3.49%
26	KB-059	11077	JOHN AFUASI	NAHA VALLEY	99B149939		KL	20mm	5 mins	4835	5527.22	4877	5527.26	0.042	0.0408	0.0012	2.94%
27	KB-058	11078	HUGHIE NELSON ENEKERA	NAHA VALLEY			KL	15mm						0	0	0	
28	KB-052	11079	WALTER RHEIN	NAHA VALLEY	99B149937		KL	20mm	5 mins	1155	4289.04	1178	4289.1	0.023	0.062	-0.039	-62.90%
29	KB-053	11081	NELRAH L KULUWAI	NAHA VALLEY	37909		KL	15mm	5 mins	4877	969.74	4892	969.76	0.015	0.02	-0.005	-25.00%
30	KB-057	11082	TOMMY TAGILI	NAHA VALLEY	37958		KL	15mm						0	0	0	
31	KB-056	11083	PHILIP KAISU	NAHA VALLEY	38029		KL	15mm	5 mins	1178	1934.34	1271	1937.48	0.093	3.1403	-3.0473	-97.04%
32	KB-097	11083-1	TREVOR TORA	STORE, NAHA	95322898		KL	15mm	5 mins	1271	260.945	1335	261.015	0.064	0.07	-0.006	-8.57%
33	KB-055	11084	HICKS OKE	NAHA VALLEY			KL	15mm	5 mins	1335	1836.58	1460	1836.7	0.125	0.115	0.01	8.70%
34	KB-054	11085	JOE ARIARIA	NAHA VALLEY	37902		KL	15mm	5 mins	1460	5590.95	1581	5591.06	0.121	0.108	0.013	12.04%
35	KB-091	11043	P.C.S.D. MANEKEHA	NAHA VALLEY	D/LINE		D/L							0	0	0	
36	KB-090	11045	TIMOTHY PITA	NAHA VALLEY	38032			15mm						0	0	0	
37	KB-088	11046	FRED SIBI OSIFELO	NAHA VALLEY	38038		D/L		5 mins	4664	990.817	4754	990.902	0.09	0.085	0.005	5.88%
38	KB-089	11047	MURIEL HA'APUE	NAHA VALLEY	380001			15mm	5 mins	4574	157.445	4664	157.463	0.09	0.018	0.072	
39	KB-087	11048	JOSEPHINE JOY	NAHA VALLEY	789			15mm	5 mins	4482	239.561	4574	239.653	0.092	0.092	1.5E-14	0.00%
40	KB-084	11049	Fred Siho Patterson	NAHA VALLEY	37814			15mm	5 mins	4232	125.443	4364	125.575	0.132	0.132	-5E-15	0.00%
41	KB-083	11050	MARIA TIROBA	NAHA VALLEY	38037		D/L		5 mins	4089	372.021	4232	372.167	0.143	0.146	-0.003	-2.05%
42	KB-082	11051	DOUGLAS WATE	NAHA VALLEY	38025			15mm	5 mins	4364	275.054	4421	275.111	0.057	0.057	-2E-14	0.00%
43	KB-085	11052	SEVERINO NUAIASI	NAHA VALLEY	37999			15mm						0	0	0	
44	KB-086	11053	PC KELLY FOMANI	NAHA VALLEY	17641			15mm	5 mins	44.21	2538.98	44.82	2539	0.00061	0.019	-0.0184	-96.79%
45	KB-079	11054	PETER HIRUME	NAHA VALLEY	37819			15mm						0	0	0	
46	KB-078	11055	DESIMA REGATULE	NAHA VALLEY	38036			15mm						0	0	0	
47	KB-076	11055-01	WILLIE TALUA	HONIARA	D/LINE		D/L		5 mins	165.441	128.893	165.883	128.932	0.00044	0.039	-0.0386	-98.87%
48	KB-074	11055-03	JANET OGE		07-001249			20mm						0	0	0	
49	KB-077	11055-1	ELLA KERU	NAHA VALLEY	99B141787			20mm	5 mins	165.839	3487.64	166.873	3487.74	0.00103	0.1017	-0.1007	-98.98%
50	KB-110	11055-2	ANDREW ARATARA	NAHA VALLEY	07-000018			15mm						0	0	0	
51	KB-070	11055-3	KITCHNER PITISOPA	NAHA VALLEY	95358964		RMC	15mm						0	0	0	
52	KB-069	11055-4	Agustine Peli	NAHA VALLEY	07-001154			20mm	5 mins	167.916	4015.94	168.78	4016.03	0.00086	0.0867	-0.0858	-99.00%
53	KB-070	11055-7	LILIAN PITISOPA		10A005312			15mm						0	0	0	
54	KB-111	11055-8	AGNES AIHUNU	NAHA 3	12B011250			20mm						0	0	0	
55	KB-068	11056	Daniel Damilea	NAHA VALLEY	NEW MTR ID			15mm	5 mins	166.897	63.4652	167.907	63.5669	0.00101	0.1017	-0.1007	-99.01%
56	KB-068	11056-1	DAVID TAPEI	NAHA 3	95359178		RMC	15mm						0	0	0	
57			Georgo	Naha 3	138019366				5 mins	291		677		0.386	0	0.386	
58					11A000734				5 mins	168.791	800.14	169.4	800.201	0.00061	0.061	-0.0604	-99.00%
																Average	-24.83%

S64-T-146

PILOT NAME: NAHA3 METER INACCURACY TEST AFTER COUNTERMEASURE

Date: 28-8-14

WATER METER INACCURACY TEST SHEET: NAHA 3

						AFTER COUNTERMEASURES						
						Initial Reading		Final Reading		Integrated Value		
NO:	ACCOUNT	CUSTOMER NAME	Meter ID	M/SIZE	TIME (Min)	Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	TR-III Meter (litres)	Difference (litres)	Error (%)
						A	B	C	D	C-A = E	D - B = F	E-F = G	G/F
1	11083-1	Trevor Tora	14A644964	1/2"	5 Min	49.6432	4.3368	49.7921	4.4854	0.1489	0.1486	0.0003	0.20%
2	11084	Hicks Oke	14A644970	1/2"	5 Min	29.181	4.1903	29.3278	4.3368	0.1468	0.1465	0.0003	0.20%
3	11073	Stanley Teinodi	14A644494	1/2"	5 Min	16.1999	4.6268	16.3251	4.7524	0.1252	0.1256	-0.0004	-0.32%
4	11065	Mataiasi Vave	14A644504	1/2"	5 Min	35.9693	4.8825	36.0968	5.0101	0.1275	0.1276	-1E-04	-0.08%
5	11055-7	Lilian Pitisopa	14A644992	1/2"	5 Min	8.975	5.0102	9.0698	5.1049	0.0948	0.0947	0.0001	0.11%
6	11055-3	Kitchener Pitisopa	14A644993	1/2"	5 Min	4.3899	5.1053	4.4843	5.1997	0.0944	0.0944	0	0.00%
7	11050	Maria Tiroba	14A645009	1/2"	5 Min	46.2388	4.7525	46.3691	4.8825	0.1303	0.13	0.0003	0.23%
8	11046	Fre Sibi Osifelo	14A645004	1/2"	5 Min	28.5321	4.4859	28.6723	4.6268	0.1402	0.1409	-0.0007	-0.50%
											Average		-0.02%

Actual Measurement of Leakage and Open-end Flow **14 No.12 Naha 3**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			Customer Type		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom . 32m^3 Non-D .45m^3	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Meterail	DL	Illegal	Dom.	Non-D	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1	*		*							*		*			*					*		0.11	2.62				
2	*			*							*	*			*					*		0.10	2.4				
3	*			*						*		*			*					*		0.09	2.16				
4	*			*					*			*			*					*		0.11	2.71				
5	*			*						*		*			*					*		0.08	1.8				
6	*			*						*		*			*					*		0.07	1.73				
7	*			*					*					*	*					*		0.09	2.16				
8	*			*						*		*			*					*		0.09	2.1				
9	*			*					*					*	*					*		0.11	2.71				
10	*			*						*		*			*					*		0.09	2.16				
11																											
12																											
13																											
14																											
Total	10	0	1	9	0	0	0	0	3	6	1	8	0	2	10	0	0	0	0	4	6		22.55			0.00	0.00
	10		10		0		10					10			10		10										

Note:

Change in Status of Connections (Customers, Users and Unconnection) 15 No.1 FFA Kola Road

No.	Account No.	Account Name	Location	status	Before Countermeasures: Registered Meter	D/L	Non-Regist. Illegal Direct	Indirect	Un-Connect.	Consumer Type Dom.	Com.	?	Meter ID Number	Meter 15	20	32	40	50	?	Service Pipe End Closed	Open	If open, m3/day	Meter Reading (m3) 2014/7/21	2014/7/22	Consumption	After Countermeasures: New/Re Regist.	Legalized	Disconnection Illegal	Registered	Un-Connect.	Meter Raising No-Change	Replace	New	Consumer Type Dom.	Com.	?	Meter ID Number	Meter (m3 unit) 15	20	32	40	50	?	Meter Reading (m3) 2014/8/3	2014/9/3	Consumption
1	09327-0	VICITT GADEPETA	FFA Kola		1								07-000606										3407.392	3407.934	0.541						1					14A644962	1						14.055	15.278	1.223
2	09327-2	KWASI DAURARA	FFA Kola		1								12A004472										1217.343	1221.126	3.183						1					14A644626	1						46.221	49.725	3.504
3	9326	DAUGHTERS OF MARY IVIMA	FFA Kola		1								81132881										6840.400	****							1					14A644616	1						280.271	300.052	19.781
4	09328-1	KWASI DAURARA	FFA Kola		1								221										5018.000	5020.000	2.000						1					14A644630	1						41.617	44.149	2.532
5	09328-2	KWASI DAURARA	FFA Kola		1								13A002132										164.740	165.340	0.600						1					14A644624	1						16.982	17.807	0.825
6	9329	JACQUELINE MAELI	FFA Kola			1							12B00874															1																	
7	9330	GANE SIMBE	FFA Kola		1								545183										170.030	170.030	0.000						1					14A644629	1						0.267	****	
8	9331	ALICK TITO	FFA Kola			1							13A002163																		1					13A002163	1						110.317	110.751	0.434
9	9332	CHARLES MAEFAI	FFA Kola		1								13A000894										766.622	768.644	2.022						1					14A644620	1						32.199	34.505	2.305
10	9333	SUSAN MANI	FFA Kola			1							DALINE																		1					14A644864	1						24.912	27.179	2.267
11	9335	WINCH HARO	FFA Kola		1								12A004460										465.814	466.904	1.090						1					12A004460	1						505.567	506.619	1.052
12	9336	JOHN TUA	FFA Kola			1							05B29462																		1					14A644614	1						9.462	9.994	0.533
13	09336-1	MAXSON & KETTIE TALOSUI	FFA Kola		1								S13B00284										63.300	64.042	0.742						1					S13B00284	1						107.317	108.830	1.513
14	09336-2	SILAS TALOSUI	FFA Kola			1							DALINE																		1					14A644612	1						7.618	8.004	0.386
15	09336-3	SILAS TALOSUI	FFA Kola			1							09B053561																		1					14A644865	1						33.195	36.368	3.173
16	9337	STEPHEN HOAHANIKENI	FFA Kola			1							12B011061																		1					14A644814	1						27.960	30.143	2.183
17	09337-1	LOT KAISUA	FFA Kola			1							99B142022																		1					14A644854	1						8.483	9.049	0.566
18	9338	PAUL BOKA	FFA Kola		1								07-000395										5764.055	5768.115	4.060						1					14A644417	1						155.785	157.962	2.178
19	9339	CATHY VAIKAWI	FFA Kola		1								12A004444										1333.411	1337.012	3.601						1					14A644870	1						45.792	49.478	3.686
20	09339-1	HENRY OTNI	FFA Kola						1				DALINE																	1															
21	09340-0	JACK WASIBEN	FFA Kola		1								99B149577										2949.828	Gate lock							1					14A644813	1						12.641	13.678	1.037
22	09340-1	GG STAFF QUARTERS	FFA Kola		1								S13A00184										43.206	43.536	0.329						1					S13A00184	1						67.457	68.109	0.652
23	09340-2	MELODY DAHE	FFA Kola			1							DALINE																		1					14A644711	1						44.448	45.222	0.774
24	09340-3	GOVERNMENT HOUSE/ Janet	FFA Kola			1							07-000438																		1					14A644701	1						32.055	33.164	1.109
25	9341	PHILIP TOME	FFA Kola			1							07-000425																1															
26	09341-1	EZEKIEL MONO	FFA Kola		1								11A000763										1402.110	1403.266	1.156						1					14A644863	1						17.681	23.937	6.256
27	09341-2	HELLEN NAKISI	FFA Kola			1							11A000762																		1					14A644871	1						9.477	10.173	0.697
28	09341-3	MIRIAM IROROKWAO	FFA Kola			1							07-000428																1															
29	09341-4	Ms NESTER MAE	FFA Kola		1								07-000430										1808.872	1809.586	0.713						1					14A644866	1						9.613	10.409	0.796
30	09341-5	JAPHILET PATITI	FFA Kola		1								07-000426										2722.548	2723.836	1.287						1					14A644621	1						12.891	13.754	0.862
31	09341-6	NICKSON WATE	FFA Kola		1								07-000437										1668.298	1668.994	0.696						1					14A644869	1						12.096	12.756	0.659
32	9343	FORUM FISHERIES AGENCY	FFA Kola		1								88133895										4800.442	4807.290	6.848						1					13E000381						1	13.634	15.314	1.680
33	9344	ANNE VAVE	FFA Kola		1								13A002118										120.651	120.663	0.012						1					14A645031	1						5.645	6.322	0.677
34	9345	WEZ NORRIS	FFA Kola		1								09A000232										1718.744	1719.934	1.190						1					S13B00111							4.211	5.096	0.885
35	9346	FORUM FISHERIES AGENCY	FFA Kola			1							99TW014258																		1					14W706956						1	65.716	73.987	8.271
36	9385	HON. TREVOR OLAVAE	FFA Kola						1				09C002302																	1															
37	9421	CALVARY TEMPLE	FFA Kola						1				12A005299																	1															
38	9422	GENERAL COUNCIL	FFA Kola						1				12B011137																	1															
39	9423	S I T T C PRIMARY SCHOOL	FFA Kola		1								12B08538										1864.721	1867.513	2.792						1					14A645016	1						27.856	33.788	5.933
40	09423-1	RAMSEY MAOMAASI	FFA Kola			1							12A004726.000										Direct Line						1															
41	9424	S I C A	FFA Kola						1				12B086553										Disconnect							1															
42	09466-1	KOLOALE SCHOOL	FFA Kola						1				05A018543																	1															
43	9478	SUSAN OLISU KULU	FFA Kola		1								05B26449										3028.626	3030.387	1.761						1					14A644977	1						12.172	13.642	1.470
44	9481	PATTERSON NORI	FFA Kola		1								05B26447										2952.442	2953.238	0.796						1					14A644829	1						8.414	9.359	0.945
45	9483	REV. BRIAN V ENITI	FFA Kola						1				07-000507										Disconnect							1															
46	9486	FLORENCE BARMATA JOEL	FFA Kola		1								75667										325.108	325.158	0.050						1					14A644855	1						8.128	8.579	0.451
47	9487	JERRY MANEMAVA	FFA Kola						1				DALINE										Disconnect							1															
48	09487-1	JOE HONI	FFA Kola		1								12A004506										306.465	306.556	0.091						1					14A644830	1						9.458	10.897	1.439
49	9488	JERRY FUTA	FFA Kola		1								12A005139										1439.593	1441.157	1.564						1					14A644824	1						15.663	16.392	0.729
50	9489	GENEVIEVE & BILL APUSAE	FFA Kola		1								05B26446										35.293	36.013	0.720						1					14A644831	1						9.247	11.710	2.463
51	9490	JACOB MAKINI	FFA Kola			1							DALINE										Direct Line								1					14A644821	1						25.703	27.830	2.127
52	9491	F J WICKHAM	FFA Kola		1								07-000656										Gate Lock	5083.830							1					14A644823	1						68.510	74.697	6.187
53	9492	PHILIP KANAIRARA	FFA Kola		1								12B086877										Gate Lock	188.328							1					14A644825	1						13.809	15.113	1.304
54	9493	SIMON B ROFO	FFA Kola		1								09A000286										2698.031	2699.837	1.806						1					14A644856	1						27.915	30.460	2.545
55	9494	ALI HOMELO	FFA Kola		1								83115466										2134.819	2134.920	0.101						1					14A644826	1						9.066	9.827	0.761
56	9495	RAM ECHEL	FFA Kola		1								75622										516.011	516.920	0.909						1					14A644857	1						18.285	20.353	2.067
57	9496	JOSHUA NOKIA	FFA Kola		1								943384										298.196	299.110	0.914						1					14A644812	1						28.963	31.275	2.312
58	9497	JOHN BATA	FFA Kola		1								230863										488.153	488.153							1					14A644852	1						32.547	35.238	2.692
59	9498	PIONE LALAO	FFA Kola						1				545589										Disconnect							1															
60	09498-1	PIONE T BOSO	FFA Kola						1				11B091663																	1															
61	09498-2	PIONE BOSO	FFA Kola						1				12A004837																	1															
62	9499	ELIZABETH AUMAE	FFA Kola		1								12B011192										946.119	952.698	6.579						1					14A644815	1						13.331	14.839	1.508
63	09499-1	GISELLA ROVO	FFA Kola		1								07-000493										2646.955	2647.529	0.574						1					14A644816	1						6.233	6.837	0.604
64	9500	ANDREW MANEPORA	FFA Kola		1								99B141801										Meter Buried								1					14A644858	1						7.327	7.798	0.470
65	9501	SILAS TORIHAHIA	FFA Kola		1								17372										3353.118	3353.607	0.489						1					14A644817	1						20.751	23.603	2.852
66	9502	REGINALD DOUGLAS	FFA Kola		1								07-000657										2491.828	2493.386	1.758						1					14A645020	1						15.001	16.359	1.358
67	09502-1	KINGSLEY TANG MANHOI	FFA Kola			1							950479										Dog								1					14A645014	1						6.768	7.189	0.421
68	9503	SELINA BOSO	FFA Kola		1								12A004454										7360.802	7378.682	17.880						1					14A644985	1						222.619	243.891	21.272
69	9504	JOHN LAI	FFA Kola		1								12A000795										2545.834	2546.629	0.795						1					14A644984	1						11.229	12.086	0.857
70	9505	HONG JUN ZHANG	FFA Kola		1								12A004825										454.797	****							1					14A644853	1						7.517	7.533	0.015
71	9506	HILDA MAEFITI	FFA Kola		1								11A000795										246.686	247.543	0.857						1					14A644983	1						4.184	4.557	0.373
72	9507	DAISY KARI	FFA Kola		1								12A00218										695.631	696.454	0.823						1					14A644986	1						8.828	9.881	1.054
73	9508	KOMATANG BAIA	FFA Kola		1								13B019391										1024.421	1024.421	0.000							1				13B019391	1						1048.105	1050.082	1.977
74	9509	ADRIAN FAFALE	FFA Kola		1								12A005219										1864.283	1869.503	5.220																					
75	9510	SOLOMON BOSAMATA	FFA Kola		1								12A005220										740.589	742.709	2.120						1					14A645022	1						216.553	218.055	1.502
76	09510-1	SOLOMON BASAMATA	FFA Kola						1																						1															
77	09511-1	CAMERON PINIETA	FFA Kola		1								12A004807										140.155	140.162	0.007						1					14A645025	1						1.609	1.769	0.160
78	09511-2	CHARLES UBUNI	FFA Kola		1								05B26476										4302.249	4303.009	0.760						1					14A645030	1						15.039	15.427	0.388
79	09512-1	NILTON CHITE	FFA Kola		1								99B141511										4621.681	4623.311	1.630						1					14A645026	1						14.367	16.385	2.018
80		GODFREY KEMANGAVA	FFA Kola		1								13A0195020										148.776	149.183	0.407						1															
81	09327-	DAVID BOKELEMA	FFA Kola		1								99B149639										6976.813	6977.816	1.003						1					14A644625	1						5.243	****	
82	09336-	JOHN TAU	FFA Kola		1								05B826492										3525.009	3525.618	0.609						1					14A644820	1						4.654	****	
83																																														
					53	17	0	0	12	0	0	0		0	0	0	0	0	0	0	0	0			83,086		0	0	0	6	12	2	49	13	0	0	0		62	0	0	0	0	2	0			142,751

Category in Water Audit Table

	A	B	D+E	F	I	A			I	A		A	
Total HH	53	17	0	0	12	0	83,086	0	0	18	64	0	64	142,751
	82						No of the meter read	46	Total HH	82				No of the meter read 61
							Average	1,806						Average 2,340
							Assumed consumption of all meters	95,730			0			Assumed consumption of all meters 149,771

* Each indirect un-registered (parasite) user cannot be recognized, so only the total should be entered manually

MNF Measure before countermeasure in FFA Kola

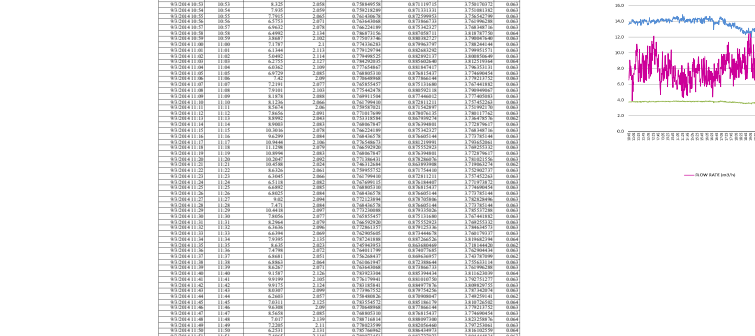
Date at MNF	Time at MNF	MNF (m³/h)	Water Pressure at MNF (kg/cm²)	Assumed Daily Leakage (m³/day)
		[3]	[6]	
22-Jul-14	2:55:00 AM	5	2.541	22.452

Date	Time	FLOW RATE (m³/h)	WATER PRESSURE (kg/cm²)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RAT E (m³/h)	LEAKAGE RATE (m³/min)
		[1]	[2]	[3]=[2]-[6]	[4]=[3]^1.5	[5]=[4] x [7]	[6]=[5]/60
21/07/2014	10:00:00	7.740	1.905	0.749801691	0.86596044	4.2598424	0.072
21/07/2014	10:05:00	8.470	1.864	0.732992529	0.85614942	4.2607491	0.071
21/07/2014	10:10:00	9.830	1.871	0.735745183	0.85775899	4.2677997	0.071
21/07/2014	10:15:00	9.930	1.871	0.735745183	0.85775899	4.2677997	0.071
21/07/2014	10:20:00	8.740	1.871	0.735745183	0.85775899	4.2677997	0.071
21/07/2014	10:25:00	9.880	1.879	0.738892497	0.85960784	4.2700938	0.071
21/07/2014	10:30:00	9.810	1.879	0.738892497	0.85960784	4.2700938	0.071
21/07/2014	10:35:00	7.480	1.872	0.736139419	0.85798561	4.2690544	0.071
21/07/2014	10:40:00	9.270	1.87	0.735351947	0.85753645	4.2676312	0.071
21/07/2014	10:45:00	9.530	1.879	0.738262457	0.85760785	4.2758039	0.071
21/07/2014	10:50:00	9.390	1.857	0.730239874	0.85454939	4.272705698	0.071
21/07/2014	10:55:00	7.980	1.868	0.734956474	0.85736795	4.2853973	0.071
21/07/2014	11:00:00	8.740	1.87	0.735351947	0.85753645	4.2876312	0.071
21/07/2014	11:05:00	9.880	1.826	0.718036926	0.84784197	4.2385985	0.071
21/07/2014	11:10:00	10.160	1.887	0.742030964	0.86141674	4.307087	0.072
21/07/2014	11:15:00	11.760	1.887	0.742030964	0.86141674	4.307087	0.072
21/07/2014	11:20:00	11.760	1.846	0.725914258	0.85206010	4.2680049	0.071
21/07/2014	11:25:00	12.150	1.892	0.7086118576	0.84179874	4.2089457	0.070
21/07/2014	11:30:00	11.380	1.876	0.729466438	0.85403623	4.2753519	0.071
21/07/2014	11:35:00	10.540	1.875	0.72311024	0.85062305	4.2931625	0.072
21/07/2014	11:40:00	11.180	1.871	0.736516569	0.85824425	4.2950724	0.072
21/07/2014	11:45:00	11.300	1.877	0.738104601	0.85913042	4.2956507	0.072
21/07/2014	11:50:00	9.540	1.881	0.740046019	0.86020389	4.2825896	0.071
21/07/2014	11:55:00	9.480	1.877	0.738098601	0.85913042	4.2956507	0.072
21/07/2014	12:00:00	9.750	1.885	0.7407775646	0.86084589	4.2962294	0.072
21/07/2014	12:05:00	9.680	1.895	0.742589492	0.86097955	4.3047953	0.072
21/07/2014	12:10:00	10.150	1.907	0.746603181	0.86326999	4.3264224	0.072
21/07/2014	12:15:00	10.760	1.907	0.746603181	0.86326999	4.3264224	0.072
21/07/2014	12:20:00	10.760	1.871	0.735745183	0.85775899	4.2877997	0.071
21/07/2014	12:25:00	8.610	1.908	0.750249857	0.86619563	4.3189787	0.072
21/07/2014	12:30:00	9.520	1.9	0.747149037	0.86437782	4.3210916	0.072
21/07/2014	12:35:00	9.020	1.889	0.742822457	0.86187204	4.3093626	0.072
21/07/2014	12:40:00	8.520	1.908	0.750249857	0.86619563	4.3189787	0.072
21/07/2014	12:45:00	10.660	1.925	0.756979945	0.87004594	4.3562972	0.073
21/07/2014	12:50:00	10.910	1.9	0.747149037	0.86437782	4.3210916	0.072
21/07/2014	12:55:00	11.280	1.895	0.745182855	0.86320744	4.3193738	0.072
21/07/2014	13:00:00	12.080	1.86	0.731495593	0.85523719	4.2765596	0.071
21/07/2014	13:05:00	11.880	1.886	0.741749581	0.86120274	4.3060137	0.072
21/07/2014	13:10:00	8.870	1.836	0.729866638	0.85433621	4.2715397	0.071
21/07/2014	13:15:00	11.680	1.853	0.729666929	0.85303997	4.2689986	0.071
21/07/2014	13:20:00	10.350	1.901	0.747422775	0.86405270	4.3238266	0.072
21/07/2014	13:25:00	9.290	1.876	0.738893974	0.85958773	4.2970867	0.072
21/07/2014	13:30:00	8.980	1.91	0.750966127	0.87137141	4.3587356	0.073
21/07/2014	13:35:00	9.040	1.932	0.759732599	0.87126341	4.3581205	0.073
21/07/2014	13:40:00	8.530	1.901	0.747582721	0.86486528	4.3240356	0.072
21/07/2014	13:45:00	8.820	1.917	0.753483454	0.86823417	4.3411887	0.072
21/07/2014	13:50:00	8.820	1.917	0.753483454	0.86823417	4.3411887	0.072
21/07/2014	13:55:00	7.940	1.901	0.747582721	0.86486528	4.3240356	0.072
21/07/2014	14:00:00	9.680	1.914	0.752565495	0.86755832	4.3372686	0.072
21/07/2014	14:05:00	11.280	1.894	0.744709619	0.86301946	4.3150973	0.072
21/07/2014	14:10:00	10.990	1.916	0.753448818	0.868009868	4.3400443	0.072
21/07/2014	14:15:00	8.810	1.901	0.747582721	0.86486528	4.3240356	0.072
21/07/2014	14:20:00	9.170	1.894	0.744709619	0.86301946	4.3150973	0.072
21/07/2014	14:25:00	8.700	1.847	0.726307511	0.85226769	4.2613946	0.071
21/07/2014	14:30:00	8.120	1.909	0.750688164	0.86642262	4.3211132	0.072
21/07/2014	14:35:00	7.550	1.892	0.744001166	0.86250179	4.3150973	0.072
21/07/2014	14:40:00	9.440	1.898	0.746382566	0.86387277	4.3219383	0.072
21/07/2014	14:45:00	9.170	1.894	0.744709619	0.86301946	4.3150973	0.072
21/07/2014	14:50:00	7.280	1.868	0.734486107	0.85709622	4.2859434	0.071
21/07/2014	14:55:00	9.720	2.024	0.795910342	0.89213807	4.4608926	0.074
21/07/2014	15:00:00	8.890	2.058	0.808528176	0.89986121	4.4988606	0.075
21/07/2014	15:05:00	10.010	2.065	0.812030302	0.90112674	4.5056477	0.075
21/07/2014	15:10:00	9.520	2.051	0.806527723	0.89806886	4.4903443	0.075
21/07/2014	15:15:00	9.940	2.028	0.797492387	0.89301939	4.4650988	0.074
21/07/2014	15:20:00	7.300	2.016	0.80636276	0.89477043	4.4738424	0.075
21/07/2014	15:25:00	8.320	2.06	0.810068850	0.90083718	4.5041856	0.075
21/07/2014	15:30:00	9.640	2.061	0.810460887	0.90025567	4.5012783	0.075
21/07/2014	15:35:00	7.350	2.041	0.802595360	0.89783866	4.4791843	0.075
21/07/2014	15:40:00	7.020	2.065	0.812030302	0.90112674	4.5056477	0.075
21/07/2014	15:45:00	7.830	2.046	0.804562541	0.89887354	4.4848725	0.075
21/07/2014	15:50:00	9.820	2.054	0.807707492	0.89972444	4.4936724	0.075
21/07/2014	15:55:00	9.210	2.038	0.801435451	0.89785210	4.4748899	0.075
21/07/2014	16:00:00	7.020	2.065	0.812030302	0.90112674	4.5056477	0.075
21/07/2014	16:05:00	8.640	2.067	0.812819503	0.90156503	4.5078255	0.075
21/07/2014	16:10:00	6.470	2.039	0.801808887	0.89547819	4.4771896	0.075
21/07/2014	16:15:00	7.180	2.048	0.805348034	0.89741042	4.4870524	0.075
21/07/2014	16:20:00	9.510	2.067	0.828684231	0.90595229	4.529581393	0.075
21/07/2014	16:25:00	7.350	2.041	0.802595360	0.89783866	4.4791843	0.075
21/07/2014	16:30:00	5.980	2.111	0.796625237	0.89481362	4.3941554	0.073
21/07/2014	16:35:00	5.820	2.54	0.998382691	0.99940897	4.9839485	0.083
21/07/2014	16:40:00	6.070	2.541	0.999215527	0.99986684	4.9868342	0.083

MNF Measure After countermeasure in FFA Kola

Date at MNF	Time at MNF	MNF (m³/h)	Water Pressure at MNF (kg/cm²)	Assumed Daily Leakage (m³/day)
		[3]	[6]	
4 September 2014	4:02:00 AM	4.305	2.712	18.305

Date	Time	FLOW RATE (m³/h)	WATER PRESSURE (kg/cm²)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RAT E (m³/h)	LEAKAGE RATE (m³/min)
		[1]	[2]	[3]=[2]-[6]	[4]=[3]^1.5	[5]=[4] x [7]	[6]=[5]/60
9/3/2014 10:40	10:40	8.5224	2.859	0.7514749826	0.86687835	3.7190304981	0.062
9/3/2014 10:45	10:45	8.5224	2.859	0.7514749826	0.86687835	3.7190304981	0.062
9/3/2014 10:47	10:47	8.6945	2.855	0.7357383643	0.85784474	3.7147480592	0.062
9/3/2014 10:48	10:48	7.2192	2.862	0.7420269846	0.86150258	3.7303130986	0.062
9/3/2014 10:49	10:49	7.9322	2.877	0.7438854577	0.86258183	3.7347481821	0.062
9/3/2014 10:50	10:50	9.0616	2.867	0.7421685421	0.86150258	3.7303130986	0.062
9/3/2014 10:52	10:52	8.1392	2.874	0.7420269846	0.86150258	3.7303130986	0.062
9/3/2014 10:52	10:53	8.1392	2.874	0.7420269846	0.86150258	3.7303130986	0.062
9/3/2014 10:53	10:53	8.235	2.858	0.7384695705	0.85951197	3.7301703752	0.063
9/3/2014 10:54	10:54	7.935	2.859	0.7384695705	0.85951197	3.7301703752	0.063
9/3/2014 10:55	10:55	7.7501	2.862	0.7393486763	0.86002731	3.7326427981	0.063
9/3/2014 10:56	10:56	6.5753	2.871	0.7420269846	0.86150258	3.7303130986	0.062
9/3/2014 10:57	10:57	6.9432	2.878	0.7462241991	0.87145237	3.7487497361	0.063
9/3/2014 10:58	10:58	6.9432	2.878	0.7462241991	0.87145237	3.7487497361	0.063
9/3/2014 10:59	10:59	6.6487	2.882	0.7504197746	0.88010427	3.7868596382	0.063
9/3/2014 11:00	11:00	7.1787	2.13	0.7341362631	0.87961397	3.7882446146	0.063
9/3/2014 11:01	11:01	6.1444	2.1133	0.7179539746	0.86264419282	3.7099515753	0.062
9/3/2014 11:02	11:02	5.0492	2.134	0.7394905205	0.88285822	3.8085506497	0.063
9/3/2014 11:03	11:03	5.0492	2.134	0.7394905205	0.88285822	3.8085506497	0.063
9/3/2014 11:04	11:04	6.0362	2.098	0.7775434847	0.88014745	3.7963533135	0.063
9/3/2014 11:05	11:05	6.9729	2.085	0.7408053103	0.87615437	3.7768904542	0.063
9/3/2014 11:06	11:06	7.82	2.095	0.7796889985	0.88277861983	3.7925217525	0.063
9/3/2014 11:07	11:07	7.2191	2.077	0.7458554717	0.87511316	3.7674419182	0.063
9/3/2014 11:08	11:08	7.2191	2.077	0.7458554717	0.87511316	3.7674419182	0.063
9/3/2014 11:09	11:09	5.1878	2.098	0.7809413746	0.88374668102	3.7777405032	0.063
9/3/2014 11:10	11:10	5.1258	2.096	0.7802598302	0.87281212	3.7251452242	0.062
9/3/2014 11:11	11:11	5.3674	2.06	0.7393978251	0.87154289	3.7019923158	0.062
9/3/2014 11:12	11:12	7.8656	2.091	0.7710176991	0.87867631	3.7481177342	0.063
9/3/2014 11:13	11:13	7.8656	2.091	0.7710176991	0.87867631	3.7481177342	0.063
9/3/2014 11:14	11:14	9.9003	2.083	0.7680478747	0.87749303	3.7729298795	0.063
9/3/2014 11:15	11:15	10.3016	2.078	0.7662241991	0.87534227	3.7487497361	0.063
9/3/2014 11:16	11:16	10.2299	2.084	0.7684468678	0.87655146	3.7539331142	0.063
9/3/2014 11:17	11:17	10.9948	2.106	0.7763988216	0.88013989	3.7693652881	0.063
9/3/2014 11:18	11:18	11.1298	2.078	0.7662241991	0.87534227	3.7487497361	0.063
9/3/2014 11:19	11:19	10.9998	2.063	0.7606867147	0.87639483	3.7532739127	0.063
9/3/2014 11:20	11:20	10.4748	2.054	0.7573683946	0.87450188	3.7451280239	0.062
9/3/2014 11:21	11:21	10.4748	2.054	0.7573683946	0.87450188	3.7451280239	0.062
9/3/2014 11:22	11:22	8.6326	2.063	0.7606867147	0.87615444	3.7529027377	0.063
9/3/2014 11:23	11:23	6.1685	2.064	0.7610561972	0.87615444	3.7529027377	0.063
9/3/2014 11:24	11:24	6.5118	2.062	0.7603195132	0.87639483	3.7532739127	0.063
9/3/2014 11:25	11:25	6.5118	2.062	0.7603195132	0.87639483	3.7532739127	0.063
9/3/2014 11:26	11:26	6.6025	2.084	0.7684468678	0.87655146	3.7539331142	0.063
9/3/2014 11:27	11:27	9.02	2.094	0.7721219196	0.87870586	3.7824284896	0.063
9/3/2014 11:28	11:28	7.473	2.094	0.7721219196	0.87870586	3.7824284896	0.063
9/3/2014 11:29	11:29	10.4418	2.097	0.7732388985	0.87931526	3.7850711288	0.063
9/3/2014 11:30	11:30	9.1066	2.079	0.7666059293	0.87615444	3.7529027377	0.063
9/3/2014 11:31	11:31	9.1066	2.079	0.7666059293	0.87615444	3.7529027377	0.063
9/3/2014 11:32	11:32	9.3656	2.096	0.7728833177	0.87931526	3.7850711288	0.063
9/3/2014 11:33	11:33	10.0394	2.069	0.7629195132	0.87344676	3.7601703735	0.063
9/3/2014 11:34	11:34	7.9395	2.135	0.7872493838	0.88726423	3.8194823196	0.064
9/3/2014 11:35	11:35	7.9395	2.135	0.7872493838	0.88726423	3.8194823196	0.064
9/3/2014 11:36	11:36	6.4768	2.092	0.7684468678	0.87655146	3.7539331142	0.063
9/3/2014 11:37	11:37	6.6681	2.051	0.7563684787	0.86863669572	3.7437870999	0.062
9/3/2014 11:38	11:38	6.8881	2.064	0.7610561972	0.87615444	3.7529027377	0.063
9/3/2014 11:39	11:39	9.6267	2.071	0.7639439068	0.87704673	3.7609962981	0.063
9/3/2014 11:40	11:40	9.1187	2.126	0.7839231046	0.88819944	3.8110436399	0.064
9/3/2014 11:41	11:41	9.9199	2.105	0.7761799841	0.88101957501	3.7787353127	0.063
9/3/2014 11:42	11:42	9.9199	2.105	0.7761799841	0.88101957501	3.7787353127	0.063
9/3/2014 11:43	11:43	9.0397	2.099	0.7739547525	0.87977427501	3.7734229745	0.063
9/3/2014 11:44	11:44	6.2683	2.057	0.7584908626	0.87909804	3.7692590141	0.062
9/3/2014 11:45	11:45	7.6511	2.232	0.8231545726	0.91685286202	3.9321430282	0.066
9/3/2014 11:46	11:46	9.6388	2.097	0.7732388985	0.87931526	3.7850711288	0.063
9/3/2014 11:47	11:47	9.6388	2.097	0.7732388985	0.87931526	3.7850711288	0.063
9/3/2014 11:48	11:48	7.417	2.139	0.7887348146	0.88809971001	3.8222508836	0.064
9/3/2014 11:49	11:49	7.2205	2.13	0.7862325981	0.88265364681	3.7972338861	0.063
9/3/2014 11:50	11:50	6.2757	2.103	0.7875869621	0.88363507597	3.8014599759	0.063
9/3/2014 11:51	11:51	7.4067	2.116	0.7897194511	0.88577292	3.8094448136	0.063
9/3/2014 11:52	11:52	8.6744	2.122	0.7907194511	0.88577292	3.8094448136	0.063
9/3/2014 11:53	11:53	8.5474	2.122	0.7824468678	0.88010426	3.7849105526	0.063
9/3/2014 11:54	11:54	8.5227	2.108	0.7772861361	0.88016585225	3.7854529388	0.063
9/3/2014 11:55	11:55	9.4986	2.102	0.7750737136	0.87893476	3.7801827277	0.063
9/3/2014 11:56	11:56	9.6886	2.127	0.7842928335	0.88540264681	3.8125159164	0.064
9/3/2014 11:57	11:57	9.6886	2.127	0.7842928335	0.88540264681	3.8125159164	0.064
9/3/2014 11:58	11:58	8.4411	2.113	0.779 7619462	0.88024743977	3.7904223361	0.063
9/3/2014 11:59	11:59	8.1002	2.103	0.7754424678	0.88059211	3.7909999672	0.063
9/3/2014 12:00	12:00	6.5318	2.072	0.7642763836	0.87435533	3.7659047222	0.063
9/3/2014 12:01	12:01	9.3669	2.047	0.7547955 01	0.868 7085 80	3.7401346232	0.062
9/4/2014 9:34	9:34	8.4386	2.059	0.7592182395	0.87318613	3.7510861192	0.063
9/4/2014 9:35	9:35	10.2736	2.029	0.7481366421	0.86749693	3.7235445146	0.062
9/4/2014 9:36	9:36	9.4239	2.047	0.7547955 01	0.86907	3.7401346232	0.062
9/4/2014 9:37	9:37	8.6394	2.087	0.7695742737	0.87715358	3.7676004225	0.063
9/4/2014 9:38	9:38	8.6067	2.062	0.7603244946	0.87196587	3.7454130846	0.063
9/4/2014 9:39	9:39	9.1201	2.075	0.7651225 82	0.87450	3.7564	0.063
9/4/2014 9:40	9:40	9.1036	2.116	0.7802359981	0.88136967	3.7852	0.063
9/4/2014 9:41	9:41	9.1036	2.116	0.7802359981	0.88136967	3.7852	0.063
9/4/2014 9:42	9:42	10.1988	2.095	0.7724982629	0.88191586	3.7881310462	0.063
9/4/2014 9:43	9:43	7.9325	2.107	0.7769174948	0.88142993	3.7905328 32	0.063
9/4/2014 9:44	9:44	6.8956	2.116	0.7802359981	0.88136967	3.7852	0.063
9/4/2014 9:45	9:45	7.175	2.064	0.7621368 71	0.87123151	3.7567505 32	0.063
9/4/2014 9:45	9:45	7.175	2.064	0.7621368 71	0.87123151	3.7567505 32	0.063
9/4/2014 9:45	9:45	9.9774	2.054	0.7573809981	0.87860848	3.7685410891	0.062



Estimated Leakage Rate (m³/day)						22.452
	5.000	2.800	m		Estimated	
	215.0000		m³	actual reading		

Estimated Leakage Rate (m³/day)						18.305
	3.860	2.220	m		Estimated	
		8.157				
173.8907		m	logger			
173.6400		m³	totalizer			

S64-148

PILOT NAME: FFA Kola Ridge Road METER INACCURACY TEST BEFORE COUNTERMEASURE

Date: 30-07-14

WATER METER INACCURACY TEST SHEET: FFA

					BEFORE COUTERMEASURES								
						Initial Reading		Final Reading		Integrated Value			
NO:	ACCOUNT	CUSTOMER NAME	Meter ID	M/SIZE	TIME (Min)	Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	TR-III Meter (litres)	Difference (litres)	Error (%)
						A	B	C	D	C-A = E	D - B = F	E-F = G	G/F
1	9497	JOHN BATA	23084	15 mm	5 min	488.151	1.205	488.151	1.2451	0	0.0401	-0.0401	-100.00%
2	9496	JOSHUA NOKIA	943384	15 mm	5 min	302.006	1.2487	302.019	1.3593	0.013	0.1106	-0.0976	-88.25%
3	9495	RAM ECHEL	759022	15 mm	5 min	518.079	1.3597	518.095	1.4863	0.016	0.1266	-0.1106	-87.36%
4	9494	ALI HOMELO	83115496	15 mm	5 min	2135.591	1.4869	2135.602	1.542	0.011	0.0551	-0.0441	-80.04%
5	9493	SIMON B ROFO	09A000286	15 mm	5 min	2715.337	1.5424	2715.5558	1.767	0.2188	0.2246	-0.0058	-2.58%
6	9492	PHILIP KANAIRARA	12B086877	15 mm	5 min	195.1	1.7674	195.181	1.8485	0.081	0.0811	-1E-04	-0.12%
7	9491	F J WICKHAM	07-000656	15 mm	5 min	5126.4387	1.8486	5126.6036	2.038	0.1649	0.1894	-0.0245	-12.94%
9	09487-1	JOE HONI	12A004506	15 mm	5 min	313.491	2.0381	313.685	2.2328	0.194	0.1947	-0.0007	-0.36%
10	9489	GENEVIEVE & BILL APUSAE	05B826446	15 mm	5 min	43.1308	2.2335	43.2214	2.324	0.0906	0.0905	0.0001	0.11%
11	9488	JERRY FUTA	12A005139	15 mm	5 min	1451.069	2.3339	1451.214	2.48	0.145	0.1461	-0.0011	-0.75%
13	9486	FLORENCE BARIMATA JOEL	758667	15 mm	5 min	325.752	2.4816	325.78	2.5968	0.028	0.1152	-0.0872	-75.69%
14	9481	PATTERSON NORI	05B826447	15 mm	5 min	2959.359	2.6017	2959.501	2.7458	0.142	0.1441	-0.0021	-1.46%
15	9478	SUSAN OLISUKULU	05B826449	20 mm	5 min	3038.78	2.746	3038.893	2.8508	0.113	0.1048	0.0082	7.82%
16	09327-01	VICITT GADEPETA	07-000906	1/2 "	5 min	3413.6782	0.4843	3413.772	0.5802	0.0938	0.0959	-0.0021	-2.19%
17	09328-1	KWASI DAURARA	221	3/4"	5 min	5043	0.5809	5043	0.6565	0	0.0756	-0.0756	-100.00%
18	09328-2	KWASI DAURARA	13A002132	1/2 "	5 min	173.071	0.6568	173.144	0.7297	0.073	0.0729	0.0001	0.14%
19	09327-2	KWASI DAURARA	12A004472	1/2"	5 min	1243.003	0.7305	1243.1	0.8301	0.097	0.0996	-0.0026	-2.61%
20		DAVID BOKELEMA	99B149639	3/4"	5 min	6980.5712	0.8301	6980.6938	0.956	0.1226	0.1259	-0.0033	-2.62%
21	9332	CHARLES MAEFAI	13A000894	1/2"	5 min	788.363	0.9562	788.477	0.0714	0.114	-0.8848	0.9988	-112.88%
22	9335	WINCH HARO	12A004460	1/2"	5 min	475.637	0.0715	475.721	0.1565	0.084	0.085	-0.001	-1.18%
23	9336	JOHN TUA	05B826492	3/4"	5 min	3530.167	0.1565	3530.874	0.2665	0.707	0.11	0.597	542.73%
24	09336-1	MAXSON & KETTIE TALOSUI	S13B00284	3/4"	5 min	72.0227	1.267	72.1758	1.4198	0.1531	0.1528	0.0003	0.20%
25	09340-01	JACK WASI BEN	99B149577	3/4"	5 min	2955.645	1.4204	2955.7683	1.5475	0.1233	0.1271	-0.0038	-2.99%
26	09341-6	NICKSON WATE	07-000437	1/2"	5 min	1674.6726	1.547	1674.7654	1.6422	0.0928	0.0952	-0.0024	-2.52%
27	09341-5	JAPHLET PATITI	07-000426	1/2"	5 min	2730.1822	1.6422	2730.2625	1.7249	0.0803	0.0827	-0.0024	-2.90%
28	09341-4	Ms NESTER MAE	07-000430	1/2"	5 min	1816.2869	1.7249	1816.3721	1.8095	0.0852	0.0846	0.0006	0.71%
29	09341-2	HELLEN NAKISI	11A000762	1/2"	5 min	602.114	1.8102	602.183	1.8808	0.069	0.0706	-0.0016	-2.27%
30	09340-1	GG STAFF QUARTERS	S13A00184	1/2"	5 min	48.4873	1.8808	48.5111	1.9056	0.0238	0.0248	-0.001	-4.03%
31	09499-1	GISELLA ROVO	07-000493	15 mm	5 min	2652.6299	2.8508	2652.7322	2.955	0.1023	0.1042	-0.0019	-1.82%
32	9499	ELIZABETH AUMAE	12B011192	20 mm	5 min	963.554	2.9554	963.706	3.1019	0.152	0.1465	0.0055	3.75%
34	9501	SILAS TORIHAHIA	17372	15 mm	5 min	3357.797	3.1023	3357.82	3.307	0.023	0.2047	-0.1817	-88.76%
35	9504	JOHN LAI	12A000795	20 mm	5 min	2554.67	3.307	2554.782	3.4207	0.112	0.1137	-0.0017	-1.50%
36	9505	HONG JUN ZHANG	12A004625	15 mm	5 min	471.435	3.4208	471.547	3.5336	0.112	0.1128	-0.0008	-0.71%
37	09424-01	GODFREY KEMANGAVA	13A0195020	20 mm	5 min	3.5341	153.363	153.363	3.6251	149.8289	-149.7379	299.5668	-200.06%
39	9423	S I T T C PRIMARY SCHOOL	12B086538	20 mm	5 min	1895.728	3.6251	1895.806	3.7031	0.078	0.078	-2.53E-14	0.00%
40	9339	CATHY VAIKAWI	12A004444	1/2"	5 min	1371.67	1.905	1371.79	2.027	0.12	0.122	-0.002	-1.64%
41	9338	PAUL BOKA	07-000395	1/2"	5 min	4.2848	2.027	4.4025	2.1437	0.1177	0.1167	0.001	0.86%
42	9506	HILDA MAEFITI	11A000795	1/2"	5 min	253.052	2.0945	253.194	2.4374	0.142	0.3429	-0.2009	-58.59%
43	9509	ADRIAN FAFALE	12A005219	1/2"	5 min	708.14	2.4374	708.252	2.5512	0.112	0.1138	-0.0018	-1.58%
44	9510	SOLOMON BOSAMATA	12A005220	1/2"	5 min	760.342	2.5512	760.44	2.6504	0.098	0.0992	-0.0012	-1.21%
45	09512-1	NILTON CHITE	99B141511	3/4"	5 min	461.442	2.6504	461.32	2.8564	-0.122	0.206	-0.328	-159.22%
46	09511-1	CAMERON RINI ETA	12A004807	1/2"	5 min	140.406	2.8565	140.619	3.0717	0.213	0.2152	-0.0022	-1.02%
47	09511-2	CHARLES UBUNI	05B826476	3/4"	5 min	4304.429	3.0717	4304.455	3.1018	0.026	0.0301	-0.0041	-13.62%
												AVERAGE:	-15.33%

PILOT NAME: FFA KOLOALE METER INACCURACY TEST AFTER COUNTERMEASURE

Date: 05-9-14

WATER METER INACCURACY TEST SHEET: FFA KOLOALE

						AFTER COUNTERMEASURES							
						Initial Reading		Final Reading		Integrated Value			
NO:	ACCOUNT	CUSTOMER NAME	Meter ID	M/SIZE	TIME (Min)	Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	TR-III Meter (litres)	Difference (litres)	Error (%)
						A	B	C	D	C - A = E	D - B = F	E - F = G	G / F
1	9328	Daughtis of Mary Immaculate	14A644616										
2	9330	Gane Simbe	14A644629										
3	9331	Alick Tito	13A002163										
4	9332	Charles Maefia	14A644620	15 mm	5 mins	36.3986	4.3932	36.5453	4.5411	0.1467	0.1479	-0.0012	-0.81%
12	09336-3	Silas Talosui	14A644865	15 mm	5 mins	39.5131	4.5422	39.7109	4.7395	0.1978	0.1973	0.0005	0.25%
29	9496	Joshua Nokia	14A644812	15 mm	5 mins	33.6197	4.2318	33.7835	4.3949	0.1638	0.1631	0.0007	0.43%
43	9501	Silas Torihahia	14A644817	15 mm	5 mins	26.2917	3.8558	26.4851	4.0491	0.1934	0.1933	0.0001	0.05%
53	9499	Elizabeth Aumae	14A644815	15 mm	5 mins	16.0564	4.0494	16.2386	4.2314	0.1822	0.182	0.0002	0.11%
												AVERAGE	0.01%

Actual Measurement of Leakage and Open-end Flow **15 No.1 FFA Kola Road**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			Customer Type		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom . 32m^3 Non-D .45m^3	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Meterail	DL	Illegal	Dom.	Non-D	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1	*			*						*		*			*					*		0.01	0.25				
2	*			*						*		*			*				*			0.01	0.15				
3	*			*						*		*			*					*		0.03	0.72				
4	*			*					*				*		*					*		0.60	14.4				
5	*			*					*				*		*				*			0.60	14.4				
6																											
7																											
8																											
9																											
10																											
11																											
12																											
13																											
14																											
Total	5	0	0	5	0	0	0	0	2	3	0	3	2	0	5	0	0	0	2	1	2		29.92			0.00	0.00
	5		5		0		5					5			5		5										

Note:

S64-T-149

Change in Status of Connections (Customers, Users and Unconnection) 1 No.10 Lenggakiki DMA

| No. | Account No. | Account Name | Location | Before Countermeasures | | |

Change in Status of Connections (Customers, Users and Unconnection) 1 No.10 Lenggakiki DMA

| No. | Account No. | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

Change in Status of Connections (Customers, Users and Unconnection) 1 No.10 Lenggakiki DMA

| No. | Account No. | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---

S64-1-53

MNF Measure After Countermeasure in Lenggakiki DMA

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
2014/10/28	2:00:00	22.8	0.245	434.466

Distance 6.0km 3.8 m^3/h/km

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=(3)^{2.5}$	[5]=[4] x [7]	[6]=[5]/60
2014/10/27	9:00	41.600	0.254	0.991018466	0.995499104	18.096083164	0.302
2014/10/27	9:15	40.800	0.26	0.989143874	0.994557125	18.078959955	0.301
2014/10/27	9:30	42.400	0.252	0.989431671	0.994701800	18.081589852	0.301
2014/10/27	9:45	40.400	0.252	0.989888260	0.994931264	18.085761389	0.301
2014/10/27	10:00	38.800	0.261	0.989428815	0.994700364	18.081563752	0.301
2014/10/27	10:15	38.000	0.257	0.991641048	0.995811753	18.101766468	0.302
2014/10/27	10:30	40.000	0.248	0.991068193	0.995524080	18.096537168	0.302
2014/10/27	10:45	42.800	0.252	0.990747944	0.995363222	18.093613119	0.302
2014/10/27	11:00	43.600	0.248	0.989133396	0.994551857	18.078864201	0.301
2014/10/27	11:15	43.200	0.252	0.991078749	0.995529381	18.096633543	0.302
2014/10/27	11:30	42.800	0.258	0.990227197	0.995101601	18.088857402	0.301
2014/10/27	11:45	40.000	0.246	0.991456045	0.995718858	18.100077834	0.302
2014/10/27	12:00	38.800	0.246	0.989783600	0.994878686	18.084805269	0.301
2014/10/27	12:15	40.400	0.251	0.988733805	0.994350946	18.075212070	0.301
2014/10/27	12:30	40.400	0.252	0.987778380	0.993870404	18.066476817	0.301
2014/10/27	12:45	38.400	0.246	0.988311007	0.994138324	18.071347037	0.301
2014/10/27	13:00	38.400	0.246	0.987557982	0.993759519	18.064461169	0.301
2014/10/27	13:15	38.800	0.247	0.988401430	0.994183801	18.072173716	0.301
2014/10/27	13:30	37.600	0.244	0.987196426	0.993577589	18.061154064	0.301
2014/10/27	13:45	37.200	0.246	0.990880573	0.995389659	18.094093677	0.302
2014/10/27	14:00	36.400	0.246	0.988652318	0.994309971	18.074467218	0.301
2014/10/27	14:15	35.200	0.241	0.988268573	0.994116981	18.070959077	0.301
2014/10/27	14:30	35.600	0.241	0.992081919	0.996033091	18.105789931	0.302
2014/10/27	14:45	35.600	0.239	0.989460058	0.994716069	18.081849233	0.301
2014/10/27	15:00	35.600	0.234	0.989500679	0.994736487	18.082220392	0.301
2014/10/27	15:15	35.200	0.24	0.988973595	0.994471515	18.077403760	0.301
2014/10/27	15:30	34.800	0.234	0.990668728	0.995323429	18.092889758	0.302
2014/10/27	15:45	35.600	0.24	0.990443946	0.995210503	18.090837008	0.302
2014/10/27	16:00	36.400	0.228	0.991405444	0.995693449	18.099615945	0.302
2014/10/27	16:15	35.600	0.231	0.991156952	0.995568658	18.097347501	0.302
2014/10/27	16:30	33.600	0.223	0.992163326	0.996073956	18.106532770	0.302
2014/10/27	16:45	35.600	0.214	0.991919545	0.995949770	18.104275329	0.302
2014/10/27	17:00	36.000	0.222	0.991249909	0.995613542	18.098196127	0.302
2014/10/27	17:15	34.800	0.227	0.989457203	0.994714634	18.081823149	0.301
2014/10/27	17:30	34.800	0.228	0.992053320	0.996018735	18.105528955	0.302
2014/10/27	17:45	37.200	0.226	0.994059612	0.997025382	18.123827687	0.302
2014/10/27	18:00	36.000	0.228	0.995000173	0.997496954	18.132399879	0.302
2014/10/27	18:15	37.600	0.234	0.993315373	0.996652082	18.117041886	0.302
2014/10/27	18:30	40.400	0.225	0.992278753	0.996131895	18.107585979	0.302
2014/10/27	18:45	38.400	0.217	0.993643585	0.996816726	18.120034758	0.302
2014/10/27	19:00	37.200	0.227	0.991997179	0.995990552	18.105016652	0.302
2014/10/27	19:15	36.800	0.229	0.991154520	0.995567436	18.097325301	0.302
2014/10/27	19:30	38.400	0.23	0.988506584	0.994236684	18.073135021	0.301
2014/10/27	19:45	36.800	0.234	0.990757101	0.995367822	18.093696734	0.302
2014/10/27	20:00	36.400	0.24	0.991983491	0.995983680	18.104891741	0.302
2014/10/27	20:15	34.800	0.23	0.993861348	0.996925949	18.122020211	0.302

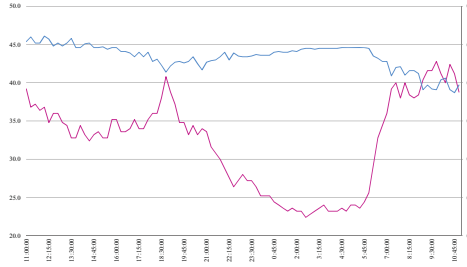


MNF Measure Before Countermeasure in Lenggakiki

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
2014/9/26	2:45:00	22.79988	0.245	434.466

Distance 6.0km 3.79998 m^3/h/km

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=(3)^{2.5}$	[5]=[4] x [7]	[6]=[5]/60
25-Sep-14	11:00:00	39.2000	0.254	0.991018466	0.995499104	18.096083164	0.302
25-Sep-14	11:15:00	36.7999	0.26	0.989143874	0.994557125	18.078959955	0.301
25-Sep-14	11:30:00	37.1999	0.252	0.989431671	0.994701800	18.081589852	0.301
25-Sep-14	11:45:00	36.4000	0.252	0.989888260	0.994931284	18.085761389	0.301
25-Sep-14	12:00:00	36.7999	0.261	0.989428815	0.994700364	18.081563752	0.301
25-Sep-14	12:15:00	34.8001	0.257	0.991641048	0.995811753	18.101766468	0.302
25-Sep-14	12:30:00	36.0000	0.248	0.991068193	0.995524080	18.096537168	0.302
25-Sep-14	12:45:00	36.0000	0.252	0.990747944	0.995363222	18.093613119	0.302
25-Sep-14	13:00:00	34.8001	0.248	0.989133396	0.994551857	18.078864201	0.301
25-Sep-14	13:15:00	34.4002	0.252	0.991078749	0.995529381	18.096633543	0.302
25-Sep-14	13:30:00	32.8000	0.258	0.990227197	0.995101601	18.088857402	0.301
25-Sep-14	13:45:00	32.8000	0.246	0.991456045	0.995718858	18.100077834	0.302
25-Sep-14	14:00:00	34.4002	0.246	0.989783600	0.994878686	18.084805269	0.301
25-Sep-14	14:15:00	33.1999	0.251	0.988733805	0.994350946	18.075212070	0.301
25-Sep-14	14:30:00	32.4000	0.252	0.987778380	0.993870404	18.066476817	0.301
25-Sep-14	14:45:00	33.1999	0.246	0.988311007	0.994138324	18.071347037	0.301
25-Sep-14	15:00:00	33.5999	0.246	0.987557982	0.993759519	18.064461169	0.301
25-Sep-14	15:15:00	32.8000	0.247	0.988401430	0.994183801	18.072173716	0.301
25-Sep-14	15:30:00	32.8000	0.244	0.987196426	0.993577589	18.061154064	0.301
25-Sep-14	15:45:00	35.2001	0.246	0.990880573	0.995389659	18.094093677	0.302
25-Sep-14	16:00:00	35.2001	0.246	0.988652318	0.994309971	18.074467218	0.301
25-Sep-14	16:15:00	33.5999	0.241	0.988268573	0.994116981	18.070959077	0.301
25-Sep-14	16:30:00	33.5999	0.241	0.992081919	0.996033091	18.105789931	0.302
25-Sep-14	16:45:00	33.9998	0.239	0.989460058	0.994716069	18.081849233	0.301
25-Sep-14	17:00:00	35.2001	0.234	0.989500679	0.994736487	18.082220392	0.301
25-Sep-14	17:15:00	33.9998	0.24	0.988973595	0.994471515	18.077403760	0.301
25-Sep-14	17:30:00	33.9998	0.234	0.990668728	0.995323429	18.092889758	0.302
25-Sep-14	17:45:00	35.2001	0.24	0.990443946	0.995210503	18.090837008	0.302
25-Sep-14	18:00:00	36.0000	0.228	0.991405444	0.995693449	18.099615945	0.302
25-Sep-14	18:15:00	36.0000	0.231	0.991156952	0.995568658	18.097347501	0.302
25-Sep-14	18:30:00	38.0002	0.223	0.992163326	0.996073956	18.106532770	0.302
25-Sep-14	18:45:00	40.7999	0.214	0.991919545	0.995949770	18.104275329	0.302
25-Sep-14	19:00:00	38.8001	0.222	0.991249909	0.995613542	18.098196127	0.302
25-Sep-14	19:15:00	37.1999	0.227	0.989457203	0.994714634	18.081823149	0.301
25-Sep-14	19:30:00	34.8001	0.228	0.992053320	0.996018735	18.105528955	0.302
25-Sep-14	19:45:00	34.8001	0.226	0.994059612	0.997025382	18.123827687	0.302
25-Sep-14	20:00:00	33.1999	0.228	0.995000173	0.997496954	18.132399879	0.302
25-Sep-14	20:15:00	34.4002	0.234	0.993315373	0.996652082	18.117041886	0.302
25-Sep-14	20:30:00	33.1999	0.225	0.992278753	0.996131895	18.107585979	0.302
25-Sep-14	20:45:00	33.9998	0.217	0.993643585	0.996816726	18.120034758	0.302
25-Sep-14	21:00:00	33.5999	0.227	0.991997179	0.995990552	18.105016652	0.302
25-Sep-14	21:15:00	31.6001	0.229	0.991154520	0.995567436	18.097325301	0.302
25-Sep-14	21:30:00	30.8002	0.23	0.988506584	0.994236684	18.073135021	0.301
25-Sep-14	21:45:00	29.9999	0.234	0.990757101	0.995367822	18.093696734	0.302
25-Sep-14	22:00:00	28.8000	0.24	0.991983491	0.995983680	18.104891741	0.302
25-Sep-14	22:15:00	27.6001	0.23	0.993861348	0.996925949	18.122020211	0.302



Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=(3)^{2.5}$	[5]=[4] x [7]	[6]=[5]/60
2014/10/27	20:30	34.000	0.239	0.992692614	0.996339708	18.111363578	0.302
2014/10/27	20:45	35.200	0.235	0.991810758	0.995896962	18.103315379	0.302
2014/10/27	21:00	35.200	0.234	0.991411248	0.995696364	18.099668927	0.302
2014/10/27	21:15	32.400	0.234	0.991829132	0.995906186	18.103483063	0.302
2014/10/27	21:30	30.400	0.235	0.993041917	0.996514885	18.114547935	0.302
2014/10/27	21:45	29.200	0.237	0.991086705	0.995533377	18.096706180	0.302
2014/10/27	22:00	30.000	0.236	0.991897607	0.995940564	18.104107977	0.302
2014/10/27	22:15	30.000	0.236	0.989275676	0.994623384	18.080164413	0.301
2014/10/27	22:30	30.000	0.236	0.990581995	0.995279858	18.092097723	0.302
2014/10/27	22:45	29.600	0.24	0.990606605	0.995292221	18.092322458	0.302
2014/10/27	23:00	27.600	0.241	0.990289815	0.995133064	18.089429321	0.301
2014/10/27	23:15	27.600	0.24	0.992424619	0.996205109	18.108916853	0.302
2014/10/27	23:30	26.400	0.24	0.990426332	0.995201654	18.090676148	0.302
2014/10/27	23:45	25.200	0.242	0.992028518	0.996006284	18.105302636	0.302
2014/10/28	0:00	24.000	0.241	0.989278878	0.994624994	18.080193674	0.301
2014/10/28	0:15	23.600	0.244	0.990046824	0.995010967	18.087209850	0.301
2014/10/28	0:30	24.800	0.245	0.987024512	0.993491073	18.059581376	0.301
2014/10/28	0:45	24.400	0.245	0.986285542	0.993119097	18.052819641	0.301
2014/10/28	1:00	24.000	0.244	0.987265988	0.993612594	18.061790377	0.301
2014/10/28	1:15	23.200	0.245	0.987522666	0.993642625	18.062336272	0.301
2014/10/28	1:30	23.200	0.245	0.986859648	0.993408097	18.058073052	0.301
2014/10/28	1:45	23.200	0.245	0.986268253	0.993110393	18.052661416	0.301
2014/10/28	2:00	22.800	0.245	0.987856864	0.993907355	18.069877342	0.301
2014/10/28	2:15	22.800	0.245	0.987507108	0.993733919	18.063995799	0.301
2014/10/28	2:30	23.200	0.246	0.988637473	0.994302986	18.074315159	0.301
2014/10/28	2:45	22.800	0.246	0.990680193	0.995329188	18.092994453	0.302
2014/10/28	3:00	23.200	0.246	0.990454642	0.995215877	18.090934696	0.302
2014/10/28	3:15	23.200	0.246	0.991230168	0.995605428	18.098015903	0.302
2014/10/28	3:30	22.400	0.246	0.991925510	0.995954572	18.104362615	0.302
2014/10/28	3:45	23.600	0.246	0.991263821	0.995622328	18.098323123	0.302
2014/10/28	4:00	23.600	0.245	0.993224832	0.996606658	18.116216176	0.302
2014/10/28	4:15	23.200	0.235	0.993460815	0.996725045	18.118368193	0.302
2014/10/28	4:30	23.200	0.232	0.992293772	0.996139434	18.107723020	0.302
2014/10/28	4:45	23.600	0.228	0.990919668	0.995449480	18.095181107	0.302
2014/10/28	5:00	24.000	0.228	0.990782601	0.995380631	18.093929573	0.302
2014/10/28	5:15	24.400	0.209	0.990736169	0.995357307	18.093505590	0.302
2014/10/28	5:30	26.000	0.22	0.992343063	0.996164175	18.108172756	0.302
2014/10/28	5:45	28.400	0.221	0.992566072	0.996276102	18.110207363	0.302
2014/10/28	6:00	31.600	0.21	0.992579894	0.996283039	18.110334456	0.302
2014/10/28	6:15	34.800	0.216	0.992213873	0.996099329	18.106993986	0.302
2014/10/28	6:30	36.800	0.216	0.990071377	0.995023305	18.087434128	0.301
2014/10/28	6:45	41.200	0.212	0.991633009	0.995905349	18.088271114	0.301
2014/10/28	7:00	41.200	0.191	0.992890803	0.996439061	18.113169612	0.302
2014/10/28	7:15	39.200	0.197	0.991688022	0.995833539	18.102195206	0.302
2014/10/28	7:30	41.200	0.192	0.994021858	0.997006448	18.123483514	0.302
2014/10/28	7:45	40.800	0.191	0.991742150	0.995862516	18.102689227	0.302
2014/10/28	8:00	41.600	0.204	0.993369203	0.996679087	18.117532779	0.302
2014/10/28	8:15	41.600	0.206	0.992096212	0.996040266	18.105920555	0.302
2014/10/28	8:30	42.000	0.191	0.990104537	0.995039967	18.087737022	0.301
2014/10/28	8:45	40.800	0.187	0.992591199	0.996288713	18.110436592	0.302
2014/10/28	9:00	41.600	0.197	0.992981598	0.996484620	18.113997775	0.302
Estimated Leakage Rate (m^3/day)							**434.466**
		813.2999	m				

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	$[4]=(3)^{2.5}$	[5]=[4] x [7]	[6]=[5]/60
25-Sep-14	22:30:00	26.3999	0.239	0.992692614	0.996339708	18.111363578	0.302
25-Sep-14	22:45:00	27.2002	0.235	0.991810758	0.995896962	18.103315379	0.302
25-Sep-14	23:00:00	28.0001	0.234	0.991411248	0.995696364	18.099668927	0.302
25-Sep-14	23:15:00	27.2002	0.234	0.991829132	0.995906186	18.103483063	0.302
25-Sep-14	23:30:00	27.2002	0.235	0.993041917	0.996514885	18.114547935	0.302
25-Sep-14	23:45:00	26.3999	0.237	0.991086705	0.995533377	18.096706180	0.302
25-Sep-14	0:00:00	25.2000	0.236	0.991897607	0.995940564	18.104107977	0.302
25-Sep-14	0:15:00	25.2000	0.236	0.989275676	0.994623384	18.080164413	0.301
25-Sep-14	0:30:00	25.2000	0.236	0.990581995	0.995279858	18.092097723	0.302
25-Sep-14	0:45:00	24.4001	0.24	0.990606605	0.995292221	18.092322458	0.302
25-Sep-14	1:00:00	24.0001	0.241	0.990289815	0.995133064	18.089429321	0.301
25-Sep-14	1:15:00	23.6002	0.24	0.992424619	0.996205109	18.108916853	0.302
25-Sep-14	1:30:00	23.1998	0.24	0.990426332	0.995201654	18.090676148	0.302
25-Sep-14	1:45:00	23.6002	0.242	0.992028518	0.996006284	18.105302636	0.302
25-Sep-14	2:00:00	23.1998	0.241	0.989278878	0.994624994	18.080193674	0.301
25-Sep-14	2:15:00	23.1998	0.244	0.990046824	0.995010967	18.087209850	0.301
25-Sep-14	2:30:00	22.3999	0.245	0.987024512	0.993491073	18.059581376	0.301
26-Sep-14	2:45:00	22.7999	0.245	0.986285542	0.993119097	18.052819641	0.301
26-Sep-14	3:00:00	23.1998	0.244	0.987265988	0.993612594	18.061790377	0.301
26-Sep-14	3:15:00	23.6002	0.245	0.987522666	0.993642625	18.062336272	0.301
26-Sep-14	3:30:00	24.0001	0.245	0.986859648	0.993408097	18.058073052	0.301
26-Sep-14	3:45:00	23.1998	0.245	0.986268253	0.993110393	18.052661416	0.301
26-Sep-14	4:00:00	23.1998	0.245	0.987856864	0.993907355	18.069877342	0.301
26-Sep-14	4:15:00	23.1998	0.245	0.987507108	0.993733919	18.063995799	0.301
26-Sep-14	4:30:00	23.6002	0.246	0.988637473	0.994302986	18.074315159	0.301
26-Sep-14	4:45:00	23.1998	0.246	0.990680193	0.995329188	18.092994453	0.302
26-Sep-14	5:00:00	24.0001	0.246	0.990454642	0.995215877	18.090934696	0.302
26-Sep-14	5:15:00	24.0001	0.246	0.991230168	0.995605428	18.098015903	0.302
26-Sep-14	5:30:00	23.6002	0.246	0.991925510	0.995954572	18.104362615	0.302
26-Sep-14	5:45:00	24.4001	0.246	0.991263821	0.995622328	18.098323123	0.302
26-Sep-14	6:00:00	25.6000	0.245	0.993224832	0.996606658	18.116216176	0.302
26-Sep-14	6:15:00	29.2000	0.235	0.993460815	0.996725045	18.118368193	0.302
26-Sep-14	6:30:00	32.8000	0.232	0.992293772	0.996139434	18.107723020	0.302
26-Sep-14	6:45:00	34.4002	0.228	0.990919668	0.995449480	18.095181107	0.302
26-Sep-14	7:00:00	36.0000	0.228	0.990782601	0.995380631	18.093929573	0.302
26-Sep-14	7:15:00	39.2000	0.209	0.990736169	0.995357307	18.093505590	0.302
26-Sep-14	7:30:00	40.0000	0.22	0.992343063	0.996164175	18.108172756	0.302
26-Sep-14	7:45:00	38.0002	0.221	0.992566072	0.996276102	18.110207363	0.302
26-Sep-14	8:00:00	40.0000	0.21	0.992579894	0.996283039	18.110334456	0.302
26-Sep-14	8:15:00	38.4001	0.216	0.992213873	0.996099329	18.106993986	0.302
26-Sep-14	8:30:00	38.0002	0.216	0.990071377	0.995023305	18.087434128	0.301
26-Sep-14	8:45:00	38.4001	0.212	0.991633009	0.995905349	18.088271114	0.301
26-Sep-14	9:00:00	40.3999	0.191	0.992890803	0.996439061	18.113169612	0.302
26-Sep-14	9:15:00	41.6002	0.197	0.991688022	0.995833539	18.102195206	0.302
26-Sep-14	9:30:00	41.6002	0.192	0.994021858	0.997006448	18.123483514	0.302
26-Sep-14	9:45:00	42.8000	0.191	0.991742150	0.995862516	18.102689227	0.302
26-Sep-14	10:00:00	41.1998	0.204	0.993369203	0.996679087	18.117532779	0.302
26-Sep-14	10:15:00	40.0000	0.206	0.992096212	0.996040266	18.105920555	0.302
26-Sep-14	10:30:00	42.4001	0.191	0.990104537	0.995039967	18.087737022	0.301
26-Sep-14	10:45:00	41.1998	0.187	0.992591199	0.996288713	18.110436592	0.302
26-Sep-14	11:00:00	38.8001	0.197	0.992981598	0.996484620	18.113997775	0.302
Estimated Leakage Rate (m^3/day)							**434.466**
		778.9001	m				**63.6442**

DMA NAME: LENGAKIKI **RE: 1.0**

Date: 31/10/2014

WATER METER INACCURACY TEST SHEET

NO:	ACCOUNT	CUSTOMER NAME	Locations	Meter ID	M/SIZE 15mm	M/SIZE 20mm	TIME (Min)	AFTER COUNTERMEASURES Initial Reading Tested Meter A	Initial Reading TR-III Meter B	Final Reading Tested Meter C	Final Reading TR-III Meter D	Integrated Value Test Meter (litre) C-A = E	Integrated Value TR-III Meter (litres) D - B = F	Difference (litres) E-F = G	Error (%) G/F
1	5089	DELILAH TILUKANA	MINISTERS RIDGE	13A000816			5	664.226	3.532	664.317	3.624	0.091	0.092	-0.001	-1.087%
2	5273	FRANCIS HAISOMA	MATAVALE	13B019731			5	2156.683	3.625	2156.764	3.707	0.081	0.082	-0.001	-1.220%
3	5274	KRISTA JANINE JACOB	KUKUTU STREET	13A000773			5	231.771	3.712	231.844	3.782	0.073	0.070	0.003	4.286%
4	5276	DALTON HONE	KUKUTU STREET	13A000774			5	242.197	3.782	242.282	3.867	0.085	0.085	0.000	0.000%
5	05273-01	DEREK TAISAU	MATAVALE	13B019729			5	1138.485	3.868	1138.567	3.951	0.082	0.083	-0.001	-1.205%
6	4119	MILTON SIBISOPERE	VASAKANA RIDGE LENGAKI	14A644643			5	60.840	2.646	60.916	2.721	0.076	0.075	0.001	1.333%
7	4120	MILTON SIBISOPERE	VASAKANA RIDGE LENGAKI	14A644648			5	65.919	3.951	65.980	4.012	0.061	0.061	0.000	0.000%
8	04122-1	ANTHONY & LINDA TAMAIKA	VASAKANA RIDGE LENGAKI	14A644583			5	28.757	2.722	28.866	2.831	0.109	0.109	0.000	0.000%
9	4139	STEPHEN NGELE	VASAKANA RIDGE LENGAKI	14A644945			5	39.196	2.831	39.398	3.031	0.202	0.200	0.002	1.000%
10	04148-1	MAX HAOMAE	VASAKANA NEAR TANK S/Q	14A644556			5	71.157	3.032	71.323	3.197	0.166	0.165	0.001	0.606%
11	5014	HAROLD RATU	REWA ROAD- LENGAKIKI	14A644930			5	1.597	3.198	1.698	3.300	0.101	0.102	-0.001	-0.980%
12	5030	ROY SADE	REWA ROAD- LENGAKIKI	14A644714			5	59.620	4.013	59.705	4.098	0.085	0.085	0.000	-0.235%
13	5033	GRACE KWANAIRARA	MOSQUITO VALLEY	14A644934			5	29.067	3.301	29.198	3.431	0.131	0.130	0.001	0.769%
14	05038-1	WALTER LEO	MOSQUITO VALLEY	14A644722			5	15.027	3.431	15.077	3.481	0.050	0.050	0.000	0.000%
15	05040-1	NICHOLAS BILIKI	MOSQUITO VALLEY	14A644933			5	26.483	3.482	26.541	3.540	0.058	0.058	0.000	0.000%
16	5041	COLLIN MIDOBATU	MOSQUITO VALLEY	14A644935			5	43.800	4.098	43.944	4.241	0.144	0.143	0.001	0.699%
											Average %				0.248%

S64-1-54

DMA NAME: LENGGAKIKI **RE: 5.0**

Date:

WATER METER INACCURACY TEST SHEET

NO:	ACCOUNT	CUSTOMER NAME	Location	Meter ID	M/SIZE 15mm	M/SIZE 20mm	TIME (Min)	BEFORE COUNTERMEASURES Initial Reading Tested Meter A	Initial Reading TR-III Meter B	Final Reading Tested Meter C	Final Reading TR-III Meter D	Integrated Value Test Meter (litres) C-A = E	Integrated Value TR-III Meter (litres) D - B = F	Difference (litres) E-F = G	Error (%) G/F
1	4100	CAROLIN FIKIASI	Vanikoro	12A005223											
2	04100-01	HARRY PHILIP	Vanikoro	12B006812		1	D/L								
3	04100-4	YANLEY SINA	Vanikoro	09A000140			5 mins	3982.8718	1.7472	3982.945	1.8224	0.0732	0.0752	-0.002	-2.66
4	04105-2	RICHARD KONARI	Vanikoro	12A005276			5 mins	1786.723	1.6774	1786.772	1.7279	0.049	0.0505	-0.0015	-2.97
5	04105-3	EZRA WESLY	Vanikoro	13A000980			5 mins	215.725	1.7262	215.742	1.7453	0.017	0.0171	-0.0001	-0.58
6	04118-01	EMMANUEL TORA	Vanikoro	12B010932		1	5 mins	959.758	1.9221	959.818	1.9721	0.06	0.05	0.01	20.00
7	04118-02	JOHN AUGA	Vanikoro	04A018173			5 mins	3626.568	1.9781	3626.61	2.0225	0.042	0.0444	-0.0024	-5.41
8	4119	MILTON SIBISOPERE	Vanikoro	13B019395		1	5 mins	482.759	1.982	482.833	2.079	0.074	0.097	-0.023	-23.71
9	4120	MILTON SIBISOPERE	Vanikoro	13B019458		1	5 mins	1652.899	2.059	1652.835	2.079	0.026	0.02	0.006	30.00
10	4121	NATIONAL FISHERIES DEV	Vanikoro	12A005234			5 mins	826.137	1.8922	826.237	1.9621	0.09	0.0699	0.0001	0.11
11	4122	RESIDENCE OF THE EUROPEAN COMMISSION	Vanikoro	81140078		1	5 mins	4108.838	2.0812	4108.862	2.2075	0.024	0.1263	-0.1023	-81.00
12	04122-1	ANTHONY & LINDA TAMAIKA	Vanikoro	13B019507			5 mins	440.16	2.2075	440.277	2.3238	0.117	0.1163	0.0007	0.60
13	4123	AUGUSTINE MALBOUP MORIHA	Vanikoro	06A021599			5 mins					0	0	0	0.00
14	4124	CHRIS ALBAN RAGARUMA	Vanikoro	12A005486			5 mins	754.454	2.4338	753.473	2.4335	-0.981	0.0197	-1.0007	0.00
15	04124-1	MOFFAT KONAI	Vanikoro	5809			5 mins	4407.361	2.3278	4407.461	2.4325	0.1	0.1047	-0.0047	-4.49
16	4125	JULIA KAPEPERE	Vanikoro				5 mins	D/Line		D/Line		0	0	0	0.00
17	4126	ROSELYN OILA	Vanikoro	12A005566			5 mins	593.628	2.5854	593.656	2.6125	0.028	0.0271	0.0009	3.32
18	4127	NEW ZEALAND HIGH COMMI	Vanikoro	12A005225			5 mins	430.411	2.4536	430.492	2.5333	0.081	0.0797	0.0013	1.63
19	4128	NEW ZEALAND HIGH COMMISSION	Vanikoro	12A005367			5 mins	2745.942	2.5336	2745.988	2.5806	0.046	0.047	-0.001	-2.13
20	4129	JOHN LEGHI	Vanikoro	97013640		1	5 mins	5403.3036	2.6133	5403.3145	2.6262	0.0109	0.0129	-0.002	-15.50
21	4133	RITALYN HOUPANA	Vanikoro	11A000742			5 mins	232.441	2.6264	232.461	2.6468	0.02	0.0204	-0.0004	-1.96
22	4134	JACK NAFUHABI	Vanikoro	5296			5 mins					0	0	0	0.00
23	04134-1	DORCAS Q POLOSO	Vanikoro	06A021832			5 mins					0	0	0	0.00
24	04134-2	EDDIE J IRO	Vanikoro	370534			5 mins	2786.2789	2.741	2786.279	2.788	0.0001	0.047	-0.0469	-99.79
25	04136-1	MEGAN BROWN	Vanikoro	617269			5 mins					0	0	0	0.00
26	4137	ROWLEY ALATALA	Vanikoro	12A005191			5 mins					0	0	0	0.00
27	4138	MARY BOLLEN	Vanikoro	S13A00578			5 mins					0	0	0	0.00
28	04138-1	FLORA LASI	Vanikoro	99B141657		1	5 mins	4348.6547	2.788	4348.7095	2.8446	0.0548	0.0566	-0.0018	-3.18
29	4139	STEPHEN NGELE	Vanikoro	05B881687			5 mins					0	0	0	0.00
30	4140	DAVID ALABOLIU	Vanikoro	544338			5 mins					0	0	0	0.00
31	04140-1	JOHN TUHAIKA JUNIOR	Vanikoro	7000812			5 mins	2163.71	2.9123	2163.71	2.9801	0	0.0678	-0.0678	-100.00
32	4141	PAULINE BOSETO	Vanikoro	12A005370			5 mins	569.062	3.1343	569.128	3.2	0.066	0.0657	0.0003	0.46
33	4142	PATRICK MARAU	Vanikoro	97107206		1	5 mins	8712.206	3.0707	8712.669	3.1339	0.463	0.0632	0.3998	0.00
34	4143	IRON ILEEN SULUKONINA	Vanikoro	99B141442		1	5 mins	8615.6716	3.0287	86153.7119	3.0701	0.0403	0.0414	-0.0011	-2.66
35	4144	JOHN GATU	Vanikoro	05DB26481		1	5 mins	3649.464	3.2003	3649.537	3.275	0.073	0.0747	-0.0017	-2.28
36	4145	DAVID RUPOKETS	Vanikoro	9?C5433		1	5 mins					0	0	0	0.00
37	4146	NEW ZEALAND HIGH COMMI	Vanikoro	9?C0432		1	5 mins					0	0	0	0.00
38	04148-1	MAX HAOMAE	Vanikoro	13B019393		1	5 mins					0	0	0	0.00
39	4149	MARILYN RONIA	Vanikoro	79233991			5 mins	4708.658	1.8229	4708.676	1.9122	0.018	0.0893	-0.0713	-79.84
40	5002	BRENDA WHITE	Rewa/Mosquito Valley	05A0183584			5 mins	3304.896	2.0225	3304.966	2.0963	0.07	0.0738	-0.0038	-5.15
41	5005	UBS Australia	Rewa/Mosquito Valley	12A005266			5 mins	852.537	2.1014	853.664	2.2383	1.127	0.1369	0.9901	0.00
42	050005-1	JOE SANGA	Rewa/Mosquito Valley	S13A00568			5 mins					0	0	0	0.00
43	5012	JOHN RABAUA	Rewa/Mosquito Valley	12A005168			5 mins	1751.755	1.2094	1751.808	1.2629	0.053	0.0535	-0.0005	-0.93
44	5013	JOSEPH SURABAUA	Rewa/Mosquito Valley	12A005170		no water	5 mins	710.597	1.2629			710.597	-1.2629	709.3341	0.00
45	5014	HAROLD RATU	Rewa/Mosquito Valley	09A000134			5 mins	4154.4195	1.2677	4154.4544	1.3052	0.0349	0.0375	-0.0026	-6.93
46	05014-1	AUGUSTINE ROSE	Rewa/Mosquito Valley	12A006089			5 mins	485.085	1.3051	485.182	1.4014	0.097	0.0963	0.0007	0.73
47	05014-2	AUGUSTINE ROSE	Rewa/Mosquito Valley	10A005130			5 mins	1328.1641	1.4018	1328.2484	1.4857	0.0843	0.0839	0.0004	0.48
48	5015	DYKES ANGIKI	Rewa/Mosquito Valley	12005250		leaks	5 mins	786.097	1.4857	786.184	1.5723	0.087	0.0866	0.0004	0.46
49	5016	LEONARD MAENU	Rewa/Mosquito Valley	11B091816		1	5 mins	2860.466	1.3732	2860.526	1.4356	0.06	0.0624	-0.0024	-3.85
50	05016-1	FRED TINA MAMAE PETER	Rewa/Mosquito Valley	759835		No meter	5 mins					0	0	0	0.00
51	5017	LILY SHOP	Rewa/Mosquito Valley	723807		1	5 mins	3584.804	1.6356	3584.823	1.7356	0.019	0.1	-0.081	-81.00
52	5018	ALICE PUIA	Rewa/Mosquito Valley	14451 6(STOP)		M/Stop	5 mins	998.838	1.738	998.838	1.7558	0	0.0178	-0.0178	-100.00
53	05018-1	THE CONSUMER	Rewa/Mosquito Valley	07-001140		Stop tap	5 mins	4730.7069	1.7566	4730.7308	1.7803	0.0239	0.0237	0.0002	0.84
54	5019	KIMWEI SAEHU	Rewa/Mosquito Valley	07-000377			5 mins								
55	5020	JAN SANGA	Rewa/Mosquito Valley	12A005248			5 mins					0	0	0	0.00
56	5021	LEICY LAWTON SIOSI	Rewa/Mosquito Valley	07-000544			5 mins	2352.6142	2.3342	2352.7489	2.4767	0.1347	0.1425	-0.0078	-5.47
57	05021-1	LELIAN FIRISUA	Rewa/Mosquito Valley	07-000014			5 mins	2146.1437	1.7803	2146.1437	1.8921	0	0.1118	-0.1118	-100.00
58	5022	PAULA DOFAI	Rewa/Mosquito Valley	81132128			5 mins					0	0	0	0.00
59	5023	TEASI SANGA	Rewa/Mosquito Valley	12A005247		by pass mitre illegal	5 mins	1830.751	2.4767	1830.887	2.6064	0.136	0.1297	0.0063	4.86
60	5027	ALLEN & JEAN GORDON	Rewa/Mosquito Valley	12B086767		1	5 mins					0	0	0	0.00
61	5028	ALICE MAETI	Rewa/Mosquito Valley	81140072			5 mins	4880.95	0.2948	4880.97	0.3955	0.02	0.1007	-0.0807	-80.14
62	5029	P C PARAFEA	Rewa/Mosquito Valley	S13A00526			5 mins	169.8526	0.1803	169.9602	0.287	0.1076	0.1067	0.0009	0.84
63	5030	ROY SADE	Rewa/Mosquito Valley	12A005470			5 mins	1268.809	0.1838	1268.917	0.2947	0.108	0.1089	-0.0009	-0.83
64	5031	DEXIES PUIA	Rewa/Mosquito Valley	759835			5 mins	692.544	0.2089	692.579	0.3763	0.035	0.0864	-0.0514	-59.49
65	05031-1	JOYCE SIOSI	Rewa/Mosquito Valley	99B149894		1	5 mins	7328.6844	0.3938	7328.9194	0.6523	0.235	0.2585	-0.0235	-8.38
66	5032	SUSIE WALEKWATE	Rewa/Mosquito Valley	S13A00394			5 mins	169.9206	0.6523	170.0469	0.779	0.1263	0.1267	-0.0004	-0.32
67	5033	GRACE KWANAIRARA	Rewa/Mosquito Valley	S13A00186			5 mins	208.3388	0.4996	208.4727	0.6334	0.1339	0.1338	0.0001	0.00
68	05033-1	FRED & PATRICIA KWANAIRARA	Rewa/Mosquito Valley	12A004896			5 mins	660.942	0.3763	661.082	0.4993	0.14	0.123	0.017	0.14
69	5034	JANET MARAU	Rewa/Mosquito Valley	12A0046616			5 mins	208.3388	0.4996	208.4727	0.6334	0.1339	0.1338	0.0001	0.07
70	5035	FAITH PALAPU	Rewa/Mosquito Valley	05A018399			5 mins	660.942	0.3763	661.082	0.4993	0.14	0.123	0.017	13.82
71	05035-1	ALLEN MAARIA	Rewa/Mosquito Valley	12B011165		1	5 mins	403.474	0.9549	403.634	1.1175	0.16	0.1626	-0.0026	-1.60
72	05035-2	Mrs. EMILY QOLONI	Rewa/Mosquito Valley	12B011162		1	5 mins	485.109	0.7793	485.281	0.9549	0.172	0.1756	-0.0036	-2.05
73	5036	ALISON O & NIGEL KWAIMANI	Rewa/Mosquito Valley	13B019799		1	5 mins	269.061	0.7851	269.197	0.9203	0.136	0.1352	0.0008	0.59
74	5037	MBOKONA PRIMARY SCHOOL	Rewa/Mosquito Valley	99B149763		1	5 mins	9059.23432	1.1142	9059.3312	1.2094	0.0968	0.0952	-0.00832	-8.74
75	05037-1	MBOKONA SECONDARY SCHOOL	Rewa/Mosquito Valley	07-001128		1	5 mins	2836.7596	1.385	2836.9695	1.6094	0.2099	0.2244	-0.0145	-6.46
76	5038	MBOKONA PRIMARY SCHOOL -STAFF HOUSE	Rewa/Mosquito Valley	81139957		Disco	5 mins					0	0	0	0.00
77	05038-01	ADVANCE CHRISTIAN SCHOOL	Rewa/Mosquito Valley	06A021694			5 mins	4020.016	1.6094	4020.082	1.6769	0.066	0.0675	-0.0015	-2.22
78	05038-1	WALTER LEO	Rewa/Mosquito Valley	9?52427			5 mins	6119.428	1.3128	6119.507	1.4199	0.079	0.1071	-0.0281	-26.24
79	05038-3	ANDREW LEO	Rewa/Mosquito Valley	12A004355			5 mins	310.311	1.2291	310.39	1.3089	0.079	0.0798	-0.0008	-1.00
80	05040-1	NICHOLAS BILIKI	Rewa/Mosquito Valley	99B141980		1	5 mins	3245.9277	1.3129	3245.9949	1.3817	0.0672	0.0688	-0.0016	-2.33
81	5041	COLLIN MIDOBATU	Rewa/Mosquito Valley	12A004488			5 mins	1156.389	1.0469	1155.6434	1.0917	-1.3456	0.0448	-1.3904	0.00
82	5042	F SIGIMANU	Rewa/Mosquito Valley	05AD18397		M/Stop	5 mins	10686.655	0.9518	10686.655	1.047	0	0.0952	-0.0952	-100.00
83	05042-1	SILVERIO WALE	Rewa/Mosquito Valley	09A000341			5 mins	3151.7854	1.1184	3151.8959	1.2277	0.1105	0.1093	0.0012	1.10
84	5053	Francis Billy Hilly	Ministers Ridge	13A000678	1		20	186.647	2.748	186.707	2.700	-0.048	0.060	0.108	4.00%
85	5047	JOHN MURIA - JUNIOR	Ministers Ridge	13A000680	1		20	1172.573	2.648	1172.634	2.766	0.118	0.061	-0.057	-2.06%
86	5048	PAUL DAOKALIA	Ministers Ridge	13A000676	1		20	121.358	2.700	121.405	2.748	0.048	0.047	0.001	-0.04%
87	5049	FRANCIS Cheka	Ministers Ridge	13A000795	1		20	40.064	2.884	40.126	2.946	0.062	0.062	0.000	0.00%
88	05057-2	JOE PORAWAI	Ministers Ridge	13A001035	1		20	468.004	2.799	468.067	2.864	0.065	0.063	0.002	-0.07%
															Average Errs -11.19 %

Change in Status of Connections (Customers, Users and Unconnection) 2 No.06 Tasahe A&B DMA with PRV

| No. | old Account No. | New Accounts | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

| No. | old Account No. | New Accounts | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

| No. | old Account No. | New Accounts | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

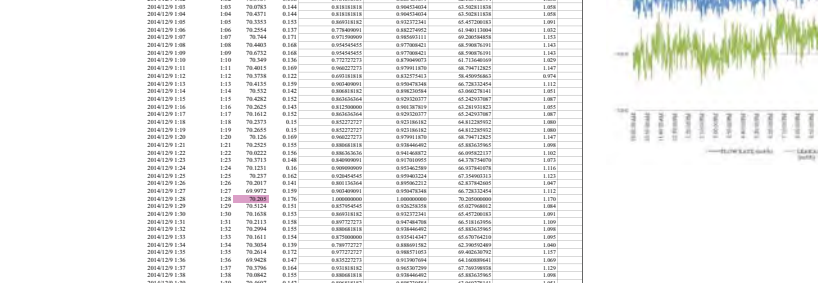
S64-158

MNF Measure Aftercountermeasure in Tasaha A & B (Without PRV)

Date at MNF	Time at MNF	MNF (m3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
#########	1:40	18.88	6.59	443.604

Distance(km) 6.00 km 3.14711458 m3/h/km

Date	Time	'VELOCITY	'FLOW RATE	Flow Rate	Water Pressure (kg/cm3)	Water Pressure/ Water Pressure at MNF	-"	Leakage Rate (m3/h)	Leakage Rate
		m/s	m^3/d	m^3/h [1]	(kg/cm2) [1]	[3]÷[2]/[8]	[4]-[3]1/2	[5]÷[4] x [7]	[6]÷[5]/60
2015/6/19 1:20	1:20:00	0.6	4554.3156	18.9298	6.572	0.9980	0.9990	18.8640	0.3144
2015/6/19 1:21	1:21:00	0.607	4593.3563	19.1398	6.575	0.9985	0.9992	18.8683	0.3145
2015/6/19 1:22	1:22:00	0.602	4553.0973	18.9624	6.578	0.9989	0.9995	18.8726	0.3145
2015/6/19 1:23	1:23:00	0.606	4585.5523	19.1063	6.571	0.9979	0.9989	18.8626	0.3144
2015/6/19 1:24	1:24:00	0.628	475.1037	19.7960	6.529	0.9915	0.9957	18.8022	0.3134
2015/6/19 1:25	1:25:00	0.62	468.6907	19.5288	6.566	0.9971	0.9986	18.8554	0.3143
2015/6/19 1:26	1:26:00	0.613	4639413	19.3309	6.572	0.9980	0.9990	18.8640	0.3144
2015/6/19 1:27	1:27:00	0.597	4514527	18.8105	6.58	0.9992	0.9996	18.8755	0.3146
2015/6/19 1:28	1:28:00	0.618	467.8986	19.4958	6.57	0.9977	0.9989	18.8612	0.3144
2015/6/19 1:29	1:29:00	0.608	459.9092	19.1629	6.572	0.9980	0.9990	18.8640	0.3144
2015/6/19 1:30	1:30:00	0.613	4634178	19.3091	6.577	0.9988	0.9994	18.8712	0.3145
2015/6/19 1:31	1:31:00	0.606	458.4692	19.1029	6.545	0.9939	0.9970	18.8252	0.3138
2015/6/19 1:32	1:32:00	0.619	467.9358	19.4973	6.539	0.9930	0.9965	18.8166	0.3136
2015/6/19 1:33	1:33:00	0.607	458.5542	19.1481	6.589	1.0006	1.0003	18.8884	0.3148
2015/6/19 1:34	1:34:00	0.614	464.7327	19.3639	6.569	0.9976	0.9988	18.8597	0.3143
2015/6/19 1:35	1:35:00	0.617	467.1206	19.4634	6.572	0.9980	0.9990	18.8640	0.3144
2015/6/19 1:36	1:36:00	0.605	457.3749	19.0573	6.59	1.0008	1.0004	18.8899	0.3148
2015/6/19 1:37	1:37:00	0.606	458.8529	19.1189	6.584	0.9998	0.9999	18.8813	0.3147
2015/6/19 1:38	1:38:00	0.609	460.4995	19.1875	6.585	1.0000	1.0000	18.8827	0.3147
2015/6/19 1:39	1:39:00	0.602	455.1234	18.9635	6.59	1.0008	1.0004	18.8899	0.3148
2015/6/19 1:40	1:40:00	0.599	453.1845	18.8827	6.585	1.0000	1.0000	18.8827	0.3147
2015/6/19 1:41	1:41:00	0.613	463.6286	19.3179	6.584	0.9998	0.9999	18.8813	0.3147
2015/6/19 1:42	1:42:00	0.604	4568100	19.0379	6.568	0.9974	0.9987	18.8583	0.3143
2015/6/19 1:43	1:43:00	0.611	461.9371	19.2474	6.59	1.0008	1.0004	18.8899	0.3148
2015/6/19 1:44	1:44:00	0.605	457.9611	19.0817	6.582	0.9995	0.9998	18.8784	0.3146
2015/6/19 1:45	1:45:00	0.61	461.7264	19.2440	6.584	0.9998	0.9999	18.8813	0.3147
2015/6/19 1:46	1:46:00	0.614	464.5551	19.3585	6.584	0.9998	0.9999	18.8813	0.3147
2015/6/19 1:47	1:47:00	0.615	4656303	19.4013	6.589	1.0006	1.0003	18.8884	0.3148
2015/6/19 1:48	1:48:00	0.6	4542156	18.9257	6.584	0.9998	0.9999	18.8813	0.3147
2015/6/19 1:49	1:49:00	0.605	457.4221	19.0593	6.578	0.9989	0.9995	18.8726	0.3145
2015/6/19 1:50	1:50:00	0.619	4683954	19.5165	6.582	0.9995	0.9998	18.8784	0.3146
2015/6/19 1:51	1:51:00	0.616	465.8877	19.4120	6.578	0.9989	0.9995	18.8726	0.3145
2015/6/19 1:52	1:52:00	0.608	459.7181	19.1549	6.595	1.0015	1.0008	18.8970	0.3150
2015/6/19 1:53	1:53:00	0.606	458.7577	19.1149	6.59	1.0008	1.0004	18.8899	0.3148
2015/6/19 1:54	1:54:00	0.606	458.6682	19.1112	6.588	1.0006	1.0003	18.8884	0.3148
2015/6/19 1:55	1:55:00	0.619	468.4774	19.5199	6.607	1.0033	1.0017	18.9142	0.3152
2015/6/19 1:56	1:56:00	0.607	459.1825	19.1326	6.62	1.0053	1.0027	18.9328	0.3155
2015/6/19 1:57	1:57:00	0.599	453.3182	18.8883	6.604	1.0029	1.0014	18.9099	0.3152
2015/6/19 1:58	1:58:00	0.603	456.4157	19.0173	6.596	1.0017	1.0008	18.8985	0.3150
2015/6/19 1:59	1:59:00	0.613	463.5619	19.3151	6.59	1.0008	1.0004	18.8899	0.3148
2015/6/19 2:00	2:00:00	0.604	457.1152	19.0465	6.59	1.0008	1.0004	18.8899	0.3148
2015/6/19 2:01	2:01:00	0.616	466.2565	19.4274	6.517	0.9897	0.9948	18.7849	0.3131

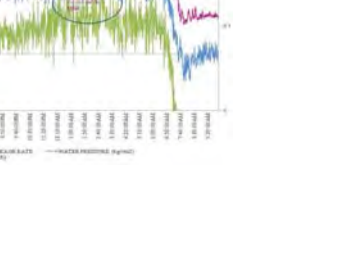


MNF Measure Before Countermeasure in Tasaha A & B DMA

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
9-Dec-14	1:28	70.205	0.176	1459.478

Distance 6.0 km 11.70683333 m^3/h/km

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE / (kn/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
	[1]		[2]	[3]÷[2]/[8]	[4]-[3]$^{1/2}$	[5]÷[4] x [7]	[6]÷[5]/60
2014/12/9 0:52	0:52	70.2207	0.156	0.886363636	0.941468872	66.09582237	1.102
2014/12/9 0:53	0:53	70.2094	0.157	0.892045455	0.944481580	66.30732369	1.105
2014/12/9 0:54	0:54	70.6669	0.171	0.9731590909	0.985693111	69.28054458	1.153
2014/12/9 0:55	0:55	70.268	0.189	1.073863636	1.036273926	72.75161023	1.213
2014/12/9 0:56	0:56	70.4155	0.161	0.9164772727	0.957407519	67.44606804	1.119
2014/12/9 0:57	0:57	70.648	0.16	0.9098969909	0.953462589	66.93784078	1.116
2014/12/9 0:58	0:58	70.7576	0.156	0.886363636	0.941468872	66.09582237	1.102
2014/12/9 0:59	0:59	70.4012	0.158	0.897727273	0.947484708	66.51816956	1.109
2014/12/9 1:00	1:00	70.6053	0.168	0.954545455	0.977068421	68.98676191	1.143
2014/12/9 1:01	1:01	70.3937	0.148	0.840909091	0.917010955	64.53675407	1.073
2014/12/9 1:02	1:02	70.5907	0.138	0.784090909	0.88548979	62.16074694	1.036
2014/12/9 1:03	1:03	70.0783	0.144	0.818181818	0.904534034	63.50281838	1.058
2014/12/9 1:04	1:04	70.4371	0.144	0.818181818	0.904534034	63.50281838	1.058
2014/12/9 1:05	1:05	70.5353	0.153	0.869318182	0.932372341	65.47720683	1.091
2014/12/9 1:06	1:06	70.2554	0.137	0.7784090911	0.882274952	61.94011304	1.032
2014/12/9 1:07	1:07	70.764	0.171	0.9731590909	0.985693111	69.28054458	1.153
2014/12/9 1:08	1:08	70.4403	0.168	0.954545455	0.977068421	68.59876191	1.143
2014/12/9 1:09	1:09	70.6732	0.168	0.954545455	0.977068421	68.59876191	1.143
2014/12/9 1:10	1:10	70.349	0.136	0.772727273	0.879969073	61.71364869	1.029
2014/12/9 1:11	1:11	70.4015	0.169	0.960227273	0.979911876	68.79471825	1.147
2014/12/9 1:12	1:12	70.3758	0.122	0.693181818	0.832575413	58.45695683	0.974
2014/12/9 1:13	1:13	70.4135	0.159	0.903409091	0.950473348	66.73833245	1.112
2014/12/9 1:14	1:14	70.552	0.142	0.806818182	0.898280584	63.0402784	1.051
2014/12/9 1:15	1:15	70.4282	0.152	0.863636364	0.929326377	65.24293787	1.087
2014/12/9 1:16	1:16	70.2625	0.141	0.8125000000	0.901387859	63.29319323	1.055
2014/12/9 1:17	1:17	70.1612	0.152	0.863636364	0.929326377	65.24293787	1.087
2014/12/9 1:18	1:18	70.2375	0.15	0.852272727	0.923186182	64.81228592	1.080
2014/12/9 1:19	1:19	70.2655	0.15	0.852272727	0.923186182	64.81228592	1.080
2014/12/9 1:20	1:20	70.126	0.169	0.960227273	0.979911876	68.79471825	1.147
2014/12/9 1:21	1:21	70.2525	0.155	0.880681818	0.938446492	65.88363965	1.098
2014/12/9 1:22	1:22	70.0222	0.156	0.886363636	0.941468872	66.09582237	1.102
2014/12/9 1:23	1:23	70.3713	0.148	0.840909091	0.917010955	64.53675407	1.073
2014/12/9 1:24	1:24	70.1251	0.16	0.9098969909	0.953462589	66.93784078	1.116
2014/12/9 1:25	1:25	70.257	0.162	0.920454545	0.959403224	67.35490313	1.123
2014/12/9 1:26	1:26	70.2817	0.141	0.801136364	0.895062212	62.83784205	1.047
2014/12/9 1:27	1:27	69.9972	0.159	0.9054809091	0.950473348	66.73833245	1.112
2014/12/9 1:28	1:28	70.205	0.176	1.000000000	1.000000000	70.20500000	1.170
2014/12/9 1:29	1:29	70.5124	0.151	0.859659545	0.926256359	65.02796861	1.084
2014/12/9 1:30	1:30	70.1638	0.153	0.869318182	0.932372341	65.47720683	1.091
2014/12/9 1:31	1:31	70.2131	0.158	0.897727273	0.947484708	66.51816956	1.109
2014/12/9 1:32	1:32	70.2994	0.155	0.880681818	0.938446492	65.88363965	1.098
2014/12/9 1:33	1:33	70.1611	0.154	0.875000000	0.935414347	65.67654210	1.095
2014/12/9 1:34	1:34	70.3054	0.139	0.789772727	0.888691582	62.39859489	1.040
2014/12/9 1:35	1:35	70.2614	0.172	0.977272727	0.988571053	69.46526792	1.157
2014/12/9 1:36	1:36	69.9428	0.147	0.835227273	0.915907694	64.1068896	1.069
2014/12/9 1:37	1:37	70.3796	0.164	0.931818182	0.965307299	67.76030858	1.129
2014/12/9 1:38	1:38	70.0864	0.155	0.880681818	0.938446492	65.88363965	1.098
2014/12/9 1:39	1:39	70.4607	0.142	0.806818182	0.898280584	63.0402784	1.051
2014/12/9 1:40	1:40	70.3989	0.155	0.880681818	0.938446492	65.88363965	1.098
2014/12/9 1:41	1:41	70.1064	0.168	0.954545455	0.977068421	68.59876191	1.143
2014/12/9 1:42	1:42	70.2224	0.155	0.880681818	0.938446492	65.88363965	1.098
2014/12/9 1:43	1:43	70.1314	0.136	0.772727273	0.879969073	61.71364869	1.029
2014/12/9 1:44	1:44	70.2357	0.131	0.744318182	0.862738768	60.56857208	1.009
2014/12/9 1:45	1:45	70.1379	0.174	0.988636364	0.994301948	69.80496254	1.163
2014/12/9 1:46	1:46	70.0212	0.157	0.892045455	0.944481580	66.30732369	1.105
2014/12/9 1:47	1:47	69.9762	0.156	0.886363636	0.941468872	66.09582237	1.102
2014/12/9 1:48	1:48	70.2952	0.167	0.948863636	0.974096318	68.38643092	1.140
2014/12/9 1:49	1:49	70.0575	0.157	0.892045455	0.944481580	66.30732369	1.105
2014/12/9 1:50	1:50	70.2165	0.168	0.954545455	0.977068421	68.59876191	1.143
2014/12/9 1:51	1:51	70.228	0.142	0.806818182	0.898280584	63.0402784	1.051
2014/12/9 1:52	1:52	69.972	0.155	0.880681818	0.938446492	65.88363965	1.098



MNF Measure Aftercountermeasure in Tasaha A & B (Without PRV)

Date at MNF	Time at MNF	MNF (m3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
#########	1:40	18.88	6.59	443.604

Distance(km) 6.00 km 3.14711458 m3/h/km

Date	Time	'VELOCITY	'FLOW RATE	Flow Rate	Water Pressure (kg/cm3)	Water Pressure/ Water Pressure at MNF	-"	Leakage Rate (m3/h)	Leakage Rate
		m/s	m^3/d	m^3/h [1]	(kg/cm2) [1]	[3]÷[2]/[8]	[4]-[3]1/2	[5]÷[4] x [7]	[6]÷[5]/60
2015/6/19 10:41	10:41:00	1.103	8345.5157	34.7715	6.117	0.9289	0.9638	18.1993	0.3033
2015/6/19 10:42	10:42:00	1.159	876.2404	36.5100	6.121	0.9295	0.9641	18.2053	0.3034
2015/6/19 10:43	10:43:00	1.18	892.4379	37.1849	6.138	0.9321	0.9655	18.2305	0.3038
2015/6/19 10:44	10:44:00	1.161	878.0823	36.5868	6.17	0.9370	0.9680	18.2780	0.3046
2015/6/19 10:45	10:45:00	1.105	835.7371	34.8224	6.151	0.9341	0.9665	18.2498	0.3042
2015/6/19 10:46	10:46:00	1.016	768.7129	32.0297	6.208	0.9427	0.9710	18.3342	0.3056
2015/6/19 10:47	10:47:00	1.083	819.2903	34.1371	6.154	0.9345	0.9667	18.2543	0.3042
2015/6/19 10:48	10:48:00	1.134	857.3377	35.7224	6.139	0.9323	0.9655	18.2320	0.3039
2015/6/19 10:49	10:49:00	1.055	797.6821	33.2368	6.145	0.9332	0.9660	18.2409	0.3040
2015/6/19 10:50	10:50:00	1.121	847.5689	35.3154	6.09	0.9248	0.9617	18.1591	0.3027
2015/6/19 10:51	10:51:00	1.116	844.3573	35.1816	6.102	0.9267	0.9626	18.1770	0.3029
2015/6/19 10:52	10:52:00	1.158	876.0603	36.5025	6.07	0.9218	0.9601	18.1293	0.3022
2015/6/19 10:53	10:53:00	1.185	896.2790	37.3400	5.932	0.9008	0.9491	17.9220	0.2987
2015/6/19 10:54	10:54:00	1.156	874.5559	36.4398	6.07	0.9218	0.9601	18.1293	0.3022
2015/6/19 10:55	10:55:00	1.153	872.1489	36.3395	6.109	0.9277	0.9632	18.1874	0.3031
2015/6/19 10:56	10:56:00	1.108	838.2467	34.9269	6.144	0.9330	0.9659	18.2394	0.3040
2015/6/19 10:57	10:57:00	1.12	846.9437	35.2893	6.181	0.9386	0.9688	18.2943	0.3049
2015/6/19 10:58	10:58:00	1.15	869.9880	36.2495	5.923	0.8995	0.9484	17.9084	0.2985
2015/6/19 10:59	10:59:00	1.18	892.1017	37.1709	5.956	0.9045	0.9510	17.9582	0.2993
2015/6/19 11:00	11:00:00	1.12	847.3945	35.3081	5.994	0.9103	0.9541	18.0154	0.3003
2015/6/19 11:01	11:01:00	1.15	869.4625	36.2276	6.099	0.9262	0.9624	18.1725	0.3029
2015/6/19 11:02	11:02:00	1.123	848.9999	35.3750	6.084	0.9239	0.9612	18.1502	0.3025
2015/6/19 11:03	11:03:00	1.116	843.8929	35.1622	6.072	0.9221	0.9603	18.1323	0.3022
2015/6/19 11:04	11:04:00	1.121	847.6816	35.3201	6.102	0.9267	0.9626	18.1770	0.3029
2015/6/19 11:05	11:05:00	1.103	8338385	34.7433	5.999	0.9110	0.9545	18.0229	0.3004
2015/6/19 11:06	11:06:00	1.18	8920447	37.1685	6.115	0.9286	0.9637	18.1963	0.3033
2015/6/19 11:07	11:07:00	1.147	867.4439	36.1435	6.053	0.9192	0.9588	18.1039	0.3017
2015/6/19 11:08	11:08:00	1.153	872.1562	36.3398	6.052	0.9191	0.9587	18.1024	0.3017
2015/6/19 11:09	11:09:00	1.165	880.7276	36.6970	6.069	0.9216	0.9600	18.1278	0.3021
2015/6/19 11:10	11:10:00	1.139	861.5747	35.8989	6.08	0.9233	0.9609	18.1442	0.3024
2015/6/19 11:11	11:11:00	1.124	8502968	35.4290	6.029	0.9156	0.9569	18.0679	0.3011
2015/6/19 11:12	11:12:00	1.209	914.1318	38.0888	6.042	0.9175	0.9579	18.0874	0.3015
2015/6/19 11:13	11:13:00	1.116	844.2975	35.1786	6.093	0.9253	0.9619	18.1636	0.3027
2015/6/19 11:14	11:14:00	1.138	8606788	35.8616	6.14	0.9324	0.9656	18.2335	0.3039
2015/6/19 11:15	11:15:00	1.119	846.3984	35.2666	6.029	0.9156	0.9569	18.0679	0.3011
								443.60426	7.3934043
				18.735854					

MNF Measure Before Countermeasure in Tasaha A & B DMA

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
9-Dec-14	1:28	70.205	0.176	1459.478

Distance 6.0 km 11.70683333 m^3/h/km

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE / (kn/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
	[1]		[2]	[3]÷[2]/[8]	[4]-[3]$^{1/2}$	[5]÷[4] x [7]	[6]÷[5]/60
2014/12/9 9:03	9:03	67.6651	0.054	0.306818182	0.553911709	38.88737159	0.648
2014/12/9 9:04	9:04	66.6377	0.063	0.357954545	0.598293026	42.06016919	0.700
2014/12/9 9:05	9:05	66.5126	0.079	0.448863636	0.669972862	47.03544405	0.784
2014/12/9 9:06	9:06	66.6553	0.056	0.318181818	0.564076075	39.60896833	0.660
2014/12/9 9:07	9:07	66.3809	0.075	0.426136364	0.652791210	45.82926886	0.764
2014/12/9 9:08	9:08	66.5568	0.061	0.346590909	0.588719720	41.33106765	0.689
2014/12/9 9:09	9:09	66.8055	0.076	0.431818182	0.65712741	46.13372259	0.769
2014/12/9 9:10	9:10	66.6117	0.065	0.369318182	0.607715544	42.04660732	0.711
2014/12/9 9:11	9:11	66.5139	0.074	0.420454545	0.648424664	45.52265367	0.759
2014/12/9 9:12	9:12	66.5837	0.082	0.465909091	0.682573337	47.58200346	0.799
2014/12/9 9:13	9:13	66.8469	0.066	0.375000000	0.612372416	42.99116848	0.717
2014/12/9 9:14	9:14	66.6468	0.07	0.397727273	0.630656224	44.27522698	0.738
2014/12/9 9:15	9:15	67.0601	0.059	0.335227273	0.578988146	40.64786761	0.677
2014/12/9 9:16	9:16	66.5984	0.071	0.403409091	0.635144937	44.59855297	0.743
2014/12/9 9:17	9:17	66.691	0.08	0.454545455	0.674199862	47.33220134	0.789
2014/12/9 9:18	9:18	67.0249	0.074	0.420454545	0.648424664	45.52265367	0.759
2014/12/9 9:19	9:19	66.6625	0.069	0.392045455	0.626133532	43.97833015	0.733
2014/12/9 9:20	9:20	66.8393	0.07	0.397727273	0.630656224	44.27522698	0.738
2014/12/9 9:21	9:21	66.615	0.066	0.349090991	0.583074288	40.99880781	0.683
2014/12/9 9:22	9:22	66.9172	0.068	0.386363636	0.621581561	43.63133455	0.727
2014/12/9 9:23	9:23	66.6586	0.061	0.346590909	0.588719720	41.33106765	0.689
2014/12/9 9:24	9:24	67.179	0.062	0.352272727	0.593525675	41.68647856	0.694
2014/12/9 9:25	9:25	66.6782	0.063	0.357954545	0.598293026	42.06016919	0.700
2014/12/9 9:26	9:26	66.9455	0.073	0.414772727	0.644028514	45.21402849	0.754
2014/12/9 9:27	9:27	66.7065	0.064	0.363636364	0.605025689	42.33207892	0.706
2014/12/9 9:28	9:28	67.2185	0.064	0.363636364	0.605025689	42.33207892	0.706
2014/12/9 9:29	9:29	67.4998	0.058	0.329545455	0.574060497	40.30191212	0.672
2014/12/9 9:30	9:30	67.1975	0.065	0.369318182	0.607715544	42.66460732	0.711
2014/12/9 9:31	9:31	67.0274	0.058	0.329545455	0.574060497	40.30191212	0.672
2014/12/9 9:32	9:32	66.8358	0.063	0.357954545	0.598293026	42.06016919	0.700
2014/12/9 9:33	9:33	66.9567	0.074	0.420454545	0.648424664	45.52265367	0.759
2014/12/9 9:34	9:34	66.6989	0.068	0.386363636	0.621581561	43.63133455	0.727
2014/12/9 9:35	9:35	66.8532	0.075	0.426136364	0.652791210	45.82926886	0.764
2014/12/9 9:36	9:36	66.6468	0.066	0.375000000	0.612372416	42.99116848	0.717
2014/12/9 9:37	9:37	66.7722	0.079	0.448863636	0.669972862	47.03544405	0.784
2014/12/9 9:38	9:38	66.7222	0.076	0.431818182	0.65712741	46.13372259	0.769
2014/12/9 9:39	9:39	66.6125	0.065	0.369318182	0.607715544	42.66460732	0.711
2014/12/9 9:40	9:40	66.6574	0.063	0.357954545	0.598293026	42.06016919	0.700
2014/12/9 9:41	9:41	66.4415	0.069	0.392045455	0.626133532	43.97833015	0.733
2014/12/9 9:42	9:42	66.5331	0.075	0.426136364	0.652791210	45.82926886	0.764
2014/12/9 9:43	9:43	67.0068	0.061	0.346590909	0.588719720	41.33106765	0.689
2014/12/9 9:44	9:44	66.8805	0.064	0.363636364	0.605025689	42.33207892	0.706
2014/12/9 9:45	9:45	66.4805	0.072	0.409090909	0.639602149	44.90326875	0.748
2014/12/9 9:46	9:46	66.4422	0.056	0.318181818	0.564076075	39.60896833	0.660
2014/12/9 9:47	9:47	66.5112	0.068	0.386363636	0.621581561	43.63133455	0.727
2014/12/9 9:48	9:48	67.0142	0.065	0.369318182	0.607715544	42.66460732	0.711
2014/12/9 9:49	9:49	67.0685	0.069	0.392045455	0.626133532	43.97833015	0.733
2014/12/9 9:50	9:50	66.5467	0.08	0.454545455	0.674199862	47.33220134	0.789
2014/12/9 9:51	9:51	67.3697	0.062	0.352272727	0.593525675	41.68647856	0.694
2014/12/9 9:52	9:52	66.6126	0.074	0.420454545	0.648424664	45.52265367	0.759
2014/12/9 9:53	9:53	66.753	0.072	0.409090909	0.639602149	44.90326875	0.748
2014/12/9 9:54	9:54	66.8217	0.077	0.437500000	0.661457828	46.43424288	0.774
2014/12/9 9:55	9:55	66.6495	0.063	0.357954545	0.598293026	42.06016919	0.700
2014/12/9 9:56	9:56	66.791	0.063	0.357954545	0.598293026	42.06016919	0.700
2014/12/9 9:57	9:57	66.9184	0.058	0.329545455	0.574060497	40.30191212	0.672
2014/12/9 9:58	9:58	66.5649	0.071	0.403409091	0.635144937	44.59855297	0.743
2014/12/9 9:59	9:59	66.5053	0.069	0.392045455	0.626133532	43.97833015	0.733
2014/12/9 10:00	10:00	66.5311	0.067	0.380681818	0.616994180	43.31607648	0.722
2015/2/11 10:30	10:30	260.1331	0.067	0.380681818	0.616994180	43.31607648	0.722
							1459.478
		1710.9806		71.29083653			

Estimated Leakage Rate (m^3/day)

NAME: TASAHE A & B **RE: 1.0**

Date: 22-12-2014

WATER METER INACCURACY TEST SHEET

NO:	ACCOUNT	CUSTOMER NAME	Meter ID	Condition of Meter	M/SIZE 15mm	M/SIZE 20mm	TIME (Min)	BEFORE COUNTERMEASURES Initial Reading Tested Meter	Initial Reading TR-III Meter	Final Reading Tested Meter	Final Reading TR-III Meter	Integrated Value Test Meter (litres)	Integrated Value TR-III Meter (litres)	Difference (litres)	Error (%)
								A	B	C	D	C-A = E	D - B = F	E-F = G	G/F
1		MICHAEL KOROA	14A001194		1		5 Min	0.027	0.3665	0.225	0.5653	0.198	0.1988	-0.0008	-0.40%
2	01073-72	EVANS MARU	12A005184		1		5 Min	506.091	0.5649	506.2	0.676	0.109	0.1111	-0.0021	-1.89%
3	01073-18	DUDDLEY FAKA	S13B00216			1	5 Min	227.4148	0.6778	227.6186	0.8831	0.2038	0.2053	-0.0015	-0.73%
4	01073-18.1	DENIS KASOAMAO	14A64905		1		5 Min	27.1739	0.8831	27.3643	1.0746	0.1904	0.1915	-0.0011	-0.57%
5	01073-38	DAVIES ARIKI	10A005362		1		5 Min	752.8364	1.0746	753.0244	1.1588	0.0027	0.0842	-0.0815	-96.79%
6		GAZA TUHAIKA	12A005157		1		5 Min	1040.545	1.1588	1040.678	1.2895	0.133	0.1307	0.0023	1.76%
7	01073-34.1	JAMES RANGI	13A000963		1		5 Min	676.025	1.2895	676.138	1.4097	0.113	0.1202	-0.0072	-5.99%
8	01073-34	JOEREX RAUKANIAU	10A005117		1		5 Min	1145.6564	1.4097	1145.7407	1.5075	0.0843	0.0978	-0.0135	-13.80%
9	01073-34.2	PHILIUS FATI	13B019632			1	5 Min	414.326	1.5075	414.532	1.6926	0.206	0.1851	0.0209	11.29%
10	01073-43	NILTON CHITE	11A000727				5 Min	979.087	19.8864	979.174	19.9758	0.087	0.0924	-0.0054	-5.84%
11	01073-35	MARTHA RAFE	S13A00565		1		5 Min	166.1911	1.6931	166.3715	1.8735	0.1804	0.1804	-8.21565E-15	0.00%
12	01073-15	AMBROSE SADE	13A000914		1		5 Min	2397.433	1.8736	2397.534	1.9802	0.101	0.1066	-0.0056	-5.25%
13	01042-04	Fredson Fenua	S13B00183			1	5 Min	72.9661	19.9707	73.2386	20.2436	0.2725	0.2729	-0.0004	-0.15%
14	01073-34.0	SIMON TARA	12B086462			1	5 Min	627.542	1.9808	627.701	2.145	0.159	0.1642	-0.0052	-3.17%
15	01049-9	SYLVESTER KABI	12A005421		1		5 Min	1384.268	2.145	1384.378	2.2656	0.11	0.1206	-0.0106	-8.79%
16	01049-7	FREDA OKU	13A001022		1		5 Min	1440.523	2.2777	1440.661	2.4025	0.138	0.1248	0.0132	10.58%
17	01073-20.0	DIVINE WAITI	13A000659		1		5 Min	468.746	2.4025	468.886	2.5452	0.14	0.1427	-0.0027	-1.89%
18	01050-3	JOB TIPAIKA	12A004693		1		5 Min	745.129	2.546	745.207	2.60234	0.078	0.05634	0.02166	38.45%
19	01073-58	SALOME KARIBULE	09B053478			1	5 Min	525.22	2.6234	525.319	2.7336	0.099	0.1102	-0.0112	-10.16%
20	01073-56	ALLAN SOTAM	09B053467				5 Min	662.806	2.7342	662.966	2.8974	0.16	0.1632	-0.0032	-1.96%
21	01073-32	WILSON FUTI	07-000269		1		5 Min	673.5837	2.8977	673.5837	3.0072	0	0.1095	-0.1095	-100.00%
22	02029-01	MICHAEL & ROSE MARIE SIKWA	12A006074		1		5 Min	141.422	3.0084	141.554	3.1332	0.132	0.1248	0.0072	5.77%
23	01073-20.1	DERICK SUIMAE	11A000787		1		5 Min	481.819	20.2436	481.88	20.2875	0.061	0.0439	0.0171	38.95%
24	01049-01	LAWRENCE KIFA	12B011107			1	5 Min	405.333	20.2886	405.65	20.6169	0.317	0.3283	-0.0113	-3.44%
25	01073-20	JOHN USURAMO	06B942176				5 Min	3043.09	20.6181	3043.23	20.7581	0.14	0.14	-1.27898E-13	0.00%
26	01073-27	LILY LOMULO	12A005193		1		5 Min	2127.42	20.7591	2127.568	20.9273	0.148	0.1682	-0.0202	-12.01%
27	01073-42	Wahon Lalao	11B091709		1		5 Min	833.83	20.9279	834.116	20.2207	0.286	-0.7072	0.9932	-140.44%
28	01074-15.1	PETER & PATRICIA SOQOIL/JOE S	S13B00049		1		5 Min	46.5164	21.2218	46.8414	21.5498	0.325	0.328	-0.003	-0.91%
29	01073-36	MARY TATE	S13A00009			1	5 Min	966.934	21.5511	967.003	21.6127	0.068	0.0626	0.0054	8.63%
30	01073-52	ALIKI HAAPIO	11B091733		1		5 Min	1828.325	21.6143	1828.325	21.9243	0	0.31	-0.31	-100.00%
31			12B011260		1		5 Min	799.58	21.9249	799.898	22.2499	0.318	0.325	-0.007	-2.15%
32	01073-07	MALACHI HOU	S13A00571		1		5 Min	435.0589	4.5627	435.2808	4.7836	0.2219	0.2209	0.001	0.45%
33	01073-8	PAUL MARITA	S13B00205		1		5 Min	180.6174	4.433	180.7475	4.5425	0.1301	0.1095	0.0206	18.81%
34	01073-25	JERRY MANELE	12A005411			1	5 Min	3845.345	3.3375	3845.452	3.4504	0.107	0.1129	-0.0059	-5.23%
35	01073-33	GEORGE KABWERE	12B086826		1		5 Min	386.651	3.1334	387.854	3.3375	1.203	0.2041	0.9989		
36	01073-40	JOHN MISI	11B091811		1		5 Min	2666.334	44.3548	2666.408	4.4324	0.074	-39.9224	39.9964	-100.19%
37	01073-45	JANET RUTH	11B091769		1		5 Min	1447.764	3.6365	1447.965	3.8345	0.201	0.198	0.003	1.52%
38	01073-45.1	WILFRED LOLOITO	12B011191			1	5 Min	233.831	3.4504	234.014	3.6364	0.183	0.186	-0.003	-1.61%
39	01073-47	GLEN TUATA	12A005172		1		5 Min	570.517	4.2039	570.665	4.3548	0.148	0.1509	-0.0029	-1.92%
40	01073-76	PATRICK KAMIS	12A005428		1		5 Min	1375.529	3.8353	1375.691	4.0018	0.162	0.1665	-0.0045	-2.70%
41	01074-11	TONY HOU	10B056022			1	5 Min	8.141	5.4162	8.147	5.4706	0.006	0.0544	-0.0484	-88.97%
42	01074-13	CLARENCE SAMANI	S13A00064		1		5 Min	998.4252	4.7838	998.5503	4.9085	0.1251	0.1247	0.0004	0.32%
43	01042-02	ANTHONY KITUA	13B113876			1	5 Min	867.197	4.9089	867.382	5.1034	0.185	0.1945	-0.0095	-4.88%
44	Unknown	NELSON	S13B00044			1	5 Min	721.8542	5.262	722.0078	5.4159	0.1536	0.1539	-0.0003	-0.19%
45	01073-19.0	LINCOLN KOINA	S13B00008			1	5 Min	65.6954	4.0025	65.7835	4.0894	0.0881	0.0869	0.0012	1.38%
46	02071-1	DAVIDSON KAEMANISI	S13A00399		1		5 Min	544.1479	5.1031	544.3049	5.2615	0.157	0.1584	-0.0014	-0.88%
47	01073-19.1	Cynthia Maetoloa	13B019484			1	5 Min	385.986	4.0911	386.097	4.2035	0.111	0.1124	-0.0014	-1.25%
48	01073-05.1	JOY FONA KIRIAU	12B010841			1	5 Min	246.731	5.4707	246.918	5.6625	0.187	0.1918	-0.0048	-2.50%
49	01100-8	VERONICA ANALAU	S13B00112			1	5 Min	145.1272	6.2382	145.2299	6.3422	0.1027	0.104	-0.0013	-1.25%
50	01100-43	WOLTON BEATO	13A001107		1		5 Min	1172.608	6.1713	1172.676	6.2381	0.068	0.0668	0.0012	1.80%
51	01146-02	IVERLYN DIUDI	13B019442			1	5 Min	325.239	5.9102	325.387	6.0556	0.142	0.1454	-0.0034	-2.34%
52	23106	MANASEH MAELANGA	12B086520				5 Min	1558.436	6.3425	1558.52	6.4264	0.084	0.0839	0.0001	0.12%
53	01100-44	LIONEL DAMOLA	07-000347		1		5 Min	4773.9109	6.0564	4774.0215	6.1708	0.1106	0.1144	-0.0038	-3.32%
54	01146-5	LUKE LEINGA	05B886110			1	5 Min	1694.163	6.4265	1694.323	6.5894	0.16	0.1629	-0.0029	-1.78%
55	01102-1	NGERE BELO'TIONGO (WAKU)	13A000721		1		5 Min	1323.297	5.6626	1323.376	5.7434	0.079	0.0808	-0.0018	-2.23%
56	01100-33	WILTON LAUFIU	13A000850		1		5 Min	427.75	5.7441	427.91	5.9096	0.16	0.1655	-0.0055	-3.32%
57	01146-01	HARVEST MIABULE	12A004690			1	5 Min	1314.768	7.0285	1314.851	7.1132	0.083	0.0847	-0.0017	-2.01%
58	01146-4	LABAN NGENA	S13A00135			1	5 Min	358.8755	6.6749	358.988	6.7886	0.1125	0.1137	-0.0012	-1.06%
59	01146-04	DR. GEORGE MALEFOASI	13A000611			1	5 Min	381.017	7.3913	381.119	381.119	0.102	373.7277	-373.6257	-99.97%
60	01146-8	RODNEY ROTEPITU	10A005140			1	5 Min	791.4	7.1872	791.4568	7.2456	0.0568	0.0584	-0.0016	-2.74%
61	01146-10	JUDITH FANGALASAU	13A000848			1	5 Min	321.1272	7.3089	321.19	7.4189	0.081	0.11	-0.0009	-1.10%
62	01146-11	AKAO WILFRED	12A005058			1	5 Min	903.781	7.2457	903.843	7.3091	0.062	0.0634	-0.0014	-2.21%
63	01146-12	SILVA DUNGE-HOUSE # 3	10A005229		1		5 Min	1318.0952	7.4955	1318.178	7.5803	0.0828	0.0848	-0.002	-2.36%
64	01146-13	MINISTRY OF PUBLIC SERVICE	12B011013			1	5 Min	726.782	6.8467	726.868	6.9334	0.086	0.0867	-0.0007	-0.81%
65	01146-13.1	BENARD TELEI	12B086406			1	5 Min	978.059	6.7891	978.116	6.8461	0.057	0.057	1.68754E-14	0.00%
66	01146-15	ALLAN DAONGA - HOUSE # 4	011A00528		1		5 Min	1078.9603	7.6879	1079.6568	7.744	0.0965	0.0961	0.0004	0.42%
67	01146-15.1	HON. MANASSEH MAELANGA	10A005227		1		5 Min	2921.1325	8.2971	2921.1959	8.3614	0.0634	0.0643	-0.0009	-1.40%
68	01146-17	IMELDA FINA	12A005081		1		5 Min	613.256	6.9338	613.35	7.0284	0.094	0.0946	-0.0006	-0.63%
69	01146-18	ISHMAEL KARI	12A005125			1	5 Min	663.397	8.0507	663.49	8.1424	0.093	0.0917	0.0013	1.42%
70	01146-19	ESTHER LELAPITU	12A004749		1		5 Min	858.507	7.5808	858.613	7.6873	0.106	0.1065	-0.0005	-0.47%
71	01146-21	MILTON WATE	12B086558		1		5 Min	869.302	8.2076	869.392	8.2969	0.09	0.0893	0.0007	-10.41%
72	01146-8.1	FRED & BETHLYN WAREREAU	14A644654			1	5 Min	19.7899	7.1132	19.8634	7.1866	0.0735	0.0734	1E-04	0.14%
73	01075-10	LEDI RIIMANA/Titus Samu	12B086738		1		5 Min	415.588	6.59	415.673	6.6745	0.085	0.0845	0.0005	0.59%
74	01146-2	DERECK KOLLY	11B091711		1		5 Min	1654.654	8.145	1655.721	8.2071	1.067	0.0621	1.0049	
75	01146-02	Leos Bava	11B091752		1		5 Min	1024.752	7.7852	1024.825	7.8549	0.073	0.0695	0.0035	5.04%
76		Kitchina	10B056012				5 Min	2184.14	7.8555	2184.313	8.0486	0.173	0.1931	-0.0221	-11.44%
77	1147	Alfred Ken	11A000599		1		5 Min	1032.942	8.3618	1032.998	8.418	0.056	0.0562	-0.0002	-0.36%
78	01073-77	STEVE SELOMANI	S13A00094		1		5 Min	197.6341	8.8835	197.7147	8.964	0.0806	0.0805	0.0001	0.12%
79	01100-58	DONALD MAUISAE	12A004754		1		5 Min	1142.597	8.782	1142.689	8.745	0.092	-0.037	0.129	
80	01073-21	NELSON TARIFIU	14A644896			1	5 Min	248.1451	8.715	248.199	8.7811	0.0539	0.0463	-0.0004	-0.86%
81	01071-1	GIDDINGS QIQO	11A000675		1		5 Min	1765.636	8.4192	1765.727	8.5144	0.091	0.0952	-0.0042	-4.41%
82	01073-9	PETER WALELOKA	05A018595		1		5 Min	1421.504	8.6506	1421.563	8.709	0.059	0.0584	0.0006	1.03%
83	01074-17	JOHN BATA	12B011047			1	5 Min	432.203	8.5752	432.271	8.6504	0.068	0.0752	-0.0072	-9.57%
84	1161	ELISHA KAITU'U/ SIMON TARIFU	09A00246		1		5 Min	1401.1128	8.5158	1401.1695	8.575	0.0567	0.0592	-0.0025	-4.22%
85	01073-06	Dante Toifasouda	06B940498	Mtr Stop			5 Min			0	0	0	0	0	
86	01074-9	BAI ANIMAMU	13B019451		1		5 Min	616.034	9.7762	616.099	9.8389	0.065	0.0627	0.0023	3.67%
87	01074-1	GEORGE & MINNIE KIRIAU	9246178	F/METER	1		5 Min	4967.3999	9.6024	4967.3999	9.6917	0	0.0893	-0.0893	-100.00%
88	01074-01	DR AYODEJI ADEMOLA	S13B00243		1		5 Min	390.7793	9.6922	390.8632	9.7759	0.0839	0.0837	0.0002	0.24%
89	01074-2	ALDRIN FOSALA	S13A00531		1		5 Min	221.562	9.8397	221.613	9.8899	0.051	0.0502	0.0008	1.59%
90	01074-07	EDWARD MANEDIKA	07-000415		1		5 Min	3806.4654	9.3839	3806.5709	9.5581	0.1055	0.1192	-0.0137	-11.49%
91	01075-8	LEBANI ELOPITU	09A000196		1		5 Min	568.9496	9.2457	569.084	9.3838	0.1344	0.1381	-0.0037	-2.68%
92	01075-9	DELMAY SHEETO	09A000202		1		5 Min	2626.3772	9.1125	2626.505	9.2456	0.1278	0.1331	-0.0053	-3.98%
93	01147-2	SUWONO	12B086579		1		5 Min	1079.898	8.9645	1080.044	9.111	0.146	0.1465	-0.0005	-0.34%
94	01058-03	HENRY BILLY	06B940553	F/METER	1		5 Min	490.443	9.5042	490.443	9.6022	0	0.098	-0.098	-100.00%
95		Charles Tungo	S13B00318		1		5 Min	460.5335	9.8901	460.5744	9.9302	0.0409	0.0401	0.0008	2.00%
96	01013-1	ALICK KAKASI	14A645226		1		5 Min	100.6676	10.2508	100.8273	10.4101	0.1597	0.1593	0.0004	0.25%
97	01146-16	MYONNIE SAMANI	12A004747		1		5 Min	1203.275	10.1034	1203.419	10.249	0.144	0.1456	-0.0016	-1.10%
98	01074-16	DICK STANLEY	12B011280		1					0	0	0	0	0	
99	01146-6	Solomon Telekom	09B053554		1		5 Mins	100.483	9.9305	100.645	10.1045	0.162	0.174	-0.012	-6.90%

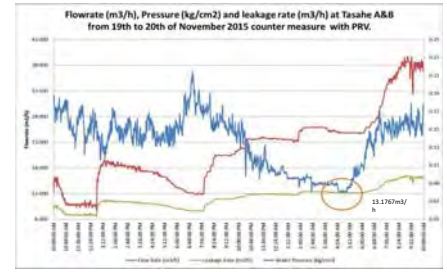
S64-1-59

MNF Measure Aftercountermeasure in Tasahe A & B (with PRV)

Date at MNF	Time at MNF	MNF (m3/h) [7]	Water Pressure at MNF (kg/cm²) [8]	Assumed Daily Leakage (m³/day)
20-Nov-15	4:34	13.177	0.15	291.226

Distance (km) 6 km 2.196116667 m3/h/km

Date	Time	VELOCITY m/s	FLOW RATE m³/h	Flow Rate (m³/h) [1]	Water Pressure Mbar	Water Pressure (kg/cm²) [2]	Water Pressure/ Water Pressure at MNF [3]=[2]/[8]	- [4]=[3]^-2	Leakage Rate (m³/h) [5]=[4] x [7]	Leakage Rate m³/min [6]=[5]/60
2015/11/20 4:14	4:14:00	0.63	14.744	14.744	149	0.15	1.01361	1.00678	13.26603	0.22110
2015/11/20 4:15	4:15:00	0.62	14.648	14.648	148	0.15	1.00680	1.00340	13.22144	0.22036
2015/11/20 4:16	4:16:00	0.62	14.694	14.694	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:17	4:17:00	0.66	14.733	14.733	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:18	4:18:00	0.61	14.927	14.927	148	0.15	1.00680	1.00340	13.22144	0.22036
2015/11/20 4:19	4:19:00	0.62	15.109	15.109	148	0.15	1.00680	1.00340	13.22144	0.22036
2015/11/20 4:20	4:20:00	0.60	14.795	14.795	148	0.15	1.00680	1.00340	13.22144	0.22036
2015/11/20 4:21	4:21:00	0.62	14.690	14.690	148	0.15	1.00680	1.00340	13.22144	0.22036
2015/11/20 4:22	4:22:00	0.64	14.785	14.785	148	0.15	1.00680	1.00340	13.22144	0.22036
2015/11/20 4:23	4:23:00	0.62	14.655	14.655	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:24	4:24:00	0.63	15.027	15.027	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:25	4:25:00	0.65	14.616	14.616	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:26	4:26:00	0.61	14.516	14.516	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:27	4:27:00	0.62	14.930	14.930	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:28	4:28:00	0.63	13.673	13.673	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:29	4:29:00	0.60	13.435	13.435	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:30	4:30:00	0.64	13.360	13.360	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:31	4:31:00	0.64	13.334	13.334	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:32	4:32:00	0.66	13.244	13.244	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:33	4:33:00	0.72	13.328	13.328	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:34	4:34:00	0.65	13.177	13.177	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:35	4:35:00	0.67	13.325	13.325	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:36	4:36:00	0.68	13.268	13.268	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:37	4:37:00	0.66	13.393	13.393	147	0.15	1.00000	1.00000	13.17670	0.21961
2015/11/20 4:38	4:38:00	0.70	13.346	13.346	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:39	4:39:00	0.66	13.538	13.538	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:40	4:40:00	0.68	13.508	13.508	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:41	4:41:00	0.68	13.407	13.407	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:42	4:42:00	0.69	13.321	13.321	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:43	4:43:00	0.72	13.446	13.446	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:44	4:44:00	0.66	13.235	13.235	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:45	4:45:00	0.67	13.271	13.271	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:46	4:46:00	0.72	13.218	13.218	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:47	4:47:00	0.69	13.540	13.540	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:48	4:48:00	0.70	13.397	13.397	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:49	4:49:00	0.65	13.522	13.522	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:50	4:50:00	0.61	13.167	13.167	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:51	4:51:00	0.68	13.477	13.477	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:52	4:52:00	0.76	13.463	13.463	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:53	4:53:00	0.67	13.509	13.509	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:54	4:54:00	0.68	13.529	13.529	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:55	4:55:00	0.68	13.518	13.518	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:56	4:56:00	0.66	13.457	13.457	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:57	4:57:00	0.70	13.352	13.352	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:58	4:58:00	0.66	13.192	13.192	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 4:59	4:59:00	0.65	13.231	13.231	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:00	5:00:00	0.68	13.255	13.255	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:01	5:01:00	0.70	13.145	13.145	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:02	5:02:00	0.66	13.552	13.552	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:03	5:03:00	0.63	14.084	14.084	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:04	5:04:00	0.69	14.245	14.245	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:05	5:05:00	0.69	13.994	13.994	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:06	5:06:00	0.66	13.882	13.882	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:07	5:07:00	0.70	14.101	14.101	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:08	5:08:00	0.75	14.201	14.201	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:09	5:09:00	0.73	14.354	14.354	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:10	5:10:00	0.77	14.346	14.346	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:11	5:11:00	0.78	14.218	14.218	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:12	5:12:00	0.74	14.396	14.396	146	0.15	0.99320	0.99659	13.13180	0.21886
2015/11/20 5:13	5:13:00	0.80	14.403	14.403	146	0.15	0.99320	0.99659	13.13180	0.21886



MNF Measure Aftercountermeasure in Tasahe A & B (with PRV)

Date at MNF	Time at MNF	MNF (m3/h) [7]	Water Pressure at MNF (kg/cm²) [8]	Assumed Daily Leakage (m³/day)
20-Nov-15	4:34	13.177	0.15	291.226

Distance (km) 6 km 2.196116667 m3/h/km

Date	Time	VELOCITY m/s	FLOW RATE m³/h	Flow Rate (m³/h) [1]	Water Pressure Mbar	Water Pressure (kg/cm²) [2]	Water Pressure/ Water Pressure at MNF [3]=[2]/[8]	- [4]=[3]^-2	Leakage Rate (m³/h) [5]=[4] x [7]	Leakage Rate m³/min [6]=[5]/60
2015/11/20 9:04	9:04:00	1.12	25.727	25.727	225	0.23	1.53061	1.23718	16.30194	0.27170
2015/11/20 9:05	9:05:00	1.05	25.300	25.300	225	0.23	1.53061	1.23718	16.30194	0.27170
2015/11/20 9:06	9:06:00	1.03	24.890	24.890	225	0.23	1.53061	1.23718	16.30194	0.27170
2015/11/20 9:07	9:07:00	1.14	24.254	24.254	225	0.23	1.53061	1.23718	16.30194	0.27170
2015/11/20 9:08	9:08:00	1.13	24.760	24.760	207	0.21	1.40816	1.18866	15.63822	0.26060
2015/11/20 9:09	9:09:00	1.12	25.734	25.734	213	0.21	1.44898	1.20374	15.84126	0.26402
2015/11/20 9:10	9:10:00	1.11	28.312	28.312	216	0.22	1.46939	1.21218	15.97257	0.26621
2015/11/20 9:11	9:11:00	1.10	26.792	26.792	220	0

91	01075-9	11001225	Delmay Sheeto	Tasahe A	09A000202												
92	01146-13	11001335	Ministry of Public Service	Tasahe A	12B011013												
93	01146-13.1	11001336	Berand Telei	Tasahe A	12B086406												
94	01146-14	11001337	Gordon Konairamo	Tasahe A	14A000982												
95	01146-16	11001341	Myonnie Samani	Tasahe A	12A004747												
96	01146-17	11001342	Imelda Fina	Tasahe A	12A005081												
97	01146-12	11001334	Silva Dunge-Hill 3	Tasahe A	10A005229												
98	01146-15	11001338	Allan Daonga H # 4	Tasahe A	10A005228												
99	01146-19	11001344	Esther Lelapitu	Tasahe A	12A004749												
100	01146-21	11001347	Milton Wate	Tasahe A	12B086558												
101	1147	11001355	Alfred Ken	Tasahe A	11A000599												
102	01146-02.1	11001328	Joyce Saemala	Tasahe A	14A001332												
103	01146-15.2	11001340	Clement Marigeni	Tasahe A	14A001313												
104			Kitchina	Tasahe A	14A645072												
105	01146-20	11001346	Iverlyn Diudi	Tasahe A	13B019442												
106	01073-76	11001196	Patrick Kamis	Tasahe B	12A005428												
107	01073-58	11001189	Salome Karibule	Tasahe B	14B056418												
108	2029	12001098	Cierra Qila C/Fostina	Tasahe B	14A056318												
109			Stanley Wale	Tasahe B	14B056334												
110	01013-1	11001041	Alick Kakasi	Tasahe B	14A645226												
111	01073-010	11001138	Jeneth Atiropo	Tasahe A	14B056190												
112	01073-7	11001191	Bevilylee Atolo	Tasahe A	14B056189												
113	01073-05	11001139	Leslie Ata	Tasahe A	06A021700												
114	01073-11	11001145	Issach Fanasia	Tasahe A	14A001138												
115	01074-17	11001214	John Bata	Tasahe B	14B056177												
116	01073-9	11001199	Peter Waleloka	Tasahe B	14B056179												
117	01073-21	11001159	Nelson Tarifiu	Tasahe A	14A001343												
118	110055-7	19001374	Lilian Pitisopa Siau	Tasahe A	14A001218												
119	01100-32	11001264	David Iro	Tasahe A	14B056220												
120	1161	11001370	Siomon Tarifiu/Elisha Kaitu`u	Tasahe A/Laundry Va	14B056221												
121	01074-5	11001217	Obeta Tioti	Tasahe A	S13A00390												
122	01073-25	11001161	Jerry Manele	Tasahe B	14A001134												
123	01073-33	11001166	George Kabwere	Tasahe B	14B056188												
124	01075-7	11001233	Steve Teho	Tasahe A	14B056229												
125			Alice Gabe	Tasahe B/Independer	14B056227												
126	01073-41	11001176	Allen Fakatonu	Tasahe B	14B056231												
127	1050	11001105	Jenifer Raravo	Tasahe B/Independer	14A645229												
128	1051	11001108	Paul Sauku	Tasahe B/Independer	14A001418												
129	01048-2	11001095	Jimmy Robin	Tasahe B/Independer	14A645099												
130	01049-02	11001098	Ronald Laufiu	Tasahe B/Independer	14B056257												
131	01071-1	11001133	Giddings Qiqo	Tasahe A/Laundry Va	14B056228												
132	01075-10	11001222	Ladi Riimana	Tasahe A	12B086738												
133	01100-7	11001284	Derick Sammuel	Tasahe A	14B056230												
134	01074-30	11001216	Danny Morison Dau	Tasahe A	14A001124												
135			Ladi Riimana	Tasahe A	14B056184												
136			Suwono	Tasahe A	12B086579												
137				Tasahe A	13A000849												

S64-L-60

NAME: TASAHE A & B **RE: 1.0**

Date: 21-04-2015

WATER METER INACCURACY TEST SHEET

NO:	ACCOUNT	NEW ACCOUNT	CUSTOMER NAME	LOCATION	NEW METER ID	M/SIZE		TIME (Min)	AFTER COUNTERMEASURES							
						15mm	20mm		Initial Reading		Final Reading		Integrated Value		Difference (litres)	Error (%)
									Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	TR-III Meter (litres)		
									A	B	C	D	C-A = E	D - B = F	E-F = G	G/F
1	01146-2	11001345	Derick Kolly	Tasahe A	14B056202											
2	1073.6	11001190	Billy Keni	Tasahe A	14A001486											
3	01074-5	11001217	Obeta Tioti	Tasahe A	S13A00390											
4	01146-15.1	11001339	Hon Mannaseh Maelanga	Tasahe A	10A005227											
5	01146-18	11001343	Ismael Kari	Tasahe A	12A005125											
6	01146-04	11001329	Dr George Malefoasi	Tasahe A	13A000611											
7	01146-10	11001331	Judith Fangalasuu	Tasahe A	13A000848											
8	01146-11	11001333	Akao Wilfred	Tasahe A	12A005058											
9	01146-7	11001352	George Iro Faadau	Tasahe A	14A000987											
10	01146-8	11001353	Rodney Rotepitu	Tasahe A	10A005140											
11	01146-8.1	11001354	Fred & B.Warereau	Tasahe A	14A644654											
12	01146-01	11001326	Harvest Miabule	Tasahe A	14A001487											
13	01146-02	11001327	Leo Sipava	Tasahe A	11B091752											
14	01146-5	11001350	Luke Leinga	Tasahe A	05B886110											
15	01146-6	11001351	Solomon Telekom	Tasahe A	09B053554											
16	23106	26001065	Hon Mannaseh Maelanga	Tasahe A	12B086520											
17	01100-48	11001272	Abraham Luiramo	Tasahe A	S13B00363											
18	01100-8	11001285	Veronica Analau	Tasahe A	S13B00112											
19	01146-4	11001349	Leban Ngena	Tasahe A	S13A00135	15 mm		5 mins	563.0251	24.7907	563.4448	25.2126				
20	01073-73	11001193	Veronica Nilang	Tasahe A	14B056323		20 mm	5 mins	263.255	24.5444	263.5	24.7905				
21	01100-43	11001288	Walton Beato	Tasahe A	13A001107											
22	01100-44	11001269	Lionel Damola	Tasahe A	14A000984											
23	01073-05.1	11001140	Joy Fona Kiriau	Tasahe A	12B010841											
24	01073-07	11001142	Malachi Hou	Tasahe B	S13A00571											
25	02071-10	12001155	Delson Caleb	Tasahe B	S13B00044											
26	01073-40	11001175	John Misi	Tasahe B	14B056266											
27	01074-12	11001209	Andrew Kopenao	Tasahe B	14A645067											
28	0104-13	11001210	Clearance Samani	Tasahe B	S13A00064											
29	01100-19	11001260	John Taunani	Tasahe A	14A000988											
30	01100-33	11001265	Wilton Laufiu	Tasahe B	13A000850											
31	01102-1	11001290	Ngere Belo/Tiongo (Waku)	Tasahe A	13A000721											
32	01073-08	11001143	Bethy Kuma	Tasahe B	S13A00152											
33	01073-19	11001151	Hansel Saeni	Tasahe B	14B056265											
34	01073-19.0	11001152	Lincon Koina	Tasahe B	S13B00008											
35	01073-19.1	11001153	Cynthia Maetoloa	Tasahe B	13B019484											
36	01073-47	11001183	Glen Tuata	Tasahe B	12A005172											
37	01073-8	11001198	Paul Marita	Tasahe B	14A645065											
38	01073-45	11001181	Janet Ruth	Tasahe B	14B056263											
39	01073-45.1	11001182	Wilfred Loloito	Tasahe B	12B011191											
40	01073-27	11001162	Lily Lomulo	Tasahe B	14A001326											

NAME: TASAHE A & B **RE: 1.0**

Date: 01-5-2015

WATER METER INACCURACY TEST SHEET

NO:	ACCOUNT	NEW ACCOUNT	CUSTOMER NAME	LOCATION	NEW METER ID	M/SIZE		TIME (Min)	AFTER COUNTERMEASURES							
						15mm	20mm		Initial Reading		Final Reading		Integrated Value		Difference (litres)	Error (%)
									Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	TR-III Meter (litres)		
									A	B	C	D	C-A = E	D - B = F	E-F = G	G/F
1		11001641	Fredson A Fenua	Tasahe B	14B056332		20 mm	5 mins	15.12	23.458	15.501	23.8239	0.381	0.3659	0.0151	4.13%
2	01073-34.0	11001168	Simon Tara	Tasahe B	14B056336		20 mm	5 mins	26.224	23.8242	26.645	24.2526	0.421	0.4284	-0.0074	-1.73%
3	01074-3	11001650	Hon. Ishmael Avui	Tashe B	14A001140	15 mm		5 mins	237.628	24.2533	237.91	24.5424	0.282	0.2891	-0.0071	-2.46%
4	01073-73	11001193	Veronica Nilang	Tasahe A	14B056323		20 mm	5 mins	263.255	24.5444	263.5	24.7905	0.245	0.2461	-0.0011	-0.45%
5	01146-4	11001349	Leban Ngena	Tasahe A	S13A00135	15 mm		5 mins	563.0251	24.7907	563.4448	25.2126	0.4197	0.4219	-0.0022	-0.52%
6																
7																
8																
													average			-0.20%

41	01073-42	11001177	Wahon Lalao	Tasahe B	14B056264												
42	01074-15.1	11001211	Peter & Patricia Soqoil	Tasahe B	S13B00049												
43	01050-3	11001107	Job Tipaika	Tasahe B	12A004693												
44	01073-14	11001146	Wilson Sanga	Tasahe B	14B056262												
45	01073-54	11001186	Francis Lomo	Tasahe B	14A645069												
46	01073-56	11001187	Allen Soliam	Tasahe B	14B056283												
47	01073-57	11001188	Alfred Soaki	Tasahe B	14A000986												
48	02029-01	12001099	Michael & Rose May Sikwaae	Tashe B	14A001325												
49	01073-32	11001165	Wilson Futi	Tashe B	14A000985												
50	01074-16	11001212	Dick Stanley	Tashe B	14B056284												
51		11001667	Stephen Dalipada	Tashe B	14B056317												
52	01074-3	11001650	Hon. Ishmael Avui	Tashe B	14A001140	15 m		5 mins	237.628	24.2533	237.910	24.5424					
53	01073-36	11001172	Mary Tate	Tashe B	14A001137												
54	01049-9	11001104	Sylvester Kabi	Tasahe B	14A001324												
55	01073-20	11001155	John Usuramo	Tasahe B	14B056285												
56	01073-44.0	11001180	Michael Koroa C/of Job Tokisiaki	Tasahe B	14A001194												
57	01073-34.0	11001168	Simon Tara	Tasahe B	14B056336		20 mm	5 mins	26.224	23.8242	26.645	24.2526					
58	01073-34.1	11001169	James Rangi	Tasahe B	14B056333												
59	01073-34	11001167	Joerex Raukaniau	Tasahe B	14B056282												
60	01073-19	11001157	Derick Suimae	Tasahe B	14A056286												
61	01073-35	11001171	Martha Rafe	Tasahe B	S13A00565												
62		11001641	Fredson A Fenua	Tasahe B	14B056332		20 mm	5 mins	15.12	23.458	15.501	23.8239					
63	01042-02	11001083	Anthony Kitua	Tasahe B	14B056335												
64	01073-18	11001148	Daddley Faka	Tasahe B	S13B00216												
65	01073-72	11001192	Evans Maru	Tasahe B	12A005184												
66	01073-18.2	11001150	Paul Kopuru	Tasahe B	14A645196												
67	01073-18.1	11001149	Denies Kasoamao	Tasahe B	14A644905												
68	01073-38	11001173	Davies Ariki	Tasahe B	14A001328												
69	01073-75	11001195	David Tuhaika	Tasahe B	14B056180												
70	01073-74	11001194	Nancy Gordon	Tasahe B	14B056178												
71	01073-15	11001147	Ambrose Sade	Tasahe B	14A001215												
72	01073-34.2	11001170	Philip Tati	Tasahe B	14B056181												
73	01074-08	11001644	Silas Foriofi/C/Janet Selevale	Tasahe B	14B056192												
74	01100-24	11001262	Rose Sae	Tasahe A	14A001136												
75		11001656	Theresa Toiha`a	Tasahe A	14B056322												
76	01073-77	11001197	Steve Selomani	Tasahe A	S13A00094												
77	01073-5	11001184	Paul Maesilia	Tasahe A	14A645070												
78	01042-04	11001085	Fredson Fenua	Tasahe B	S13B00185												
79	01073-52	11001185	Aliki Ha`apio	Tasahe B	11B091733												
80	01073-20.0	11001156	Divine Waiti	Tasahe B	13A000659												
81	01100-58	11001279	Donal Mausae	Tasahe A	12A004754												
82			Gaza Tuhaika	Tasahe A	12A005157												
83	01049-01	11001097	Lorence Kiva	Tasahe B	14A001327												
84	01058-03	11001115	Henry Billy	Tasahe A	14B056401												
85	01074-01	11001201	Dr Ayodegi Ademela	Tasahe A	S13B00243												
86	01074-1	11001207	George & Mini Kiriau	Tasahe A	14B056196												
87	01074-2	11001215	Andrian Fosala	Tasahe A	S13A00531												
88	01074-9	11001220	Bai Animamu	Tasahe A	13B019451												
89	01074-07	11001206	Edward Manedika	Tasahe A	14A001488												
90	01075-8	11001224	Lebani Elopiitu	Tasahe A	09A000196												

Change in Status of Connections (Customers, Users and Unconnection)　　3 No.17　West Kola Ridge A DMA

S64-1-161

No.	Account No.	New Account	Account Name	Location	Before Countermeasures: Registered Meter	Registered D/L	Non-Regist./Illegal Direct	Non-Regist./Illegal Indirect	Un-Connect.	Consumer Type Dom.	Consumer Type Com.	Consumer Type ?	Meter ID Number	Meter 15	Meter 20	Meter 32	Meter 40	Meter 50	Meter ?	Service Pipe End Closed	Service Pipe End Open	If open, m3/day	Meter Reading (m3) 2015/2/10	Meter Reading (m3) 2015/2/11	Meter Reading (m3) Consumption	After Countermeasures: New/Re Regist.	Legalized	Disconnection Illegal	Disconnection Registered	Un-Connect.	Meter Raising No-Change	Meter Raising Replace	Meter Raising New	Consumer Type Dom.	Consumer Type Com.	Consumer Type ?	Meter ID Number	Meter (m3 unit) 15	Meter (m3 unit) 20	Meter (m3 unit) 32	Meter (m3 unit) 40	Meter (m3 unit) 50	Meter (m3 unit) ?	Meter Reading (m3) 2015/7/9	Meter Reading (m3) 2015/7/10	Meter Reading (m3) Consumption
1	06669-1	**15001482**	JOHN IANI & GEORGE LAI	KAIBIA		1							D/LINE																1																
2	08451-03	**16001569**	JOY RICKY	LOT/NO	1								12A005449										4032.969	4039.459	6.490				0		1						12A005449												
3	08451-01	**16001567**	MAGGIE M WOOLLETT	VARA CREEK	1								99B149609										5152.4877	5153.416	0.928						1						99B149609								5369.85	5372.34	2.496
4	08451-2	**16001573**	NELSON SOKE	VARA CREEK	1								07-001097										1719.6639	1720.303	0.639								1				14B056487								25.7	25.923	0.223
5	08470-3	**16001605**	GEORGE KALY	LOT/NO	1								09A000222										1057.5244	1037.941							1						09A000222								1125.82	1126.66	0.845
6	08470-4	**16001606**	JEFFREY SAMO	VARA CREEK	1								14A644456										203.1101										1				14A644456								343.857	345.032	1.175
7	08453-03	**16001581**	JOHN MATA	ABOVE VARA CREEK		1							D/LINE										Confirm D/L	Confirm D/L					1																				
8	08453-02	**16001580**	JENIFFER IAMANA	ABOVE VARA CREEK	1								99B141968										3118.3404	3118.647	0.306							1					14B056306								63.671	64.181	0.510
9	08451-1	**16001572**	MORIS MAE	VARA CREEK	1								07-001126										1854.4043	1855.204	0.800							1					14A001527								83.819	84.467	0.648
10	84512	**16001575**	REX MAE	AEKAFO VILLAGE	1								07-001021										1370.4043	1370.728	0.324							1					14A001122								23.315	23.425	0.110
11	08452-1	**16001577**	REXLEY TOME	VARA CREEK	1								97C0235										Reading not Clear									1					14A001120								51.412	51.81	0.398
12	8453	**16001578**	HENRY UDUA	AEKAFO VILLAGE		1							12A005418										1235.155	1236.162	1.007							0	1				12A005418								1354.84	1356.55	1.713
13	08457-04	**16001589**	BILLY KILOKO	AEKAFO ONTOP HILL		1							0700723										Meter Stop/Reading not Clear									0	1				14A001121								71.615	72.219	0.604
14	8454	**16001584**	SAMUEL BILLY	AEKAFO VILLAGE	1								12A005155										1077.41	1079.658	2.248							1					12A005155								1191.12	1193	1.876
15	08454-1	**16001587**	ROSE GELI	ABOVE VARA CREEK (AEK	1								05A019094										2825.772	2826.461	0.689							1					14A001119								75.066	76.243	1.177
16	08457-03	**16001588**	STEPHEN WEO	AEKAFO ON TOP HILL	1								99B141633										4214.74242	4214.731							1						99B141633								4325.2	4326.37	1.170
17	08457-4	**16001593**	PETER KENIHURAIA	AEKAFO ON TOP HILL		1							D/LINE										Confirm D/L									0	1				14A001526								140.903	142.355	1.452
18	08453-04	**16001582**	THOMAS TAREOHA	VARA CREEK	1								99B141392										267.5644	267.5444								1					14B056490								31.574	32.139	0.565
19	08457-1	**16001590**	DANIEL MAEKALI	AEKAFO VILLAGE	1								12B011139										816.706	817.189	0.483						1						12B011139								941.998	943.106	1.108
20	08457-2	**16001591**	WILSON MISI	AEKAFO					1				12A005111										confirm Disco						0	1																	
21	08458-1	**16001596**	BILLY MAE	LOT NO	1								12A004487										449.612	450.362	0.750						1						14A004487								533.278	533.755	0.477
22	08457-3	**16001592**	ROBERT MALO	AEKAFO VILLAGE ONTOP	1								12A004486										514.986	515.098	0.112						1						12A004486								576.901	577.663	0.762
23	8459	**16001597**	NAMOLIKI LOCAL CHURC	AEKAFO VILLAGE	1								12A004489										918.574	919.03	0.456						1						12A004489								962.112	962.155	0.043
24	8474	**16001611**	FRANCIS TUMU	AEKAFO VILLAGE	1								12A005040												0.000						1						12A005040								1021.78	1022.06	0.284
25	08493-1	**16001624**	AMOS UNA	AEKAFO	1								05A018730										4660.835	4662.295	1.460							1					14A001451								133.047	134.335	1.288
26	8477	**16001612**	JENNY WATARII	AEKAFO VILLAGE	1								13B019678										309.5408	310.432	0.891							1					13B019678								455.185	455.907	0.722
27	08489-2	**16001619**	DAVID SILI	PH # 7478229					1				11B091729										confirm Disco						0	1																	
28	08489-1	**16001618**	DAVID SITO		1								95322706										154.026	154.721	0.695				1	0																	
29	8478	**16001613**	DAVID SIRU	AEKAFO VILLAGE	1								S13A00080										1028.2098	1031.002	2.793							1					14A001449								217.593	219.861	2.268
30	8479	**16001615**	NICHOLAS RAMOTAKA	AEKAFO VILLAGE VARA CR		1							D/LINE										1086.408	1086.408								0	1				14A001452								67.059	68.505	1.446
31	8492	**16001622**	CHARLES NIMA	AEKAFO VILLAGE VARA CR		1							D/LINE										Confirm D/L										1				14A001115								129.62	131.093	1.473
32	8490	**16001620**	ISHMAEL TAHERIU	AEKAFO VILLAGE	1								99B141709										3040.4846	3842.539								1					14B056254								93.645	95.063	1.418
33	8491	**16001621**	TOM PA'A	AEKAFO VILLAGE		1							D/LINE										Confirm D/L										1				14A001114								114.973	115.39	0.417
34	8493	**16001623**	ROSE DEVA/IANSLY AWA	AEKAFO VILLAGE VARA CI	1								88091738										1877.414	1877.786	0.372							1					14A001117								81.382	87.175	5.793
35	8494	**16001625**	ANDY TABA'A	AEKAFO VILLAGE VARA CI	1								07-000547										2839.4163	2840.802	1.386							1					14A001118								334.126	339.012	4.886
36	8487	**16001617**	WILLIAM SIRU	Cana Hill	1								759836										94.653	94.653								1					14A001450								56.402	57.045	0.643
37	8486	**16001616**	MIKE HAUKARIA	Cana Hill	1								07-000233										2520.6314	2521.488	0.857							1					14A001116								111.776	113.028	1.252
38	8495	**16001626**	ROBERT CHRIS	AEKAFO VILLAGE VARA CI	1								07-000234												0.000							1	0				14B056252								85.792	86.49	0.698
39	04896-1	**16001628**	CANA HILL LOCAL CHURC	DOWN CAINA HILL CHURC	1								07-00136										233.2202	233.2221	0.002							1					14B056253								17.048	18.915	1.867
40	8496	**16001627**	FRANK KENITAUSUANA	AEKAFO VILLAGE VARA CI	1								8012364										3067.576	3067.857	0.281							1					14A001453								155.969	157.089	1.120
41	8498	**16001629**	JIMMY OTOARA'A	AEKAFO VILLAGE	1								12A004512										450.633	451.159	0.526							1	0				12A004512								530.95	531.093	0.143
42	08502-5	**17001014**	ANNA HOASI	ON-TOP HILL	1								11A000695										1181.344	1182.017	0.673						1						11A000695								1301.72	1302.14	0.422
43	08502-09	**17001009**	DAVID LILIMAE	CANA HILL	1								12B172499												0.000						1						12B172499								366.632	367.453	0.821
44	0802-7	**17001015**	JOHN MARTIN IROFALU	FAR END (ONTOP)	1								99B141939										3084.0875	3084.738	0.650							1					13A000907								62.935	64.33	1.395
45	08502-10	**17001011**	RUEL PETER UHIARO	CANA HILL	1								13A000907										465.115	466.604	1.489						1						13A000907								577.496	577.607	0.111
46	08500-5	**17001001**	BARNABAS OTOMIA	CANA HILL	1								06A021790										2972.712	2972.945	0.233						1						06A021790								3009.91	3010.09	0.180
47	08500-3	**16001635**	TOM TORAHERE	ABOVE CAINA HILL CHURC	1								14B056291										32.622	33.005	0.383						1						14B056291								121.537	122.651	1.114
48	08500-2	**16001634**	MOCKS KAHUI	VARA CREEK	1								S13A00019										491.894	493.1966	1.303						1						S13A00019								742.153	743.68	1.527
49	08502-1	**17001010**	MISHACK MAETORO	CANA HILL ON TOP HILL	1								12A005153										1215.866	1217.445	1.579						1						12A005153								1415.09	1418.14	3.053
50	08502-8	**17001016**	STEVE MAO	CANA HILLSIDE (LOWER)	1								14A644666										108.9587	110.6403	1.682						1						14A044666								254.186	255.426	1.241
51	08502-4	**17001013**	GODFREY PAROVATA		1								14B056290										83.527	00085-571							1						14B056290								333.818	334.026	0.208
52	08502-3	**17001012**	IVORY HUASIWA	TUVARUHU ROAD	1								99B141695										3974	3974								1					14A001112								53.147	54.341	1.194
53	08502-03	**17001005**	ALICK KENIWASIA	ABOVE KOFIA MARKET / V	1								13A000994										285.294	285.924	0.630						1						13A000994								450.433	451.957	1.524
54	08500-1	**16001633**	JOHN C MUKU	AEKAFO VILLAGE ONTOP	1								14B056529										48.035	49.265	1.230				1								14B056529										
55	8501	**17001002**	JIMMY HOUAHE	AEKAFO VILLAGE	1								14B056528										80.576	81.687	1.111						1						14B056528								238.004		
56	8500	**16001631**	RHIANNY HATAMANE	CANA HILL	1								13B019595										1590.187	1593.042	2.855						1						13B019595								2060.53	2064.96	4.437
57	8552	**17001021**	RACHMAN SYAH	VARA CREEK	1								5454142										3482.19	8883.264							1						14A001317								278.509	279.084	0.575
58	8551	**17001020**	DARTON DEVA	VARA CREEK	1								13B019728										1130.386	1131.042	0.656						1						13B019728								1187.23	1188.74	1.513
59	09098-1	**17001087**	ALPHEAUS ARANANI	NAMOLIKI	1								11B091792										310.99	310.99							1						S13B00250								310.99	310.99	
60	9098	**17001088**	BRIAN BILLY MANI	NAMOLIKI BELOW W/KOLA'		1							D/LINE										Confirm D/L											1			14A001533								144.027	145.324	1.297
61	9093	**17001084**	WILSON SALATALAU	WEST KOLAA RIDGE		1							617285																				1				14A001142								432.413	435.315	2.902
62	9090	**17001083**	MORGAN LIKA	WEST KOLAA RIDGE		1							D/LINE										Confirm D/L					0		1																		
63	9219	17001120	BURABETI TABE	LOT/NO3029 P/NO.19-027-	1								13A001054										1107.78	1109.216	1.436							1					13A001054								1457.71	1462.08	4.370
		17001088	BURABETI TABE			1																											1				14A001111								42.943		
64	9220	**17001090**	PHILIP FATO	WEST KOLAA RIDGE	1								12A005330										960.049	960.228	0.179						1						12A005330								999.383	999.787	0.404
65	09221-1	**17001091**	GABRIEL LIUFIMANU	WEST KOLA RIGDE	1								07-000936										927.855	928.853	0.998							1					14A001123								374.893	381.246	6.353
66	9224	**17001116**	COMMINIS PINURU	WEST KOLA'A RIDGE	1								9752717										6717.542	6718.137	0.595							1					14A001001								41.001	41.788	0.787
67	09222-4	**17001103**	HON ALFRED GHIRO	LOT / JIMMY GANIFIRI'S R	1								07-001334										4760.9842	4763.551	2.567							1					14B056207								410.428	413.069	2.641
68	9223	**17001109**	JIMMY GANIFIRI	WEST KOLAA RIDGE	1								9087730										2522.922	2524.633	1.711						1						14A001532								289.782	292.863	3.081
69	09222-5	**17001104**	HUDSON KOUHIONA	LOT / JIMY FIFIRI'S RESID	1								07-001296										2283.1546	2284.353	1.198							1					14A001530								120.428	122.552	2.124
70	09223-01	**17001110**	MICHAEL FUEMUA		1								06A021810										Gate Lock	Gate Lock								1					14A001531								61.472	63.616	2.144
71	09222-8	**17001107**	FESTUS JIMMY GANIFIRI-	WEST KOLA RIDGE	1								12A005420										213.606	213.869	0.263						1						12A005420								278.522	279.387	0.865
72	09222-2	**17001101**	DANIEL GAIOFA/AGNESS	WEST KOLAA RIDGE, ABOV	1								99B141518										5268.1612	5269.77	1.608						1						99B141518								5431.21	5431.89	0.678
73	09222-10	**17001093**	FESTUS JIMMY GANIFIRI	WEST KOLA RIDGE	1								13A000836										134.364	135.413	1.049						1						13A000836								223.837	224.865	1.028

Change in Status of Connections (Customers, Users and Unconnection)　　3 No.17　West Kola Ridge A DMA

| No. | Account No. | New Account | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

Change in Status of Connections (Customers, Users and Unconnection)　　3 No.17　West Kola Ridge A DMA

S64-1-63

| No. | Account No. | New Account | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

Change in Status of Connections (Customers, Users and Unconnection)　　3 No.17　West Kola Ridge A DMA

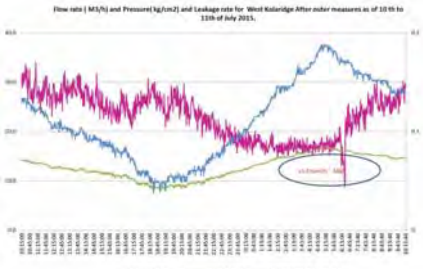
| No. | Account No. | New Account | Account Name | Location | Before Countermeasures | | | | | | | | | | | | | | | | | | | | | | After Countermeasures | | | | | | | | | | | | | | | | | | |

MNF Measure After countermeasure in West Kolaridge A

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
10-Jul-15	3:55	15.7356208	0.163	306.925

distance 6.0 km 2.62260 m3/h/km

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
2015/7/10 3:39	3:39	16.480	0.1650	1.0123	1.0061	15.8319	0.264
2015/7/10 3:40	3:40	18.305	0.1620	0.9939	0.9969	15.6873	0.261
2015/7/10 3:41	3:41	17.193	0.1580	0.9693	0.9845	15.4924	0.258
2015/7/10 3:42	3:42	16.765	0.1580	0.9693	0.9845	15.4924	0.258
2015/7/10 3:43	3:43	17.109	0.1580	0.9693	0.9845	15.4924	0.258
2015/7/10 3:44	3:44	16.508	0.1580	0.9693	0.9845	15.4924	0.258
2015/7/10 3:45	3:45	16.671	0.1630	1.0000	1.0000	15.7356	0.262
2015/7/10 3:46	3:46	17.234	0.1590	0.9755	0.9877	15.5413	0.259
2015/7/10 3:47	3:47	17.132	0.1580	0.9693	0.9845	15.4924	0.258
2015/7/10 3:48	3:48	15.647	0.1580	0.9693	0.9845	15.4924	0.258
2015/7/10 3:49	3:49	18.510	0.1580	0.9693	0.9845	15.4924	0.258
2015/7/10 3:50	3:50	15.429	0.1590	0.9755	0.9877	15.5413	0.259
2015/7/10 3:51	3:51	16.863	0.1610	0.9877	0.9938	15.6388	0.261
2015/7/10 3:52	3:52	16.989	0.1610	0.9877	0.9938	15.6388	0.261
2015/7/10 3:53	3:53	16.876	0.1620	0.9939	0.9969	15.6873	0.261
2015/7/10 3:54	3:54	18.006	0.1620	0.9939	0.9969	15.6873	0.261
2015/7/10 3:55	3:55	15.736	0.1630	1.0000	1.0000	15.7356	0.262
2015/7/10 3:56	3:56	17.371	0.1620	0.9939	0.9969	15.6873	0.261
2015/7/10 3:57	3:57	15.664	0.1580	0.9693	0.9845	15.4924	0.258
2015/7/10 3:58	3:58	17.492	0.1630	1.0000	1.0000	15.7356	0.262
2015/7/10 3:59	3:59	17.516	0.1630	1.0000	1.0000	15.7356	0.262
2015/7/10 4:00	4:00	16.364	0.1630	1.0000	1.0000	15.7356	0.262
2015/7/10 4:01	4:01	16.080	0.1640	1.0061	1.0031	15.7838	0.263
2015/7/10 4:02	4:02	16.495	0.1630	1.0000	1.0000	15.7356	0.262
2015/7/10 4:03	4:03	17.372	0.1640	1.0061	1.0031	15.7838	0.263
2015/7/10 4:04	4:04	16.822	0.1640	1.0061	1.0031	15.7838	0.263
2015/7/10 4:05	4:05	18.629	0.1660	1.0184	1.0092	15.8798	0.265
2015/7/10 4:06	4:06	17.238	0.1640	1.0061	1.0031	15.7838	0.263
2015/7/10 4:07	4:07	15.910	0.1630	1.0000	1.0000	15.7356	0.262
2015/7/10 4:08	4:08	15.792	0.1630	1.0000	1.0000	15.7356	0.262
2015/7/10 4:09	4:09	16.429	0.1640	1.0061	1.0031	15.7838	0.263
2015/7/10 4:10	4:10	16.889	0.1640	1.0061	1.0031	15.7838	0.263
2015/7/10 4:11	4:11	16.906	0.1640	1.0061	1.0031	15.7838	0.263
2015/7/10 4:12	4:12	17.125	0.1650	1.0123	1.0061	15.8319	0.264
2015/7/10 4:13	4:13	15.620	0.1650	1.0123	1.0061	15.8319	0.264
2015/7/10 4:14	4:14	16.754	0.1650	1.0123	1.0061	15.8319	0.264
2015/7/10 4:15	4:15	17.498	0.1640	1.0061	1.0031	15.7838	0.263
2015/7/10 4:16	4:16	17.298	0.1690	1.0368	1.0182	16.0226	0.267
2015/7/10 4:17	4:17	17.065	0.1670	1.0245	1.0122	15.9275	0.265
2015/7/10 4:18	4:18	16.605	0.1700	1.0429	1.0212	16.0700	0.268
2015/7/10 4:19	4:19	16.501	0.1660	1.0184	1.0092	15.8798	0.265
2015/7/10 4:20	4:20	17.227	0.1680	1.0307	1.0152	15.9751	0.266
2015/7/10 4:21	4:21	17.403	0.1700	1.0429	1.0212	16.0700	0.268
2015/7/10 4:22	4:22	16.935	0.1710	1.0491	1.0242	16.1171	0.269
2015/7/10 4:23	4:23	16.857	0.1700	1.0429	1.0212	16.0700	0.268
2015/7/10 4:24	4:24	16.917	0.1700	1.0429	1.0212	16.0700	0.268
2015/7/10 4:25	4:25	15.464	0.1700	1.0429	1.0212	16.0700	0.268

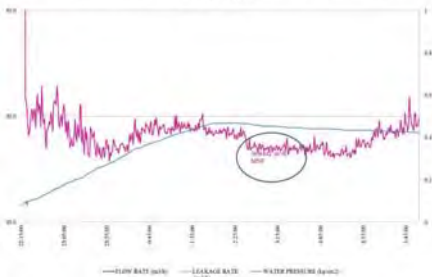


MNF Measure Before Countermeasure in West Kola Ridge A DMA

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
5/03/15	03:05:00	36.6442	0.453	0.348

Distance 6.0 km 6.107666667 m^3/h/km

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
2015/3/5 2:43	2:43	36.817	0.464	0.012662304	##########	0.050974687	0.001
2015/3/5 2:44	2:44	36.9276	0.463	0.012635015	##########	0.050919728	0.001
2015/3/5 2:45	2:45	37.0473	0.462	0.012607725	##########	0.050864709	0.001
2015/3/5 2:46	2:46	37.0684	0.461	0.012580436	##########	0.050809631	0.001
2015/3/5 2:47	2:47	37.1818	0.46	0.012553146	##########	0.050754493	0.001
2015/3/5 2:48	2:48	37.5307	0.459	0.012525857	##########	0.050699295	0.001
2015/3/5 2:49	2:49	37.1443	0.459	0.012525857	##########	0.050699295	0.001
2015/3/5 2:50	2:50	37.1623	0.459	0.012525857	##########	0.050699295	0.001
2015/3/5 2:51	2:51	36.9313	0.458	0.012498567	##########	0.050644037	0.001
2015/3/5 2:52	2:52	36.5056	0.458	0.012498567	##########	0.050644037	0.001
2015/3/5 2:53	2:53	37.2808	0.458	0.012498567	##########	0.050644037	0.001
2015/3/5 2:54	2:54	37.3855	0.456	0.012443988	##########	0.050533340	0.001
2015/3/5 2:55	2:55	36.8601	0.455	0.012416699	##########	0.050477900	0.001
2015/3/5 2:56	2:56	37.0962	0.454	0.012389410	##########	0.050422399	0.001
2015/3/5 2:57	2:57	37.3135	0.454	0.012389410	##########	0.050422399	0.001
2015/3/5 2:58	2:58	37.091	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 2:59	2:59	36.7107	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:00	3:00	36.9589	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:01	3:01	36.9843	0.454	0.012389410	##########	0.050422399	0.001
2015/3/5 3:02	3:02	36.8666	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:03	3:03	37.0914	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:04	3:04	37.0329	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:05	3:05	36.6442	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:06	3:06	36.9817	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:07	3:07	37.1999	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:08	3:08	37.086	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:09	3:09	36.6124	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:10	3:10	37.0715	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:11	3:11	36.9448	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:12	3:12	36.772	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:13	3:13	37.1253	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:14	3:14	37.2549	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:15	3:15	36.7806	0.453	0.012362120	##########	0.050366837	0.001
2015/3/5 3:16	3:16	37.0493	0.452	0.012334831	##########	0.050311214	0.001
2015/3/5 3:17	3:17	37.1191	0.452	0.012334831	##########	0.050311214	0.001
2015/3/5 3:18	3:18	36.7495	0.452	0.012334831	##########	0.050311214	0.001
2015/3/5 3:19	3:19	36.8685	0.451	0.012307541	##########	0.050255529	0.001
2015/3/5 3:20	3:20	36.8766	0.451	0.012307541	##########	0.050255529	0.001
2015/3/5 3:21	3:21	37.1661	0.45	0.012280252	##########	0.050199783	0.001
2015/3/5 3:22	3:22	37.2362	0.45	0.012280252	##########	0.050199783	0.001
2015/3/5 3:23	3:23	37.4289	0.449	0.012252962	##########	0.050143974	0.001
2015/3/5 3:24	3:24	36.6705	0.449	0.012252962	##########	0.050143974	0.001
2015/3/5 3:25	3:25	37.3953	0.448	0.012225673	##########	0.050088103	0.001
2015/3/5 3:26	3:26	37.9322	0.448	0.012225673	##########	0.050088103	0.001
2015/3/5 3:27	3:27	36.4233	0.447	0.012198383	##########	0.050032170	0.001
2015/3/5 3:28	3:28	36.4716	0.447	0.012198383	##########	0.050032170	0.001
2015/3/5 3:29	3:29	37.1333	0.447	0.012198383	##########	0.050032170	0.001
2015/3/5 3:30	3:30	36.7854	0.447	0.012198383	##########	0.050032170	0.001



MNF Measure After countermeasure in West Kolaridge A

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
10-Jul-15	3:55	15.7356208	0.163	306.925

distance 6.0 km 2.62260 m3/h/km

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
2015/7/10 9:40	9:40	24.940	0.1390	0.8528	0.9235	14.5311	0.242
2015/7/10 9:41	9:41	25.863	0.1390	0.8528	0.9235	14.5311	0.242
2015/7/10 9:42	9:42	27.365	0.1390	0.8528	0.9235	14.5311	0.242
2015/7/10 9:43	9:43	28.362	0.1380	0.8466	0.9201	14.4787	0.241
2015/7/10 9:44	9:44	28.573	0.1400	0.8589	0.9268	14.5832	0.243
2015/7/10 9:45	9:45	26.697	0.1400	0.8589	0.9268	14.5832	0.243
2015/7/10 9:46	9:46	28.306	0.1400	0.8589	0.9268	14.5832	0.243
2015/7/10 9:47	9:47	26.736	0.1410	0.8650	0.9301	14.6352	0.244
2015/7/10 9:48	9:48	26.504	0.1400	0.8589	0.9268	14.5832	0.243
2015/7/10 9:49	9:49	23.717	0.1400	0.8589	0.9268	14.5832	0.243
2015/7/10 9:50	9:50	28.597	0.1420	0.8712	0.9334	14.6870	0.245
2015/7/10 9:51	9:51	26.757	0.1400	0.8589	0.9268	14.5832	0.243
2015/7/10 9:52	9:52	25.264	0.1410	0.8650	0.9301	14.6352	0.244
2015/7/10 9:53	9:53	25.185	0.1420	0.8712	0.9334	14.6870	0.245
2015/7/10 9:54	9:54	25.730	0.1390	0.8528	0.9235	14.5311	0.242
2015/7/10 9:55	9:55	26.188	0.1400	0.8589	0.9268	14.5832	0.243
2015/7/10 9:56	9:56	27.020	0.1410	0.8650	0.9301	14.6352	0.244
2015/7/10 9:57	9:57	27.426	0.1400	0.8589	0.9268	14.5832	0.243
2015/7/10 9:58	9:58	28.834	0.1410	0.8650	0.9301	14.6352	0.244
2015/7/10 9:59	9:59	28.807	0.1420	0.8712	0.9334	14.6870	0.245
2015/7/10 10:00	10:00	27.893	0.1400	0.8589	0.9268	14.5832	0.243
2015/7/10 10:01	10:01	27.712	0.1390	0.8528	0.9235	14.5311	0.242
2015/7/10 10:02	10:02	28.588	0.1390	0.8528	0.9235	14.5311	0.242
2015/7/10 10:03	10:03	28.357	0.1450	0.8896	0.9432	14.8414	0.247
2015/7/10 10:04	10:04	28.126	0.1400	0.8589	0.9268	14.5832	0.243
2015/7/10 10:05	10:05	28.759	0.1410	0.8650	0.9301	14.6352	0.244
2015/7/10 10:06	10:06	30.278	0.1410	0.8650	0.9301	14.6352	0.244
2015/7/10 10:07	10:07	29.422	0.1430	0.8773	0.9366	14.7387	0.246
2015/7/10 10:08	10:08	29.133	0.1420	0.8712	0.9334	14.6870	0.245
2015/7/10 10:09	10:09	27.635	0.1410	0.8650	0.9301	14.6352	0.244
2015/7/10 10:10	10:10	25.818	0.1420	0.8712	0.9334	14.6870	0.245
2015/7/10 10:11	10:11	28.859	0.1390	0.8528	0.9235	14.5311	0.242
2015/7/10 10:12	10:12	29.213	0.1400	0.8589	0.9268	14.5832	0.243
2015/7/10 10:13	10:13	29.454	0.1430	0.8773	0.9366	14.7387	0.246
2015/7/10 10:14	10:14	29.769	0.1400	0.8589	0.9268	14.5832	0.243
2015/7/10 10:15	10:15	29.022	0.1400	0.8589	0.9268	14.5832	0.243
Estimated Leakage Rate (m^3/day)							**306.925**
		553.4621	m^3				

MNF Measure Before Countermeasure in West Kola Ridge A DMA

Date at MNF	Time at MNF	MNF (m^3/h)	Water Pressure at MNF (kg/cm^2)	Assumed Daily Leakage (m^3/day)
		[7]	[8]	
5/03/15	03:05:00	36.6442	0.453	0.348

Distance 6.0 km 6.107666667 m^3/h/km

Date	Time	FLOW RATE (m^3/h)	WATER PRESSURE (kg/cm^2)	WATER PRESSURE / WATER PRESSURE at MNF	-	LEAKAGE RATE (m^3/h)	LEAKAGE RATE (m^3/min)
		[1]	[2]	[3]=[2]/[8]	[4]=[3]$^{1/2}$	[5]=[4] x [7]	[6]=[5]/60
2015/3/5 5:13	5:13	38.9565	0.431	0.011761752	##########	0.049128580	0.001
2015/3/5 5:14	5:14	39.6115	0.43	0.011734463	##########	0.049071554	0.001
2015/3/5 5:15	5:15	38.3949	0.429	0.011707173	##########	0.049014460	0.001
2015/3/5 5:16	5:16	38.5432	0.43	0.011734463	##########	0.049071554	0.001
2015/3/5 5:17	5:17	38.7845	0.429	0.011707173	##########	0.049014460	0.001
2015/3/5 5:18	5:18	38.2097	0.429	0.011707173	##########	0.049014460	0.001
2015/3/5 5:19	5:19	37.8288	0.429	0.011707173	##########	0.049014460	0.001
2015/3/5 5:20	5:20	37.8457	0.429	0.011707173	##########	0.049014460	0.001
2015/3/5 5:21	5:21	38.2278	0.429	0.011707173	##########	0.049014460	0.001
2015/3/5 5:22	5:22	38.4305	0.429	0.011707173	##########	0.049014460	0.001
2015/3/5 5:23	5:23	38.2493	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:24	5:24	38.7026	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:25	5:25	38.9374	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:26	5:26	38.4147	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:27	5:27	39.1664	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:28	5:28	38.6569	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:29	5:29	38.4369	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:30	5:30	38.5357	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:31	5:31	38.386	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:32	5:32	38.633	0.427	0.011652594	##########	0.048900074	0.001
2015/3/5 5:33	5:33	37.9703	0.427	0.011652594	##########	0.048900074	0.001
2015/3/5 5:34	5:34	38.6913	0.427	0.011652594	##########	0.048900074	0.001
2015/3/5 5:35	5:35	38.8112	0.427	0.011652594	##########	0.048900074	0.001
2015/3/5 5:36	5:36	38.071	0.427	0.011652594	##########	0.048900074	0.001
2015/3/5 5:37	5:37	38.573	0.427	0.011652594	##########	0.048900074	0.001
2015/3/5 5:38	5:38	38.712	0.427	0.011652594	##########	0.048900074	0.001
2015/3/5 5:39	5:39	39.6674	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:40	5:40	38.787	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:41	5:41	38.316	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:42	5:42	38.9371	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:43	5:43	38.386	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:44	5:44	40.3182	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:45	5:45	39.3388	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:46	5:46	39.2547	0.428	0.011679884	##########	0.048957301	0.001
2015/3/5 5:47	5:47	38.6018	0.426	0.011623505	##########	0.048842780	0.001
2015/3/5 5:48	5:48	38.9756	0.426	0.011623505	##########	0.048842780	0.001
2015/3/5 5:49	5:49	41.8134	0.425	0.011598016	##########	0.048785420	0.001
2015/3/5 5:50	5:50	40.3767	0.426	0.011623505	##########	0.048842780	0.001
2015/3/5 5:51	5:51	39.5148	0.426	0.011623505	##########	0.048842780	0.001
2015/3/5 5:52	5:52	39.1559	0.424	0.011570726	##########	0.048727991	0.001
2015/3/5 5:53	5:53	39.0631	0.423	0.011543437	##########	0.048670495	0.001
2015/3/5 5:54	5:54	38.6329	0.424	0.011570726	##########	0.048727991	0.001
2015/3/5 5:55	5:55	40.1362	0.424	0.011570726	##########	0.048727991	0.001
2015/3/5 5:56	5:56	40.3253	0.423	0.011543437	##########	0.048670495	0.001
2015/3/5 5:57	5:57	39.0208	0.423	0.011543437	##########	0.048670495	0.001
2015/3/5 5:58	5:58	39.0908	0.423	0.011543437	##########	0.048670495	0.001
2015/3/5 5:59	5:59	39.2003	0.423	0.011543437	##########	0.048670495	0.001
2015/3/5 6:00	6:00	39.7958	0.423	0.011543437	##########	0.048670495	0.001
Estimated Leakage Rate (m^3/day)							**0.348**
		302.0400	m^3				

S64-1-165

NAME: WEST KOLARIDGE DMA **RE: 1.0**

Date:

WATER METER INACCURACY TEST SHEET

NO:	Old Account	NEW ACCOUNT	CUSTOMER NAME	LOCATION	NEW METER ID	METER STATUS	M/SIZE		TIME (Min	Initial Reading		Final Reading		Integrated Value		Difference (litres)	Error (%)
							15mm	20mm		Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	Meter (litres)		
										A	B	C	D	C-A = E	D - B = F	E-F = G	G/F
1	9248	17001166	Geofrey Chow	West Kola Ridge A	14A001008	Used/Existing Meter											
2	9421	17001320	Calvary Temple	West Kola Ridge A	14A001150	New Meter											
3	09256-1	17001174	Joseph Samani & Mercy S	West Kola Ridge A	14B056304	New Meter											
4	9257	11001175	M P Kwan	West Kola Ridge A	14A001151	New Meter											
5	09259-	17001176	Vea	West Kola Ridge A	05A018597	Used/Existing Meter											
6	09259-1	17001177	Elizabeth Tolliliu	West Kola Ridge A	10A005189	Used/Existing Meter											
7	9262	17001179	John Kwaita	West Kola Ridge A	14A001186	Used/Existing Meter											
8	9263	17001180	John Adifaka Snr	West Kola Ridge A	14A001149	New Meter											
9	9247	17001163	Fred Fakani	West Kola Ridge A	14A001152	New Meter											
10	09247-1	17001164	Peter Chow	West Kola Ridge A	14B056302	New Meter											
11	09247-2	17001165	Peter Chow	West Kola Ridge A	14A001533	New Meter											
12	9249	17001167	Piti Maskia	West Kola Ridge A	14A001153	New Meter											
13	9250	17001168	FR Moses Razak	West Kola Ridge A	14A001205	Use/Existing Meter											
14	9252	17001170	Muslim Association	West Kola Ridge A	14B056274	Use/Existing Meter											
15	9254	17001172	Hong Sun Chow	West Kola Ridge A	14A001234	Use/Existing Meter											
16	9264	17001181	Nikora Kaireua	West Kola Ridge A	14A001188	Use/Existing Meter											
17	9268	17001185	Duddley Baerodo	West Kola Ridge A	14A001187	Use/Existing Meter											
18	9422	17001321	General Council	West Kola Ridge A	14B056303	New Meter											
19	09246-01	17001158	Ken Grossmith	West Kola Ridge A	06A021738	Used/Existing Meter											
20	09246-1	17001159	John Alo	West Kola Ridge A	14A644455	Used/Existing Meter											
21	09246-3	17001161	John Alo	West Kola Ridge A	14A645206	Used/Existing Meter											
22	9253	17001171	Ken & Shirley Taylor	West Kola Ridge A	14A000999	New Meter											
23	9256	17001173	Dr Kwang soo Park	West Kola Ridge A	14A001000	New Meter											
24	9265	17001182	Willie Luna	West Kola Ridge A	14A001537	New Meter											
25	9270	17001187	Andrew Gaote`e	West Kola Ridge A	14A000709	Used/Existing Meter											
26	9240	17001150	Alice Olega	West Kola Ridge A	13B019798	Used/Existing Meter											
27	9241-1	17001152	Frank Crulci	West Kola Ridge A	14A645222	Used/Existing Meter											
28	9242	17001153	Ishmael Kai	West Kola Ridge A	14A056208	New Meter											
29	9243	17001154	Jean Tafoa	West Kola Ridge A	14A644585	Used/Existing Meter											
30	9244	17001155	Frank Crulci	West Kola Ridge A	14A645216	Used/Existing Meter											
31	09245-1	17001156	Penny Cole	West Kola Ridge A	05B881627	Used/Existing Meter											
32	9246	17001157	Pastor Ross Elford	West Kola Ridge A	14A645221	Used/Existing Meter											
33	9228	17001131	Mrs Davina M. Boso	West Kola Ridge A	14A644792	Used/Existing Meter											
34	9229	17001132	Susan Orudiana	West Kola Ridge A	14A644804	Used/Existing Meter											
35	09230-1	17001134	George Blamoli	West Kola Ridge A	10B056031	Used/Existing Meter											
36	09230-4	17001136	A`aron Kiniou	West Kola Ridge A	11A000781	Used/Existing Meter											
37	0923-5	17001137	Jeoffry Ava`a	West Kola Ridge A	11A000779	Used/Existing Meter											
38	9232	17001140	Hicks Don Tolia	West Kola Ridge A	14A001087	Used/Existing Meter											
39	09232-1	17001141	Marthas & Donn Tolia	West Kola Ridge A	14A644761	Used/Existing Meter											
40	9233	17001142	William Talua	West Kola Ridge A	12A006149	Used/Existing Meter											
41	9234	17001143	John Kaitu`u Sao	West Kola Ridge A	14A001088	Used/Existing Meter											
42	9236	17001145	Peter Hoffman	West Kola Ridge A	14A001084	Used/Existing Meter											
43	9241	17001151	Nicholas Reese	West Kola Ridge A	14A001002	Used/Existing Meter											

DMA NAME: WEST KOLA RIDGE A

Date: 11/02/2015

WATER METER INACCURACY TEST SHEET

NO.	ACCOUNT	NEW ACCOUT NUMBER	CUSTOMER NAME	Meter ID	Condition of Meter	M/SIZE		TIME (Min)	BEFORE COUNTERMEASURES							
						15mm	20mm		Initial Reading		Final Reading		Integrated Value		Difference (litres)	Error (%)
									Tested Metr	TR-III Metr	Tested Metr	TR-III Metr	Test Meter (litres)	TR-III Meter (litres)		
									A	B	C	D	C-A = E	D - B = F	E-F = G	G/F
1	**08451-03**	**16001569**	JOY RICKY		12A065449	LOT/NO	15 mm	5 mm	4111.799	5.6501	4112.049	5.9052	0.25	0.2551	-0.0051	-2.00%
2	**08470-3**	**16001605**	GEORGE KALY		09A000222	LOT/NO	15 mm	5 mm	1042.9774	5.9053	1042.159	5.9682	0.0816	0.0629	-0.0013	-1.57%
3	**08470-4**	**16001606**	JEFFREY SAMO		14A644456	VARA CREEK	15 mm	5 mm	206.9747	5.9885	206.9949	6.0689	0.0802	0.0804	-0.0002	-0.25%
4	**08454**	**16001584**	SAMUEL BILLY		12A005155	AEKAFO VILLAGE	20 mm	5 mm	1090.068	6.2673	1090.166	6.3369	0.098	0.0696	0.0284	40.80%
5	**08454-1**	**16001587**	ROSE GILI	80A018694	ABOVE VARA CREEK (AEKAFO)	15 mm		5 mins	2826.468	6.3669	2826.544	6.4462	0.076	0.0793	-0.0033	-4.16%
6	**08457-03**	**16001588**	STEPHEN WEO		99B141633	AEKAFO ON TOP HILL		20 mm 5 mins	4214.8032	6.2028	4214.866	6.2673	0.0628	0.0645	-0.0017	-2.64%
7	**08453-02**	**16001583**	JIMMY OTOARA'A		99B141968	ABOVE VARA CREEK	20 mm	5 mm	3124.388	6.1869	3124.4372	6.201	0.1292	0.1324	-0.0032	-2.72%
8	**08453**	**16001578**	HENRY UDUA		12A005418	AEKAFO VILLAGE	15 mm	5 mm	1243.633	6.6219	1243.649	6.6377	0.016	0.0158	0.0002	1.27%
9	**08458-1**	**16001596**	BILLY MAE		12A004487	LOT NO	15 mm	5 mm	455.609	5.1213	455.666	5.1791	0.057	0.0578	-0.0008	-1.38%
10	**08457-3**	**16001592**	ROBERT MALO		12A004486	AEKAFO VILLAGE ONTOP H	15 mm	5 mm	524.624	5.0398	524.705	5.1213	0.081	0.0815	-0.0005	-0.61%
11	**08459**	**16001597**	NAMOLIKI LOCAL CHURCH		12A004489	AEKAFO VILLAGE	15 mm	5 mm	920.816	4.8474	920.889	4.9217	0.073	0.0743	-0.0013	-1.75%
12	**08483-1**	**16001624**	AMOS UNA		05A018730	AEKAFO		20 mm 5 mins	4673.292	7.669	4673.319	7.6978	0.027	0.0288	-0.0018	-6.25%
13	**08477**	**16001612**	JENNY WATARII		13B019678	AEKAFO VILLAGE		20 mm 5 mins	319.746	7.698	319.79	7.7413	0.044	0.0433	0.0007	1.62%
14	**08457-1**	**16001590**	DANIEL MAEKALI		12B011139	AEKAFO VILLAGE		20 mm 5 mins	822.945	6.6397	823.012	6.708	0.067	0.0683	-0.0013	-1.90%
15	**08490**	**16001620**	ISHMAEL TAHERE		99B141709	AEKAFO VILLAGE		20 mm 5 mins	3860.405	7.741	3860.439	7.776	0.034	0.035	-0.001	-2.86%
16	**08478**	**16001613**	DAVID SIRU		S13A000800	AEKAFO VILLAGE	15 mm	5 mins	1051.279	7.571	1051.337	7.6283	0.058	0.0573	0.0007	1.22%
17	**08498**	**16001629**	JIMMY OTOARA'A		12A004512	AEKAFO VILLAGE	15 mm	5 mins	455.629	7.247	455.75	7.3644	0.121	0.1174	0.0036	3.07%
18	**08502-5**	**17001014**	ANNA HOASI		11A000695	ON-TOP HILL	15 mm	5 mins	1188.027	8.3023	1188.054	8.329	0.027	0.0267	0.0003	1.12%
19	**08502-7**	**17001015**	JOHN MARTIN IROFALU		99B141939	FAR END (ONTOP)		20 mm 5 mins	3091.227	8.1915	3091.2632	8.2266	0.0362	0.0351	0.0011	3.13%
20	**08502-10**	**17001011**	RUEL PETER USIABO		13A000907	CANA HILL	15 mm	5 mins	477.149	8.1415	477.199	8.1915	0.05	0.05	1.2434E-14	0.00%
21	**08500-5**	**17001001**	BARNABAS OTOMIA		06A021790	CANA HILL	15 mm	5 mins	2975.044	8.915	2975.093	8.141	0.049	-0.774	0.823	-106.33%
22	**08500-3**	**17001035**	TOM TOAGHERE		14B056291	ABOVE CAINA HILL CHURC		20 mm 5 mins	39.591	8.0139	39.665	8.0915	0.074	0.0725	0.0015	2.07%
23	**08500-2**	**16001634**	MOCKS KAHUI		S13A000019	VARA CREEK	15 mm	5 mins	505.3915	7.9709	505.44	7.019	0.0485	-0.9519	1.0004	-105.10%
24	**08503-1**	**17001010**	MOSHACK MAETORO		12A005153	CANA HILL ON TOP HILL	15 mm	5 mins	1230.297	7.925	1230.342	7.9709	0.045	0.0459	-0.0009	-1.96%
25	**08502-8**	**17001016**	STEVE MAO		14A644666	CANA HILLSIDE (LOWER)	15 mm	5 mins	120.282	8.3297	120.315	8.3621	0.033	0.0324	0.0006	1.85%
26	**08502-4**	**17001013**	GODFREY PAROVATA		14B056290			20 mm 5 mins	101.444	8.3628	101.511	8.4291	0.067	0.0663	0.0007	1.06%
27	**08502-05**	**17001005**	ALICK KAWASIA		13A000994	ABOVE KOFIA MARKET / VARA CREE	15 mm	5 mins	290.992	8.4291	291.039	8.476	0.047	0.0469	0.0001	0.21%
28	**08500-1**	**16001633**	JOHN C MUKU		14B056329	AEKAFO VILLAGE ONTOP H		20 mm 5 mins	57.364	8.4769	57.47	8.585	0.106	0.1081	-0.0021	-1.94%
29	**08501**	**17001002**	JIMMY HOUAHE		14B056328	AEKAPO VILLAGE		20 mm 5 mins	91.571	7.856	91.667	7.9525	0.096	0.0969	0.0027	39.13%
30	**08500**	**16001631**	RHIANNY HATAMANE		13B019595	CANA HILL		20 mm 5 mins	1617.899	7.7769	1617.97	7.8503	0.071	0.0734	-0.0024	-3.27%
31	**08551**	**17001020**	DARTON DEVA		13B019728	VARA CREEK		20 mm 5 mins	1135.457	6.708	1135.581	6.833	0.124	0.125	-0.001	-0.80%
32	**09219**	**17001008**	IBURABETI TABE		05A018914	LOT/NO2029 P/NO.19-027-134	15 mm	5 mins	1119.427	4.2489	1119.502	4.325	0.075	0.0761	-0.0011	-1.45%
33	**09220**	**17001090**	PHILIP FATO		12A005330	WEST KOLAA RIDGE	15 mm	5 mins	961.666	3.7864	961.719	3.8399	0.053	0.0535	-0.0005	-0.93%
34	**09222-8**	**17001107**	FESTUS JIMMY GANIFIRI-HOUSE 2		12A005420	WEST KOLAA RIDGE	15 mm	5 Mins	215.535	2.9971	215.621	3.0834	0.086	0.0863	-0.0003	-0.33%
35	**09222-2**	**17001101**	DANIEL GAIOFA/AGNESS GAOTE`E		99B141518	WEST KOLAA RIDGE, ABOVE AEKAFO		20 mm 5 Mins	5277.8531	3.0835	5277.926	3.1577	0.0729	0.0742	-0.0013	-1.75%
36	**09222-10**	**17001093**	FESTUS JIMMY GANIFIRI -(Melisa S)		13A000836	WEST KOLA RIDGE	15 mm	5 Mins	138.123	3.158	138.21	3.467	0.087	0.309	-0.222	-71.84%
37	**09222-7**	**17001106**	FESTUS JIMMY GANIFIRI		12A005390	WEST KOLA RIDGE	15 mm	5 Mins	625.396	3.2481	625.467	3.3189	0.071	0.0708	0.0002	0.28%
38	**09222-9**	**17001108**	FESTUS JIMMY GANIFIRI		12A005412	WEST KOLA RIDGE	15 mm	5 mins	375.665	2.963	375.694	2.99	0.029	0.027	0.002	7.41%
39	**09222-3**	**17001102**	ERIC OSO		05A018486	LOT/NO	15 mm	5 mins	386.446	3.3189	386.506	3.3772	0.06	0.0583	0.0017	2.92%
40	**09222-14**	**17001097**	FESTUS JIMMY GANIFIRI		13A001083	WEST KOLA	15 mm	5 mins	257.404	3.4122	257.462	3.4705	0.058	0.0583	-0.0003	-0.51%
41	**09222-15**	**17001098**	FESTUS JIMMY GANIFIRI		13000979	WEST KOLA	15 mm	5 mins	25.103	3.3773	25.137	3.4127	0.034	0.0354	-0.0014	-3.95%
42	**09222-11**	**17001094**	FESTUS JIMMY GANIFIRI		12B172428	WEST KOLA (DOWN STAIRS)	15 mm	5 mins	219.365	3.5602	219.442	3.636	0.077	0.0758	0.0012	1.58%
43	**09222-12**	**17001095**	FESTUS JIMMY GANIFIRI - C/-SAMANTHA NES		13B019454	WEST KOLA	20 mm	5 mins	309.184	3.4705	309.273	3.5601	0.089	0.0896	-0.0006	-0.67%
44	**09222-4**	**17001100**	JIMMY GANIFIRI		13000750		15 mm	5 mins	1192.838	3.6464	1192.868	3.666	0.03	0.0196	0.0104	53.06%
45	**09222-1**	**17001092**	QUINCY DARCY		12B011203	WEST KOLA RIDGE		20 mm 5 mins	556.02	3.721	556.057	3.76	0.037	0.039	-0.002	-5.13%
46	**0923-2**	**17001112**	ANDY MISOSI		14A644217	WEST KOLA / SIDE HILL	20 mm	5 mins	341.9454	3.937	342.0331	4.0253	0.0877	0.0883	-0.0006	-6.68%
47	**09225**	**17001125**	TIMOTHY MATZKE		05A018986	WEST KOLAA RIDGE		20 mm 5 mins	2287.181	4.5304	2287.23	4.5806	0.049	0.0502	-0.0012	-2.39%
48	**09226**	**17001126**	S.I.T.A.G		05A018987	WEST KOLAA RIDGE	15 mm	5 mins	172.273	4.3763	172.322	4.4283	0.049	0.0518	-0.0028	-5.41%
49	**09226-1**	**17001127**	REX M HOU		13A001053	LOWER WEST KOLAA RIDGE	15 mm	5 mins	624.875	4.3251	624.925	4.3761	0.05	0.051	-0.001	-1.96%
50	**09227**	**17001128**	LENSA MAGIZA		S13B00006	WEST KOLAA RIDGE		20 mm 5 mins	4669.8652	4.4804	4669.9146	4.5304	0.0494	0.05	-0.0006	-1.20%
51	**09224**	**17001116**	COMMINIS PINURU		97527/17	WEST KOLA/A RIDGE	15 mm	5 mins	6722.452	3.8399	6722.549	3.9367	0.097	0.0968	0.0002	0.21%
52	**09223**	**17001109**	JIMMY GANIFIRI		9087730	WEST KOLAA RIDGE	15 mm	5 Mins	2533.413	2.9035	2533.422	2.9626	0.009	0.0591	-0.0501	-84.77%
53	**09238**	**17001147**	GRANT GRIFFITHS		97B033468	WEST KOLA RIDGE	15 mm	5 Mins	1661.7319	2.459	1661.772	2.5019	0.0401	0.0429	-0.0028	-6.53%
54	**09237**	**17001146**	BOBAI		97B033524	WEST KOLA RIDGE		20 mm 5 Mins	5113.85115	2.4	5113.91	2.459	0.0585	0.059	-0.0005	-0.85%
55	**09235**	**17001144**	JANE BAEANISIA		14A645218	WEST KOLA/A RIDGE		20 mm 5 mins	275.3676	2.2948	275.429	2.336	0.0614	0.0612	0.0002	0.33%
56	**09234**	**17001143**	JOHN KAITUU SAO		14A001088	WEST KOLA RIDGE	15 mm	5 mins	22.283	2.373	22.325	2.3995	0.042	0.0425	-0.0005	-1.18%
57	**09233**	**17001142**	WILLIAM TALUA		12A006149	WEST KOLA RIDGE	15 mm	5 mins	995.858	2.203	995.893	2.237	0.035	0.034	0.001	2.94%
58	**09232**	**17001140**	HICKS DON TOLIA		14A001087	WEST KOLAA RIDGE	15 mm	5 mins	12.687	2.1635	12.724	2.2031	0.037	0.0396	-0.0026	-6.57%

S64-L-66

44	09246-4	17001162	Mary Boke Pidoke	West Kola Ridge A	12B172503	Used/Existing Meter										
45	9231	17001139	Mathew Mafe	West Kola Ridge A	14B056305	New Meter										
46	9237	17001146	Tebano Kabiri Bobai/BOBA	West Kola Ridge A	14A001536	New Meter										
47	9238	17001147	Grant Griffiths	West Kola Ridge A	14B056469	New Meter										
48	9235	17001144	Jane Baeanisia	West Kola Ridge A	14A645218	Used/Existing Meter										
49	09227-2	17001130	Lovelyn Misi	West Kola Ridge A	14B056209	New Meter										
50	09227-1	17001129	Leonard Koi	West Kola Ridge A	14A001003	New Meter										
51	9219	17001088	Burabeti Tabe	West Kola Ridge A	13A001054	Used/Existing Meter										
52	9220	17001090	Philip Fato	West Kola Ridge A	12A005330	Used/Existing Meter										
53	09221-1	17001091	Gabriel Liufmanu	West Kola Ridge A	14A001123	New Meter										
54	09223-3	17001113	Basil Maefane	West Kola Ridge A	14A001383	Used/Existing Meter										
55	9224	17001116	Comminis Pinuru	West Kola Ridge A	14A001001	New Meter										
56	9225	17001125	Timothy Matzke	West Kola Ridge A	14A001534	New Meter										
57	9226	17001126	S.I.T.A.G	West Kola Ridge A	05A018987	Used/Existing Meter										
58	09226-3	17001127	Rex Hou	West Kola Ridge A	13A001053	Used/Existing Meter										
59	09088-1	17001087	Aspheaus Aranani	West Kola Ridge A	S13B00250	Used/Existing Meter										
60	9227	17001128	Lensa Magiza	West Kola Ridge A	S13B00006	Used/Existing Meter										
61	09222-6	17001105	Jimmy Festus Ganifiri	West Kola Ridge A	14A000770	Used/Existing Meter										
62	09224-2	17001121	Michael Salini	West Kola Ridge A	12B172440	Used/Existing Meter										
63	09224-04	17001118	Baoro Laxton Koraua	West Kola Ridge A	14B056211	New Meter										
64	09224-05	17001119	Baoro Laxton Koraua & De	West Kola Ridge A	S13A00297	Used/Existing Meter										
65	09224-03	17001117	Beaver Biti	West Kola Ridge A	11B091767	Used/Existing Meter										
66	09224-3	17001122	Deborah Butler	West Kola Ridge A	14A001535	New Meter										
67	09222-1	17001092	Quincy Darcy	West Kola Ridge A	12B011203	Used/Existing Meter										
68	08454-02	16001586	Samuel Billy	West Kola Ridge A	14B056479	Used/Existing Meter										
69	08453-02	16001580	Jeniffer lamana	Abova Vara Creek	14B056306	New Meter										
70	8452	16001575	Rex Mae	Aekafo	14A001122	New Meter										
71	8454	16001584	Samuel Billy	Aekafo	12A005155	Used/Existing Meter										
72	08454-1	16001587	Rose Geli	Vara Creek	14A001119	New Meter										
73	08457-04	16001589	Billy Kiloko	Aekafo	14A001121	New Meter										
74	08452-1	16001577	Rexley Tome	Vara Creek	14A001120	New Meter										
75	08470-4	16001606	Jeffery Samo	Vara Creek	14A644456	Used/Existing Meter										
76	8453	16001578	Henry Udua	Aekafo	12A005418	Used/Existing Meter										
77	08470-3	16001605	George Kaly	Vara Creek	09A000222	Used/Existing Meter										
78	08451-1	16001572	Moris Mae	Aekafo	14A001527	New Meter										
79	08458-01	16001594	Silas To ofai	Aekafo	14A001528	New Meter										
80	08458-02	16001595	Tracey Vencent	Aekafo	12A004836	Used/Existing Meter										
81	08457-3	16001592	Robert Malo	Aekafo	12A004486	Used/Existing Meter										
82	08451-2	16001573	Nelson Soke	Vara Creek	14B056487	New Meter										
83	08452-01	16001576	Barbara Mafane	Vara Creek Heights	14A001525	New Meter										
84	08451-04	16001570	Philip Waneta	Vara Creek Heights	S13A00567	Used/Existing Meter										
85	08450-1	16001565	G.Bana Ouou	Aekafo	12A005383	Used/Existing Meter										
86	08461-1	16001600	Faitoa Angorii	Aekafo	14B056489	New Meter										
87	8451	16001566	Mefrey Awao	Vara Creek	14B056509	Used/Existing Meter										
88	8459	16001597	Namoliki Local Church	Namoliki	12A004489	Used/Existing Meter										
89	08460-1	16001598	Wilson Mu`u	Namoliki	14A001529	New Meter										
90	09222-7	17001106	Festus Jimmy Ganifiri	West Kolaridge A	12A005390	Used/Existing Meter										
91	09222-10	17001093	Festus Jimmy Ganifiri-(Me	West Kolaridge A	13A000836	Used/Existing Meter										
92	09222-12	17001095	Festus Jimmy Ganifiri-C/-S	West Kolaridge A	13B019454	Used/Existing Meter										
93	09222-11	17001094	Festus Jimmy Ganifiri	West Kolaridge A	12B172428	Used/Existing Meter										
94	09222-14	17001097	Festus Jimmy Ganifiri	West Kolaridge A	13A001083	Used/Existing Meter										
95	09222-15	17001098	Festus Jimmy Ganifiri	West Kolaridge A	13A000979	Used/Existing Meter										

59	**09230**	**17001133**	JOHANNE BAWDEN		14A645220	WEST KOLAA RIDGE		20 mm 5 mins	250.018	2.1016	250.1	2.16	0.082	0.0584	0.0236	40.41%
60	**09232**	**17001132**	SUSAN ORUDIANA		14A644804	WEST KOLAA RIDGE	15 mm	5 mins	1042.9774	2.0112	2.1012	210.531	208.1598	208.4998	-416.5596	-199.93%
61	**09228**	**17001131**	MRS DAVINIA M. BOSO		14A644792	WEST KOLAA RIDGE	15 mm	5 mins	227.384	1.99	227.43	2.0332	0.046	0.0432	0.0048	11.63%
62	**09230-5**	**17001137**	JEOFFRY AVA'A		11A000779	WEST KOLA/A RIDGE		20 mm 5 mins	473.958	2.779	473.998	2.819	0.04	0.04	-3.6413E-14	0.00%
63	**09230-3**	**17001135**	MALON BAGOIN/MINT MALU		14A001479		15 mm	5 mins	9.667	2.706	9.739	2.799	0.072	0.093	-0.021	-22.58%
64	**09230-4**	**17001136**	A'ARON KINIOU		11A000781	WEST KOLA/A RIDGE	15 mm	5 mins	442.286	2.5992	442.391	2.706	0.105	0.1068	-0.0018	-1.69%
65	**09230-1**	**17001134**	GEORGE BLAMOLI		10B056031			20 mm 5 mins	539.701	2.502	539.797	2.5992	0.096	0.0972	-0.0012	-1.23%
66	**09245-1**	**17001156**	PENNY COLE		05B881627	WEST KOLAA RIDGE		20 mm 5 mins	1040.747	1.804	1040.795	1.853	0.048	0.049	-0.001	-2.04%
67	**09244**	**17001155**	FRANK CRULCI		14A645216	WEST KOLAA RIDGE		20 mm 5 mins	51.487	1.697	51.545	1.755	0.058	0.058	0	0.00%
68	**09243**	**17001154**	JEAN TAFOA/PAUL D'ROUGHAN		14A644585	WEST KOLAA RIDGE	16 mm	5 mins	135.408	1.629	135.478	1.697	0.07	0.068	0.002	2.94%
69	**09241-1**	**17001152**	FRANK CRULCI		14A645222	WEST KOLAA RIDGE	16 mm	5 mins	55.4734	1.553	55.5486	1.6285	0.0752	0.0755	-0.0003	-0.40%
70	**09240**	**17001150**	ALICE OLEGA		13B019798	WEST KOLA RIDGE		20 mm 5 mins	1155.06	1.4854	1155.129	1.553	0.069	0.0676	0.0014	2.07%
71	**09246**	**17001157**	PASTOR ROSS ELFORD		14A645221	WEST KOLA/A RIDGE		20 mm 5 mins	149.235	1.756	149.283	1.804	0.048	0.048	-2.6645E-14	0.00%
72	**09239-2**	**17001149**	ALLAN MUANIMAE'(JR)		13B019455	WEST KOLA RIDGE		20 mm 5 mins	352.094	1.937	352.145	1.989	0.051	0.052	-0.001	-1.92%
73	**09246-1**	**17001159**	JOHN ALO/Telekom		14A644455	WEST KOLA RIDGE	16 mm	5 Mins	39.09	1.895	39.131	1.937	0.041	0.042	-0.001	-2.38%
74	**09246-3**	**17001161**	JOHN ALO		14A644506	WEST KOLAA	16 mm	5 Mins	247.558	1.853	247.599	1.895	0.041	0.042	-0.001	-2.38%
75	**09246-01**	**17001158**	KEN GROSSMITH		06A021738	WEST KOLAA	16 mm	5 Mins	1239.432	1.407	1239.48	1.458	0.048	0.051	-0.003	-5.88%
76	**09268**	**17001185**	DUDDLEY BAERODO		14A001178	WEST KOLA RIDGE	15 mm	5 Mins	27.477	1.365	27.51	1.407	0.033	0.042	-0.009	-21.43%
77	**09264**	**17001181**	NIKORA KAIERUA		14A001188	WEST KOLA RIDGE	15 mm	5 Mins	17.75	1.3	17.81	1.364	0.06	0.064	-0.004	-6.25%
78	**09262**	**17001179**	JOHN KWAITA		14A001186	WEST KOLA RIDGE	15 mm	5 Mins	29.633	1.116	29.719	1.2031	0.086	0.0871	-0.0011	-1.26%
79	**09224-03**	**17001117**	BEAVER BITI		11B091767			20 mm 5	1006.041	4.6355	1006.153	4.7483	0.112	0.1128	-0.0008	-0.71%
80	**09224-05**	**17001119**	BAORO LAXTON KORAUA & DEBORAH BUTL		S13A00297	HONIARA	15 mm	5 mins	1854639	4.7483	185.1425	4.8471	0.0986	0.0988	-0.0002	-0.20%
81	**09247**	**17001163**	FRED FAKARII		97-000339	WEST KOLAA RIDG

96	09222-9	17001108	Festus Jimmy Ganifiri	West Kolaridge A	12A005412	Used/Existing Meter													
97	09222-8	17001107	Festus Jimmy Ganifiri-Hou	West Kolaridge A	12A005420	Used/Existing Meter													
98	9223	17001109	Jimmy Ganifiri	West Kolaridge A	14A001532	New Meter													
99	09222-2	17001101	Daniel Gaiofa	West Kolaridge A	99B141518	Used/Existing Meter													
100	09222-17	17001100	Festus Jimmy Ganifiri	West Kolaridge A	14A644763	Used/Existing Meter													
101	09222-5	17001104	Hudson Kouhiona	West Kolaridge A	14A001530	New Meter													
102	09223-01	17001110	Michael Fuemua	West Kolaridge A	14A001531	New Meter													
103	09222-4	17001103	Hon Alfred Ghiro	West Kolaridge A	14B056207	New Meter													
104	09222-3	17001102	Eric Oso	West Kolaridge A	14A001524	New Meter													
105	09246-2	17001160	Josephine Kama	West Kolaridge A	14B056491	New Meter													
106	09271-4	17001191	Dickson Manu	West Kolaridge A	12A004651	Used/Existing Meter													
107	09271-5	17001642	Cathy Maefasia	West Kolaridge A	14B056504	Used/Existing Meter													
108	09222-16	17001099	Festus Jimmy Ganifiri	West Kolaridge A	12B172425	Used/Existing Meter													
109	09239-2	17001149	Allan Muanimae (Jr)	West Kolaridge A	13B019455	Used/Existing Meter													
110	9098	17001086	Brian Billy Mani	West Kolaridge A	14A001533	New Meter													
111	09098-1	17001087	Alpheaus Aranani	West Kolaridge A	11B091792	Used/Existing Meter													
112	09223-5	17001114	Ileen Akaramo	West Kolaridge A	14A645331	Used/Existing Meter													
113	08451-01	16001567	Maggie M Woollett	Vara Creek	99B149609	Used/Existing Meter													
114	08451-03	16001569	Joy Ricky	Vara Creek	12A005449	Used/Existing Meter													
115	08471-1	16001608	Richard Tiana	Vara Creek	12A005152	Used/Existing Meter													
116	08465-2	16001602	Jack Indu	Aekafo	14B056488	New Meter													
117	8469	16001604	Manoah Manetei	Aekafo	14A001113	New Meter													
118	08562-01	17001029	Baddley Sele	Cana Hill	14A001110	New Meter													
119	08502-01	17001003	Henry B Kahui	Cana Hill	12B086450	Used/Existing Meter													
120	08562-02	17001030	Jonah Rusi	Cana Hill	10B056040	Used/Existing Meter													
121	08502-02	17001004	Moses Kenilorea	Cana Hill	14B056530	Used/Existing Meter													
122	08502-08	17001007	Clement Terewauri	Cana Hill	S13B00184	Used/Existing Meter													
123	08502-07	17001006	Youngsley Oli	Cana Hill	14B056531	Used/Existing Meter													
124	08502-5	17001014	Anna Hoasi	Cana Hill	11A000695	Used/Existing Meter													
125	08502-8	17001016	Steve Mao	Cana Hill	14A044666	Used/Existing Meter													
126	08502-3	17001012	Ivory Huaswa	Cana Hill	14A001112	New Meter													
127	08502-4	17001013	Godfrey Parovata	Cana Hill	14B056290	Used/Existing Meter													
128	08496-1	16001628	Cana Hill Local Church	Cana Hill	14B056253	New Meter													
129	8500	16001631	Rhianny Hatamane	Cana Hill	13B019595	Used/Existing Meter													
130	08500-5	17001001	Barnabas Otomia	Cana Hill	06A021790	Used/Existing Meter													
131	08502-9	17001017	Moffat Hoa	Cana Hill	14B056289	Used/Existing Meter													
132	08502-7	17001015	John Martin Inofalu	Cana Hill	14A001109	New Meter													
133	08502-09	17001009	David Lilimae	Cana Hill	12B172499	Used/Existing Meter													
134	08502-10	17001011	Ruel Peter Uhiaro	Cana Hill	13A000907	Used/Existing Meter													
135	08500-3	16001635	Tom Torahere	Cana Hill	14B056291	Used/Existing Meter													
136	8501	17001002	Jimmy Houahe	Cana Hill	14B056528	Used/Existing Meter													
137	08502-1	17001010	Mishack Maetoro	Cana Hill	12A005153	Used/Existing Meter													
138	8487	16001617	William Siru	Aekafo	14A001450	New Meter													
139	8485	16001644	Leonard Marzyano	Aekafo	14A001473	Used/Existing Meter													
140	8491	16001621	Tom Pa`a	Cana Hill	14A001114	New Meter													
141	8493	16001623	Rose Deva	Cana Hill	14A001117	New Meter													
142	8486	16001616	Mike Haukaria	Cana Hill	14A001116	New Meter													
143	8492	16001622	Charles Nima	Cana Hill	14A001115	New Meter													
144	8494	16001625	Andy Taba`a	Cana Hill	14A001118	New Meter													
145	8490	16001620	Ishmael Taheriu	Cana Hill	14B056254	New Meter													
146	08500-2	16001634	Mocks Kahui	Cana Hill	S13A000019	Used/Existing Meter													
147	08500-02	16001632	Milton Taro	Cana Hill	14A644549	Used/Existing Meter													

148	08478-01	16001614	David Siru	Aekafo	S13A00592	Used/Existing Meter													
149	8496	16001627	Frank Kenitausuana	Aekafo	14A001453	New Meter													
150	8479	16001615	Nicholas Ramotaka	Aekafo	14A001452	New Meter													
151	8478	16001613	David Siru	Aekafo	14A001449	New Meter													
152	8477	16001612	Jenny Watani	Aekafo	13B019678	Used/Existing Meter													
153	8498	16001629	Jimmy Otoara`a	Aekafo	12A004512	Used/Existing Meter													
154	8493-1	16001624	Amos Una	Aekafo	14A001451	New Meter													
155	8495	16001626	Robert Chris	Aekafo	14B056252	New Meter													
156	8552	17001021	Rachman Syah	Vara Creek	14A001317	Used/Existing Meter													
157	9219-01	17001089	Teriba Tabe	West Kolaridge A	14A644682	Used/Existing Meter													
158	8499	16001630	Nelson Horipua	Cana Hill	14B056256	New Meter													
159	9219	17001088	Burabeti Tabe	West Kolaridge A	14A001111	New Meter													
160	08502-03	17001005	Alick Keniwasia	Cana Hill	13A000994	Used/Existing Meter													
161	8503	17001018	John Maetorea	Aekafo	14B056288	Used/Existing Meter													
162	8551	17001020	Darton Deva	Vara Creek	13B019728	Used/Existing Meter													
163	8504	17001019	S Telison	Cana Hill	14A645211	Used/Existing Meter													
164	09230-3	17001135	Malon Isaiah	West Kolaridge A	14B001479	Used/Existing Meter													
165	08451-02	16001568	Henry Sango	Varacreek	14A001080	New Meter													
166		17001178	Donald Kiriau	West Kolaridge A	14A001219	New Meter													
167	08454-01	16001585	Jared Bua	West Kolaridge A	14A001172	New Meter													
168	09222-13	17001096	John Abana	West Kolaridge A	12B011202	Used/Existing Meter													
169	09223-2	17001112	Andy Misioni	West Kolaridge A	14A645217	Used/Existing Meter													
170	09230	17001133	Johanne Bawden	West Kolaridge A	14A645220	new Meter													
171	08448-01	16001563	James Kwaisina	Vara Creek	14A001461	new Meter													
172	08453-04	16001582	Thomas Tareoha	Vara Creek	14B056490	New Meter													
173	08457-03	16001588	Stephen Weo	Aekafo	99B141633	Used/Existing Meter													
174	08457-1	16001590	Daniel Maekali	Aekafo	12B011139	Used/Existing Meter													
175	08451-3	16001574	Crystal Mae	Vara Creek	14B056468	New Meter													
176	5549	16001603	Edrie Indu	Aekafo	14A001223	Used/Existing Meter													
177	09094-3	17001085	Clement Kilelasa	Gwaimao	14A001143	New Meter													
178	9093	17001084	Willson Salatalau	Gwaimao	14A001142	New Meter													
179	09093-1	17001643	Solomon Tabiolo	Gwaimao	14A001141	New Meter													
180	08453-1	16001583	Silio Rere	Aekafo	14A644546	New Meter													
181	08457-4	16001593	Peter Kenihuraia	Aekafo	14A001526	Used/Existing Meter													
182	08472-5	16001610	Sivina Ruksa	Aekafo	12A005424	New Meter													
183	08453-01	16001579	David Ori	Aekafo	14B056471	Used/Existing Meter													
184		16001609	Martin Meke	Aekafo	14A001222	New Meter													
185		16001655	Obed Dausabea	Aekafo	14A001170	New Meter													
186		17001649	Margret Quan	West Kolaridge A	14B056267	Used/Existing Meter													
187		17001046	Francis & Elizabeth Wales	Papaho	14A001082	New Meter													
188		15001483	Rickson Agwai Ramo	Papaho	14A001083	New Meter													
189	6466		Patson Gavai	Papaho	14A001220	New Meter													
190			Francis & Elizabeth Wales	Papaho	14A001081	New Meter													
191			Francis & Elizabeth Wales	Papaho	14A001079	New Meter													
192			Wilfred nigo	Papaho	12B019021	Used/Existing Meter													
193		??	??	Aekafo	14A004487	Used/Existing Meter													
194		16001664	Hendry Ngewae	Namoliki	15A000045	New Meter													
195	08562-03	17001031	Brian Keniarisia	Cana Hill	11A000755	Used/Existing Meter													
196	09239-1	17001148	Noel Totolonobatus	Cana Hill	11B091789	Used/Existing Meter													
197		17001668	Hilda Mota	West Kolaridge A	14B056239	New Meter													

S64-1-67

Change in Status of Connections (Customers, Users and Unconnection) 4 No.7

No.	Account No.		Account Name	Location	Before Countermeasures										After Countermeasures												Remarks
					Registered	Non-Regist./Illegal			Un-	er Type			Meter ID	July Consumption m3/d	New/Re	Legalized	Disconnection		Un-	Meter Raising		Consumer Type			Meter ID	November Consumption m3/d	
		New Account			Meter	D/L	Direct	Indirect	Connect.	Dom.	Com.	?	Number	2015/7/30	Regist.		Illegal	Registered	Connect.	No-Change	Replace	New	Dom.	Com.	?	Number	Consumption	
1	02099-02	12001179	JULIE GEGEU HARO	TASAHE C	1					1			12B011206	1.97						1			1			12B011206	24	0.800	
2	02099-1	12001178	DAVID KAUMAE	TASAHE C	1				1	1			545549						1	1			1						
3	02137-3	12001324	COLLIN BECK	TASAHE C	1					1			09B053374	0.97						1			1			09B053374	27	0.900	
4	02137	12001322	MARUJA KAMATIE	TASAHE C	1					1			12A004515	0.00						1			1			12A004515	116	3.867	
5	02136-1	12001321	GEORGE BECK	TASAHE C	1					1			S13A00294	0.00						1			1			S13A00294	709	23.633	
6	02136	12001315	GEORGE WU CO LTD	TASAHE C	1					1			R940000753	0.97						1			1			15A000534	9	0.300	
7	02133-1	12001311	KATHLEEN ASIWIN	TASAHE C	1					1			S13A00001	1.17						1			1			S13A00001	73,000	2.433	
8	02134	12001312	DAISY MAY & SAM MOLI	TASAHE C	1					1			12A004456	1.83						1			1			12A004456	36	1.200	
9	02133	12001310	JOHN ASHWIN	TASAHE C	1					1			14A001435	0.57						1			1			14A001435	48	1.600	
10	02134-1	12001313	SEBASTIAN LALA	TASAHE C	1					1			99B141698	0.83						1			1			99B141698	56	1.867	
11	02135-1	12001314	NIGEL MAEZAMA	TASAHE C		1				1			99B150013		1					1			1			14B123260	193	6.433	
12	02130	12001308	TOMMY LEONG	TASAHE C	1					1			11B091760	2.10						1			1			11B091760	54	1.800	
13	02126-02	12001300	ANSA NATHAN WATE	TASAHE C	1					1			99B149878	1.80						1	1		1			14B122980	71	2.367	
14	02126-1	12001301	BRIAN KWAIMANI	TASAHE C	1					1			S13A00537	0.43						1			1			S13A00537	21	0.700	
15	02126-2	12001302	J KWAIMANI	TASAHE C	1					1			14B056498	1.07						1			1			14B056498	17	0.567	
16	02128	12001307	NEW ZEALAND HIGH COM - TAS B	TASAHE C	1					1			12B086829	1.13						1			1			12B086829	32	1.067	
17	02126-5	12001304	TIMOTHY & VIOLINE ARUAFU	TASAHE C	1					1			13B019654							1			1			13B019654	21	0.700	
18	02126	12001299	SAM IRO	TASAHE C	1					1			14A644751	1.97						1			1			14A644751	75	2.500	
19	02125-1	12001298	JOHN LAMANI	TASAHE C	1					1			14A644735	5.90						1			1			14A644735	36	1.200	
20	02114-1	12001274	RIBANATAAKE AWIRA/TIMOTHY ARUAFU	TASAHE C	1					1			09B053475	1.87						1			1			09B053475	19,000	0.633	
21	02126-4	12001303	TIMOTHY ARUAFU	TASAHE C		1				1			DIRECT LINE									1	1			15A000532	124	4.133	
22	02115	12001275	STIVA CHAN	TASAHE C	1					1			14A644740	1.17						1			1			14A644740	35	1.167	
23	02117	12001277	HONG KONG PALACE	TASAHE C	1					1			14A644540	5.47						1			1			14A644540	112	3.733	
24	02116	12001276	JOHN KONAM	TASAHE C	1					1			12A005480	18.87						1			1			12A005480	78	2.600	
25	02117-1	12001278	EARTH MOVERS S I LTD	TASAHE C	1					1			12A005391	5.57						1			1			12A005391	73	2.433	
26	02117-2	12001279	BULACAN INT WOOD INDUSTRIES	TASAHE C		1				1			DIRECT LINE									1	1			15A000185	69	2.300	
27	02117-3	12001280	BULACAN INT WOOD INDUSTRY	TASAHE C		1				1			07-000644							1			1			15A000535	21,000	0.700	
28	02118	12001281	EBA LTD (TONY & BEN FERRIS)	TASAHE C	1					1			14A001050	0.80						1			1			14A001050	14,000	0.467	
29	02119	12001282	DR ZHIWEI ZHANG	TASAHE C		1				1			GKM07208753							1			1			15A000183	133	4.433	
30	02119-1	12001283	HONIARA CASINO	TASAHE C	1					1			14A645023	5.33						1			1			14A645023	190	6.333	
31	02120	12001286	SUGAR AND SALT INDUSTRY LTD	TASAHE C	1					1			12A645017	2.60						1			1			12A645017	54	1.800	
32	02119-3	12001285	RICKY LOMEA	TASAHE C	1					1			12B086682	1.97						1	1		1			14B122978	-31		
33	02121	12001287	DUDLEY WU	TASAHE C	1					1			14A644741	12.27						1			1			14A644741	52	1.733	
34	02123	12001291	JOHN & KAREN FOMUA	TASAHE C	1					1			10A005278	2.73						1			1			15A000162	25	0.833	
35	02123-1	12001292	ROBERT BARRY	TASAHE C	1					1			99B141685	1.07						1			1			14B123190	139	4.633	
36	02124	12001293	DR JOHN AND KONO SZETU	TASAHE C	1					1			S13A00159	1.43						1			1			S13A00159	44	1.467	
37	02125	12001297	QUAN FOO	TASAHE C	1					1			S13A00262	3.17						1			1			S13A00262	131	4.367	
38	02124-1	12001294	KEN YEE	TASAHE C	1					1			14B056259	3.13						1			1			14B056259	73	2.433	
39	02111-02	12001267	DSS/OURS AUSTRALIA PTY LTD	TASAHE C	1					1			07-001282	0.03						1			1			14B123189	5	0.167	
40	02111-03	12001268	DSS/OURS AUSTRALIA PTY LTD	TASAHE C	1					1			11B091784	0.90						1			1			11B091784	2	0.067	
41	02110-31	12001253	TIM TOY & SING GIMWONG	TASAHE C	1					1			12A005255	0.43						1	1		1			12A005255	10	0.333	
42	02110-01	12001233	DOREEN KUPER	TASAHE C	1					1			95359179	0.07						1			1			15A000185	2	0.067	
43	02109-4	12001230	MIKE HEMMER	TASAHE C	1					1			09C002282	2.40						1			1			09C002282	103	3.433	
44	02110-7	12001232	THERESA RIA PAKAI	TASAHE C	1					1			12B011293	1.07						1			1			12B011293	15	0.500	
45	02110-06.1	12001236	ZU COU HU	TASAHE C	1					1			12B086880	0.13						1			1			12B086880	5	0.167	
46	02111-04	12001259	JR BENJAMIN DOLA FA'AMAURI	TASAHE C	1					1			12B011010	0.00						1			1			12B011010	20	0.667	
47	02110-06	12001235	SAM CHAN	TASAHE C	1					1			99B141734	0.27						1			1			99B141734	10	0.333	
48	02110-20	12001244	AUSPAC GROUP COM/SOUTHEN SEA INVESTMENT LTD	TASAHE C	1					1			13A000670	4.07						1			1			13A000670	38	1.267	
49	02110-2	12001243	DR. DEOGRATIS HAROHMANA	TASAHE C	1					1			07-000245	1.07						1			1			15A000501	152	5.067	
50		12001649	JACKSON FIULAUA	TASAHE C	1					1			05A019045	1.00						1			1			05A019045	28	0.933	
51	02103	12001191	MR. KEN CHAN	TASAHE C	1					1			13B019789	5.93						1			1			13B019789	6	0.200	
52	02102-4	12001190	WORLD VISION	TASAHE C	1					1			12B010940	0.00						1			1			12B010940	22	0.733	
53	02102-3	12001189	NEW ZEALAND HIGH COM	TASAHE C	1					1			99B141907	1.93						1			1			99B141907	42	1.400	
54	02105	12001207	JOSHUA WASAU	TASAHE C	1					1			13A000754	1.77						1			1			13A000754	50,000	1.667	
55	02104-06	12001196	BENJAMIN FAAMAURI	TASAHE C	1					1			11B091819	0.80						1			1			11B091819	25,000	0.833	
56	02102-2	12001188	JOYCE& DON BOYKIN - RENTER	TASAHE C	1					1			13B019638	1.23						1			1			13B019638	56	1.867	
57	02102-1	12001187	JOYCE & DON BOYKIN	TASAHE C	1					1			13B019790	3.60						1			1			13B019790	36	1.200	
58	02105-1	12001209	JACK WILLIAMS(FLAT 1)	TASAHE C	1					1			09B053517	0.13						1			1			09B053517	0		
59	02106-2	12001210	GEORGE BECK	TASAHE C	1					1			09B053516	1.87						1			1			09B053516	25	0.833	
60	02107-06	12001217	OPPORTUNITY KUKU	TASAHE C	1					1			S13B00190	1.10						1			1			13B019789	18	0.600	
61	02104	12001192	JACQUILINE RABEL	TASAHE C	1					1			05A018228	3.13						1			1			05A018228	45	1.500	House under Mathew Fox
62	02104-22	12001194	WILLIAM LAI	TASAHE C	1					1			12A004762	1.83						1			1			12A004762	39	1.300	
63	02104-03	12001702	WILLIAM LAI (WM INVESTMENT LTD)	TASAHE C		1				1			12B010936			1				1			1			12B010936	42	1.400	
64		12001163	MOLTON VAGIBULE	TASAHE C	1					1			13A000673	1.10						1			1			13A000673	16	0.533	
65	02104-4	12001202	VARIANI LONAMEI	TASAHE C	1					1			S13B00114	0.97						1			1			14B123191	22	0.733	
66		12001206	HON. VARIANI LONAMEI	TASAHE C	1					1			14A644809							1			1			14A644809	90	3.000	
67	02104-2	12001666	TONY RAEGA'A	TASAHE C	1					1			DIRECT LINE	1.07									1	1			14B123258	31	1.033	
68	02104-6	12001203	GRACE KABUI	TASAHE C	1					1			10A005365	3.27						1			1			10A005365	0		
69		12001204	HON. MANASSEH & EMMY SOGAVARE	TASAHE C	1					1			14A645248	0.77						1			1			14A645248	73	2.433	
70	02104-3		ANTHONY G OLIDELE	TASAHE C	1				1	1			09A002251						1										
71	02104-08	12001197	MARK YUONNE CONSTANTINE	TASAHE C	1					1			12A005109							1			1			12A005109	0		
72	02104-5		LINDA R. PALMER & LEMUEL B. SIOSI	TASAHE C					1	1			DIRECT LINE						1				1						
73	02104-25		JUNIOR METE	TASAHE C					1	1			12A004864						1				1						
74	02104-04	12001195	AUSPAC/SALOME`S KWAISA	TASAHE C	1					1			05A019062	3.30						1			1			15A000503	93	3.100	
75	02104-10	12001200	TS JAYA LTD	TASAHE C	1					1			13A001028	1.67						1			1			15A000504	42	1.400	

No.	Account No.		Account Name	Location	Before Countermeasures										After Countermeasures												Remarks
					Registered	Non-Regist./Illegal			Un-	er Type			Meter ID	July Consumption m3/d	New/Re	Legalized	Disconnection		Un-	Meter Raising		Consumer Type			Meter ID	November Consumption m3/d	
		New Account			Meter	D/L	Direct	Indirect	Connect.	Dom.	Com.	?	Number	2015/7/30	Regist.		Illegal	Registered	Connect.	No-Change	Replace	New	Dom.	Com.	?	Number	Consumption	
76	02104-01	12001193	MRS JOYCE BUNDU	TASAHE C	1					1			12A004459	0.57						1			1			12A004459	31	1.033	
77	02104-1	12001199	ROBERT M. YUEN	TASAHE C	1					1			GKM0C400012	0.97							1		1			14B123279	50	1.667	
78	02107-03	12001214	HARRY STEWART	TASAHE C	1					1			10B056042	0.73						1			1			14B123281	8	0.267	
79	02107-02	12001213	URS AUSTRALIA	TASAHE C	1					1			10B056043	1.37						1			1			10B56043	33	1.100	
80		12001201	SIQUAN TANG	TASAHE C	1					1			14A645107	2.37						1			1			14A645107	36	1.200	
81	02107-04	12001215	FRANCIS FA'AMAURI	TASAHE C	1					1			11B091771	1.43						1			1			14B056427	16	0.533	
82		12001216	FRANCIS FA'AMAURI	TASAHE C	1					1			S13A00489							1			1			S13A00489	24	0.800	
83	02107-04	12001700	GEORGE PAUL IROFIA	TASAHE C		1				1			DIRECT LINE			1						1	1			14B123260	183	6.100	
84	02110-26	12001248	STEPHEN ANISI	TASAHE C	1					1			12B011053	1.83						1			1			12B011053	66	2.200	
85	02110-34	12001258	BARBARA ANILAELAE	TASAHE C	1					1			12B086790	0.53						1			1			12B086790	19	0.633	
86	02110-8	12001250	MIRRIAM NAMOI	TASAHE C		1				1			14A645120			1				1			1			14A645120	0		
87	02108-5	12001226	TONGS CORPORATION	TASAHE C	1					1			12B066811							1			1			12B066811	139	4.633	
88	02110-07	12001237	BLANDINA TUITA	TASAHE C	1					1			S13A00038	1.27						1			1			S13A00038	31	1.033	
89	02110-40	12001260	FELIX TALISIA (HOUSE 1)	TASAHE C	1					1			13B113825	6.77						1			1			13B113825	203	6.767	
90	02110-33	12001255	BELLA SIMPHA	TASAHE C	1					1			12A005478	1.53						1			1			12A005478	35	1.167	
91	02110-33.1	12001256	MARIE D`AFU	TASAHE C	1					1			12B172418	0.30						1			1			12B172418	13	0.433	
92	02110-27	12001249	JAMES IROGA	TASAHE C	1					1			12A005350	0.83						1			1			12A005350	35	1.167	
93	02110-33.2	12001257	FELIX TALISIA (HOUSE 2)	TASAHE C	1					1			13A002125	0.93						1			1			13A002125	81	2.700	
94		12001198	ASHLEY TEIKA	TASAHE C	1					1			S13B00339	0.70						1			1			S13B00339	47	1.567	
95	02110-7	12001263	ESTHER BOSA	TASAHE C		1				1			DIRECT LINE	1.07									1	1			15A000234	31	1.033	
96	02110-4	12001259	BERNARD BATAANSIA	TASAHE C	1					1			13A000626	0.63						1			1			13A000626	42	1.400	
97	02110-16	12001242	JACKSON FIU	TASAHE C		1				1			13B019456			1				1			1			13B019456	11	0.367	
98		12001262	GEORGE TARA	TASAHE C	1					1			14A644901	3.07						1			1			14A644901	90,000	3.000	
99	02110-04	12001698	ENOCH NAOMANE	TASAHE C		1				1			99B149891			1				1			1			14B123277	106	3.533	
100	02110-23	12001246	EDDY LIN	TASAHE C	1					1			99B142064	3.13						1			1			14B123188	49	1.633	
101	02110-24	12001247	NELSON KOHIA	TASAHE C	1					1			12A004800	2.80						1			1			15A000505	93	3.100	
102	02110-32	12001254	LESLIE TOLOMAEA	TASAHE C	1					1			14A645243	0.77						1			1			14A645243	31	1.033	
103	02110-29	12001251	JOHN ATOREA/PRENIL SHARMA	TASAHE C	1					1			07-001018	0.03						1			1			14B123280	101	3.367	
104	02110-15	12001241	JUDY BARTY	TASAHE C	1					1			14A001063	0.37						1			1			14A001063	19	0.633	
105	02110-30	12001252	INTERFACTION/ PATTESON AJTOREA	TASAHE C	1					1			10A005174	2.27						1			1			10A005174	59	1.967	
106	02110-14	12001240	LORENA ELVIRA AYUSO	TASAHE C	1					1			10B56000	0.33						1			1			10B56000	6	0.200	
107	02110-11	12001239	MATTHEW SHORTUS	TASAHE C	1					1			12B010873	1.23						1			1			12B010873	59	1.967	
108	02109-2	12001227	PETER BONDURS AUSTRALIA PTY LTD	TASAHE C	1					1			05B881462	1.03						1			1			05B881462	39	1.300	
109	02109-3	12001228	BEN FAMAURI	TASAHE C	1					1			07-001479	3.13						1			1			14B123257	44	1.467	
110		12001231	FRANCIS FA'AMAURI	TASAHE C	1					1			07-001478	1.50						1			1			14B123259	22	0.733	
111	02109-3	12001223	TONGS COOPERATION	TASAHE C	1					1			09A000230	1.90						1			1			09A000230	15	0.500	
112	02109-4	12001224	TONGS COOPERATION	TASAHE C	1					1			12B086809	5.87						1			1			12B086809	11,000	0.367	
113		12001225	KEITH DOUGLAS	TASAHE C	1					1			S13B00350	1.57						1			1			S13B00350	62	2.067	
114	02108-2	12001222	MOANA STRICKLAND	TASAHE C	1					1			09B053436	1.80						1			1			09B053436	28	0.933	
115	02111-1	12001270	MICHAEL ANDRESEN	TASAHE C	1					1			12A004519	3.90						1			1			12A004519	106	3.533	
116	02108-1	12001221	MOANA STRICTLAND	TASAHE C	1					1			11A000741	0.47						1			1			11A000741	8	0.267	
117	02108	12001220	BOBO CHAN	TASAHE C	1					1			14B056526	0.00						1			1			14B056526	31	1.033	
118	02107	12001211	SILAS CHAN	TASAHE C	1					1			13A000874	1.17						1			1			13A000874	47	1.567	
119	02106	12001208	GEORGE BECK	TASAHE C	1					1			99B149800	1.97						1	1		1			14B056428	2,000	0.067	
120	02101	12001182	ELIJAH FIUBALA-MTR #1	TASAHE C	1					1			05A018229	1.40						1			1			05A018229	47	1.567	
121	02101-4	12001185	ELIJAH FIUBALA	TASAHE C	1					1			12B086837	1.97						1			1			12B086837	36	1.200	
122	02101-1	12001218	CHAN CORPORATION	TASAHE C	1					1			10B056082	0.00						1			1			10B056082	11	0.367	
123	02107-2	12001219	CHAN CORPORATION	TASAHE C	1					1			10B056083	0.00						1			1			10B056083	48	1.600	
124	02101-1	12001164	DONALD FIUBALA	TASAHE C	1					1			14B056301	8.00						1			1			14B056301	228,000	7.600	
125	02107-01	12001212	MICHAEL HOGAN (AUS HIGH COMM)	TASAHE C	1					1			05B881564	0.27						1			1			05B881564	36	1.200	
126	02105-5	12001188	TUVAKAONI CHURCH	TASAHE C	1					1			13B019817	0.37						1			1			13B019817	0		
127	02113	12001273	JEREMY ROA	TASAHE C	1					1			GKM07527722	2.20						1	1		1			14B123277	70	2.333	
128	02126-8	12001305	ALLAN KWAIMANI	TASAHE C	1					1			S13B00311	3.27						1			1			S13B00311	113	3.767	
129	02136-01	12001316	PETER CHENG	TASAHE C	1					1			12B010872	2.47						1			1			12B010872	26	0.867	
130	02136-02	12001317	FAR EAST ENT	TASAHE C	1					1			12A004894	0.13						1			1			12A004894	2	0.067	
131	02135-03	12001318	FAR EAST ENT	TASAHE C	1					1			12A004893	0.33						1			1			12A004893	12	0.400	
132	02136-04	12001319	FAR EAST ENT	TASAHE C	1					1			12A004892	0.00						1			1			12A004892	0		
133	02136-05	12001320	FAR EAST ENT	TASAHE C	1					1			12A004891	1.77						1			1			12A004891	2,000	0.067	
134	02286	12001556	STANLEY DICK PIRIONE	TASAHE C	1					1			07-000874							1			1			07-000874	32	1.067	
135	02284-4	12001544	LUKE VAWAHA	TASAHE C	1					1			12A004430	0.53						1			1			12A004430	35	1.167	
136	23078	12001250	HON JACKSON FIULAUA	TASAHE C	1					1			S13A00481	2.33						1			1			S13A00481	39	1.300	
137	02119-2	12001284	NAMSON TRAN	TASAHE C	1					1			14E001149	0.00						1			1			14E001149	0		
138		12001309	MARIA WONG	TASAHE C	1					1			14A644822	0.97						1			1			15A000181	35	1.167	
139	Newly activate	12001693	TONY SZETU (PINACLE)	TASAHE C						1			09A002208			1				1			1			15A000108	83	2.767	
140	Newly activate	12001692	DR LEVI HOU	TASAHE C				1		1			DL			1						1	1			15A000533	95	3.167	
141		12001665	FRANK BOLLEN PULE	TASAHE C		1				1			DIRECT LINE	1.07									1	1			15A000502	6	0.200	
142	Not in system		AUSPAC GROUP COM/SOUTHEN SEA INVESTMENT LTD	TASAHE C				1		1			14A644895				1						1			14A644895			
143	Newly active	12001697	ROSE AONIMA	TASAHE C				1		1			GKM07C9214		1					1			1			14B123279	110,000	3.667	
144	newly active	12001637	JUDY BARTY	TASAHE C				1		1			Direct Line		1							1	1			15A000133	119	3.967	
145	newly active	12001711	PNG HIGH COM COMPLEX 1 (HENAO IDAU)	TASAHE C				1		1			NO METER		1							1	1			14B056486	22	0.733	
146	NEWLY ACTIVE	12001710	PNG HIGH COM COMPLEX 2 (TOMMY ANGA	TASAHE C				1		1			14B056234		1					1			1			14B056234	83,000	2.767	
147	NEWLY ACTIVE	12001653	SILAS MILIKADA	TASAHE C				1		1			Unknown		1							1	1			14B123320	66	2.200	Illegal by SW. Consult debt recovery team for
148	NEWLY ACTIVE	12001703	MISS SAVITA NANDAN	TASAHE C				1		1			Direct Line		1							1	1			15A000531	0		
149	Newly activate	12001689	JOHN TALUNAGO	TASAHE C				1		1			12A004458							1			1			12A004458	0		
150	Newly activate	12001435	LISA TALUNAGO	TASAHE C				1		1			Direct Line		1							1	1			15A000184	0		
151	Newly activate	12001636	NESTA GHIRO/ LINDSAY KAUA	TASAHE C				1		1			Direct Line		1							1	1			15A000182	316	10.533	
152		12001694	SOLOMON QUAN	TASAHE C				1		1			12A004628			1				1			1			12A004628	28	0.933	
153	Newly activate	12001690	BOBO CHAN/ SALOTE ULUINACEVA	TASAHE C				1		1			99B149804			1				1			1			99B149804	0		

No.	Account No.	New Account	Account Name	Location	Before Countermeasures									Meter ID Number	July Consumption m3/d 2015/7/30	After Countermeasures												Meter ID Number	November Consumption m3/d Consumption	Remarks
					Registered		Non-Regist.-Illegal		Un-	er Type						New/Re	Legalized	Disconnection		Un-	Meter Raising		Consumer Type						
					Meter	D/L	Direct	Indirect	Connect.	Dom.	Com.	?				Regist.		Illegal	Registered	Connect.	No-Change	Replace	New	Dom.	Com.	?			
154	NEWLY ACTIVATE	11001725	WILSON WILLIKA	TASAHE C			1			1			12A004650				1					1	1			15A000450	0		Account number needs to be verified
155	NEWLY ACTIVATE	11001724	WILSON WILLIKA	TASAHE C			1			1							1					1	1			15A000449	0		Account number needs to be verified
156	NEWLY ACTIVATE	11001725	WILSON WILLIKA	TASAHE C			1			1							1					1	1			15A000231	0		Account number needs to be verified
157		12001261	AUSPAC GROUP Co LTD	TASAHE C	1					1			14A001456								1		1			14A001456	0		
158		12001264	KERNY FAAMAURI	TASAHE C	1					1			06A021793	18,23							1		1			06A021793	128	4,267	
159		12001265	TEAM TAKARIA (GREEN HOUSE)	TASAHE C	1					1			12A004518	2,83							1		1			12A004518	73	2,433	
160		12001266	TEAM TAKARIA (AMON)	TASAHE C	1					1			14A644895	3,43							1		1			14A644895	73	2,433	
161		12001271	GEORGE TITIULU	TASAHE C	1					1			14B056313	1,97							1		1			14B056313	93	3,100	
162		12001272	OBREY / PETER TITIULU	TASAHE C			1			1			DIRECTLINE									1	1			14B122981	42	1,400	
163	Newly activate	12001691	TIMOTHY TITIULU	TASAHE C				1		1							1					1	1			14B122979	8	0,267	
164	Newly active	11001723	TERENCE TITIULU	TASAHE C				1		1							1					1	1			15A000448	0		
165		12001288	TIANDA & M QUYUN	TASAHE C	1					1			12A004732	4,87							1		1			15A000164	256	8,533	
166		12001289	TIANDA & M QUYUN	TASAHE C	1					1			12B010880	1,07							1		1			12B010880	28	0,933	
167	Newly activate	12001290	TIANDA & M QUYUN	TASAHE C			1			1			11A000707				1				1		1			11A000707	25	0,833	
168		12001295	CHRETINA PUA	TASAHE C	1					1			14A001052	1,57							1		1			14A001052	31	1,033	
169		12001296	ELLEN WARAHIRU	TASAHE C	1					1			14A644914	0,97							1		1			14A644914	31	1,033	
170		12001308	LESLIE TEAMA	TASAHE C	1					1			12A005382								1		1			15A000183	289	9,633	
171		12001671	JOHN & CATHY ADIPAKA	TASAHE C	1					1			14B123098								1		1			14B123098	7	0,233	
172		12001681	GORDON DENTYTIMOTY ARUAFU	TASAHE C	1					1			14B123097								1		1			14B123097	2	0,067	In the system the account is Timothy Aruafu
173		12001652	ROZALYN CHAN	TASAHE C	1					1			14A000997								1		1			14A000997	37	1,233	Meter was not read in July
174		12001657	AUSPAC GROUP COM LTD	TASAHE C	1					1			15A000052	0,57							1		1			15A000052	374	12,467	
175		12001245	GIBSON GALO	TASAHE C	1					1			14B056389	1,83							1		1			14B056389	57	1,900	
176		12001234	BIZWIZ LTD (MR CHI-SUM WONG)	TASAHE C	1					1			S13B00345								1		1			S13B00345	6	0,200	
177	Newly Activated	11001720	NICK HU	TASAHE C			1			1			CKM87C0905			1					1		1			14B123187	0		
178		12001573	EMMANUEL GELA	TASAHE C	1					1			S13B00268	0,43							1		1			S13B00268	15	0,500	
179		12001668	HARPER NGELEA (Moffat Sonitoga)	TASAHE C		1				1			Direct Line	1,07								1	1			15A000161	62	2,067	
180		12001685	MICHAEL KONA	TASAHE C					1	1					1							1	1			15A000546	47	1,567	
181		12001686	ELVIS PAHENA	TASAHE C					1	1					1							1	1			15A000107	-168		
182		11001721	MA HUANBO	TASAHE C					1	1					1							1	1			15A000232	0		
183	Newly activated	12001181	JOYCE DAFUA (VISSY TUPO)	TASAHE C			1			1							1					1	1			15A000235	31	1,033	
184	Newly added to DMA	12001172	JOHN & ANNE MISITE'E	TASAHE C					1	1										1			1			12B085521	16	0,533	
185		12001662	NADYUKIFUJIYAMA	TASAHE C		1				1			12B172450								1		1			12B172450			Customer claimed that meter was stolen.
186	Newly added to DMA		BILLY MAE	TASAHE C					1	1										1			1						
			MARIA ROSEBATU	TASAHE C			1			1								1					1						
			Two houses parasite to Dr. Levi Hou	TASAHE C				2																					
					140	9	29	2	9	187	0	0	0	262,48		3	27	2	0	6	123	33	23	187	0	0			323,767	

Category in Water Audit Table

A	B	D+E	F	I
140	9	29		9	187

Total HH: 187

* Each indirect un-registered (parasite) user cannot be recognized, so only the

6 Deleted 1 Added

262,477	
129	
2,035	
284,858	

3	27		8	179	187

Total HH: 187

323,767
154
2,102
376,376

S64-1-170

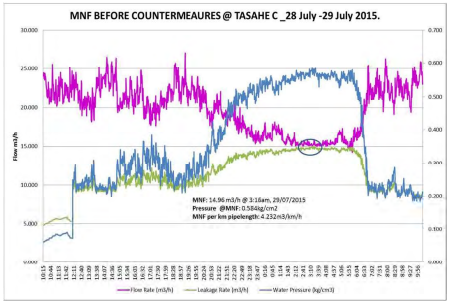
MNF Measure Before countermeasure in Tasahe C

Date at MNF	Time at MNF	MNF (m3/h) (1)	Water Pressure at MNF (kg/cm2) (2)	Assumed Daily Leakage (m3/day)
2015/7/29	2:00:00	14,211	3.2	253,200
		5,156	Ps	
		9,055	(1)-(2)	

Need to perform step test on site.

Total Inlet Length of Pipeline	415.2	m
	5,535	sec

Date	Time	S	VELOCITY m/s	FLOW RATE m3/s	Flow Rate (m3/h) (1)	Water Pressure Mnor	Water Pressure/ Water Pressure at MNF (kg/cm2) (2)	n (2)-(2)^1/2	Leakage Rate (m3/h) (1)-(1) x (2)	Leakage Rate (l/s) (1)-(1) x (2)
2015/7/29	1:01	2015/7/29 1:01	0.803	361.3755	1,300	1.41	0.94	0.9693	1,221	339
2015/7/29	1:02	2015/7/29 1:02	0.698	389.3305	1,402	1.55	0.93	0.9615	1,316	366
2015/7/29	1:03	2015/7/29 1:03	0.602	384.8268	1,386	1.53	0.93	0.9628	1,303	362
2015/7/29	1:04	2015/7/29 1:04	0.5	319.8867	1,152	1.27	0.93	0.9670	1,083	301
2015/7/29	1:05	2015/7/29 1:05	0.401	384.4967	1,384	1.53	0.93	0.9630	1,301	361
2015/7/29	1:06	2015/7/29 1:06	0.401	384.4967	1,384	1.53	0.92	0.9630	1,301	361
2015/7/29	1:07	2015/7/29 1:07	0.398	381.7313	1,374	1.52	0.92	0.9632	1,292	359
2015/7/29	1:08	2015/7/29 1:08	0.399	382.6956	1,378	1.52	0.92	0.9631	1,295	360
2015/7/29	1:09	2015/7/29 1:09	0.399	382.6956	1,378	1.52	0.92	0.9631	1,295	360
2015/7/29	1:10	2015/7/29 1:10	0.401	384.6878	1,385	1.53	0.92	0.9629	1,302	362
2015/7/29	1:11	2015/7/29 1:11	0.402	384.8830	1,386	1.53	0.92	0.9628	1,303	362
2015/7/29	1:12	2015/7/29 1:12	0.402	384.8830	1,386	1.53	0.92	0.9628	1,303	362
2015/7/29	1:13	2015/7/29 1:13	0.401	384.2211	1,383	1.53	0.92	0.9628	1,300	361
2015/7/29	1:14	2015/7/29 1:14	0.401	384.2211	1,383	1.53	0.92	0.9628	1,300	361
2015/7/29	1:15	2015/7/29 1:15	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:16	2015/7/29 1:16	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:17	2015/7/29 1:17	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:18	2015/7/29 1:18	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:19	2015/7/29 1:19	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:20	2015/7/29 1:20	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:21	2015/7/29 1:21	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:22	2015/7/29 1:22	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:23	2015/7/29 1:23	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:24	2015/7/29 1:24	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:25	2015/7/29 1:25	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:26	2015/7/29 1:26	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:27	2015/7/29 1:27	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:28	2015/7/29 1:28	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:29	2015/7/29 1:29	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:30	2015/7/29 1:30	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:31	2015/7/29 1:31	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:32	2015/7/29 1:32	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:33	2015/7/29 1:33	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:34	2015/7/29 1:34	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:35	2015/7/29 1:35	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:36	2015/7/29 1:36	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:37	2015/7/29 1:37	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:38	2015/7/29 1:38	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:39	2015/7/29 1:39	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:40	2015/7/29 1:40	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:41	2015/7/29 1:41	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:42	2015/7/29 1:42	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:43	2015/7/29 1:43	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:44	2015/7/29 1:44	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:45	2015/7/29 1:45	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:46	2015/7/29 1:46	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:47	2015/7/29 1:47	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:48	2015/7/29 1:48	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:49	2015/7/29 1:49	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:50	2015/7/29 1:50	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:51	2015/7/29 1:51	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:52	2015/7/29 1:52	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:53	2015/7/29 1:53	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:54	2015/7/29 1:54	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:55	2015/7/29 1:55	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:56	2015/7/29 1:56	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:57	2015/7/29 1:57	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:58	2015/7/29 1:58	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	1:59	2015/7/29 1:59	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:00	2015/7/29 2:00	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:01	2015/7/29 2:01	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:02	2015/7/29 2:02	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:03	2015/7/29 2:03	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:04	2015/7/29 2:04	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:05	2015/7/29 2:05	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:06	2015/7/29 2:06	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:07	2015/7/29 2:07	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:08	2015/7/29 2:08	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:09	2015/7/29 2:09	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:10	2015/7/29 2:10	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:11	2015/7/29 2:11	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:12	2015/7/29 2:12	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:13	2015/7/29 2:13	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359
2015/7/29	2:14	2015/7/29 2:14	0.399	382.3313	1,376	1.52	0.92	0.9630	1,294	359

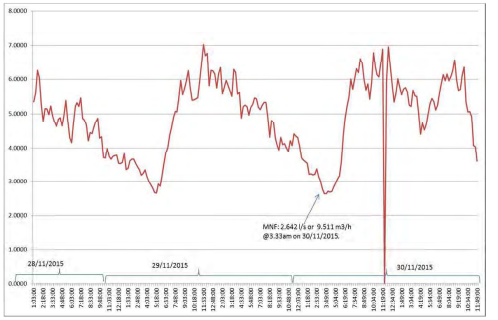


MNF Measure After countermeasure in Tasahe C

Date at MNF	Time at MNF	MNF (m3/h) (1)	Water Pressure at MNF (kg/cm2) (a)	Assumed Daily Leakage (m3/day)
2015/11/30	3:33:00	3,211	0.95	0.668
		2,447	Ps	
		2,211	(1)-(a)	

Total Inlet Length of Pipeline	415.2	m
	5,535	sec

Date	Time		Flow Rate (m3/h) (1)	Water Pressure Mnor	Water Pressure/ Water Pressure at MNF (kg/cm2) (2)	n (2)-(2)^1/2	Leakage Rate (m3/h) (1)-(1) x (2)	Leakage Rate (l/s) (1)-(1) x (2)
2015/11/23	2:53:00	PM	5,2668					
2015/11/23	2:54:00	PM	5,2668					
2015/11/23	2:55:00	PM	5,2668					
2015/11/23	2:56:00	PM	5,2668					
2015/11/23	2:57:00	PM	5,2668					
2015/11/23	2:58:00	PM	5,2668					
2015/11/23	2:59:00	PM	5,2668					
2015/11/23	3:00:00	PM	5,2668					
2015/11/23	3:01:00	PM	5,2668					
2015/11/23	3:02:00	PM	5,2668					
2015/11/23	3:03:00	PM	5,2668					
2015/11/23	3:04:00	PM	5,2668					
2015/11/23	3:05:00	PM	5,2668					
2015/11/23	3:06:00	PM	5,2668					
2015/11/23	3:07:00	PM	5,2668					
2015/11/23	3:08:00	PM	5,2668					
2015/11/23	3:09:00	PM	5,2668					
2015/11/23	3:10:00	PM	5,2668					
2015/11/23	3:11:00	PM	5,2668					
2015/11/23	3:12:00	PM	5,2668					
2015/11/23	3:13:00	PM	5,2668					
2015/11/23	3:14:00	PM	5,2668					
2015/11/23	3:15:00	PM	5,2668					
2015/11/23	3:16:00	PM	5,2668					
2015/11/23	3:17:00	PM	5,2668					
2015/11/23	3:18:00	PM	5,2668					
2015/11/23	3:19:00	PM	5,2668					
2015/11/23	3:20:00	PM	5,2668					
2015/11/23	3:21:00	PM	5,2668					
2015/11/23	3:22:00	PM	5,2668					
2015/11/23	3:23:00	PM	5,2668					
2015/11/23	3:24:00	PM	5,2668					
2015/11/23	3:25:00	PM	5,2668					
2015/11/23	3:26:00	PM	5,2668					
2015/11/23	3:27:00	PM	5,2668					
2015/11/23	3:28:00	PM	5,2668					
2015/11/23	3:29:00	PM	5,2668					
2015/11/23	3:30:00	PM	5,2668					
2015/11/23	3:31:00	PM	5,2668					
2015/11/23	3:32:00	PM	5,2668					
2015/11/23	3:33:00	PM	5,2668					
2015/11/23	3:34:00	PM	5,2668					
2015/11/23	3:35:00	PM	5,2668					
2015/11/23	3:36:00	PM	5,2668					
2015/11/23	3:37:00	PM	5,2668					
2015/11/23	3:38:00	PM	5,2668					
2015/11/23	3:39:00	PM	5,2668					
2015/11/23	3:40:00	PM	5,2668					
2015/11/23	3:41:00	PM	5,2668					
2015/11/23	3:42:00	PM	5,2668					
2015/11/23	3:43:00	PM	5,2668					
2015/11/23	3:44:00	PM	5,2668					
2015/11/23	3:45:00	PM	5,2668					
2015/11/23	3:46:00	PM	5,2668					
2015/11/23	3:47:00	PM	5,2668					
2015/11/23	3:48:00	PM	5,2668					
2015/11/23	3:49:00	PM	5,2668					
2015/11/23	3:50:00	PM	5,2668					
2015/11/23	3:51:00	PM	5,2668					
2015/11/23	3:52:00	PM	5,2668					
2015/11/23	3:53:00	PM	5,2668					
2015/11/23	3:54:00	PM	5,2668					
2015/11/23	3:55:00	PM	5,2668					
2015/11/23	3:56:00	PM	5,2668					
2015/11/23	3:57:00	PM	5,2668					
2015/11/23	3:58:00	PM	5,2668					
2015/11/23	3:59:00	PM	5,2668					
2015/11/23	4:00:00	PM	5,2668					
2015/11/23	4:01:00	PM	5,2668					
2015/11/23	4:02:00	PM	5,2668					
2015/11/23	4:03:00	PM	5,2668					
2015/11/23	4:04:00	PM	5,2668					
2015/11/23	4:05:00	PM	5,2668					
2015/11/23	4:06:00	PM	5,2668					
2015/11/23	4:07:00	PM	5,2668					
2015/11/23	4:08:00	PM	5,2668					
2015/11/23	4:09:00	PM	5,2668					
2015/11/23	4:10:00	PM	5,2668					
2015/11/23	4:11:00	PM	5,2668					
2015/11/23	4:12:00	PM	5,2668					
2015/11/23	4:13:00	PM	5,2668					
2015/11/23	4:14:00	PM	5,2668					
2015/11/23	4:15:00	PM	5,2668					
2015/11/23	4:16:00	PM	5,2668					
2015/11/23	4:17:00	PM	5,2668					
2015/11/23	4:18:00	PM	5,2668					
2015/11/23	4:19:00	PM	5,2668					
2015/11/23	4:20:00	PM	5,2668					
2015/11/23	4:21:00	PM	5,2668					
2015/11/23	4:22:00	PM	5,2668					
2015/11/23	4:23:00	PM	5,2668					
2015/11/23	4:24:00	PM	5,2668					
2015/11/23	4:25:00	PM	5,2668					
2015/11/23	4:26:00	PM	5,2668					
2015/11/23	4:27:00	PM	5,2668					
2015/11/23	4:28:00	PM	5,2668					
2015/11/23	4:29:00	PM	5,2668					
2015/11/23	4:30:00	PM	5,2668					
2015/11/23	4:31:00	PM	5,2668					
2015/11/23	4:32:00	PM	5,2668					
2015/11/23	4:33:00	PM	5,2668					
2015/11/23	4:34:00	PM	5,2668					
2015/11/23	4:35:00	PM	5,2668					
2015/11/23	4:36:00	PM	5,2668					
2015/11/23	4:37:00	PM	5,2668					
2015/11/23	4:38:00	PM	5,2668					
2015/11/23	4:39:00	PM	5,2668					
2015/11/23	4:40:00	PM	5,2668					
2015/11/23	4:41:00	PM	5,2668					
2015/11/23	4:42:00	PM	5,2668					
2015/11/23	4:43:00	PM	5,2668					
2015/11/23	4:44:00	PM	5,2668					
2015/11/23	4:45:00	PM	5,2668					
2015/11/23	4:46:00	PM	5,2668					
2015/11/23	4:47:00	PM	5,2668					
2015/11/23	4:48:00	PM	5,2668					
2015/11/23	4:49:00	PM	5,2668					
2015/11/23	4:50:00	PM	5,2668					
2015/11/23	4:51:00	PM	5,2668					
2015/11/23	4:52:00	PM	5,2668					
2015/11/23	4:53:00	PM	5,2668					
2015/11/23	4:54:00	PM	5,2668					
2015/11/23	4:55:00	PM	5,2668					
2015/11/23	4:56:00	PM	5,2668					
2015/11/23	4:57:00	PM	5,2668					
2015/11/23	4:58:00	PM	5,2668					
2015/11/23	4:59:00	PM	5,2668					
2015/11/23	5:00:00	PM	5,2668					
2015/11/23	5:01:00	PM	5,2668					
2015/11/23	5:02:00	PM	5,2668					
2015/11/23	5:03:00	PM	5,2668					
2015/11/23	5:04:00	PM	5,2668					
2015/11/23	5:05:00	PM	5,2668					
2015/11/23	5:06:00	PM	5,2668					
2015/11/23	5:07:00	PM	5,2668					
2015/11/23	5:08:00	PM	5,2668					
2015/11/23	5:09:00	PM	5,2668					
2015/11/23	5:10:00	PM	5,2668					
2015/11/23	5:11:00	PM	5,2668					
2015/11/23	5:12:00	PM	5,2668					
2015/11/23	5:13:00	PM	5,2668					
2015/11/23	5:14:00	PM	5,2668					
2015/11/23	5:15:00	PM	5,2668					
2015/11/23	5:16:00	PM	5,2668					
2015/11/23	5:17:00	PM	5,2668					
2015/11/23	5:18:00	PM	5,2668					
2015/11/23	5:19:00	PM	5,2668					
2015/11/23	5:20:00	PM	5,2668					
2015/11/23	5:21:00	PM	5,2668					
2015/11/23	5:22:00	PM	5,2668					
2015/11/23	5:23:00	PM	5,2668					
2015/11/23	5:24:00	PM	5,2668					
2015/11/23	5:25:00	PM	5,2668					
2015/11/23	5:26:00	PM	5,2668					
2015/11/23	5:27:00	PM	5,2668					
2015/11/23	5:28:00	PM	5,2668					
2015/11/23	5:29:00	PM	5,2668					
2015/11/23	5:30:00	PM	5,2668					
2015/11/23	5:31:00	PM	5,2668					
2015/11/23	5:32:00	PM	5,2668					
2015/11/23	5:33:00	PM	5,2668					
2015/11/23	5:34:00	PM	5,2668					
2015/11/23	5:35:00	PM	5,2668					
2015/11/23	5:36:00	PM	5,2668					
2015/11/23	5:37:00	PM	5,2668					
2015/11/23	5:38:00	PM	5,2668					
2015/11/23	5:39:00	PM	5,2668					
2015/11/23	5:40:00	PM	5,2668					
2015/11/23	5:41:00	PM	5,2668					
2015/11/23	5:42:00	PM	5,2668					
2015/11/23	5:43:00	PM	5,2668					
2015/11/23	5:44:00	PM	5,2668					
2015/11/23	5:45:00	PM	5,2668					
2015/11/23	5:46:00	PM	5,2668					
2015/11/23	5:47:00	PM	5,2668					
2015/11/23	5:48:00	PM	5,2668					
2015/11/23	5:49:00	PM	5,2668					
2015/11/23	5:50:00	PM	5,2668					
2015/11/23	5:51:00	PM	5,2668					
2015/11/23	5:52:00	PM	5,2668					
2015/11/23	5:53:00	PM	5,2668					
2015/11/23	5:54:00	PM	5,2668					
2015/11/23	5:55:00	PM	5,2668					
2015/11/23	5:56:00	PM	5,2668					
2015/11/23	5:57:00	PM	5,2668					
2015/11/23	5:58:00	PM	5,2668					
2015/11/23	5:59:00	PM	5,2668					
2015/11/23	6:00:00	PM	5,2668					
2015/11/23	6:01:00	PM	5,2668					
2015/11/23	6:02:00	PM	5,2668					
2015/11/23	6:03:00	PM	5,2668					
2015/11/23	6:04:00	PM	5,2668					
2015/11/23	6:05:00	PM	5,2668					
2015/11/23	6:06:00	PM	5,2668					
2015/11/23	6:07:00	PM	5,2668					
2015/11/23	6:08:00	PM	5,2668					
2015/11/23	6:09:00	PM	5,2668					
2015/11/23	6:10:00	PM	5,2668					
2015/11/23	6:11:00	PM	5,2668					
2015/11/23	6:12:00	PM	5,2668					
2015/11/23	6:13:00	PM	5,2668					
2015/11/23	6:14:00	PM	5,2668					
2015/11/23	6:15:00	PM	5,2668					
2015/11/23	6:16:00	PM	5,2668					
2015/11/23	6:17:00	PM	5,2668					
2015/11/23	6:18:00	PM	5,2668					
2015/11/23	6:19:00	PM	5,2668					
2015/11/23	6:20:00	PM	5,2668					
2015/11/23	6:21:00	PM	5,2668					
2015/11/23	6:22:00	PM	5,2668					
2015/11/23	6:23:00	PM	5,2668					
2015/11/23	6:24:00	PM	5,2668					
2015/11/23	6:25:00	PM	5,2668					
2015/11/23	6:26:00	PM	5,2668					
2015/11/23	6:27:00	PM	5,2668					
2015/11/23	6:28:00	PM	5,2668					
2015/11/23	6:29:00	PM	5,2668					
2015/11/23	6:30:00	PM	5,2668					
2015/11/23	6:31:00	PM	5,2668					
2015/11/23	6:32:00	PM	5,2668					
2015/11/23	6:33:00	PM	5,2668					
2015/11/23	6:34:00	PM	5,2668					



Date	Time	S	VELOCITY m/s	FLOW RATE m3/s	Flow Rate (m3/h) (1)	Water Pressure Mnor	Water Pressure/ Water Pressure at MNF (kg/cm2) (2)	n (2)-(2)^1/2	Leakage Rate (m3/h) (1)-(1) x (2)	Leakage Rate (l/s) (1)-(1) x (2)
2015/7/29	3:43	2015/7/29 3:43	0.698	337.8305	1,216	1.33	0.93	0.9677	1,177	327
2015/7/29	3:44	2015/7/29 3:44	0.598	347.3817	1,250	1.38	0.93	0.9652	1,207	335
2015/7/29	3:45	2015/7/29 3:45	0.498	319.8867	1,152	1.27	0.93	0.9670	1,083	301
2015/7/29	3:46	2015/7/29 3:46	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:47	2015/7/29 3:47	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:48	2015/7/29 3:48	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:49	2015/7/29 3:49	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:50	2015/7/29 3:50	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:51	2015/7/29 3:51	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:52	2015/7/29 3:52	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:53	2015/7/29 3:53	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:54	2015/7/29 3:54	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:55	2015/7/29 3:55	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:56	2015/7/29 3:56	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:57	2015/7/29 3:57	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:58	2015/7/29 3:58	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	3:59	2015/7/29 3:59	0.504	323.8440	1,166	1.28	0.93	0.9669	1,098	305
2015/7/29	4:00	2015/7/29 4:00	0.504	323.8440	1,166	1.28

Actual Measurement of Leakage and Open-end Flow **4 No. 7** **Tasahe C**

No.	Category of Items		If Leakage, Main lines or Service lines		If Opend-end, DL or Illegal		Leakage Location					Customer Registration Category			User Type (excl. Leakage on Main lines)		Pipe Material					Manually Measured Hourly Flow (m^3/hrs)	Leakage Daily Flow (m^3/day)	Open-End Daily Flow (m^3/day)	Daily DL Consumption (m^3/day) Monthly Dom.: $32m^3$ Non-D :$45m^3$	DL Open-end Excess Flow (m^3/day)	Illegal Open-end Flow (m^3/day)
	Leakage	Open-end	Main	Service	DL	Illegal	End	Tap	Pipe	Valve	Joint	Metered	DL	Illegal	Dom	Non-D.	CIP	uPVC	GP	PE	Others	[1]	[2]=[1]x24	[2]=[1]x24	[3]	[4]=[2]-[3]	[5]=[2]
1	*			*					*				*		*						*	3.02	72.58				
2	*			*					*				*		*						*	0.08	1.88				
3	*			*					*				*		*						*	0.06	1.49				
4	*			*					*				*		*						*	0.05	1.11				
5	*			*					*				*		*					*							
6	*			*					*				*		*						*	0.04	1.02				
7	*			*					*				*		*						*	0.06	1.39				
8	*			*					*				*		*						*	0.06	1.49				
9	*			*					*				*		*					*		0.18	4.32				
10	*			*					*				*		*					*		0.36	8.64				
11	*			*						*			*		*				*			0.10	2.47				
12	*			*						*			*		*				*			0.11	2.62				
13	*			*					*				*		*					*		0.18	4.32				
14	*		*						*				*		*					*		0.36	8.64				
15	*			*					*				*		*					*		0.07	1.73				
16	*			*					*				*		*					*		0.04	0.91				
17	*			*					*				*		*					*		0.07	1.73				
18	*			*					*				*		*					*		0.14	3.46				
19	*			*					*				*		*					*		0.72	17.28				
20	*			*					*				*		*					*		0.10	2.47				
21	*			*					*				*		*					*		0.40	9.6				
22	*			*					*				*		*					*		0.10	2.47				
23	*			*					*				*		*						*	0.07	1.57				
24	*			*					*				*		*					*		0.26	6.17				
25	*			*					*				*		*					*		0.06	1.49				
26	*			*					*				*		*					*		0.07	1.57				
27	*			*								*	*		*					*		0.08	1.88				
28	*		*								*	*		*					*		0.15	3.6				
29	*		*								*	*		*					*		0.16	3.93				
30	*			*								*	*		*					*		0.16	3.93				
31	*			*					*				*		*						*	0.08	1.84				
Total	**31**	**0**	**3**	**28**	**0**	**0**	**0**	**0**	**25**	**2**	**4**	**0**	**31**	**0**	**31**	**0**	**0**	**0**	**2**	**20**	**9**		**177.60**			**0.00**	**0.00**
	31		**31**		**0**		**31**					**31**			**31**		**31**										

Note:

S64-1-71