

**APPENDIX C**

**Data Tables**

EC Value of YCDC Tubewells

No.	name	ID	name	name	EC	Well Depth	Remarks	
Well	Township	No.	Ward	Street				
1	Ahlonge	1	L 01	Ayerawaddy	Tha Kin Mya	216	380.0	
2	Ahlonge	1	L 02	Ayerawaddy	Tha Kin Mya	162	180.0	
3	Ahlonge	1	L 03	West Saw Yan Paing	Zagarsein	160	160.0	
4	Ahlonge	1	L 04	Thit Taw	That Taw	128	380.0	
5	Ahlonge	1	L 05	East Saw Yan Paing	Kyaung	117	140.0	
6	Ahlonge	1	L 06	Htar Nar	Ahlonge	196	175.0	
7	Ahlonge	1	L 07	Ka Yin Chan	Rose	119	165.0	
8	Ahlonge	1	L 08	Sin Min	Kwin Kyaung 1	314	140.0	
9	Ahlonge	1	L 09	Galone	Kwin Kyaung	134	140.0	
10	Ahlonge	1	L 10	East Saw Yan Paing	Wai Bar Gi	213	140.0	
Total Well No.		10						
11	Botataung	1	No. 01	Port Area	Navy Tae Tha Yae	536	94.0	tank water no wash out line
12	Botataung	1	No. 02		9 Merchant	-	145.0	Well is damaged
13	Botataung	1	No. 03		8 Bogaalyzay	478	138.0	
14	Botataung	1	No. 04		1 Botathaung Panchan	2,250	120.0	
Total Well No.		3						
15	Dagon	1	1	North Pyay	Manaw Hari	85.5	130.0	
16	Dagon	1	2	East Pyay	Myoma Kyaung	234	140.0	
17	Dagon	1	3	East Pyay	Myoma Kyaung-Minaw Hari	79	120.0	
18	Dagon	1	4	Phar Yar Gyi	Ziwaka-U Wisara	-	125.0	Engine is damaged
19	Dagon	1	5	Phar Yar Gyi	U Wisara-Zay Myoh	203	124.0	
20	Dagon	1	6	Yaw Min Gyi	Paya-U Wisara	-	140.0	main power is not function
21	Dagon	1	7	Yaw Min Gyi	Dagon Pan Chan (1)	148.3	114.0	
22	Dagon	1	8	Residence Park	Tawhlaya Pan Chan (1)	-	100.0	Engin is damaged
23	Dagon	1	9	Residence Park	Tawhlaya Pan Chan (2)	248	145.0	
24	Dagon	1	10	Residence Park	Tawhlaya Pan Chan (3)	-	140.0	well is damaged and abandoned
25	Dagon	1	11	Residence Park	Tawhlaya Pan Chan (4)	-	127.0	Engine is damaged
Total Well No.		11						
26	Dagon Myothit South	1	18/0A	18	Khaing Shwe War	532	220.0	no power test water is from tank
27	Dagon Myothit South	1	18/0B	18	Khwr Nyo	1,400	260.0	
28	Dagon Myothit South	1	64/A	64	Law Pi Ta	-	390.0	no tube well
29	Dagon Myothit South	1	19/01	19	Myeik	4,500	230.0	
30	Dagon Myothit South	1	19/02	19	Myeik	5,450	227.0	
31	Dagon Myothit South	1	19/03	19	Podonmar	4,000	128.0	ditto, test water is from tank no operatory
32	Dagon Myothit South	1	19/04	19	Nant Thar Myaing	13,170	320.0	ditto, water pressure is low screen is damaged
33	Dagon Myothit South	1	64/B	64	Moe Ma Kha	10,300	380.0	

No.	name	ID	name	name	EC	Well Depth	Remarks	
34	Dagon Myothit South	1	19/05	19 Padarnyar	2,350	280.0		
35	Dagon Myothit South	1	19/06	19 Sein Chel	3,200	205.0		
36	Dagon Myothit South	1	19/07	19 Zaya Mying	9,500	247.0		
37	Dagon Myothit South	1	19/08	19 Mya Yi Nandar	4,400	190.0		
38	Dagon Myothit South	1	19/09	19 Malar Myaing	20,000	202.0	Test water from tank	
39	Dagon Myothit South	1	19/0A	19 Zayar Myaing	1,467	252.0		
40	Dagon Myothit South	1	19/10	19 Malar Myaing	2,300	227.0		
41	Dagon Myothit South	1	20/A	20 Shwe War Tun	2,000	304.0		
42	Dagon Myothit South	1	20/11	20 Kan Taw Mingalar	4,600	214.0		
43	Dagon Myothit South	1	20/12	20 Yadana	441	254.0		
44	Dagon Myothit South	1	20/13	20 Yadana	2,600	264.0	No power, Test water from Tank	
45	Dagon Myothit South	1	20/14	20 Awayar	1,984	267.0		
46	Dagon Myothit South	1	20/16	20 Zabu Aye	5,400	205.0		
47	Dagon Myothit South	1	20/17	20 Phugyi	4,300	236.0		
48	Dagon Myothit South	1	20/18	20 Ziwaka	2,300	208.0		
49	Dagon Myothit South	1	24/01	24 Mya Yadanar	402	257.0		
50	Dagon Myothit South	1	24/02	24 Mya Yadanar	817	252.0		
51	Dagon Myothit South	1	24/03	24 Theyet Chaung	357	203.0		
52	Dagon Myothit South	1	24/04	24 Theingi	4,500	286.0		
53	Dagon Myothit South	1	24/05	24 Padonmar	4,260	302.0		
54	Dagon Myothit South	1	24/06	24 Theingi	2,700	252.0		
55	Dagon Myothit South	1	24/07	24 Shwe Yin Mar	2,800	218.0		
56	Dagon Myothit South	1	24/08	24 Thukha-Nawart	4.0	282.0		
57	Dagon Myothit South	1	24/09	24 Nawart	5,200	229.0	No power tested from water tank	
		Total Well No. 32						
58	Dala	1	No.1	out of city	Yangon Pauk	1,459	120.0	
59	Dala	1	No.2	out of city	Yangon Pauk	1,580	120.0	
60	Dala	1	No.3	out of city	Yangon Pauk	1,669	120.0	
		Total Well No. 3						
61	Dawbon	1	Daw/1		8 Mandaing	-	480.0	no operation ( no water)
62	Dawbon	1	Daw/2		7 Pathein Myae	653	310.0	
63	Dawbon	1	Daw/3		5 Sepin	1,973	225.0	
64	Dawbon	1	Daw/4		5 Aung Thin	1,782	390.0	
65	Dawbon	1	Daw/6		1 Aungzaya	-	400.0	Engine is damaged
66	Dawbon	1	Daw/7		4 Thiri Mingalar/Dhamayeik Thar	204	380.0	
67	Dawbon	1	Daw/8		4 Thazin New	580	250.0	
		Total Well No. 7						
68	Hlaingthaya	1	08/02		8 Bo Aung Kyaw	1,228	170.0	

No.	name	ID	name	name	EC	Well Depth	Remarks	
69	Hlaingthaya	1	09/07	9 Sin Phyu Shin + Sanging	1,440	200.0		
70	Hlaingthaya	1	11/04	11 Sin Phyu Shin	1,386	225.0	Sis kin lan& ThaPya lan	
71	Hlaingthaya	1	13/03	13 Gandawin + Mandalay	1,122	210.0	Sein chay lan	
72	Hlaingthaya	1	13/05	13 Mandalay	1,209	215.0		
73	Hlaingthaya	1	14/01	14 Mandalay	1,195	180.0		
74	Hlaingthaya	1	16/06	16 Bo Aung Kyaw	1,360	195.0		
		Total Well No.	7					
75	Insein	1	No. 01	West Zaygone	Fire Brigade	606	210.0	
76	Insein	1	No. 02	West Gyogone	Baho	219	140.0	
77	Insein	1	No. 03	West Gyogone	Baho	219	140.0	
78	Insein	1	No. 04	West Ywarma	Bayint Naung	343	100.0	
		Total Well No.	4					
79	Kamayut	1	No. 01		8 Aung Chan Tha	-	160.0	Engine is damaged
80	Kamayut	1	No. 02		8 Pyi Yeik Tha	249	130.0	
81	Kamayut	1	No. 03		10 Aung Min Khaung	199	180.0	
82	Kamayut	1	No. 04		2 Anawyahta	96	140.0	
83	Kamayut	1	No. 05		5 No.1 Sibin Winn	193	140.0	
84	Kamayut	1	No. 06		7 Sibin Ye No.1	104	130.0	
85	Kamayut	1	No. 07		7 Sibin Ye No.2	167	150.0	
86	Kamayut	1	No. 08		7 Sibin Ye No.3	-	150.0	Tube well is under repairing
87	Kamayut	1	No. 09		7 Sibin Ye No.4	-	120.0	Tube well is damaged
88	Kamayut	1	No. 10		7 Sibin Ye No.5	73	130.0	
89	Kamayut	1	No. 11		8 Pyi Yeik Mon A-1	110	130.0	
90	Kamayut	1	No. 12		8 Pyi Yeik Mon A-2	211	130.0	
91	Kamayut	1	No. 13		7 Pyi Yeik Mon B-1	356	130.0	
92	Kamayut	1	No. 14		7 Pyi Yeik Mon B-2	162	130.0	
93	Kamayut	1	No. 15		7 Pyi Yeik Mon B-2	465	130.0	
94	Kamayut	1	No. 16		6 Pyi Yeik Mon C-1	228	130.0	
95	Kamayut	1	No. 17		6 Pyi Yeik Mon C-2	320	130.0	
96	Kamayut	1	No. 18		6 Pyi Yeik Mon D-1	275	130.0	
97	Kamayut	1	No. 19		7 Sibin Ye No.6	104	140.0	power out
		Total Well No.	19					
98	Kyauktada	1	No. 01		2 Mahabandoola Garden	354	95.0	
99	Kyauktada	1	No. 02		2 Mahabandoola Garden	-	145.0	no operation always operates
100	Kyauktada	1	No. 03		2 Mahabandoola Garden	-	140.0	at thingyan festival time (in April)
101	Kyauktada	1	No. 04		2 Mahabandoola Garden	118	122.0	
		Total Well No.	4					
102	Kyeemyindaing	1	No. 01	Makyidan South/East	U Kywe Hoe	212	150.0	

No.	name	ID	name	name	EC	Well Depth	Remarks	
103	Kyeemyindaing	1	No. 02	Makyidan North/East	Sa Lin Football Ground-I	-	130.0	Motor is damaged
104	Kyeemyindaing	1	No. 03	Pan Hlaing	Pan Hlaing Housing	279	140.0	
105	Kyeemyindaing	1	No. 04	Pan Hlaing	Kyeemyindaing University	299	120.0	
106	Kyeemyindaing	1	No. 05	Thadu	Thadu Ground	205	155.5	
107	Kyeemyindaing	1	No. 06	Makyidan South	Nya Market	392	140.0	
108	Kyeemyindaing	1	No. 07	Zaykyi East	Bo Thu Ya	386	150.0	
109	Kyeemyindaing	1	No. 08	Obo	Kyaung Kyi	205	143.0	
110	Kyeemyindaing	1	No. 09	Thadu East	Neikban	101	140.0	
111	Kyeemyindaing	1	No. 10	Zaykyi East	Kyaung Kyi	396	160.0	
112	Kyeemyindaing	1	No. 11	Zaykyi Lay	Htee Dan	341	140.0	
113	Kyeemyindaing	1	No. 12	Pan Hlaing	Pan Hlaing Housing No.2	-	140.0	no tube well
Total Well No.		12						
114	Lanmadaw	1	No. 01		4 Yangon 10th St.	437	100.0	
115	Lanmadaw	1	No. 02		9 Min Ye Kyaw Swar	148	125.0	
116	Lanmadaw	1	No. 03		8 Thakhinmya Garden	-	360.0	well is repairing now
117	Lanmadaw	1	No. 04		8 Thakhinmya Garden	-	380.0	well is damaged
118	Lanmadaw	1	No. 05		8 Tha Khin Mya Garden	176	140.0	
119	Lanmadaw	1	No. 06		7 Yangon 16th St.	202	115.0	
Total Well No.		6						
120	Latha	1	No. 01		2 Latha - 18th St.	159	115.0	
121	Latha	1	No. 02		5 Latha - 22nd St.	246	106.0	
122	Latha	1	No. 03		9 Shwe Tagone Pagoda	155	140.0	
123	Latha	1	No. 04		9 Anawrahta and Lanmadaw St.	157	120.0	
Total Well No.		4						
124	Mingalartaungnyunt	1	No. 01	Thar Yar Gone	Set Yone (Mill Road)	567	140.0	
125	Mingalartaungnyunt	1	No. 02	Ferry Point	Upper Pazun Dang	828	135.0	
Total Well No.		2						
126	North Okkalapa	1	No. 3	L	Sabai	-	140.0	Low voltage, power is available only midnight
127	North Okkalapa	1	No. 4	L	Hninsi	1,496	300.0	
128	North Okkalapa	1	No. 5	L	Khay Mar Kyaur (Zagawars)	2,770	480.0	
129	North Okkalapa	1	No. 1	J	Wa Bar Gi	-	370.0	No tubewell, abandoned
130	North Okkalapa	1	No. 2	J	Wai Bar Gi-Ayer	1,065	380.0	
131	North Okkalapa	1	No. 6	J	Bommar	1,060	140.0	Low voltage, tested by tank water
132	North Okkalapa	1	No. 7		7 Palae Phyat	480	360.0	
133	North Okkalapa	1	No. 6		6 Wai Bar Gi (6)	-	360.0	Motor is damaged, tank is broken
134	North Okkalapa	1	No. 4		14 Shawe Pauk Kan (14)	853	390.0	
135	North Okkalapa	1	No. 8	K	Karunar Yae Set-Loakzanar I1	4,200	410.0	
136	North Okkalapa	1	N/09	K	Mya Kan Thar	164	480.0	

No.	name	ID	name	name	EC	Well Depth	Remarks	
137	North Okkalapa	1	N/12	20 Shawe Pauk Kan (20)	290	380.0		
138	North Okkalapa	1	Wai/01	1 Pan Chan (Wai Hin)	-	213.0	Flooding, no access	
139	North Okkalapa	1	Wai/02	4 Myit Nge	129	183.0		
140	North Okkalapa	1	Wai/03	4 Thanlwin	45.6	180.0		
141	North Okkalapa	1	Wai/04	5 Thitsar	419	180.0		
142	North Okkalapa	1	Wai/05	5 Magin-Maggin	479	182.0		
143	North Okkalapa	1	Wai/06	6 Kantgaw	1,770	180.0		
144	North Okkalapa	1	Wai/07	7 Sein Pan	477	180.0		
145	North Okkalapa	1	Wai/08 L	Myawaddy	885	360.0		
146	North Okkalapa	1	Wai/09 J	SHS (3) Yae Set	-	179.0	Flooding, no access	
147	North Okkalapa	1	Wai/15	17 Hnisi (1) Yae Set	-	115.0	Low voltage, power is available only midnight	
148	North Okkalapa	1	Wai/17	21 W (21) Quarter Yae Set	1,274	297.0	Flooding, no access	
149	North Okkalapa	1	Wai/19	17 Zagawar	524	203.0		
		Total Well No.	24					
150	Pabedan	1	No. 01	2 Shwe Da Gon Pagoda-Anawrahta	273	120.0		
151	Pabedan	1	No. 02	11 Bo Soon Pat	218	120.0		
152	Pabedan	1	No. 03	2 Shwe Da Gon Pagoda-Anhwhrahth	141	115.0		
		Total Well No.	3					
153	Sanchaung	1	San/01	Myaynigone North	Ma Po	168	110.0	
154	Sanchaung	1	San/03	Moke South	Hamther Waddy	92	100.0	
155	Sanchaung	1	San/04	Moke South	Daik Oo	96	120.0	
156	Sanchaung	1	San/05	Moke South	Kyun Taw	119	105.0	
157	Sanchaung	1	San/08	Kyuntaw North	Shan Road	204	99.5	
158	Sanchaung	1	San/10	Linn North	Sagaing	452	130.0	
159	Sanchaung	1	San/11	Linn North	Za Lun	456	140.0	
160	Sanchaung	1	San/12	Thatandao	Ta Yoke Kyaung	332	120.0	no wash out directly connected to
161	Sanchaung	1	San/14	Thatandao	Dhamika Waddy	262	140.0	pipe lime (tested from tap)
162	Sanchaung	1	San/15	Moke South	Moe Makha	179	120.0	
163	Sanchaung	1	San/16	Kyuntaw South	Kyuntaw Lann	-	90.0	well is damaged
164	Sanchaung	1	San/17	Thiykamar	Khatter	-	100.0	Pump is damage abandoned no wash out line
165	Sanchaung	1	San/22	Moke North	Wailuwan	175	125.0	directly connected to pipe line tap water
166	Sanchaung	1	San/24	Thatandao	Zaya Waddy	302	140.0	
167	Sanchaung	1	San/25	Aungchanthao	Aung Chanthar	-	95.0	well is damaged
168	Sanchaung	1	San/26	Moke North	Zaya Thukha	161	130.0	
169	Sanchaung	1	San/27	Wailuwan North	Gantgaw	86	116.0	For fire rescue
		Total Well No.	17					
170	Shwepyitha	1	7/06	5/04	Thiri Mingalar Zay	467	150.0	
171	Shwepyitha	1	7/16	5/08	Thit Khwa Pan Chan	374	165.0	

No.	name	ID	name	name	EC	Well Depth	Remarks	
172	Shwepyitha	1	7/17	6/11	Sittaung	816	150.0	
173	Shwepyitha	1	7/19	5/07	Sein Pan Pan Chan	432	150.0	
174	Shwepyitha	1	7/31	6/14	Phaan Pan Chan	-	150.0	no engine, under repair
175	Shwepyitha	1	7/40	7/09	Nawart	443	150.0	
176	Shwepyitha	1	7/46	8/05	U Aung Zaya	-	160.0	Flooding, no access
177	Shwepyitha	1	7/48	8/05	Yadana Pan Chan	-	380.0	Tank breakdown, will be abandoned
Total Well No.		8						
178	South Okkalapa	1	1	13	Than Thu Mar-Yadanar Bon	-	390.0	Motor is damaged and will be changed
179	South Okkalapa	1	2	14/1	Myittar	270	215.0	Test water from tank
180	South Okkalapa	1	3	14/2	Thanthumar-Hinnthar	-	278.0	Tank breakdown
181	South Okkalapa	1	4	14/2	Zinyaw	-	180.0	Tank breakdown, will be abandoned
182	South Okkalapa	1	5	14/3	Karamat	180	255.0	Test water from tank
183	South Okkalapa	1	6	14/3	Yinmar	242	282.0	ditto
184	South Okkalapa	1	7	12	Baya Kyaw Thu	-	320.0	No power
Total Well No.		7						
185	Thaketa	1	Tha/01	3	Yan Pyae	-	360.0	Tubewell damaged (screen clogged)
186	Thaketa	1	Tha/02	3	Thumana-Minnandar	263	360.0	
187	Thaketa	1	Tha/03	2	Zaw Ta Yon	300	360.0	
188	Thaketa	1	Tha/04	2	Thumana-Myindawthar	-	280.0	Starter is under repair
189	Thaketa	1	Tha/05	3	Man Aung	-	390.0	ditto
190	Thaketa	1	Tha/06	4	Aung Myintta	454	240.0	
191	Thaketa	1	Tha/07	5	Sepin Compound	359	340.0	
192	Thaketa	1	Tha/09	10	No.7 Zay	-	110.0	No power
193	Thaketa	1	Tha/12	10	Shukhin Thar	1,543	80.0	
194	Thaketa	1	Tha/13	10	Thalar Waddy	(844)	200.0	Directly connected to Pipe, (Tap water)
195	Thaketa	1	Tha/14	10	Thanlyin Bridge	(967)	86.0	(Tank water, No valve)
196	Thaketa	1	Tha/15	7	Ayer Wun	1,360	90.0	
197	Thaketa	1	Tha/16	7	Ayer Wun	2,180	85.0	
198	Thaketa	1	Tha/20	10	Tharlarwaddy	611	120.0	
199	Thaketa	1	Tha/21	10	Tharlarwaddy	-	260.0	Pump is now in Workshop and will be repaired
200	Thaketa	1	Tha/22	10	Thalar Waddy	-	80.0	Directly connected to Pipe, Air pipe is broken
201	Thaketa	1	Tha/23	8	Shwe Oat Gu	-	340.0	Pump is malfunctioning
Total Well No.		17						
202	Thingangyun	1	1	Thurningalar	Lay Dauntkan-Mingalar	339	322.0	
203	Thingangyun	1	2	Ziwana	Thu Mingalar	386	325.0	
204	Thingangyun	1	3	Laydauntkan	Yan Kin-Lay Dauntkan	795	280.0	
205	Thingangyun	1	4	Sa-ka	Kyaikasan Pogoda	398	220.0	
206	Thingangyun	1	5	Hninsigone	Tharaphi	-	175.0	No power

No.	name	ID	name	name	EC	Well Depth	Remarks
207	Thingangyun	1	6	Hninsigone	Zayar Thukha	-	320.0 ditto
208	Thingangyun	1	7	Thuwana 24	Thanthumar-Thuwana	612	475.0
209	Thingangyun	1	8	Michung Kan 12	Waizayandar-Phi Tharyar	-	225.0 Pump is malfunctioning
210	Thingangyun	1	9	16/3	Yadana	-	225.0 No power
211	Thingangyun	1	10	Yangon Thit	Thanthumar-Independence	-	160.0 ditto
212	Thingangyun	1	11	Laydauntkan	Lay Dauntkan-Yankin	-	175.0 Pump is malfunctioning
213	Thingangyun	1	12	Kyipwarye	Thanthumar	346	180.0
214	Thingangyun	1	13	Thuwana 24	Thanthumar	-	180.0 Pump is malfunctioning
215	Thingangyun	1	14	Laydauntkan	Yan Nyein	-	280.0 Motor is damaged
216	Thingangyun	1	15	Thuwana 24	Thanthumar	629	475.0
217	Thingangyun	1	16	Pyidaung Su Yeik Mon	Pyidaung Su Bridge	-	480.0 No power
		Total Well No. 16					



**Water Quality Analysis Results at Gyobyu Reservoir**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	TCU	NTU	Degree	mg/l	mg/l	mg/l	µ S/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.3	5 - 50	20	-	-	-	-
2001	May	95	43	58	6.8	7.50	2.0	11.0	8.88	5.35	N.D	N.D	N.D	N.D	N.D	N.D	0.006	N.D	N.D	N.D	7.65	7.5	3.0	30.0	1.00	4.0	7.40	98.1
	June	94	41	52	6.4	7.21	4.0	10.0	8.62	7.41	N.D	0.04	N.D	N.D	N.D	N.D	0.006	N.D	N.D	N.D	7.8	N.D	2.0	28.0	0.60	4.0	6.00	96.2
	July	146	54	46	5.6	6.35	1.0	8.0	3.5	N.D	N.D	0.02	N.D	N.D	N.D	N.D	0.006	N.D	0.05	N.D	7.5	N.D	N.D	27.4	0.44	N.D	5.32	97.8
	August	69	36	42	5.6	5.47	2.0	9.0	3.5	N.D	N.D	0.03	N.D	N.D	N.D	N.D	0.005	N.D	N.D	N.D	7.56	N.D	N.D	27.9	0.10	25.6	6.60	97
	September	121	38	46	6.0	4.90	2.0	5.0	6.5	N.D	N.D	0.05	N.D	N.D	N.D	N.D	0.006	N.D	0.13	N.D	6.90	N.D	N.D	29.8	0.10	16.0	5.32	98.8
	October	106	36	44	4.0	28.26	3.0	9.0	4.0	N.D	0.13	0.05	N.D	N.D	N.D	N.D	0.033	N.D	N.D	0.06	7.0	N.D	N.D	28.6	N.D	16.0	5.44	99.8
	November	97	34	40	2.4	1.73	5.0	3.0	4.5	N.D	N.D	0.04	N.D	N.D	N.D	N.D	N.D	N.D	0.02	N.D	6.7	N.D	N.D	18.6	1.0	9.6	7.97	99.4
	December	31	42	50	8.0	6.34	4.0	11.0	2.0	N.D	N.D	0.04	N.D	N.D	N.D	N.D	N.D	N.D	0.06	N.D	6.8	N.D	N.D	28.5	0.04	19.2	6.67	116.3
2002	January	126	46	56	5.0	5.1	1.5	5.3	4.0	N.D	N.D	0.35	N.D	N.D	N.D	N.D	0.2	0.00	0.4	N.D	6.6	N.D	8	28.8	0.24	3.2	6.25	128.9
	February	87	46	56	8.8	6.5	1.8	5.8	3.0	N.D	N.D	0.07	N.D	N.D	N.D	N.D	0.2	0.00	0.2	N.D	6.7	N.D	N.D	28.4	0.8	19.2	6.53	132.1
	March	86	46	64	10.0	3.0	2.0	5.0	4.0	N.D	N.D	0.05	N.D	N.D	N.D	N.D	0.2	0	N.D	N.D	7.61	N.D	N.D	29.1	N.D	16.0	8.03	133.1

Note , N.D = Not Detected

**Water Quality Analysis Results at Phugyi Reservoir**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity
	Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
	Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	65	23	32	4.0	4.04	2.0	8.0	8.88	7.61	N.D	N.D	N.D	N.D	N.D	N.D	0.005	N.D	N.D	N.D	7.6	5.00	2.0	30.0	0.08	N.D	7.40	64.5
	June	68	29	32	2.8	6.35	4.0	6.0	8.62	9.05	N.D	0.08	N.D	N.D	N.D	N.D	0.004	N.D	N.D	N.D	7.5	N.D	2	28.0	0.40	4.00	6.00	63.3
	July	117	38	30	3.2	3.75	1.0	5.0	13.5	N.D	N.D	N.D	N.D	N.D	N.D	N.D	0.003	N.D	0.025	N.D	7.4	N.D	N.D	27.4	0.20	N.D	5.47	61.0
	August	59	26	30	4.8	2.31	2.0	7.0	4.5	N.D	N.D	0.03	N.D	N.D	N.D	N.D	0.008	N.D	N.D	N.D	7.37	N.D	N.D	27.7	0.20	19.20	6.06	62.2
	September	100	24	30	4.8	8.55	19.0	4.0	7.0	N.D	N.D	7.07	N.D	N.D	N.D	N.D	0.003	N.D	0.12	N.D	7.2	N.D	N.D	29.9	N.D	16	5.68	63.9
	October	39	26	32	2.4	2.6	2.0	6.0	4.0	N.D	0.37	0.05	N.D	1.0	N.D	N.D	0.033	N.D	N.D	N.D	7.0	N.D	N.D	28.5	N.D	N.D	5.53	64.5
	November	70	22	30	4.4	3.74	3.0	7.0	4.5	N.D	N.D	0.15	N.D	N.D	N.D	N.D	0.002	N.D	0.02	N.D	6.3	2	N.D	16.9	0.6	32	7.28	70.0
	December	16	22	32	6.4	2.3	3.0	8.0	3.0	N.D	N.D	0.04	N.D	N.D	N.D	N.D	N.D	N.D	0.06	N.D	6.7	N.D	N.D	28.5	0.06	3.2	6.49	30.9
2002	January	84	24	32	2.1	2.9	1.1	3.0	5.0	N.D	N.D	0.07	N.D	N.D	N.D	N.D	0.1	0.000	0.1	N.D	7.2	N.D	N.D	29.0	0.12	19.2	7.67	69.9
	February	56	24	30	5.0	3.9	1.3	3.3	3	N.D	N.D	0.05	N.D	N.D	N.D	N.D	0.1	0.000	0.02	N.D	6.7	N.D	N.D	28.6	0.4	22.4	6.15	72.2
	March	54	28	38	6.0	2.0	1.0	4.0	4.5	N.D	N.D	0.05	N.D	N.D	N.D	N.D	0.1	0.000	N.D	N.D	7.53	N.D	N.D	29.1	0.4	22.4	8.22	71.7

Note, N.D = Not Detected

**Water Quality Analysis Results at Hlawga Reservoir**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	60	20	30	4.8	2.31	1.0	8.0	7.1	7.4	N.D	0.30	N.D	N.D	N.D	N.D	0.003	N.D	N.D	N.D	7.8	12.50	4.0	30.0	0.8	6.0	6.80	45.6	
	June	52	17	25	3.6	2.31	3.0	6.0	6.9	7.2	N.D	0.08	N.D	N.D	N.D	N.D	0.010	N.D	N.D	N.D	7.5	N.D	2.0	28.0	0.6	4.0	6.00	44.3	
	July	90	30	22	2.0	2.59	1.0	6.0	3.5	N.D	N.D	0.04	N.D	N.D	N.D	N.D	0.006	N.D	0.025	N.D	7.1	N.D	2.0	27.5	0.3	N.D	5.35	43.1	
	August	41	18	20	2.4	2.30	1.0	4.0	4.5	N.D	N.D	0.09	N.D	N.D	N.D	N.D	0.006	N.D	N.D	N.D	7.26	N.D	N.D	27.4	0.3	12.8	6.80	45.2	
	September	100	18	20	3.6	1.44	1.0	2.0	5.5	N.D	N.D	0.21	N.D	N.D	N.D	N.D	0.008	N.D	0.15	N.D	7.0	N.D	N.D	29.8	0.1	32.0	5.88	42.5	
	October	39	24	24	2.0	4.04	1.0	4.0	4.0	N.D	0.20	0.18	N.D	N.D	N.D	N.D	0.033	N.D	N.D	0.06	6.8	N.D	N.D	28.5	N.D	N.D	5.62	43.8	
	November	48	18	24	4.8	1.73	2.0	5.0	5.0	N.D	N.D	0.15	N.D	N.D	N.D	N.D	0.002	N.D	0.02	N.D	6.7	N.D	N.D	15.3	0.8	25.6	6.61	49.1	
	December	14	18	26	2.8	3.17	2.0	6.0	2.0	N.D	N.D	0.11	N.D	N.D	N.D	N.D	N.D	N.D	0.06	N.D	6.6	N.D	N.D	28.5	0.12	N.D	6.80	56.3	
2002	January	75	20	28	2.1	2.5	0.9	2.8	4.0	N.D	N.D	0.11	N.D	N.D	N.D	N.D	0.1	0.000	0.2	0.004	6.5	N.D	N.D	29.2	0.6	44.8	8.27	59.5	
	February	57	24	30	3.4	3.5	1.0	3.1	2.5	N.D	N.D	0.18	N.D	N.D	N.D	N.D	0.1	0.000	0.1	N.D	6.6	N.D	N.D	28.4	0.8	6.4	6.36	64.2	
	March	47	24	36	5.0	2.0	1.0	3.0	4.5	N.D	N.D	0.11	N.D	N.D	N.D	N.D	0.1	0.000	N.D	N.D	7.42	N.D	N.D	29.3	0.4	25.6	7.87	65.9	

Note, N.D = Not Detected

**Water Quality Analysis Results at Ngamoeyek Reservoir**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	92	39	51	6.4	6.63	2.0	6.0	7.1	6.38	N.D	0.05	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	7.8	10.00	2.0	30.0	0.8	N.D	6.80	98.8	
	June	80	37	45	6.0	6.35	6.0	8.0	8.62	3.50	N.D	0.08	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	7.8	N.D	2.0	28.0	0.6	2.0	6.00	97.4	
	July	114	50	42	5.6	5.48	2.0	11.0	4.0	N.D	N.D	0.25	N.D	N.D	N.D	N.D	0.006	N.D	0.10	N.D	7.3	N.D	2.5	27.4	0.2	N.D	5.32	96.3	
	August	47	36	44	6.8	4.61	2.0	9.0	5.5	N.D	N.D	0.13	N.D	N.D	N.D	N.D	0.008	N.D	N.D	N.D	7.23	N.D	N.D	27.1	N.D	28.8	6.20	95.2	
	September	112	38	44	6.8	4.61	2.0	6.0	6.0	N.D	N.D	N.D	N.D	N.D	N.D	N.D	0.003	N.D	0.16	N.D	6.9	N.D	N.D	29.6	0.22	16.0	5.22	99.8	
	October	79	40	46	6.0	31.72	3.0	8.0	3.0	N.D	0.07	0.03	N.D	1.5	N.D	N.D	0.033	N.D	N.D	0.06	7.3	N.D	N.D	28.6	N.D	16.0	5.35	100.3	
	November	97	40	44	6.8	6.62	3.0	10.0	4.5	N.D	N.D	0.16	N.D	N.D	N.D	N.D	0.002	N.D	0.02	N.D	6.2	6	N.D	20.9	0.8	19.2	6.44	113.6	
	December	30	42	48	8.8	5.47	3.00	10.0	3.0	N.D	N.D	0.04	N.D	N.D	N.D	N.D	N.D	N.D	N.D	0.05	N.D	7.1	N.D	N.D	28.3	0.2	16.0	5.92	44.5
2002	January	89	44	50	5.5	5.1	1.6	5.0	4.0	N.D	0.008	0.07	N.D	N.D	N.D	N.D	0.0	0.000	0.1	N.D	7.5	N.D	N.D	29.0	0.4	22.4	7.12	76.0	
	February	87	42	54	6.3	6.1	1.6	5.4	3.0	N.D	N.D	0.05	N.D	N.D	N.D	N.D	0.1	0.000	0.08	N.D	6.7	N.D	N.D	28.3	0.8	6.4	6.09	128.3	
	March	79	44	58	9.0	3.0	1.0	5.0	5.5	N.D	N.D	0.67	N.D	N.D	N.D	N.D	0.1	0.000	N.D	N.D	7.48	N.D	N.D	29.1	N.D	N.D	8.34	60.2	

Note , N.D = Not Detected

**Water Quality Analysis Results at La Gun Pyin Reservoir**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	μS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	65	11	19	2.0	1.73	8.0	3.0	12.07	10.08	N.D	0.15	N.D	N.D	N.D	N.D	0.040	N.D	N.D	N.D	7.50	20	20	28.0	16.2	10.0	2.40	28.2	
	June	68	11	19	1.6	2.02	10.0	3.0	8.62	N.D	N.D	0.50	N.D	N.D	N.D	N.D	0.030	N.D	N.D	N.D	6.80	18	15	28.0	16.4	8.0	2.60	27.3	
	July	102	24	18	1.6	1.44	1.0	3.0	3.50	N.D	N.D	1.22	N.D	N.D	N.D	N.D	0.012	N.D	0.16	N.D	6.40	5	21	27.2	0.84	4.0	3.81	26.9	
	August	26	16	16	1.6	1.44	3.0	2.0	4.50	N.D	N.D	0.51	N.D	N.D	N.D	N.D	N.D	N.D	0.15	N.D	6.32	12	5	27.4	0.96	22.4	4.80	26.3	
	September	78	14	22	2.4	0.86	3.0	2.0	7.5	N.D	N.D	1.63	N.D	N.D	N.D	N.D	0.003	N.D	0.1	N.D	6.5	12	7	29.7	0.4	16.0	3.32	27.6	
	October	17	16	18	2.0	4.33	5.0	2.0	4.5	N.D	0.20	0.27	N.D	N.D	N.D	N.D	0.033	N.D	0.08	0.06	6.8	N.D	N.D	28.5	N.D	28.8	5.24	27.6	
	November	79	10	20	5.2	6.04	4.0	10.0	4.5	N.D	N.D	1.14	N.D	N.D	N.D	N.D	0.002	N.D	0.1	N.D	6.0	25	20	19.6	1.1	28.8	7.67	38.0	
	December	12	12	18	4.0	0.86	7.0	5.00	2.0	N.D	N.D	0.19	N.D	N.D	N.D	N.D	N.D	N.D	0.21	N.D	6.7	N.D	N.D	28.4	0.3	25.6	0.21	40.8	
2002	January	94	14	20	1.0	1.3	2.7	1.5	4.5	N.D	N.D	1.30	N.D	N.D	N.D	0.4	0.2	0.000	0.5	N.D	7.3	50	35	29.0	5.1	41.6	6.13	45.0	
	February	54	18	22	2.5	2.1	2.9	1.5	4.0	N.D	N.D	0.45	N.D	N.D	N.D	N.D	0.2	0.000	0.08	N.D	6.9	N.D	N.D	28.5	1.4	22.4	7.04	44.6	
	March	65	16	24	4.0	1.0	3.0	2.0	5.5	N.D	N.D	0.49	N.D	N.D	N.D	N.D	0.2	0.000	N.D	N.D	7.21	N.D	5	29.1	N.D	16.0	7.85	44.7	

Note , N.D = Not Detected

**Water Quality Analysis Results at Hlaing River ( Gwedanshe, High Tide, Middle Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
		Myanmar Standard	1,000	500	-	75 - 300	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.5	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	194	89	125	14.8	15.0	6.0	25	14.2	9.05	N.D	0.30	N.D	N.D	N.D	N.D	0.01	N.D	N.D	N.D	8.1	17.50	800	30.0	0.20	N.D	6.80	107	
	June	93	38	40	7.2	5.76	5.0	7	6.95	7.20	N.D	1.00	N.D	N.D	N.D	N.D	0.010	N.D	N.D	N.D	7.6	50	600	28.0	0.40	6.0	6.00	118	
	July	177	54	44	7.2	4.9	4.0	5	4.0	N.D	N.D	5.66	N.D	N.D	N.D	N.D	0.03	N.D	1.60	N.D	7.3	575	263	27.9	0.66	32.0	5.52	115	
	August	189	54	50	16.0	4.02	1.0	4	6.5	N.D	0.15	5.26	N.D	N.D	N.D	N.D	0.02	N.D	0.15	N.D	7.7	235	232	27.0	0.40	48.0	5.46	110	
	September	349	46	56	10.4	4.6	3.0	4	4.0	N.D	N.D	5.06	N.D	N.D	N.D	N.D	0.016	N.D	0.17	N.D	7.2	160	275	28.4	N.D	6.4	6.62	119	
	October	43	58	60	13.2	6.05	3.0	6	4.5	N.D	N.D	7.74	N.D	N.D	N.D	N.D	0.008	N.D	1.5	N.D	7.4	320	220	27.5	N.D	N.D	3.48	114	
	November	219	70	74	18.0	6.9	2.0	5	3.0	N.D	0.20	6.96	0.33	N.D	N.D	N.D	N.D	N.D	0.45	N.D	7.5	250	237	29	N.D	16.0	6.66	186	
	December	166	63	90	16.0	13.54	4.0	20	6.0	N.D	N.D	2.74	N.D	N.D	N.D	N.D	0.02	N.D	1.2	N.D	7.5	63	90	24.4	0.38	N.D	7.36	225	
2002	January	298	104	122	13.2	13.2	1.6	16	8.0	N.D	0.02	2.52	N.D	0.03	N.D	N.D	0.1	0.002	N.D	N.D	7.2	80	45	21.8	1.74	22.4	8.09	293	
	February	295	110	138	17.5	12.4	2.0	18	10.0	N.D	N.D	3.86	N.D	N.D	N.D	N.D	0.1	0.003	0.2	N.D	7.3	37	80	28.8	0.06	25.6	6.82	318	
	March	337	110	140	15.9	12.1	1.8	18	10.0	N.D	N.D	5.66	N.D	N.D	N.D	N.D	0.1	0.003	0.2	N.D	8.31	18	190	30.9	0.24	32.0	7.78	302	

Note, N.D = Not Detected

**Water Quality Analysis Results at Hlaing River ( Gwedanshe, High Tide, Lower Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity
	Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
	Myanmar Standard	1,000	500	-	75 - 200	50 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	195	89	125	14.8	15.00	4.0	26	14.20	12.14	N.D.	0.20	N.D.	N.D.	N.D.	N.D.	0.01	N.D.	N.D.	N.D.	8.1	17.5	800	30.0	0.40	N.D.	7.00	-
	June	78	37	42	7.6	5.19	5.0	7	6.95	9.26	N.D.	1.20	N.D.	N.D.	N.D.	N.D.	0.016	N.D.	N.D.	N.D.	7.6	70	750	28.0	0.20	4.00	6.00	1,749
	July	978	50	46	6.8	5.19	3.0	5	5.00	N.D.	0.008	5.06	N.D.	N.D.	N.D.	N.D.	0.03	N.D.	1.55	N.D.	7.5	563	917	27.9	1.50	32.00	5.92	1,714
	August	257	54	54	16.4	3.17	1.0	2	6.50	N.D.	0.22	4.56	N.D.	N.D.	N.D.	N.D.	0.02	N.D.	0.08	N.D.	7.7	215	239	27.0	0.40	44.00	5.52	1,953
	September	(Sampling was not conducted)																										
	October	(Sampling was not conducted)																										
	November	252	70	76	16.0	8.64	2.0	5	4.0	N.D.	0.20	6.96	0.44	N.D.	N.D.	N.D.	0.070	N.D.	0.57	N.D.	7.2	170	533	29.8	0.4	25.6	5.71	185
	December	177	88	92	17.6	12.09	4.0	19	4.0	N.D.	N.D.	2.82	N.D.	N.D.	N.D.	N.D.	0.002	N.D.	1.3	N.D.	7.5	80	80	23.9	0.32	N.D.	7.31	224
2002	January	296	102	122	13.2	12.10	2.5	16	7.0	N.D.	0.02	2.20	N.D.	0.05	N.D.	N.D.	0.0	0.002	N.D.	N.D.	7.4	75	45	21.4	1.4	9.6	8.18	164
	February	224	110	138	18.8	13.3	2.2	17	10	N.D.	N.D.	3.56	N.D.	N.D.	N.D.	N.D.	0.0	0.003	0.3	N.D.	7.4	50	65	28.9	0.02	6.4	6.85	319
	March	363	110	144	17.4	12.9	2.8	17	8	N.D.	N.D.	6.12	N.D.	N.D.	N.D.	N.D.	0.0	0.003	0.55	N.D.	7.99	50	190	31.1	0.9	96	7.65	313

Note . N.D = Not Detected

**Water Quality Analysis Results at Hlaing River (Gwedanshe, Low Tide, Middle Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm	
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	(Sampling was not conducted)																											
	June	(Sampling was not conducted)																											
	July	340	54	48	7.6	4.61	4.0	6	4.0	N.D.	0.008	4.42	N.D.	N.D.	N.D.	N.D.	0.02	N.D.	1.78	N.D.	7.30	475	333	27.8	1.2	16.0	5.45	1,746	
	August	216	54	50	16.0	3.74	1.0	4	5.0	N.D.	0.21	4.88	N.D.	N.D.	N.D.	N.D.	0.02	N.D.	0.10	N.D.	7.50	190	263	27.0	0.6	28.8	5.32	1,911	
	September	410	46	54	11.6	3.74	3.0	7	5.0	N.D.	N.D.	4.70	N.D.	N.D.	N.D.	N.D.	0.016	N.D.	0.18	N.D.	7.00	170	333	28.4	N.D.	28.8	6.23	119	
	October	98	56	62	12.80	6.34	2.00	4	4.0	N.D.	N.D.	6.94	N.D.	N.D.	N.D.	N.D.	0.006	N.D.	1.3	N.D.	7.3	475	270	27.4	N.D.	N.D.	5.40	148	
	November	287	72	76	17.2	8.35	2.0	5	2.5	N.D.	0.20	6.68	0.33	N.D.	N.D.	0.25	0.040	N.D.	0.51	N.D.	7.5	190	280	28.9	N.D.	19.2	6.69	185	
	December	153	96	96	18.0	12.67	4.0	20	6.0	N.D.	N.D.	4.36	N.D.	N.D.	N.D.	N.D.	0.002	N.D.	1.3	N.D.	6.7	70	80	24.9	0.16	N.D.	6.84	226	
2002	January	235	102	124	14.3	13.2	1.9	16	6.0	N.D.	0.02	1.14	N.D.	0.04	N.D.	N.D.	0.0	0.000	N.D.	N.D.	7.6	80	40	21.8	0.9	N.D.	8.45	292	
	February	226	108	140	20.0	14.1	2.0	18	8	N.D.	N.D.	1.30	N.D.	N.D.	N.D.	N.D.	0.0	0.001	0.15	0.004	7.6	25	55	28.8	0.3	N.D.	6.55	312	
	March	282	108	142	16.8	13.1	2.9	18	10	N.D.	N.D.	4.28	N.D.	N.D.	N.D.	N.D.	0.0	0.001	0.55	N.D.	8.37	60	180	30.9	0.6	25.6	7.66	325	

Note. N.D = Not Detected



**Water Quality Analysis Results at Hlaing River (Gwedanshe, Low Tide, Lower Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µ S/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	(Sampling was not conducted)																											
	June	(Sampling was not conducted)																											
	July	233	54	46	7.2	5.19	4.0	6	4.0	N.D	N.D	5.06	N.D	N.D	N.D	N.D	0.02	N.D.	1.85	N.D.	7.30	650	334	27.9	0.6	32.0	5.52	1,752	
	August	228	54	54	16.4	4.03	2.0	5	5.5	N.D.	0.13	4.70	N.D	N.D	N.D	N.D	0.02	N.D.	0.70	N.D.	7.40	250	256	27.0	0.4	38.4	5.36	1,902	
	September	(Sampling was not conducted)																											
	October	(Sampling was not conducted)																											
	November	233	70	74	16.4	8.64	2.0	6	3.5	N.D	N.D	6.96	0.44	N.D	N.D	N.D	0.070	N.D.	0.5	N.D	7.5	170	206	29.0	N.D	16	6.89	188	
	December	179	88	92	16.4	10.08	4.0	19	4.0	N.D	N.D	2.44	N.D	N.D	N.D	N.D	0.02	N.D	0.3	N.D	7.4	50	80	24.2	0.52	N.D	7.50	133	
2002	January	268	106	120	13.2	12.10	1.7	16	5.0	N.D	0.02	1.78	N.D	0.06	N.D	N.D	0.02	0.001	N.D	N.D	7.5	80	40	22.5	1.1	6.4	7.67	175	
	February	180	108	138	17.5	13.6	2.6	17	10.0	N.D	N.D	1.78	N.D	N.D	N.D	N.D	0.1	0.001	0.1	N.D	7.5	40	40	28.6	0.48	25.6	7.22	314	
	March	300	108	144	17.0	12.8	2.8	18	11.0	N.D	N.D	5.26	N.D	N.D	N.D	N.D	0.1	0.001	0.1	N.D	8.12	60	195	30.8	0.26	32	7.69	329	

Note, N.D = Not Detected

**Water Quality Analysis Results at Hlaing River (Myochaung, High Tide, Middle Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	μS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May																												
	June																												
	July																												
	August																												
	September																												
	October	(Sampling was started from Nov. 2001)																											
	November	523	68	74	16.0	8.1	2.0	6	2.5	N.D	0.30	6.68	0.22	N.D	N.D	0.25	0.04	N.D	1.05	N.D	7.2	180	250	29.1	N.D	22.4	6.22	198	
	December	188	96	94	18.0	11.5	4.0	18	5.0	N.D	N.D	4.06	N.D	N.D	N.D	N.D	0.02	N.D	0.05	N.D	7.3	80	110	24.7	0.5	N.D	6.29	227	
2002	January	289	106	124	14.3	13.2	2.0	16	11.0	N.D	0.03	2.90	N.D	0.03	N.D	N.D	0.0	0.007	N.D	N.D	7.8	120	65	22.9	0.9	16	7.62	290	
	February	266	104	136	18.8	13.0	1.8	19	13	N.D	N.D	4.06	N.D	N.D	N.D	N.D	0.1	0.007	1.8	N.D	7.1	75	120	29.3	0.2	28.8	6.41	317	
	March	269	106	144	16.9	13.1	3.3	19	15	N.D	N.D	4.70	N.D	N.D	N.D	N.D	0.1	0.007	0.65	N.D	8.03	90	500	30.4	0.24	25.6	7.72	324	

Note. N.D = Not Detected

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**Water Quality Analysis Results at Hlaing River (Myochaung, High Tide, Lower Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity		
	Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm		
	Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500		
2001	May																													
	June																													
	July																													
	August																													
	September																													
	October	(Sampling was started from Nov. 2001)																												
	November	250	68	74	16.4	7.8	2.0	6	4.0	N.D	0.20	6.68	0.22	N.D	N.D	N.D	0.04	N.D	1.1	N.D	7.3	180	270	29.1	N.D	41.6	6.42	197		
December	153	92	96	17.2	12.1	4.0	19	7.0	N.D	N.D	5.46	N.D	N.D	N.D	N.D	0.02	N.D	0.06	N.D	7.4	90	135	24.6	0.08	16	6.22	225			
2002	January	301	102	120	14.3	13.2	2.1	17	9.0	N.D	0.03	4.06	0.01	0.03	N.D	N.D	0.0	0.007	N.D	N.D	7.8	100	85	22.9	0.6	9.6	7.57	290		
	February	172	104	136	21.3	13.4	3.1	20	12.0	N.D	N.D	4.42	N.D	N.D	N.D	N.D	0.0	0.007	1.48	N.D	6.9	75	120	29.4	N.D	22.4	6.02	319		
	March	442	108	140	16.9	12.0	3.0	18	13.0	N.D	N.D	5.06	N.D	N.D	N.D	N.D	0.0	0.007	0.6	N.D	8.08	100	563	30.4	0.3	32	7.51	329		

Note. N.D = Not Detected

**Water Quality Analysis Results at Hlaing River (Myochaung, Low Tide, Middle Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.5	5 - 50	20	-	-	-	-	1,500
2001	May																												
	June																												
	July																												
	August																												
	September																												
	October	(Sampling was started from Nov. 2001)																											
	November	274	68	74	16.0	8.35	2.0	6	4.0	N.D	0.30	6.96	N.D	N.D	N.D	0.30	0.070	N.D	0.56	N.D	7.5	280	265	29.5	0.2	16	6.28	185	
December	202	92	94	17.6	12.67	4.0	18	5.0	N.D	N.D	4.42	N.D	N.D	N.D	N.D	0.02	N.D	0.04	N.D	7.3	70	105	24.7	0.5	N.D	6.67	225		
2002	January	292	102	126	11.0	13.20	2.1	16	7.0	N.D	0.02	2.60	N.D	0.02	N.D	N.D	0.0	0.004	N.D	N.D	7.8	100	58	22.8	0.9	9.6	7.14	163	
	February	295	110	138	22.5	12.5	2.2	19	13.0	N.D	0.006	5.66	N.D	N.D	N.D	N.D	0.0	0.004	0.62	N.D	7.2	140	110	29.3	0.28	25.6	6.96	311	
	March	278	110	142	17.6	12.5	3.3	18	12.0	N.D	N.D	6.12	N.D	N.D	N.D	N.D	0.0	0.004	0.55	N.D	8.06	75	450	30.4	0.1	54.4	7.33	301	

Note: N.D = Not Detected

**Water Quality Analysis Results at Hlaing River (Myochaung, Low Tide, Lower Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	$\mu$ S/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May																												
	June																												
	July																												
	August																												
	September																												
	October	(Sampling was started from Nov. 2001)																											
	November	299	70	76	17.6	18.7	2.0	6	4.5	N.D	0.50	6.96	0.16	N.D	N.D	N.D	0.070	N.D	0.56	N.D	7.4	275	280	29	N.D	16	6.96	184	
December	207	94	98	18.0	11.5	4.00	18	6.0	N.D	N.D	4.56	N.D	N.D	N.D	N.D	0.002	N.D	0.05	N.D	7.5	80	110	25.0	0.52	16	6.33	227		
2002	January	326	102	122	15.4	13.2	1.90	15	8.0	N.D	0.02	3.86	N.D	0.01	N.D	N.D	0.0	0.005	N.D	N.D	7.9	80	60	23.0	0.9	3.2	6.94	287	
	February	291	110	136	21.3	13.3	2.0	18	12	N.D	0.018	4.42	N.D	N.D	N.D	N.D	0.0	0.005	0.4	N.D	7.1	100	125	28.5	0.22	32	7.10	311	
	March	115	122	132	17.6	12.6	2.9	19	71	10	N.D	5.86	N.D	N.D	N.D	N.D	0.0	0.005	0.58	N.D	8.19	78	575	30.6	0.26	32	6.69	329	

Note, N.D = Not Detected

**Water Quality Analysis Results at Hlaing River (Wataya, High Tide, Middle Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	300 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.5	10.0	0.05	-	0.005	5.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May																												
	June																												
	July																												
	August	(Sampling was started from Sep. 2001)																											
	September	128	46	54	11.6	3.2	3.0	6	5.0	N.D.	N.D.	4.88	N.D.	N.D.	N.D.	N.D.	0.016	N.D.	0.16	N.D.	6.7	150	225	28.5	0.90	3.20	5.84	115	
	October	106	50	56	12.8	4.9	2.0	7	6.5	N.D.	N.D.	6.68	N.D.	N.D.	N.D.	N.D.	0.003	N.D.	1.40	N.D.	7.8	375	206	27.4	0.24	6.40	5.80	86	
	November	287	72	76	15.2	9.2	2.0	5	2.5	N.D.	N.D.	6.68	N.D.	N.D.	N.D.	N.D.	0.04	N.D.	0.51	N.D.	7.5	190	280	28.9	N.D.	19.20	6.69	183	
	December	148	86	82	18.4	8.6	3.0	16	7.0	N.D.	N.D.	6.12	N.D.	N.D.	N.D.	N.D.	0.02	N.D.	0.12	N.D.	7.3	50	170	24.8	0.2	N.D.	6.50	198	
2002	January	234	90	96	12.1	11.0	1.0	10	10	N.D.	0.04	7.34	N.D.	0.03	N.D.	N.D.	0.04	0.016	N.D.	N.D.	7.7	250	45	22.8	0.28	9.6	7.64	201	
	February	508	98	106	20.0	12.4	2.0	14	17	N.D.	N.D.	6.40	N.D.	N.D.	N.D.	N.D.	0.4	0.016	0.15	N.D.	7.5	325	530	29.1	N.D.	32	7.28	266	
	March	2,070	340	106	22.5	42.5	12.0	318	590	75	N.D.	2.02	N.D.	N.D.	N.D.	N.D.	0.4	0.016	0.05	N.D.	7.92	12	2,625	30.2	1.52	160	6.58	2,670	

Note, N.D = Not Detected

Water Quality Analysis Results at Hlaing River (Wataya, High Tide, Lower Layer)

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µ S/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May																												
	June																												
	July																												
	August																												
	September																												
	October	(Sampling was started from Nov. 2001)																											
	November	260	76	78	16.4	8.1	2.0	6	2.5	N.D	N.D	5.46	N.D	N.D	N.D	N.D	0.04	N.D	0.52	N.D	7.5	125	475	28.8	N.D	16	6.74	182	
	December	191	84	82	16.8	9.8	3.0	15	7.0	N.D	N.D	8.20	N.D	N.D	N.D	N.D	0.02	N.D	0.15	N.D	7.2	50	170	24.7	0.16	N.D	7.34	197	
2002	January	591	88	92	12.1	13.2	1.1	10	10	N.D	0.04	7.74	0.01	0.03	N.D	N.D	0.03	0.053	N.D	N.D	7.7	240	170	22.9	0.36	9.6	7.39	202	
	February	416	110	108	18.8	12.1	1.8	13	15	N.D	N.D	7.34	N.D	N.D	N.D	N.D	0.3	0.053	0.2	N.D	7.5	300	530	28.6	N.D	32	7.67	277	
	March	1,908	340	110	23.8	41.3	12.0	323	610	80	N.D	1.40	N.D	N.D	N.D	N.D	0.3	0.053	0.05	N.D	7.68	120	2,375	30.3	0.8	48	6.81	4,600	

Note, N.D = Not Detected

**Water Quality Analysis Results at Hlaing River (Wataya, Low Tide, Middle Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µ S/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	100 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	5.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May																												
	June																												
	July																												
	August	(Sampling was started from Sep. 2001)																											
	September	206	46	52	10.8	4.3	2.0	9	5.6	N.D	N.D	5.86	N.D	N.D	N.D	N.D	0.016	N.D	0.16	N.D	7.2	175	238	28.3	0.90	3.20	6.12	113	
	October	46	50	58	15.2	3.5	2.0	5	6.5	N.D	N.D	3.48	N.D	N.D	N.D	N.D	0.003	N.D	1.30	N.D	7.6	485	275	27.5	N.D	N.D	5.74	134	
	November	180	68	72	16.0	8.6	2.0	5	3.0	N.D	0.20	6.96	N.D	N.D	N.D	N.D	0.04	N.D	0.48	N.D	7.4	225	212	29.1	N.D	32	6.86	180	
	December	165	84	82	19.2	8.4	3.0	15	5.0	N.D	N.D	7.74	N.D	N.D	N.D	N.D	0.02	N.D	0.5	N.D	7.0	25	180	24.6	N.D	16	7.29	197	
2002	January	410	90	94	12.1	12.1	2.1	10	10	N.D	0.05	8.20	N.D	0.04	N.D	N.D	0.3	0.016	N.D	N.D	7.8	225	225	23.0	0.82	N.D	7.22	229	
	February	434	98	110	21.3	11.9	1.4	13	15	N.D	0.02	9.40	N.D	N.D	N.D	N.D	0.3	0.016	0.15	N.D	7.6	310	433	29.0	0.4	N.D	7.41	283	
	March	842	146	108	18.1	20.0	7.0	106	172	25	N.D	3.56	N.D	N.D	0.03	N.D	0.03	0.016	0.5	N.D	7.78	60	1,250	31.5	0.1	16	7.66	287	

Note, N.D = Not Detected



Water Quality Analysis Results at Hlaing River (Wataya, Low Tide, Lower Layer)

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
	Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	$\mu S/cm$	
	Myanmar Standard	1,000	500	-	75-200	30-150	-	200	200-600	400	5-15	0.5-1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5-9.2	5-50	20	-	-	-	-	1,500	
2001	May																												
	June																												
	July																												
	August																												
	September																												
	October	(Sampling was started from Nov. 2001)																											
	November	287	70	72	16.8	7.5	2.0	6	2.0	N.D	N.D	7.74	0.04	N.D	N.D	N.D	0.04	N.D	0.53	N.D	7.6	220	270	29.1	N.D	22.0	7.04	179	
December	202	80	84	18.0	9.5	3.0	15	4.0	N.D	N.D	8.20	N.D	N.D	N.D	N.D	0.02	N.D	0.3	N.D	7.1	60	200	24.6	0.1	N.D	7.42	196		
2002	January	390	90	94	13.2	13.2	2.1	10	10	N.D	0.05	8.20	N.D	0.02	N.D	N.D	0.1	0.019	N.D	N.D	7.8	250	250	23.1	0.28	25.6	7.10	228	
	February	412	100	106	18.8	10.6	1.6	13	15	N.D	0.02	9.40	N.D	N.D	N.D	N.D	0.1	0.019	0.1	N.D	7.6	280	467	28.3	0.1	12.8	7.62	260	
	March	441	148	114	18.3	21.3	7.0	108	181	26	0.02	1.84	N.D	N.D	N.D	N.D	0.1	0.019	0.6	N.D	7.85	70	2,250	31.8	0.5	38.4	7.73	402	

Note, N.D = Not Detected

**Water Quality Analysis Results at Hlaing River (Baw Le Kyun, High Tide, Middle Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	μS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	212	98	135	17.6	15.57	4.0	25.0	14.2	7.85	N.D	0.02	N.D	N.D	N.D	N.D	0.016	N.D	N.D	N.D	8.15	15	300	30.0	0.60	N.D	7.00	60.5	
	June	82	37	40	7.6	5.19	5.0	6.0	6.9	12.76	N.D	3.00	N.D	N.D	N.D	N.D	0.010	N.D	N.D	N.D	7.60	50	500	28.0	1.60	N.D	5.80	78.8	
	July	170	52	44	8.8	2.30	3.0	5.0	3.5	N.D	N.D	5.86	N.D	N.D	N.D	N.D	0.020	N.D	1.78	N.D	7.30	563	238	27.9	0.90	32.0	5.48	83.9	
	August	218	54	52	16.8	5.18	2.0	5.0	6.0	N.D	0.15	5.06	N.D	N.D	N.D	N.D	0.020	N.D	0.10	N.D	7.70	240	210	27.1	0.60	32.0	5.76	81.0	
	September	349	46	56	10.4	4.61	3.0	4.0	4.0	N.D	N.D	5.06	N.D	N.D	N.D	N.D	0.016	N.D	0.17	N.D	7.20	160	275	28.4	N.D	6.4	6.62	82.1	
	October	(Sampling was terminated)																											
	November																												
December																													
2002	January																												
	February																												
	March																												

Note, N.D = Not Detected

**Water Quality Analysis Results at Hlaing River (Baw Le Kyun, Low Tide, Middle Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	μS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	(Sampling was not conducted)																											
	June	(Sampling was not conducted)																											
	July	277	54	44	9.2	2.30	4.0	6.0	4.50	N.D.	N.D.	4.06	N.D.	N.D.	N.D.	N.D.	0.020	N.D.	1.76	N.D.	7.30	4.50	275	27.9	0.72	32.0	5.53	63.0	
	August	219	56	50	16.8	5.18	2.0	5.0	6.0	N.D.	0.15	5.06	N.D.	N.D.	N.D.	N.D.	0.020	N.D.	0.14	N.D.	7.70	215	252	27.0	0.20	48.0	5.63	61.5	
	September	206	46	52	10.8	4.32	2.0	9.0	5.6	N.D.	N.D.	5.86	N.D.	N.D.	N.D.	N.D.	0.016	N.D.	0.16	N.D.	7.20	175	238	28.3	0.90	3.2	6.12	62.2	
	October	(Sampling was terminated)																											
	November																												
	December																												
2002	January																												
	February																												
	March																												

Note, N.D = Not Detected

**Water Quality Analysis Results at Bago River (Upstream, High Tide, Middle Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity
	Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
	Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	(Sampling was not conducted)																										
	June	(Sampling was not conducted)																										
	July	1,081	40	34	4.0	4.0	3.0	5	6.0	N.D	N.D	4.56	N.D	N.D	N.D	N.D	0.02	N.D	0.3	N.D	7.1	450	500	27.3	0.15	12.8	5.20	80.5
	August	217	30	36	6.0	3.2	2.0	7	5.5	N.D	0.10	6.12	N.D	N.D	N.D	N.D	N.D	N.D	1.75	N.D	6.8	265	260	26.2	0.7	28.80	5.38	85.4
	September	161	18	20	3.2	2.9	1.0	8	8.5	N.D	N.D	3.26	N.D	N.D	N.D	N.D	0.006	N.D	1.30	N.D	6.8	155	95	26.40	1.50	12.80	5.80	82.1
	October	43	58	60	4.8	5.5	2.0	10	N.D	N.D	N.D	7.74	N.D	N.D	N.D	N.D	0.015	N.D	1.5	7.4	6.9	220	28	N.D	N.D	3.48	5.17	84.0
	November	293	52	46	7.6	9.8	6.0	20	44	N.D	0.50	6.68	N.D	N.D	N.D	N.D	0.020	N.D	0.45	N.D	6.9	310	270	26.2	0.66	32.0	6.88	292
	December	320	48.8	69	9.6	10.9	6.0	33	40	N.D	1.00	8.80	N.D	N.D	N.D	N.D	0.002	N.D	0.05	N.D	7.5	370	488	28.1	0.3	48	6.71	303
2002	January	1,997	170	88	12.5	27.5	9.0	170	245	32	0.02	1.30	N.D	N.D	0.08	N.D	0.6	0	0.35	N.D	7.0	70	10,013	17.6	1.1	230.4	7.74	1,160
	February	12,730	380	104	25.0	65.0	22.0	500	750	80	N.D	8.20	N.D	0.2	0.15	N.D	0.6	0.001	0.3	0.005	7.1	25	31,250	24.8	2.4	128	8.39	3,290
	March	9,800	500	84	26.0	68.0	27.0	19	1,120	125	N.D	5.06	N.D	N.D	N.D	N.D	0.6	0.001	0.3	N.D	8.04	50	7,000	28.8	0.64	217.6	6.71	4,840

Note, N.D = Not Detected

**Water Quality Analysis Results at Bago River (Upstream, Low Tide, Middle Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	(Sampling was not conducted)																											
	June	(Sampling was not conducted)																											
	July	1.087	40	36	4.0	4.3	5.0	9	6.5	N.D.	N.D.	4.56	0.003	N.D.	N.D.	N.D.	0.018	N.D.	0.28	N.D.	6.90	320	550	27.30	0.75	16.00	4.97	60.9	
	August	(Sampling was not conducted)																											
	September	270	26	30	3.6	3.2	1.0	7	9.5	N.D.	N.D.	4.88	N.D.	N.D.	N.D.	N.D.	0.010	N.D.	0.30	N.D.	6.7	155	125	25.9	1.50	22.40	5.48	62.2	
	October	124	36	42	4.4	5.8	2.0	10	13.5	N.D.	0.03	6.68	N.D.	N.D.	N.D.	N.D.	0.017	N.D.	0.075	N.D.	7.3	160	90	29.7	0.9	22.4	5.35	65.1	
	November	150	54	56	8.8	9.5	5.0	17	31.0	N.D.	0.30	6.12	N.D.	N.D.	N.D.	N.D.	0.020	N.D.	0.5	N.D.	7.1	220	155	26.0	N.D.	3.2	6.99	301	
	December	514	62	65	9.6	11.2	7.0	36	41.5	N.D.	0.10	8.20	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.34	N.D.	7.5	390	468	27.8	0.5	32	6.47	308	
2002	January	11,039	150	82	7.5	17.5	7.0	75	145	33	0.01	2.73	N.D.	0.07	0.08	N.D.	0.5	0.001	0.6	N.D.	7.2	275	10,850	17.7	1.0	265.6	8.02	670	
	February	12,583	100	100	10.0	16.9	10.0	70	109	40	N.D.	4.70	N.D.	N.D.	0.15	N.D.	0.5	0.001	0.6	N.D.	7.1	530	13,000	24.5	1.0	160	9.62	710	
	March	3,393	220	96	14	41	14	25	450	70	N.D.	5.26	N.D.	N.D.	0.03	N.D.	0.5	0.001	0.95	N.D.	8.05	110	6,875	28.8	0.92	98.6	4.64	2,160	

Note: N.D = Not Detected

**Water Quality Analysis Results at Bago River (Downstream, High Tide, Middle Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity
	Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	μ S/cm
	Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	(Sampling was not conducted)																										
	June	(Sampling was not conducted)																										
	July	549	42	34	3.2	4.16	5.0	8.0	8.5	N.D	0.01	5.66	0.0125	N.D	N.D	N.D	0.02	N.D	0.24	N.D	7.3	563	475	27.00	0.15	32	5.48	82.8
	August	173	30	30	6.0	2.30	1.0	8.0	6.50	N.D	0.15	6.12	N.D	N.D	N.D	N.D	N.D	N.D	1.70	N.D	6.70	290	212	26.10	0.30	28.80	5.35	87.5
	September	255	24	30	3.6	3.17	1.0	9.0	11.50	N.D	N.D	7.74	N.D	N.D	N.D	N.D	0.009	N.D	1.55	N.D	6.80	162	160	26.10	1.80	19.20	5.88	85.0
	October	190	32	38	4.8	4.61	2.0	12.0	16.5	N.D	N.D	4.56	N.D	N.D	N.D	N.D	0.017	N.D	0.25	N.D	7.3	160	80	29.7	0.9	6.4	5.25	86.2
	November	823	54	42	10.0	7.78	5.0	19.0	43.0	N.D	0.50	6.40	N.D	N.D	N.D	N.D	0.02	N.D	1.05	N.D	6.9	300	316	26.3	N.D	32.0	6.05	259
	December	713	66	69	9.2	13.54	7.0	40.0	54.5	N.D	N.D	8.80	N.D	N.D	N.D	N.D	0.02	N.D	0.05	N.D	7.4	470	1,165	28.1	0.86	67.2	6.78	371
2002	January	(Sampling was terminated)																										
	February																											
	March																											

Note, N.D = Not Detected

**Water Quality Analysis Results at Bago River (Downstream, Low Tide, Middle Layer)**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	(Sampling was not conducted)																											
	June	(Sampling was not conducted)																											
	July	2,082	42	34	4.0	4.33	4.0	5.0	8.50	N.D.	N.D.	5.86	0.005	N.D.	N.D.	N.D.	0.060	N.D.	0.23	N.D.	7.20	500	600	27.10	0.30	16.00	5.13	76.8	
	August	(Sampling was not conducted)																											
	September	321	26	28	3.6	3.46	1.0	8.0	9.50	N.D.	4.00	6.68	N.D.	N.D.	N.D.	N.D.	0.009	N.D.	0.30	N.D.	6.70	125	145	26.00	1.80	19.20	5.96	80.5	
	October	46	50	58	3.6	5.77	2.0	12.0	6.5	N.D.	0.14	3.48	N.D.	N.D.	N.D.	N.D.	0.015	N.D.	1.3	N.D.	7.5	485	275	27.5	N.D.	N.D.	5.74	79.3	
	November	522	50	44	9.6	8.35	6.0	19.0	46.0	N.D.	0.50	6.12	N.D.	N.D.	N.D.	N.D.	0.020	N.D.	1.1	N.D.	6.5	270	333	26.1	0.2	19.2	6.51	263	
	December	1,052	70.4	63.4	12.8	10.66	7.0	41.0	53.9	N.D.	0.10	10.0	N.D.	N.D.	N.D.	N.D.	0.002	N.D.	0.43	N.D.	7.5	425	1,583	27.8	0.1	80	6.81	359	
2002	January	(Sampling was terminated)																											
	February																												
	March																												

Note . N.D = Not Detected

**Water Quality Analysis Results at Kokine Service Reservoir**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	E-Coliform	SPCB	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm	No/100ml	No/1ml	
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500	0	-
2001	May																														
	June																														
	July																														
	August	(Sampling was started from Sep. 2001)																													
	September	38	38	34	5.6	4.32	3.0	6.0	4.5	28	N.D	0.05	N.D	N.D	N.D	N.D	0.008	N.D	0.36	N.D	6.7	N.D	N.D	27.7	0.1	8	5.27	88.0	D	D	
	October	91	32	44	1.0	5.71	2.0	5.0	4.5	N.D	0.23	0.13	N.D	1.90	N.D	N.D	0.02	N.D	0.05	N.D	6.6	N.D	N.D	27.6	0.2	16	5.0	984	N.D	D	
	November	92	34	42	9.6	3.17	3.0	8.0	3.0	N.D	0.10	0.07	N.D	N.D	N.D	N.D	N.D	N.D	0.025	N.D	6.7	N.D	N.D	21.2	0.32	25.6	5.08	96.4	D	D	
	December	77	26	30	4.0	3.46	3.0	6.0	3.5	N.D	N.D	0.04	N.D	N.D	N.D	N.D	0.012	N.D	0.01	N.D	7.1	N.D	N.D	25.4	0.06	N.D	7.00	63.7	N.D	D	
2002	January	50	26	30	2.5	2.63	1.0	2.8	4.5	N.D	0.010	0.11	N.D	N.D	N.D	N.D	0.3	0.001	0.15	N.D	6.8	N.D	N.D	28.0	N.D	N.D	7.61	66.6	N.D	D	
	February	107	38	48	6.3	4.5	1.4	4.0	3.5	N.D	N.D	0.07	N.D	N.D	N.D	N.D	0.3	0.001	0.012	0.007	7.59	N.D	N.D	29.4	N.D	N.D	6.60	103	N.D	D	
	March	41	36	46	7.3	4.9	0.8	4	3.5	N.D	N.D	0.04	N.D	N.D	N.D	N.D	0.3	0.001	0.05	N.D	6.97	N.D	N.D	31.4	0.16	16	6.68	107	N.D	D	

Note, N.D = Not Detected  
D = Detected



**Water Quality Analysis Results at Kamayut Faucet**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	E-Coliform	S/PCB	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µ S/cm	No/100ml	No/ml
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500	0	-
2001	May																														
	June																														
	July																														
	August	(Sampling was started from Sep. 2001)																													
	September	28	26	22	4.0	1.15	1.0	2.0	3.5	N.D	N.D	0.07	N.D	N.D	N.D	N.D	0.005	N.D	0.14	N.D	6.8	N.D	N.D	27.7	N.D	14.4	5.77	44.4	N.D	N.D	
	October	59	20	26	1.0	2.86	2.0	4.0	4.5	N.D	0.40	0.15	0.10	1.00	N.D	N.D	0.12	N.D	0.025	N.D	6.6	N.D	N.D	27.6	0.2	16	5.0	51.2	N.D	D	
	November	44	16	26	4.0	2.59	2.0	6.0	4	N.D	0.20	0.05	N.D	N.D	N.D	N.D	0.004	N.D	N.D	N.D	7.0	N.D	N.D	21.4	N.D	N.D	6.01	46.4	N.D	D	
December	45	18	24	4.4	2.88	2.0	12.0	3.5	N.D	N.D	0.13	N.D	N.D	N.D	N.D	0.012	N.D	0.05	N.D	7.1	N.D	N.D	25.5	N.D	N.D	7.04	55.4	N.D	D		
2002	January	45	22	28	3.8	2.25	1.0	2.7	4.5	N.D	0.150	0.18	N.D	N.D	N.D	N.D	0.1	0.000	0.13	0.003	6.7	N.D	N.D	27.7	N.D	N.D	7.14	57.4	N.D	D	
	February	90	34	30	3.8	3.0	0.9	2.9	4	N.D	0.007	0.13	N.D	N.D	N.D	N.D	0.1	0.000	0.012	N.D	7.49	9	1	29.6	N.D	16	7.93	64.0	N.D	D	
	March	13	22	30	3.8	3.4	0.8	3	2.5	N.D	N.D	0.04	N.D	N.D	N.D	N.D	0.1	0.000	0.02	N.D	7.29	N.D	N.D	31.5	0.5	41.6	7.64	65.7	N.D	D	

Note , N.D = Not Detected  
D = Detected

Water Quality Analysis Results at Ahlone Faucet

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	P-Coliform	SPCB		
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µ S/cm	No/100ml	No/1ml	
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500	0	-	
2001	May																															
	June																															
	July																															
	August	(Sampling was started from Sep. 2001)																														
	September	49	38	34	6.0	4.32	3.0	5.0	5.5	N.D	N.D	0.23	N.D	N.D	N.D	N.D	0.01	N.D	0.18	N.D	6.8	N.D	N.D	27.6	N.D	1.6	5.83	99.0	D	D		
	October	104	38	42	1.0	5.85	2.0	7.0	7.5	N.D	0.33	0.13	N.D	0.50	N.D	N.D	0.02	N.D	0.025	0.06	6.8	N.D	N.D	27.6	0.2	16	5.95	107	D	D		
	November	90	30	42	7.6	4.03	3.0	8.0	3.5	N.D	N.D	0.05	N.D	N.D	N.D	N.D	0.002	N.D	0.025	N.D	6.7	N.D	N.D	20.8	0.28	N.D	6.20	85.0	D	D		
	December	49	26	30	4.8	2.88	3.0	15.0	4.0	N.D	N.D	0.07	N.D	N.D	N.D	N.D	0.012	N.D	0.03	N.D	7.0	N.D	N.D	25.4	N.D	N.D	7.15	66.0	N.D	D		
2002	January	51	24	24	2.5	2.25	1.0	3.0	5.0	N.D	N.D	0.05	N.D	N.D	N.D	N.D	4.0	0.000	0.1	N.D	6.1	N.D	N.D	28	N.D	N.D	7.04	65.9	N.D	D		
	February	154	32	30	5.0	3.0	4.0	12.0	21	N.D	0.029	0.07	N.D	N.D	N.D	N.D	4.0	0.000	0.025	0.005	7.15	N.D	N.D	29.5	N.D	N.D	5.72	171	N.D	D		
	March	55	40	44	6	5	3	7	9.5	N.D	N.D	0.04	N.D	N.D	N.D	N.D	1.6	0.000	N.D	N.D	6.73	N.D	N.D	29.6	N.D	3.2	7.08	132	N.D	D		

Note, N.D = Not Detected  
D = Detected

**Water Quality Analysis Results at Dagon Faucet**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	E-Coliform	SPCB		
	Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	$\mu$ S/cm	No/100ml	No/lml		
	Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500	0	-		
2001	May																															
	June																															
	July																															
	August	(Sampling was started from Sep. 2001)																														
	September	37	40	32	8.0	2.3	3.0	4.0	4	N.D	N.D	0.13	N.D	N.D	N.D	0.30	0.01	N.D	0.11	N.D	6.8	N.D	N.D	27.6	N.D	17.6	5.73	88.2	D	D		
	October	80	36	42	1.0	5.0	2.0	5.0	5.0	N.D	0.20	0.55	0.10	1.00	N.D	N.D	0.014	N.D	0.025	N.D	6.8	N.D	N.D	27.7	0.3	9.6	4.44	97.4	N.D	D		
	November	73	34	42	9.2	3.46	3.0	7.0	3	N.D	N.D	0.09	N.D	N.D	N.D	N.D	0.002	N.D	0.01	N.D	6.9	N.D	N.D	21.6	0.3	N.D	5.39	95.4	N.D	D		
	December	57	26	28	4.4	3.46	3.0	13.0	3.5	N.D	N.D	0.31	N.D	N.D	N.D	N.D	0.012	N.D	0.05	N.D	7.2	12	5	25.5	0.26	N.D	7.15	23.2	N.D	D		
2002	January	55	26	30	3.75	2.75	1.1	2.9	4.5	N.D	N.D	0.13	N.D	N.D	N.D	N.D	0.1	0.000	0.18	N.D	6.8	N.D	N.D	28.1	N.D	N.D	6.28	27.5	N.D	D		
	February	96	38	44	5.0	4.5	1.0	4.0	5	N.D	N.D	0.29	N.D	N.D	N.D	N.D	0.4	0.000	0.02	N.D	7.59	21	5	29.3	N.D	16	6.52	102	N.D	D		
	March	52	36	48	5.0	5.0	1.3	4.0	4	N.D	N.D	0.13	N.D	N.D	N.D	N.D	0.3	0.000	N.D	N.D	7.37	N.D	N.D	29.7	0.44	3.2	6.93	38.1	N.D	D		

Note, N.D = Not Detected  
D = Detected

**Water Quality Analysis Results at Lanmadaw Faucet**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	E-Coliform	SPCB	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm	No/100ml	No/1ml
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500	0	-
2001	May																														
	June																														
	July																														
	August	(Sampling was started from Sep. 2001)																													
	September	125	22	28	5.2	2.88	12.0	13.0	19.5	N.D	N.D	0.03	N.D	N.D	N.D	N.D	0.20	N.D	0.15	N.D	5.6	N.D	N.D	27.7	N.D	8	5.38	135	D	D	
	October	187	52	36	2.0	6.85	7.0	17.0	29.0	4	0.17	0.05	N.D	N.D	N.D	N.D	0.044	0.06	0.35	N.D	6.0	N.D	N.D	27.7	N.D	12.8	4.26	265	N.D	D	
	November	95	22	26	5.6	2.59	5.0	10.0	7.5	N.D	N.D	0.41	N.D	N.D	N.D	N.D	0.02	N.D	N.D	N.D	6.2	N.D	N.D	19.8	N.D	12.8	4.95	87.9	D	D	
	December	85	28	22	5.2	3.74	7.0	33.0	13.5	4.0	N.D	0.02	N.D	N.D	N.D	N.D	0.12	N.D	N.D	N.D	6.2	N.D	N.D	25.7	0.02	6.4	7.57	123	D	D	
2002	January	134	30	20	3.75	2.88	7.0	18.0	22	3	0.045	0.03	N.D	N.D	N.D	N.D	11.5	0.000	0.3	0.003	5.2	N.D	N.D	28.1	N.D	N.D	4.47	44.6	D	D	
	February	273	60	22	12.5	5.1	7.0	20.0	45	N.D	0.018	0.18	N.D	N.D	N.D	N.D	11.5	0.000	0.012	N.D	7.49	4	1	29.4	N.D	16	5.97	325	D	D	
	March	81	28	28	4.0	4.0	5.0	12.0	16.5	4	N.D	0.16	N.D	N.D	N.D	0.2	3.8	0.000	N.D	N.D	6.18	N.D	N.D	29.7	0.2	9.6	7.12	156	D	D	

Note . N,D = Not Detected  
D = Detected

**Water Quality Analysis Results at Yankin Faucet**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	E-Coliform	SP/CB	
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm	No/100ml	No/1ml	
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500	0	-
2001	May																														
	June																														
	July																														
	August	(Sampling was started from Sep. 2001)																													
	September	31	40	34	5.2	4.32	3.0	5.0	4	N.D	N.D	0.11	N.D	N.D	N.D	N.D	0.007	N.D	0.2	N.D	6.6	N.D	N.D	27.7	N.D	1.6	6.06	86.3	D	D	
	October	75	36	40	1.0	6.28	2.0	6.0	5.0	N.D	0.23	0.31	N.D	N.D	N.D	N.D	0.02	N.D	0.025	0.06	6.7	N.D	N.D	28.0	0.1	25.6	5.28	98.3	D	D	
	November	91	32	42	7.6	4.03	3.0	7.0	2.5	N.D	0.10	0.21	N.D	N.D	N.D	N.D	N.D	N.D	0.01	N.D	6.4	N.D	N.D	16.9	0.1	N.D	6.30	90.1	D	D	
	December	37	26	28	5.6	2.30	2.0	7.0	3.0	N.D	N.D	0.21	N.D	N.D	N.D	N.D	0.012	N.D	N.D	N.D	7.1	N.D	N.D	25.4	0.2	N.D	8.07	60.7	N.D	D	
2002	January	56	26	30	3.75	2.63	1.0	2.9	4.5	N.D	N.D	0.16	N.D	N.D	N.D	N.D	0.3	0.000	0.18	N.D	6.7	N.D	N.D	27.7	N.D	N.D	7.7	62.1	N.D	D	
	February	92	40	50	6.3	4.8	1.1	4.1	4.5	N.D	N.D	0.23	N.D	N.D	N.D	N.D	0.3	0.000	0.02	0.006	7.83	13	4	29.3	N.D	16	6.58	106	N.D	D	
	March	41	36	52	3.8	5.1	1.5	4.2	4	N.D	N.D	0.04	N.D	N.D	N.D	N.D	0.3	0.000	N.D	N.D	7.32	N.D	N.D	30.6	0.4	6.4	8.03	108	N.D	D	

Note , N.D = Not Detected  
D = Detected

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**Water Quality Analysis Results at Tawme Faucet**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	E-Coliform	SPCB	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	μS/cm	No/100ml	No/lml
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500	0	-
2001	May																														
	June																														
	July																														
	August	(Sampling was started from Sep. 2001)																													
	September	19	28	20	4.0	1.73	2.0	3.0	5	N.D	N.D	0.07	N.D	N.D	N.D	N.D	0.007	N.D	0.16	N.D	6.7	N.D	N.D	27.7	N.D	8	5.79	48.4	N.D	N.D	
	October	82	22	26	1.0	2.57	1.0	4.0	4.5	N.D	0.23	0.16	N.D	N.D	N.D	N.D	0.02	N.D	0.025	N.D	7.1	N.D	N.D	27.5	0.3	12.8	82	53.0	N.D	D	
	November	73	20	26	4.8	2.88	2.0	6.0	3	N.D	N.D	0.07	N.D	N.D	N.D	N.D	0.002	N.D	0.02	N.D	7.5	N.D	N.D	21.2	0.3	22.4	5.75	90.1	N.D	D	
	December	36	22	26	3.6	3.17	2.0	12.0	3.5	N.D	N.D	0.39	N.D	N.D	N.D	N.D	0.012	N.D	N.D	N.D	7.0	3	4	25.4	N.D	N.D	6.89	55.5	N.D	D	
2002	January	54	26	28	2.5	2.63	0.9	2.7	4.5	N.D	0.008	0.15	N.D	N.D	N.D	N.D	0.1	0.000	0.15	N.D	6.9	N.D	N.D	28.0	N.D	N.D	7.03	57.4	N.D	D	
	February	48	24	32	3.8	3.1	1.0	3.1	4	N.D	N.D	0.16	N.D	N.D	N.D	N.D	0.1	0.000	0.02	N.D	7.70	8	2	29.5	N.D	N.D	6.91	64.4	N.D	D	
	March	36	24	32	4.6	3.6	0.6	3	3	N.D	N.D	0.09	N.D	N.D	N.D	N.D	0.1	0.000	0.02	N.D	7.19	N.D	N.D	31.2	0.16	54.4	7.23	64.2	N.D	D	

Note, N.D = Not Detected  
D = Detected

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**Water Quality Analysis Results at Botataung Faucet**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	E-Coliform	SPCB	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µ S/cm	No./100ml	No./1ml
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500	0	-
2001	May																														
	June																														
	July																														
	August	(Sampling was started from Sep. 2001)																													
	September	661	72	152	16.8	33.98	23.0	69.0	255	N.D	N.D	0.33	N.D	N.D	N.D	N.D	0.20	N.D	0.16	N.D	6.2	N.D	N.D	27.6	0.3	24	5.59	1,245	D	D	
	October	354	80	52	2.0	13.71	4.0	32.0	103	16	0.20	3.20	N.D	N.D	N.D	N.D	0.02	N.D	0.15	N.D	6.7	N.D	3.0	27.7	0.2	16	4.26	871	D	D	
	November	216	48	44	7.6	7.78	6.0	44.0	68	13	0.20	0.39	N.D	N.D	N.D	N.D	0.002	N.D	0.05	N.D	7.0	N.D	2	16.8	0.04	3.2	5.02	418	D	D	
	December	820	212	78	22.8	48.34	21.0	19.0	306	34	N.D	0.37	N.D	N.D	N.D	N.D	0.012	N.D	0.05	N.D	6.7	4	N.D	25.5	1.52	N.D	6.82	1,554	D	D	
2002	January	192	56	38	5.0	7.5	2.0	34.0	56	12	0.080	0.27	N.D	N.D	N.D	N.D	0.3	0.001	0.15	N.D	6.7	N.D	N.D	28.4	0.06	N.D	5.89	255	D	D	
	February	78	28	38	3.8	3.1	0.8	3.2	4	N.D	0.17	0.43	N.D	N.D	N.D	N.D	0.3	0.001	0.02	N.D	7.36	9	2	29.4	N.D	N.D	6.24	47.4	D	D	
	March	16	26	32	2.5	3.1	0.8	3.0	4	N.D	0.01	0.02	N.D	N.D	N.D	N.D	0.3	0.001	N.D	N.D	6.94	N.D	N.D	30.7	N.D	9.6	8.20	72.4	D	D	

Note, N.D = Not Detected  
D = Detected

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**Water Quality Analysis Results at Tube Well No.1**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solids	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	TCU	NTU	Degree	mg/l	mg/l	mg/l	µ S/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-
2001	May	134	43	27	9.6	5.47	7.0	24.0	33.73	6.99	0.1	0.08	N.D	N.D	N.D	0.75	0.07	N.D	N.D	N.D	7.34	N.D	N.D	29	0.20	N.D	6.20	218
	June	130	41	29	9.6	4.90	7.0	19.0	32.75	2.67	0.20	0.03	0.01	N.D	N.D	-	0.200	N.D	N.D	N.D	5.80	N.D	1	30.00	N.D	N.D	6.20	200
	July	176	57	30	10.8	4.32	4.0	14.0	28.00	N.D	0.09	N.D	N.D	N.D	N.D	N.D	0.24	N.D	N.D	N.D	6.30	N.D	N.D	27.40	0.29	N.D	5.70	203
	August	172	46	30	11.2	5.18	3.0	12.0	30.00	3.00	0.06	0.07	N.D	N.D	N.D	N.D	0.16	N.D	0.10	N.D	5.80	N.D	N.D	29.50	0.20	22.40	4.80	206
	September	312	50	28	11.6	4.03	10.0	20.0	34.5	N.D	0.15	N.D	N.D	N.D	N.D	N.D	0.20	N.D	0.12	N.D	5.50	N.D	N.D	29.90	N.D	11.20	4.47	215
	October	209	50	28	10.4	20.19	7.0	22.0	34.0	3.0	0.20	0.05	0.10	N.D	N.D	N.D	0.04	N.D	N.D	N.D	5.9	N.D	N.D	28.6	N.D	16	4.81	217
	November	167	48	26	10.0	6.05	8.0	13.0	32.0	4.0	0.30	0.04	N.D	N.D	N.D	N.D	0.14	N.D	0.05	N.D	5.8	N.D	N.D	25.7	0.1	12.8	6.67	130
	December	142	48	30	11.6	5.47	8.0	22.0	32.0	3.0	N.D	0.07	N.D	N.D	N.D	N.D	N.D	N.D	N.D	0.02	N.D	5.5	N.D	N.D	28.1	N.D	6.4	6.55
2002	January	132	48	26	7.7	4.40	3.1	14.0	33.0	N.D	0.03	0.05	N.D	0.03	N.D	N.D	3.3	0.000	N.D	N.D	6.0	N.D	N.D	21.6	N.D	6.4	6.54	223
	February	143	52	32	10.0	5.6	3.0	12.0	31.5	N.D	0.012	0.13	N.D	N.D	N.D	N.D	3.1	0.009	N.D	N.D	5.68	N.D	N.D	27.7	N.D	16	5.43	231
	March	178	52	32	10.0	5.0	5.0	12.0	33.0	N.D	N.D	0.03	N.D	N.D	N.D	N.D	3.1	0.009	0.1	N.D	5.58	N.D	N.D	31.2	0.1	9.6	6.43	211

Note, N.D = Not Detected



**Water Quality Analysis Results at Tube Well No.7**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	$\mu S/cm$
		Myanmar Standard	1,000	500	-	75-200	30-150	-	200	200-600	400	5-15	0.5-1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5-9.2	5-50	20	-	-	-	-	1,500
2001	May	276	54	33	8.8	9.22	13.0	63.0	85	37.0	0.10	0.10	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	8.25	N.D	N.D	29	N.D	N.D	5.40	471	
	June	264	50	32	11.2	6.34	12.0	49.0	72	39.3	3.00	0.08	N.D	N.D	N.D	0.45	0.200	N.D	N.D	N.D	5.37	N.D	2	3.00	N.D	1.89	5.60	466	
	July	279	73	38	8.4	7.20	8.0	46.0	73	27.5	0.10	0.09	0.09	N.D	N.D	1.39	0.04	N.D	N.D	N.D	6.00	N.D	N.D	27.60	0.35	9.60	5.60	451	
	August	323	54	42	9.2	8.35	7.0	45.0	13	28.0	0.05	1.10	N.D	N.D	N.D	0.05	N.D	N.D	0.20	N.D	5.60	N.D	N.D	29.80	0.40	25.60	4.91	423	
	September	308	58	38	12.4	5.18	17.0	57.0	78	73	0.05	0.05	N.D	N.D	N.D	0.86	0.04	N.D	0.28	N.D	5.40	N.D	N.D	29.80	0.14	1.60	4.22	478	
	October	298	56	38	2.8	2.60	8.0	11.0	N.D	27.5	0.24	0.04	0.26	N.D	N.D	N.D	0.10	N.D	0.1	N.D	6.2	N.D	N.D	29.7	N.D	N.D	5.31	522	
	November	239	54	36	3.6	2.02	8.0	49.0	71	25	0.10	0.07	N.D	N.D	N.D	N.D	0.140	N.D	0.06	N.D	5.8	N.D	N.D	29.2	0.3	N.D	5.32	112	
	December	557	60	34	3.2	2.59	9.00	18.0	110	26.0	N.D	N.D	N.D	N.D	N.D	N.D	0.10	N.D	N.D	N.D	5.7	N.D	N.D	25.0	0.24	N.D	5.68	114	
2002	January	50	18	14	4.4	1.43	3.50	9.0	16	N.D	0.07	0.07	N.D	0.06	N.D	N.D	3.5	0.000	N.D	N.D	6.0	N.D	N.D	24.3	0.4	N.D	6.94	116	
	February	96	20	16	2.5	2.0	18.0	9.0	15	N.D	0.01	0.11	N.D	N.D	N.D	N.D	3.4	0.000	N.D	N.D	5.6	N.D	N.D	28.5	0.06	19.2	5.54	115	
	March	67	18	18	2.5	2.4	3.3	7.0	14	N.D	0.02	0.02	N.D	N.D	N.D	N.D	3.4	0.000	N.D	N.D	5.42	N.D	N.D	30.6	N.D	5.42	7.47	112	

Note, N.D = Not Detected

**Water Quality Analysis Results at Tube Well No.11**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
		Myanmar Standard	1,000	500	-	75-200	30-150	-	200	200-600	400	5-15	0.5-1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5-9.2	5-50	20	-	-	-	-
2001	May	276	54	33	8.8	9.22	13	63	85	37.0	0.10	0.10	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	8.25	N.D	N.D	29	N.D	N.D	5.40	471
	June	264	50	32	11.2	6.34	12	49	72	39.3	3.00	0.08	N.D	N.D	N.D	0.45	0.200	N.D	N.D	N.D	5.37	N.D	2	3.00	N.D	1.89	5.60	466
	July	279	73	38	8.4	7.20	8	46	73	27.5	0.10	0.09	0.09	N.D	N.D	1.39	0.04	N.D	N.D	N.D	6.00	N.D	N.D	27.60	0.35	9.60	5.60	451
	August	323	54	42	9.2	8.35	7	45	13	28.0	0.05	1.10	N.D	N.D	N.D	0.05	N.D	N.D	0.20	N.D	5.60	N.D	N.D	29.80	0.40	25.60	4.91	423
	September	308	58	38	12.4	5.18	17	57	78	73	0.05	0.05	N.D	N.D	N.D	0.86	0.04	N.D	0.28	N.D	5.40	N.D	N.D	29.80	0.14	1.60	4.22	478
	October	298	56	38	20.8	15.86	28	38	N.D	27.5	0.06	0.04	0.37	N.D	N.D	N.D	0.01	N.D	0.1	N.D	6.2	N.D	N.D	29.7	N.D	N.D	5.31	522
	November	239	54	36	10.4	1.44	9	28	71	25	1.00	0.07	0.44	N.D	N.D	0.80	0.070	N.D	0.06	N.D	5.8	N.D	N.D	29.2	0.3	N.D	5.32	484
	December	557	60	34	12.4	5.18	17	58	110	26	1.5	N.D	N.D	N.D	N.D	0.7	0.04	N.D	N.D	N.D	5.7	N.D	N.D	25.0	0.24	N.D	5.68	492
2002	January	235	60	34	6.25	6.25	7	52	72	28	0.03	0.09	N.D	N.D	N.D	3.10	0.6	0.000	N.D	N.D	5.8	N.D	N.D	17.6	N.D	N.D	8.62	405
	February	292	12	40	6.3	6.3	8.0	50	71	26	0.04	0.37	N.D	N.D	N.D	2.5	0.0	0.000	0.15	N.D	5.7	N.D	N.D	24.1	N.D	N.D	7.30	502
	March	250	58	40	7.5	6.1	5.0	31.0	71	38	0.01	0.59	N.D	N.D	N.D	2.0	0.0	0.000	0.68	N.D	5.83	N.D	15	30.7	0.2	19.2	7.81	506

Note, N.D = Not Detected

**Water Quality Analysis Results at Tube Well No.13**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	μS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005		6.5 - 9.2	5 - 50	20	-	-	-	-
2001	May	1,254	190	148	17.2	43.34	25.0	159	483	90.7	0.06	0.10	N.D	N.D	N.D	1.50	0.12	N.D	N.D	N.D	7.72	N.D	N.D	29	N.D	N.D	5.60	2,380	
	June	1,448	207	170	14.4	49.32	23.0	135	569	115.5	0.50	0.10	0.005	N.D	N.D	N.D	0.020	N.D	N.D	N.D	6.60	N.D	2	30.00	0.20	3.78	5.00	2,520	
	July	1,426	212	177	15.2	45.79	17.0	160	530	75.0	0.003	3.16	N.D	N.D	N.D	0.33	0.013	N.D	0.55	N.D	8.20	25	40	27.50	0.80	19.20	6.60	2,440	
	August	1,123	184	166	15.2	36.58	11.0	126	470	70.0	0.04	1.10	N.D	N.D	N.D	0.19	0.020	N.D	0.25	N.D	6.60	25	5	30.00	N.D	28.80	3.19	2,800	
	September	1,374	240	182	16.0	47.23	37.0	166	590	N.D	0.05	0.45	N.D	N.D	N.D	0.46	0.02	N.D	0.22	N.D	6.60	N.D	N.D	29.50	N.D	36.80	5.38	2,250	
	October	440	126	120	8.8	8.94	12.0	37	129	29	0.24	0.39	0.042	N.D	N.D	0.70	0.044	N.D	0.2	N.D	6.8	N.D	N.D	29.7	N.D	6.4	5.22	2,570	
	November	405	150	94	30.4	18.43	21.0	33	256	26	N.D	1.83	N.D	N.D	N.D	0.25	0.070	N.D	0.23	N.D	6.2	25	8	29.3	N.D	9.6	5.43	665	
	December	1,554	280	180	22.0	69.98	33.0	155	590	85	N.D	3.87	N.D	N.D	N.D	N.D	0.02	N.D	0.65	N.D	6.5	12	43	24.7	0.44	32	5.83	3,060	
2002	January	87	144	94	16.3	14.9	14.0	78	155	33	N.D	2.03	N.D	N.D	N.D	1.2	0.000	0.002	0.1	0.005	6.7	37	15	29.0	0.4	25.6	8.04	915	
	February	384	130	90	21.3	16.3	31.0	100	132	25	0.02	1.30	N.D	N.D	N.D	2.0	0.0	0.002	0.45	N.D	6.1	40	10	28.8	0.24	12.8	6.64	834	
	March	735	260	120	20.0	25.0	11.0	168	290	46	N.D	0.51	N.D	N.D	N.D	N.D	0.000	0.002	0.2	N.D	6.35	N.D	N.D	31.5	N.D	96	6.77	1,629	

Note. N.D = Not Detected

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**Water Quality Analysis Results at Tube Well No.14**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
		Myanmar Standard	1,000	500	-	75-200	30-150	-	200	200-600	400	5-15	0.5-1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5-9.2	5-50	20	-	-	-	-	1,500
2001	May	49	10	11	1.6	1.73	8.0	15	14.2	6.17	0.08	0.08	N.D	N.D	N.D	0.75	0.07	N.D	N.D	N.D	7.26	N.D	N.D	29	0.80	N.D	6.60	83.3	
	June	72	12	17	1.2	2.59	7.0	11	15.5	6.99	0.30	0.05	N.D	N.D	N.D	N.D	0.160	N.D	N.D	N.D	4.80	N.D	2	30.00	N.D	N.D	4.60	85.6	
	July	182	26	12	1.2	1.73	2.0	12	11.5	N.D	N.D	N.D	N.D	N.D	N.D	N.D	0.150	N.D	N.D	N.D	5.20	N.D	N.D	27.00	N.D	N.D	5.42	82.3	
	August	88	14	16	2.0	1.44	4.0	10	125.0	2.00	0.09	0.43	N.D	N.D	N.D	N.D	0.16	N.D	0.18	N.D	5.10	10	6	29.70	0.20	9.60	4.62	84.5	
	September	84	18	16	2.0	1.15	6.0	12	12.5	N.D	0.47	N.D	N.D	N.D	N.D	N.D	0.086	N.D	0.15	N.D	5.40	N.D	N.D	29.9	0.6	N.D	4.85	80.7	
	October	100	16	16	1.2	2.02	7.0	8	12	N.D	0.14	0.33	N.D	N.D	N.D	N.D	0.036	N.D	0.05	N.D	5.9	N.D	N.D	29.7	N.D	N.D	5.22	88.2	
	November	76	10	14	2.4	1.72	8.0	8	10	3	0.10	0.07	N.D	N.D	N.D	N.D	0.050	N.D	0.1	N.D	5.6	N.D	N.D	25.8	N.D	N.D	7.08	79.6	
	December	58	10	17.4	2.8	2.02	8.0	12	8.0	N.D	N.D	0.23	N.D	N.D	N.D	N.D	0.02	N.D	N.D	N.D	5.3	N.D	N.D	28.5	0.1	N.D	5.12	80.6	
2002	January	20	16	12	3.3	1.10	4.0	7	11.0	N.D	0.04	0.09	N.D	0.02	N.D	N.D	0.02	N.D	N.D	N.D	5.6	N.D	N.D	22.9	N.D	N.D	6.43	80.4	
	February	119	10	20	2.5	1.8	4.2	6	10	N.D	0.03	0.19	N.D	N.D	N.D	N.D	2.3	0.000	0.05	N.D	5.0	N.D	N.D	24.3	N.D	N.D	7.91	80.7	
	March	66	16	18	1.3	1.3	6	7	10.5	N.D	N.D	0.05	N.D	N.D	N.D	N.D	2.3	0.000	N.D	N.D	5.79	N.D	N.D	29.6	N.D	9.6	7.12	80.1	

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Water Quality Analysis Results at Tube Well No.37

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µ S/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May																												
	June																												
	July																												
	August	(Sampling was started from Sep. 2001)																											
	September	13,729	1,800	390	197	342	55	369	5,800	N.D.	0.22	10.52	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	33.75	N.D.	7.30	180	65	29.50	1.34	188.8	4.72	20,500
	October	1,747	2,000	460	106	441	55	361	5,950	N.D.	0.25	6.40	0.17	N.D.	N.D.	0.5	0.28	N.D.	35.5	N.D.	7.3	175	59	27.6	0.16	268.8	4.7	23,200	
	November	15053	1750	325	126	409	58	213	6,073	N.D.	0.50	7.34	0.33	N.D.	N.D.	N.D.	0.07	N.D.	14	N.D.	7.3	70	125	29.2	0.3	140	598	21,000	
	December	11,940	1,742	352	115	391	87	366	5,900	N.D.	N.D.	9.40	N.D.	N.D.	N.D.	N.D.	0.06	N.D.	9.0	N.D.	7.4	150	140	28.0	0.7	80	6.52	20,900	
2002	January	3,912	780	150	37.5	138	26	800	1,800	N.D.	0.02	6.40	N.D.	0.30	N.D.	0.2	0.00	0.000	N.D.	0.018	7.1	18	190	14.3	3.3	N.D.	8.09	6,700	
	February	730	170	188	18.8	27.5	10.0	200	255	3.0	3.50	1.63	N.D.	N.D.	N.D.	N.D.	0.0	0.000	1.05	N.D.	6.9	20	5	24.4	1.2	N.D.	8.24	1,407	
	March	647	82	178	10	10	10	60	31	N.D.	0.03	3.48	N.D.	N.D.	N.D.	0.1	0.0	0.000	1.45	N.D.	8.44	75	334	28.9	0.34	9.6	7.52	524	

Note, N.D = Not Detected

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Water Quality Analysis Results at Tube Well No.57

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May																												
	June																												
	July																												
	August	(Sampling was started from Sep. 2001)																											
	September	750	50	248	5.6	9.22	19.0	88	246	1.00	0.23	0.27	N.D	N.D	N.D	N.D	0.080	N.D.	1.55	N.D.	6.80	N.D.	N.D.	25.00	0.20	16.00	5.21	1,459	
	October	637	56	242	7.2	8.93	18.0	103	242	N.D	N.D	0.05	N.D	N.D	N.D	N.D	0.10	N.D.	1.3	N.D.	6.9	N.D	N.D	27.1	N.D	N.D	4.61	1,508	
	November	693	50	234	5.6	10.66	24.0	65	234	N.D	N.D	0.09	0.66	N.D	N.D	0.10	0.200	N.D.	1.2	N.D.	7.3	N.D	N.D	29.4	N.D	12.80	6.31	1,495	
	December	700	80	228	6.0	10.37	37.0	120	260	4.0	N.D	0.13	N.D	N.D	N.D	N.D	0.05	N.D.	1.55	N.D.	7.0	N.D	N.D	24.3	2.02	N.D	5.08	1,511	
2002	January	595	48	122	1.25	8.75	8	108	112	7	0.01	0.47	0.02	N.D	N.D	N.D	0.00	0.000	0.28	0.002	7.4	N.D	N.D	25.7	1.7	N.D	8.42	1,670	
	February	807	140	246	1.3	9.8	20.0	280	280	5.0	N.D	0.18	N.D	N.D	N.D	N.D	0.0	0.000	1.8	N.D.	7.8	N.D	N.D	27.1	0.14	3.2	6.86	1,692	
	March	710	80	246	4.3	9.3	14.0	2.23	260	8	N.D	0.13	N.D	N.D	N.D	0.1	0.0	0.000	1.7	N.D.	7.34	N.D	N.D	32.1	N.D	16	6.24	1,510	

Note, N.D = Not Detected

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**Water Quality Analysis Results at Tube Well No.58**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity		
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm	
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500	
2001	May																													
	June																													
	July																													
	August	(Sampling was started from Sep. 2001)																												
	September	810	46	246	4.8	8.35	19.0	93	276	2.50	0.29	0.18	N.D	N.D	N.D	N.D	0.08	N.D.	1.45	N.D.	6.80	N.D.	N.D.	25.00	N.D.	16.00	5.47	1,580		
	October	651	52	244	6.8	8.93	18.0	101	244	N.D	N.D	0.09	N.D	N.D	N.D	N.D	0.10	N.D.	1.3	N.D.	6.8	N.D	N.D	27.2	N.D	N.D	4.25	1,603		
	November	758	46	232	6.4	9.50	24.0	66	270	13	N.D	0.33	N.D	N.D	N.D	N.D	0.20	N.D	0.98	N.D.	8.0	N.D	N.D	29	0.2	16	6.81	1,617		
	December	757	80	228	4.8	9.72	35.0	132	300	8.0	N.D	0.09	N.D	N.D	N.D	N.D	0.10	N.D	1.55	N.D.	7.5	N.D	N.D	24.5	0.04	N.D	6.45	1,631		
2002	January	820	50	236	1.25	10.25	13	260	305	7	0.01	0.11	0.02	0.10	N.D	N.D	0.0	0.000	1.48	0.005	7.5	N.D	N.D	25.3	0.26	22.4	7.34	1,653		
	February	1,172	100	248	2.5	9.3	24.0	260	340	11.0	N.D	0.16	N.D	N.D	N.D	N.D	0.0	0.000	1.7	0.006	8.0	N.D	N.D	26.8	0.16	N.D	7.56	1,590		
	March	793	100	248	3.8	8.1	12.0	280	310	14	N.D	0.16	N.D	N.D	N.D	N.D	0.0	0.000	1.6	N.D.	7.14	N.D	N.D	32.2	N.D	6.4	5.59	1,741		

Note, N.D = Not Detected

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Water Quality Analysis Results at Tube Well No.59

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degrec	mg/l	mg/l	mg/l	µm/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May																												
	June																												
	July																												
	August	(Sampling was started from Sep. 2001)																											
	September	856	42	244	6.4	6.34	18.0	97	304	5	0.44	0.23	N.D	N.D	N.D	N.D	0.070	N.D.	1.45	N.D.	6.80	N.D.	N.D.	25.30	N.D.	16.00	6.23	1,669	
	October	640	56	242	5.2	10.37	19.0	102	246	N.D	N.D	0.05	N.D	N.D	N.D	N.D	0.10	N.D.	1.3	N.D.	6.9	N.D	N.D	27.0	N.D	N.D	4.45	1,702	
	November	795	40	236	6.0	7.49	23.0	68	285	13	N.D	0.09	N.D	N.D	N.D	N.D	0.200	N.D.	1.1	N.D.	7.3	N.D	N.D	28.80	N.D	3.2	6.50	1,701	
	December	804	60	234	6.0	7.78	34.0	140	320	8.0	N.D	0.16	N.D	N.D	N.D	N.D	0.04	N.D	1.4	N.D.	7.0	N.D	N.D	24.4	0.14	32	4.68	1,697	
2002	January	800	60	236	1.25	9.13	14	250	290	7	0.01	0.19	N.D	0.10	N.D	0.10	0.000	1.35	N.D.	7.7	N.D	N.D	25.4	0.86	N.D	7.22	1,660		
	February	911	120	248	2.5	9.5	21.0	250	340	12	N.D	0.18	N.D	N.D	N.D	N.D	0.0	0.000	1.75	0.002	7.6	N.D	N.D	26.7	0.34	16	7.15	1,649	
	March	746	80	248	4.3	9.5	13.0	250	300	12	N.D	0.09	N.D	N.D	N.D	N.D	0.0	0.000	1.6	N.D.	7.29	N.D	N.D	32.2	N.D	25.6	6.13	1,660	

Note, N.D = Not Detected



Water Quality Analysis Results at Tube Well No.74

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µ S/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	295	70	71	13.2	10.66	23.0	69	130	25.72	0.26	0.05	N.D	N.D	N.D	0.75	0.12	N.D	0.60	0.026	6.76	N.D	N.D	29	N.D	10.00	5.00	294	
	June	380	74	21	14.8	10.67	21.0	61	140	20.58	2.00	N.D	0.005	N.D	N.D	0.15	0.640	N.D	0.90	N.D	5.00	N.D	2	30.00	N.D	N.D	4.80	281	
	July	441	90	28	14.0	9.79	15.0	58	115	14.0	0.34	4.56	N.D	N.D	N.D	0.64	1.20	N.D	1.70	N.D	6.40	12	20	27.50	0.41	12.80	5.80	268	
	August	409	74	24	13.2	10.08	12.0	72	102	7.5	0.13	0.21	N.D	N.D	N.D	1.0	0.62	N.D	0.95	N.D	5.13	N.D	N.D	27.60	N.D	6.40	3.40	272	
	September	194	58	42	13.6	5.47	5.0	29	48	5.0	N.D	N.D	N.D	N.D	N.D	N.D	0.075	N.D	0.13	N.D	6.20	N.D	N.D	27.9	0.4	3.2	5.33	294	
	October	347	64	22	12.8	110.75	20.0	60	86	2.0	0.37	1.58	0.1	0.50	N.D	N.D	0.066	N.D	0.04	N.D	5.5	37	12	28.4	N.D	6.4	3.82	302	
	November	373	68	20	13.2	11.23	25.0	64	103	8.0	1.00	0.18	N.D	N.D	N.D	0.70	0.23	N.D	0.85	N.D	5.7	N.D	N.D	15.5	0.4	28.8	6.49	645	
December	323	64	28	12.4	10.08	21.0	58	92	8.0	1.00	3.67	N.D	N.D	N.D	0.2	N.D	N.D	0.7	N.D	5.5	90	35	27.7	N.D	9.6	2.47	636		
2002	January	326	66	18	8.8	8.8	11.5	65	102	7.5	0.12	0.53	N.D	0.05	N.D	N.D	0.0	0.000	1.0	N.D	5.4	N.D	N.D	20.5	0.02	N.D	6.81	217	
	February	332	70	28	11.3	7.5	10.0	80	104	8	0.100	0.63	N.D	N.D	N.D	0.8	N.D	0.000	0.23	N.D	5.68	N.D	N.D	27.7	0.2	16	4.18	328	
	March	328	68	26	12.5	7.8	11.0	66	106	7	N.D	0.13	N.D	N.D	N.D	N.D	N.D	0.000	1.1	N.D	5.32	N.D	N.D	31.6	N.D	19.2	5.79	683	

Note, N.D = Not Detected

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**Water Quality Analysis Results at Tube Well No.108**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	198	46	24	9.2	6.62	9.0	38	48.0	26.38	0.21	0.05	N.D	N.D	N.D	0.60	0.07	N.D	N.D	0.026	7.12	N.D	N.D	29	N.D	N.D	5.60	266	
	June	148	47	30	10.0	6.34	9.0	31	50.0	12.55	N.D	0.20	N.D	N.D	N.D	N.D	0.300	N.D	N.D	N.D	5.27	N.D	1	30.00	N.D	5.66	5.60	232	
	July	351	58	26	6.0	4.04	2.0	27	41.5	7.50	0.15	0.04	N.D	N.D	N.D	N.D	0.120	N.D	N.D	N.D	5.50	N.D	N.D	27.40	N.D	N.D	5.40	241	
	August	178	40	26	9.2	4.03	5.0	39	39.0	2.50	0.13	0.11	N.D	N.D	N.D	N.D	0.41	N.D	N.D	N.D	5.34	N.D	N.D	27.50	N.D	19.20	4.40	250	
	September	226	42	28	9.6	4.61	7.0	30	41.0	5.00	0.39	N.D	N.D	N.D	N.D	N.D	0.20	N.D	0.12	N.D	5.80	N.D	N.D	29.9	0.16	28.8	4.98	269	
	October	217	44	28	9.2	5.19	9.0	23	42	5.0	0.27	0.04	N.D	N.D	N.D	N.D	0.13	N.D	N.D	N.D	5.8	N.D	N.D	29.7	N.D	N.D	4.84	277	
	November	215	40	28	10.4	4.61	9.0	34	39.0	7.0	0.20	0.4	N.D	N.D	N.D	N.D	0.18	N.D	N.D	N.D	5.2	N.D	N.D	19.9	0.5	N.D	5.81	270	
	December	146	40	28	9.6	4.61	10.0	33	37.0	9.0	N.D	0.04	N.D	N.D	N.D	N.D	0.16	N.D	0.025	N.D	5.5	N.D	N.D	28.2	N.D	N.D	5.42	271	
2002	January	25	28	28	3.3	1.65	1.5	7	11.0	N.D	0.03	0.11	N.D	0.04	N.D	N.D	1.0	0.000	N.D	N.D	6.2	N.D	N.D	21.6	0.3	N.D	7.10	93.1	
	February	244	62	28	10.0	6.0	7.0	40	50	8.0	0.04	0.11	N.D	N.D	N.D	N.D	N.D	0.001	N.D	0.003	6.4	N.D	N.D	28.2	N.D	19.2	6.82	356	
	March	147	44	32	9.4	4.4	3.1	23	36	7	N.D	0.02	N.D	N.D	N.D	N.D	N.D	0.001	N.D	N.D	5.79	N.D	N.D	31.1	N.D	32	7.81	279	

Note, N.D = Not Detected

**Water Quality Analysis Results at Tube Well No.129**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm	
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May																												
	June																												
	July																												
	August	(Sampling was started from Sep. 2001)																											
	September	544	204	170	24.4	38.88	9.0	64.0	165	10.00	0.19	3.26	N.D	N.D	N.D	N.D	0.02	N.D	0.90	N.D	6.80	65	20	29.70	0.30	32.00	3.15	1.046	
	October	524	216	170	30.4	37.15	8.0	59.0	162	N.D	N.D	2.93	N.D	N.D	N.D	N.D	N.D	N.D	1.5	N.D	6.8	75	23	27.8	N.D	3.2	3.81	1.011	
	November	273	98	154	15.6	10.37	17.0	43.0	45.0	N.D	0.40	2.35	N.D	N.D	N.D	N.D	0.02	N.D	0.05	N.D	7.0	80	26	25.0	0.1	28.8	6.61	347	
	December	524	200	164	24.8	40.61	13.0	71.0	164	11.0	N.D	1.93	N.D	N.D	N.D	N.D	0.04	N.D	0.55	N.D	6.9	35	10	28.3	N.D	3.2	5.75	1.064	
2002	January	557	202	162	15.0	21.3	5.0	87.0	165	18	0.02	2.08	N.D	N.D	N.D	0.1	0.2	0.001	0.4	0.003	6.6	70	22	29.0	0.24	6.4	5.23	979	
	February	582	204	174	23.8	32.5	5.2	100.0	157	8	0.018	3.06	N.D	N.D	N.D	N.D	0.2	0.001	0.23	N.D	6.98	50	15	28.9	0.1	16	5.45	2,560	
	March	1,251	300	218	21.0	31.1	9.0	28.0	560	N.D	0.20	1.41	N.D	N.D	N.D	N.D	0.2	0.001	0.9	N.D	7.18	N.D	85	30.6	3	25.8	6.51	1,094	

Note, N.D = Not Detected

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Water Quality Analysis Results at Tube Well No.178

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	μS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May																												
	June																												
	July																												
	August	(Sampling was started from Sep. 2001)																											
	September	209	72	82	12.8	8.64	9.0	33.0	55	N.D	0.10	8.80	N.D	N.D	N.D	0.05	N.D	N.D	1.5	N.D	6.6	95	251	27.6	N.D	N.D	4.96	314	
	October	285	88	128	17.2	12.96	6.0	14.0	8	N.D	N.D	0.80	N.D	N.D	N.D	0.30	0.002	N.D	0.18	N.D	6.5	4	4	27.5	N.D	N.D	4.13	314	
	November	242	88	132	19.6	11.23	13.0	29.0	8	N.D	0.20	0.25	N.D	N.D	N.D	N.D	0.006	N.D	0.2	N.D	6.4	5	N.D	25.1	0.1	6.4	5.99	327	
	December	244	36	126	19.6	11.23	13.0	29.0	6	2.5	0.20	0.18	N.D	N.D	N.D	N.D	0.006	N.D	0.01	N.D	6.5	N.D	N.D	29.4	N.D	16	2.97	320	
2002	January	278	84	122	12.5	8.1	5.0	26.0	5	N.D	0.007	0.18	N.D	N.D	N.D	N.D	0.0	0.000	0.1	N.D	6.4	N.D	N.D	28.9	N.D	25.6	4.61	277	
	February	272	88	132	15.0	8.8	5.0	18.0	8	2	0.030	0.13	N.D	N.D	N.D	N.D	0.0	0.000	N.D	N.D	6.78	N.D	N.D	27.8	N.D	32	5.54	319	
	March	214	86	134	15.0	8.1	5.0	18.0	4	N.D	0.02	0.05	N.D	N.D	N.D	N.D	0.0	0.000	N.D	N.D	6.47	N.D	N.D	30.7	N.D	6.4	6.01	320	

Note, N.D = Not Detected

**Water Quality Analysis Results at Tube Well No.187**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	TCU	NTU	Degree	mg/l	mg/l	mg/l	μS/cm	
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	200	61	115	11.6	9.22	11.0	36	17.75	13.78	N.D	0.60	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	8.39	15.00	8.00	29	N.D	N.D	6.00	144	
	June	( Pump was under repair )																											
	July	238	76	118	13.2	7.78	7.0	20	6	N.D	0.036	4.40	0.05	N.D	N.D	0.48	0.0025	N.D	1.50	N.D	6.70	240	60	27.30	0.30	12.80	4.40	12.9	
	August	258	60	124	13.6	7.49	4.0	17	10	2.50	0.09	3.34	N.D	N.D	N.D	0.33	N.D	N.D	0.35	N.D	6.70	6	N.D	30.70	0.20	12.80	3.61	182	
	September	257	66	116	14.8	6.62	8.0	27	12	N.D	0.83	4.70	N.D	N.D	N.D	N.D	0.001	N.D	0.88	N.D	6.50	275	80	27.80	N.D	16.00	5.18	162	
	October	247	64	114	12.4	8.94	11.0	8	8.0	N.D	0.14	3.76	N.D	N.D	N.D	N.D	0.017	N.D	0.8	N.D	6.7	175	45	29.6	N.D	3.2	5.19	154	
	November	190	62	112	15.6	7.20	12.0	19	5.0	N.D	0.50	3.34	N.D	N.D	N.D	N.D	0.008	N.D	0.45	N.D	6.5	170	55	25.9	N.D	N.D	6.34	303	
	December	184	61	110	14.0	8.35	13.0	31	6.5	N.D	0.20	5.06	N.D	N.D	N.D	0.20	N.D	N.D	0.45	N.D	6.3	220	85	27.1	0.6	3.2	3.80	303	
2002	January	256	66	110	8.8	7.70	4.0	20	6.0	N.D	0.03	3.36	N.D	0.06	N.D	N.D	0.6	0.000	0.25	N.D	6.3	170	45	23.0	0.12	12.8	6.47	242	
	February	253	62	120	12.5	6.4	4.6	23	5	N.D	0.01	2.53	N.D	N.D	N.D	0.2	0.9	0.000	0.3	N.D	6.2	290	80	24.1	N.D	N.D	7.40	309	
	March	211	68	120	8.8	7.1	7.0	23	8	N.D	N.D	0.83	N.D	N.D	N.D	N.D	0.9	0.000	0.78	N.D	6.67	25	22	30.6	0.3	6.4	5.81	331	

Note, N.D = Not Detected

**Water Quality Analysis Results at Tube Well No.197**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity
	Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µ S/cm
	Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	1,176	380	284	26.8	9.14	38.0	132.0	391	45.88	0.07	0.30	N.D	N.D	0.01	0.70	N.D	N.D	N.D	N.D	8.70	15	12	29	0.60	N.D	6.00	2,200
	June	1,176	370	240	34.8	81.61	35.0	96.0	365	45.06	0.40	1.05	0.05	N.D	N.D	0.15	0.260	N.D	N.D	N.D	6.97	15	2	30.00	33.00	1.89	N.D	3,410
	July	1,157	400	277	31.6	87.84	30.0	114.0	386	55.00	0.05	3.56	N.D	N.D	N.D	N.D	0.20	N.D	0.55	N.D	7.80	80	65	27.40	0.10	12.80	3.70	3,630
	August	1,221	384	276	33.6	86.40	19.0	76.0	390	52.00	0.03	3.34	N.D	N.D	N.D	N.D	0.16	N.D	0.40	N.D	7.10	170	43	29.50	0.20	48.00	4.80	2,310
	September	1,205	430	280	36.8	82.37	28.0	102.0	460	45.00	0.39	3.06	N.D	N.D	N.D	N.D	N.D	N.D	1.95	N.D	7.00	50	35	27.90	N.D	N.D	5.12	2,200
	October	1,197	440	284	11.2	10.38	38.0	11.0	440	85	0.23	2.93	0.2	0.5	N.D	N.D	0.066	N.D	4.5	N.D	7.1	50	48	30.4	0.14	16	3.71	2,320
	November	698	308	226	24.0	71.42	3.00	69.0	198	23	N.D	3.34	N.D	N.D	N.D	N.D	0.09	N.D	1.0	N.D	7.1	60	15	17.1	1.0	12.8	6.20	1,372
	December	691	316	220	24.0	79.49	43.0	158.0	196	19	N.D	2.53	N.D	N.D	N.D	N.D	0.12	N.D	0.65	N.D	7.6	90	28	25.7	0.1	6.4	7.19	1,408
2002	January	746	306	212	15.0	51.3	16.0	96.0	220	27	N.D	1.68	N.D	N.D	0.05	0.008	0.1	0.009	0.9	N.D	7.0	35	30	28.8	0.24	16.0	8.47	1,475
	February	1,139	480	290	28.8	80.0	33.0	230.0	430	70	N.D	1.68	N.D	N.D	N.D	N.D	0.2	0.009	0.5	0.008	7.0	38	45	28.7	N.D	22.4	5.01	2,340
	March	1,251	440	290	10	10	20	160	430	68	N.D	2.53	N.D	N.D	N.D	0.1	0.2	0.009	0.4	N.D	8.07	90	55	29.9	N.D	16	6.93	2,390

Note. N.D = Not Detected

**Water Quality Analysis Results at Tube Well No.208**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 45	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	296	137	145	17.2	27.07	12.0	54.0	69.23	9.67	0.04	0.30	N.D	N.D	N.D	0.40	N.D	N.D	N.D	0.013	8.50	15	5	29	0.60	N.D	6.00	677	
	June	292	132	138	30.0	16.44	12.0	43.0	68.95	5.34	0.60	0.20	N.D	N.D	N.D	0.08	0.002	N.D	N.D	N.D	6.56	19	2	30.00	N.D	N.D	5.00	605	
	July	426	170	145	29.6	14.67	8.0	42.0	91.00	23.00	0.064	3.92	N.D	N.D	N.D	N.D	0.007	N.D	0.70	N.D	7.90	125	55	27.40	0.20	6.40	6.00	641	
	August	361	126	146	28.4	14.98	6.0	42.0	63.00	13.00	0.08	2.35	N.D	N.D	N.D	0.31	N.D	N.D	0.45	N.D	6.70	80	25	30.50	0.20	32.00	3.59	653	
	September	330	130	146	27.2	15.55	9.0	47.0	67.00	12.00	N.D	2.20	N.D	N.D	N.D	N.D	0.001	N.D	0.40	N.D	6.70	90	25	29.50	N.D	9.60	4.44	612	
	October	352	130	144	5.6	5.77	12.0	53.0	53.0	12.0	0.20	2.21	N.D	N.D	N.D	N.D	0.033	N.D	0.25	N.D	6.9	100	35	28.3	N.D	16	5.32	630	
	November	685	126	140	20.4	13.82	16.0	35.0	64	10	N.D	2.21	N.D	1.63	N.D	N.D	N.D	N.D	N.D	N.D	6.2	75	28	19.7	N.D	32	4.56	631	
	December	586	198	138	28.4	16.13	14.0	56.0	135	20	0.20	9.68	N.D	N.D	N.D	N.D	0.002	N.D	0.3	N.D	7.0	75	90	28.2	0.24	12.8	5.69	606	
2002	January	570	200	136	16.3	11.0	5.0	48.0	150	29	0.01	4.88	N.D	N.D	N.D	0.2	0.1	0.002	0.6	0.003	6.3	100	100	28.8	0.12	16	5.22	521	
	February	537	186	150	23.8	17.5	5.3	60.0	125	17	0.019	3.34	N.D	N.D	N.D	0.4	0.3	0.004	0.2	N.D	6.82	25	85	27.9	N.D	16	6.14	964	
	March	350	136	156	25.0	10.0	7.0	28.0	66	10	0.05	1.68	N.D	N.D	N.D	N.D	0.3	0.004	1.0	N.D	6.77	180	110	30.6	1.8	16	5.87	540	

Note, N.D = Not Detected

**Water Quality Analysis Results at Tube Well No.212**

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity	
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	μS/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500
2001	May	212	100	158	18.8	15.26	14	40	14.2	6.17	0.03	0.80	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	8.50	20	5	29	0.20	N.D	6.00	323	
	June	250	93	157	21.2	11.54	14	32	13.8	3.91	0.30	0.70	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	6.50	19.50	2	30.00	0.40	N.D	5.80	334	
	July																												
	August	285	94	154	19.2	12.67	8	29	22.0	N.D	0.015	1.78	N.D	N.D	N.D	N.D	N.D	N.D	N.D	0.30	N.D	6.80	50	12	30.40	N.D	22.00	3.58	308
	September	294	96	148	16	13.25	10	42	11.0	N.D	0.30	0.72	N.D	N.D	N.D	N.D	N.D	N.D	N.D	0.21	N.D	7.00	6	5	29.80	0.20	16.00	4.69	317
	October	282	94	182	10.4	4.90	14	35	18.0	N.D	0.10	2.9	0.10	0.5	N.D	N.D	N.D	N.D	N.D	0.55	N.D	6.9	18	5	27.6	2.7	N.D	1.92	325
	November	244	94	148	23.2	11.52	15	10	9.0	N.D	0.30	1.63	N.D	N.D	N.D	N.D	N.D	N.D	N.D	0.2	N.D	6.7	37	20	25.7	0.34	N.D	5.78	394
	December	241	98	150	14	8.35	13	31	9.0	N.D	0.2	2.44	N.D	N.D	N.D	N.D	0.20	N.D	N.D	0.35	N.D	6.8	70	28	28.0	N.D	12.8	6.46	217
2002	January	226	100	150	11.3	10.75	10	26	9.0	1.0	0.01	1.22	N.D	N.D	N.D	N.D	0.1	0.000	N.D	N.D	6.8	80	18	17.9	0.06	N.D	9.06	390	
	February	257	96	162	17.5	10.8	8.0	32	8.0	N.D	N.D	1.18	N.D	N.D	N.D	N.D	0.1	0.001	0.75	N.D	6.4	50	15	28.7	1.4	N.D	4.03	359	
	March	244	100	158	14	10	7	22	10	N.D	N.D	1.18	N.D	N.D	N.D	N.D	0.1	0.001	N.D	N.D	7.41	80	22	29.8	N.D	9.6	6.72	239	

Note. N.D = Not Detected



Water Quality Analysis Results at Tube Well No.213

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Calcium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	TCU	NTU	Degree	mg/l	mg/l	mg/l	μ S/cm
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-
2001	May																											
	June																											
	July																											
	August	(Sampling was started from Sep. 2001)																										
	September	282	94	182	19.6	10.94	10.0	29.0	18	N.D	N.D	2.9	N.D	N.D	N.D	N.D	N.D	N.D	0.55	N.D	6.9	18	5	27.6	2.7	N.D	1.92	317
	October	520	112	114	9.6	2.31	18.0	8.0	192	17	0.37	1.49	0.10	N.D	N.D	N.D	0.025	N.D	0.28	N.D	6.4	50	15	28.5	N.D	19.2	3.86	162
	November	450	98	105	8.8	21.02	20.0	49.0	169	22.0	0.30	1.49	N.D	N.D	N.D	N.D	0.100	N.D	0.2	N.D	6.8	N.D	N.D	25.9	N.D	N.D	6.91	1,020
	December	467	111.2	106	11.2	21.60	21.0	86.0	194	20	N.D	1.14	N.D	N.D	N.D	0.30	N.D	N.D	0.25	N.D	7.0	40	15	27.8	N.D	16	6.65	935
2002	January	452	94	110	5.0	14.0	10.0	126.0	185	25	0.03	0.57	N.D	N.D	N.D	0.3	0.001	0.002	0.3	N.D	6.9	25	8	29.3	N.D	16	7.89	1,064
	February	505	100	120	8.8	18.3	10.0	120	183	24	0.19	1.53	N.D	0.1	N.D	0.4	0.000	0.002	0.7	N.D	6.4	60	35	28.4	0.1	N.D	4.23	1,034
	March	463	100	114	6	18	15	120	177	22	N.D	0.55	N.D	N.D	N.D	0.2	0.000	0.002	N.D	N.D	6.83	N.D	N.D	29.6	N.D	9.6	6.59	1,072

Note, N.D = Not Detected

58-C

Water Quality Analysis Results at Tube Well in Hlaingthaya T/S

Sampling Year / Month	Water Quality Indices	Total Dissolved Solid	Total Hardness	Alkalinity	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulphate	Zinc	Iron	Copper	Lead	Arsenic	Manganese	Nitrate	Cyanide	Nitrogen-Ammonia	Cadmium	pH	Colour	Turbidity	Temperature	BOD	COD	Dissolved Oxygen	Electric Conductivity		
		Unit	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		TCU	NTU	Degree	mg/l	mg/l	mg/l	µS/cm	
		Myanmar Standard	1,000	500	-	75 - 200	30 - 150	-	200	200 - 600	400	5 - 15	0.5 - 1.5	1.0	0.05	0.05	0.3	10.0	0.05	-	0.005	6.5 - 9.2	5 - 50	20	-	-	-	-	1,500	
2001	May																													
	June																													
	July																													
	August	(Sampling was started from Sep. 2001)																												
	September	221	112	130	18.0	17.57	4.0	24	19	N.D	0.94	0.18	N.D	N.D	N.D	0.05	N.D	N.D	0.68	N.D	6.7	N.D	N.D	29.8	0.10	3.20	3.66	340		
	October	205	112	132	1.0	17.43	3.0	16	20	N.D	0.37	0.59	N.D	0.50	N.D	0.10	0.028	N.D	0.45	N.D	6.6	N.D	N.D	27.9	N.D	16	3.28	352		
	November	200	118	124	20.8	19.87	6.0	26	23	N.D	0.15	0.39	N.D	N.D	N.D	1.00	0.02	N.D	0.58	N.D	6.5	N.D	N.D	20.9	N.D	19.2	4.46	374		
	December	158	124	122	20.4	23.62	7.0	59	30	N.D	N.D	0.27	N.D	N.D	N.D	1.00	0.10	N.D	0.6	N.D	7.3	N.D	N.D	25.4	0.2	N.D	7.14	396		
2002	January	237	142	122	15.0	18.75	2.0	20	41	N.D	0.040	0.29	N.D	N.D	N.D	0.9	0.1	0.005	0.8	0.003	6.7	N.D	N.D	28.4	N.D	N.D	6.34	443		
	February	674	124	132	17.5	16.3	2.8	18	31	N.D	0.001	3.20	N.D	N.D	N.D	0.1	0.1	0.005	N.D	N.D	8.26	21	18	29.5	N.D	N.D	7.81	402		
	March	242	136	134	23	4	3	20	40	N.D	N.D	0.25	N.D	N.D	N.D	N.D	0.1	0.005	0.7	N.D	7.14	N.D	N.D	29.3	N.D	35.2	7.84	442		

Note, N.D = Not Detected