

THE RESULT OF WATER QUALITY ANALYSIS CONDUCTED IN SEPTEMBER 2001 (1/2)

No.	Parameter	Unit	Sampling Point (Ref. Figure 1)										Water Quality Criteria			
			G1	G2	G3	G4	G5	G6	G7	G8	G9	Class I	Class II	Class III	Class IV	
A Fundamentals																
1	Temperature	°C	28.4	26.9	27.7	31.6	24.7	28.4	29.8	26.2	27.6	1)	1)	1)	2)	
2	PH	-	8.0	7.8	8.2	7.7	7.2	8.0	7.9	7.7	7.5	6-9	6-9	6-9	5-9	
3	BOD ₅	mg/l	16.8	9.3	7.5	11.2	5.6	7.5	13.1	7.5	11.2	2	3	6	12	
4	COD	mg/l	23	16	15	17	12	12	18	13	18	10	25	50	100	
5	DO	mg/l	7.06	6.62	6.9	6.71	6.8	6.99	7.08	6.9	6.99	>6	>4	>3	>0	
6	TSS (Total Suspended Solids)	mg/l	22	24	38	24	15	18	23	17	14	-	-	-	-	
7	Coliform Bacillus	MPN/100ml	2,300	<300	400	<300	<300	<300	<300	900	400	1,000	5,000	10,000	10,000	
8	Total Nitrogen (T-N)	mg/l	1.0654	1.2836	1.2635	2.0278	0.7934	1.1377	1.5238	2.7683	0.9811	-	-	-	-	
9	Total Phosphorus (T-P)	mg/l	0.0033	0.0065	0.0033	0.0082	0.0029	0.0065	0.0033	0.0049	0.0033	0.2	0.2	1	5	
10	Electric Conductivity (EC)	µS/cm	528	507	560	347	182.7	178	348	235	276	-	-	-	-	
11	Color	TCU	12.5	5	9	12	8.5	6	13.5	8.5	9.5	-	-	-	-	
12	Turbidity	NTU	2.24	3.9	1.82	1.64	1.24	5.28	3.75	2.66	0.62	-	-	-	-	
B Heavy Metals																
13	Cadmium (Cd)	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	0.01	0.01	0.01	
14	Total Mercury (T-Hg)	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	0.002	0.002	0.005	
15	Selenium (Se)	mg/l	0.032	0.047	0.05	0.014	0.037	0.065	0.053	0.047	0.042	0.01	0.05	0.05	0.05	
16	Lead (Pb)	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	0.03	0.03	1	
17	Arsenic (As)	mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.05	1	1	1	
18	Hexavalent Chromium (Cr ⁶⁺)	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	0.05	0.05	0.01	
19	Zinc (Zn)	mg/l	0.057	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.05	0.05	0.05	2	
20	Iron (Fe)	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.3	(-)	(-)	(-)	
21	Manganese (Mn)	mg/l	0.07	0.051	0.076	0.139	0.033	0.07	0.13	0.11	0.075	0.1	(-)	(-)	(-)	
C Others																
22	Cyanide (CN)	mg/l	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	0.02	0.02	0.02	(-)	
23	Nitrate Nitrogen (NO ₃ -N)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	10	10	20	20	
24	Nitrite Nitrogen (NO ₂ -N)	mg/l	<0.001	0.011	0.002	0.298	<0.001	<0.001	0.002	0.001	0.016	0.06	0.06	0.06	(-)	
25	Fluorine (F)	mg/l	0.26	0.24	0.24	0.14	0.14	0.12	0.13	0.11	0.11	0.5	1.5	1.5	(-)	
26	Chloride Ion (Cl ⁻)	mg/l	35.9	42.63	41.51	23.56	19.07	7.85	47.12	19.07	7.85	600	(-)	(-)	(-)	
27	Calcium (Ca ²⁺)	mg/l	127.1	109	117.3	75.9	68.3	60.7	72	72.9	75.9	-	-	-	-	
28	Magnesium (Mg ²⁺)	mg/l	16.1	13	17.5	13.5	4.7	4.9	10.1	6.4	12.3	-	-	-	-	
29	Phenolic Substances	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	
Discharge (river) / depth (lake)			0.035	-	-	0.034	-	-	3.25	-	0.095	-	-	-	-	

* Class I water is utilized for drinking water, Class II water is utilized for recreational activity, freshwater fish culture, animal husbandry, irrigation, Class III water is utilized for freshwater fish culture, animal husbandry, irrigation, and Class IV water is utilized for irrigation.

** 1) Air Temperature ±3°C. 2) Air Temperature ±5°C.

THE RESULT OF WATER QUALITY ANALYSIS CONDUCTED IN SEPTEMBER 2001(2/2)

No.	Parameter	Unit	Sampling Point (Ref. Figure 1)					Consolidation (G1 - G15)			Water Quality Criteria				
			G10	G11	G12	G13	G14	G15	Max.	Min.	Ave.	Class I	Class II	Class III	Class IV
A Fundamentals															
1	Temperature	°C	28.1	21.0	25.2	25.9	27.2	25.8	31.6	21.0	27.0	6-9	1)	1)	2)
2	PH	-	7.2	7.1	7.8	7.7	8.0	7.8	8.2	7.0	8.0	6-9	6-9	6-9	5-9
3	BOD ₅	mg/l	13.1	5.6	13.1	11.2	5.6	7.5	16.8	5.6	9.7	2	3	6	12
4	COD	mg/l	22	12	19	14	13	12	23	12	16	10	25	50	100
5	DO	mg/l	6.71	6.8	6.99	6.71	6.8	6.8	7.1	6.6	6.9	>6	>4	>3	>0
6	TSS (Total Suspended Solids)	mg/l	12	214	1052	654	27	29	1,052	12	146	-	-	-	-
7	Coliform Bacillus	MPN/100ml	400	<300	<300	<300	1,400	<300	2,300	<300	400	1,000	5,000	10,000	10,000
8	Total Nitrogen (T-N)	mg/l	1.6445	1.0957	1.0049	2.114	1.4106	1.1778	2.7683	0.7934	1.4195	-	-	-	-
9	Total Phosphorus (T-P)	mg/l	0.0049	0.0065	0.0049	0.002	0.0029	0.0023	0.0082	0.0020	0.0044	0.2	0.2	1	5
10	Electric Conductivity (EC)	µS/cm	267	125.1	206.9	206.8	351	387	560	125	314	-	-	-	-
11	Color	TCU	9	17.5	8	9.5	9	10	18	5	10	-	-	-	-
12	Turbidity	NTU	2.2	30.1	6.9	29.1	2.81	1.61	30.10	0.62	6.39	-	-	-	-
B Heavy Metals															
13	Cadmium (Cd)	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	0.01	0.01	0.01
14	Total Mercury (T-Hg)	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	0.002	0.002	0.005
15	Selenium (Se)	mg/l	0.047	0.085	0.133	0.042	0.074	0.046	0.133	0.014	0.054	0.01	0.05	0.05	0.05
16	Lead (Pb)	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	0.03	0.03	1
17	Arsenic (As)	mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.05	1	1	1
18	Hexavalent Chromium (Cr ⁶⁺)	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	0.05	0.05	0.01
19	Zinc (Zn)	mg/l	<0.005	0.037	<0.005	<0.005	<0.005	<0.005	0.057	<0.005	0.047	0.05	0.05	0.05	2
20	Iron (Fe)	mg/l	<0.02	19.28	6.18	9.47	<0.02	<0.02	19.28	<0.02	11.64	0.3	(-)	(-)	(-)
21	Manganese (Mn)	mg/l	0.349	0.768	0.012	0.489	0.135	0.174	0.768	0.012	0.179	0.1	(-)	(-)	(-)
C Others															
22	Cyanide (CN)	mg/l	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	0.02	0.02	0.02	(-)
23	Nitrate Nitrogen (NO ₃ -N)	mg/l	0.03	0.01	0.01	0.01	0.01	0.01	0.03	<0.01	0.01	10	10	20	20
24	Nitrite Nitrogen (NO ₂ -N)	mg/l	0.002	<0.001	<0.001	0.002	0.126	0.021	0.298	<0.001	0.048	0.06	0.06	0.06	(-)
25	Fluorine (F)	mg/l	0.14	0.05	0.06	0.1	0.11	0.12	0.26	0.05	0.14	0.5	1.5	1.5	(-)
26	Chloride Ion (Cl ⁻)	mg/l	20.19	20.19	35.9	24.68	42.63	42.63	47.12	7.85	28.72	600	(-)	(-)	(-)
27	Calcium (Ca ²⁺)	mg/l	65.6	21.1	35.4	30.3	75.4	71.8	127.1	21.1	71.9	-	-	-	-
28	Magnesium (Mg ²⁺)	mg/l	7.7	4.7	5.7	6.9	9.7	12.8	17.5	4.7	9.7	-	-	-	-
29	Phenolic Substances	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-
Discharge (river) / depth (lake)			m ³ /s or m	-	-	-	3.0	0.6	-	-	-	-	-	-	-

* Class I water is utilized for drinking water, Class II water is utilized for recreational activity, freshwater fish culture, animal husbandry, irrigation, and Class IV water is utilized for irrigation.

** 1) Air Temperature ±3°C. 2) Air Temperature ±5°C.

THE RESULT OF WATER QUALITY ANALYSIS CONDUCTED IN DECEMBER 2001(1/2)

No.	Parameter	Unit	Sampling Point (Ref. Figure 1)									Water Quality Criteria			
			G1	G2	G3	G4	G5	G6	G7	G8	G9	Class I	Class II	Class III	Class IV
A Fundamentals															
1	Temperature	°C	28.6	26.9	26.8	25.7	23.9	25.3	27.8	23.6	26.6	1)	1)	1)	2)
2	PH	-	7.8	7.8	7.8	7.7	7.3	7.7	7.4	7.4	7.5	6-9	6-9	6-9	5-9
3	BOD ₅	mg/l	34.9	20.9	11.0	14.7	22.1	13.5	24.4	8.5	24.4	2	3	6	12
4	COD	mg/l	40	28	17	18	29	16	30	11	30	10	25	50	100
5	DO	mg/l	3.5	4	4.4	4.2	3.7	4	3.8	5.2	3.8	>6	>4	>3	>0
6	TSS (Total Suspended Solids)	mg/l	95	195	229	84	6	22	6	88	7	-	-	-	-
7	Coliform Bacillus	MPN/100ml	9,300	15,000	24,000	21,000	9,300	900	2,800	4,300	12,000	1,000	5,000	10,000	10,000
8	Total Nitrogen (T-N)	mg/l	2.15	1.81	2.22	1.54	1.02	1.36	2.12	1.32	1.51	-	-	-	-
9	Total Phosphorus (T-P)	mg/l	0.0554	0.0457	0.0457	0.0522	0.0391	0.0489	0.0424	0.0457	0.0815	0.2	0.2	1	5
10	Electric Conductivity (EC)	µS/cm	322	340	327	231	185.2	217.7	338	281	273	-	-	-	-
11	Color	TCU	14	10.5	11	10	7	1.5	12	4.5	1	-	-	-	-
12	Turbidity	NTU	1.3	4.48	4.98	3.26	0.3	0.25	0.12	0.98	0.22	-	-	-	-
B Heavy Metals															
13	Cadmium (Cd)	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	0.01	0.01	0.01
14	Total Mercury (T-Hg)	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	0.002	0.002	0.005
15	Selenium (Se)	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	0.05	0.05	0.05
16	Lead (Pb)	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	0.03	0.03	1
17	Arsenic (As)	mg/l	0.009	0.003	<0.002	<0.002	<0.002	<0.002	0.006	<0.002	<0.002	0.05	1	1	1
18	Hexavalent Chromium (Cr ⁶⁺)	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	0.05	0.05	0.01
19	Zinc (Zn)	mg/l	0.12	0.35	0.23	0.12	0.06	0.18	0.15	0.08	0.09	0.05	0.05	0.05	2
20	Iron (Fe)	mg/l	4.68	8.68	9.56	4.69	0.77	1.98	0.39	1.24	0.81	0.3	(-)	(-)	(-)
21	Manganese (Mn)	mg/l	0.14	0.287	0.34	0.213	0.077	0.072	0.095	0.136	0.111	0.1	(-)	(-)	(-)
C Others															
22	Cyanide (CN)	mg/l	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	0.02	0.02	0.02	(-)
23	Nitrate Nitrogen (NO ₃ -N)	mg/l	0.07	0.07	0.07	0.04	0.06	0.48	0.1	0.35	0.03	10	10	20	20
24	Nitrite Nitrogen (NO ₂ -N)	mg/l	0.012	<0.001	<0.001	<0.001	<0.001	0.004	0.034	<0.001	<0.001	0.06	0.06	0.06	(-)
25	Fluorine (F)	mg/l	0.24	0.14	0.1	0.09	0.07	0.44	0.25	0.1	0.09	0.5	1.5	1.5	(-)
26	Chloride Ion (Cl ⁻)	mg/l	10.54	11.44	10.09	6.28	4.94	15.48	19.29	13.69	4.49	600	(-)	(-)	(-)
27	Calcium (Ca ²⁺)	mg/l	39.52	38.84	32.38	38.66	21.37	36.6	62.91	26.5	33.82	-	-	-	-
28	Magnesium (Mg ²⁺)	mg/l	10.68	10.62	9.93	10.62	4.84	8.52	11.12	7.84	14.13	-	-	-	-
29	Phenolic Substances	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-
Discharge (river) / depth (lake)			m ³ /s or m	-	-	-	-	-	-	-	0.12	-	-	-	-

* Class I water is utilized for drinking water, Class II water is utilized for recreational activity, freshwater fish culture, animal husbandry, irrigation, and Class IV water is utilized for irrigation.

** 1) Air Temperature ±3°C. 2) Air Temperature ±5°C.

THE RESULT OF WATER QUALITY ANALYSIS CONDUCTED IN DECEMBER 2001(2/2)

No.	Parameter	Unit	Sampling Point (Ref. Figure 1)								Consolidation (G1 - G15)			Water Quality Criteria				
			G10	G11	G12	G13	G14	G15	Max.	Min.	Ave.	Class I	Class II	Class III	Class IV			
A Fundamentals																		
1	Temperature	°C	26.8	22.7	24.9	26.3	28	28.1	28.6	22.7	26.13	28.6	22.7	26.13	1)	1)	1)	2)
2	PH	-	7.3	7.6	7.6	7.4	8.0	7.5	8.0	7.3	7.6	8.0	7.3	7.6	6-9	6-9	6-9	5-9
3	BOD ₅	mg/l	34.7	10.9	38.7	26.5	10.3	8.1	38.7	8.1	20.2	38.7	8.1	20.2	2	3	6	12
4	COD	mg/l	40	16	45	29	12	9	45	9	24.7	45	9	24.7	10	25	50	100
5	DO	mg/l	3.5	4.3	3.2	3.9	4	5.5	5.5	3.2	4.1	5.5	3.2	4.1	>6	>4	>3	>0
6	TSS (Total Suspended Solids)	mg/l	265	85	131	44	5	2	265	2	84	265	2	84	-	-	-	-
7	Coliform Bacillus	MPN/100ml	9300	<300	3,900	4,300	2,000	300	24,000	<300	8,500	24,000	<300	8,500	1,000	5,000	10,000	10,000
8	Total Nitrogen (T-N)	mg/l	4.69	2.04	3.52	2.39	1.28	1.58	4.69	1.02	2.04	4.69	1.02	2.04	-	-	-	-
9	Total Phosphorus (T-P)	mg/l	0.0554	0.0489	0.0554	0.0489	0.0391	0.0424	0.0815	0.0391	0.0498	0.0815	0.0391	0.0498	0.2	0.2	1	5
10	Electric Conductivity (EC)	µS/cm	236	127	137.6	283	298	425	425	127	268	425	127	268	-	-	-	-
11	Color	TCU	24	34	30	1.5	8	12.5	34	1	12.1	34	1	12.1	-	-	-	-
12	Turbidity	NTU	7.92	1.2	3.21	0.09	0.65	0.34	7.92	0.09	1.95	7.92	0.09	1.95	-	-	-	-
B Heavy Metals																		
13	Cadmium (Cd)	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	0.01	0.01	0.01
14	Total Mercury (T-Hg)	mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	0.002	0.002	0.005
15	Selenium (Se)	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	0.05	0.05	0.05
16	Lead (Pb)	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	0.03	0.03	1
17	Arsenic (As)	mg/l	<0.002	0.008	0.008	<0.002	0.005	0.005	0.009	<0.002	0.006	0.009	<0.002	0.006	0.05	1	1	1
18	Hexavalent Chromium (Cr ⁶⁺)	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	0.05	0.05	0.01
19	Zinc (Zn)	mg/l	1.11	0.06	0.12	0.05	0.08	0.07	1.11	0.05	0.19	1.11	0.05	0.19	0.05	0.05	0.05	2
20	Iron (Fe)	mg/l	6.64	3.99	7.34	1.51	0.95	0.19	9.56	0.19	3.56	9.56	0.19	3.56	0.3	(-)	(-)	(-)
21	Manganese (Mn)	mg/l	0.495	0.159	0.28	0.116	0.089	0.179	0.495	0.072	0.186	0.495	0.072	0.186	0.1	(-)	(-)	(-)
C Others																		
22	Cyanide (CN)	mg/l	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	0.02	0.02	0.02	(-)
23	Nitrate Nitrogen (NO ₃ -N)	mg/l	0.06	0.05	0.08	0.44	0.05	0.03	0.48	0.03	0.13	0.48	0.03	0.13	10	10	20	20
24	Nitrite Nitrogen (NO ₂ -N)	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.034	<0.001	0.017	0.034	<0.001	0.017	0.06	0.06	0.06	(-)
25	Fluorine (F)	mg/l	0.05	0.04	0.03	0.09	0.08	0.08	0.44	0.03	0.13	0.44	0.03	0.13	0.5	1.5	1.5	(-)
26	Chloride Ion (Cl ⁻)	mg/l	8.53	11.44	12.34	14.13	13.35	31.52	31.52	4.49	12.50	31.52	4.49	12.50	600	(-)	(-)	(-)
27	Calcium (Ca ²⁺)	mg/l	36.48	38	30.36	56.94	34.94	25.26	62.91	21.37	36.84	62.91	21.37	36.84	-	-	-	-
28	Magnesium (Mg ²⁺)	mg/l	5.32	5.1	7.48	4.6	10.56	9.91	14.13	4.6	8.75	14.13	4.6	8.75	-	-	-	-
29	Phenolic Substances	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-
Discharge (river) / depth (lake)			m ³ /s or m												-		-	

* Class I water is utilized for drinking water, Class II water is utilized for recreational activity, freshwater fish culture, animal husbandry, irrigation, and Class IV water is utilized for irrigation.

** 1) Air Temperature ±3°C. 2) Air Temperature ±5°C.

THE RESULT OF BOTTOM-SEDIMENT ANALYSIS CONDUCTED IN SEPTEMBER 2001 (1/2)

No.	Parameter	Unit	Sampling Point (Ref. Figure 1)								
			G1	G2	G3	G4	G5	G6	G7	G8	G9
A Fundamentals											
1	Temperature	°C	27.7	25.8	26.6	30.7	23.9	27.6	28.9	25.2	26.6
2	pH	-	7.2	7.03	7.93	7.37	7.17	7.18	7.94	7.52	7.7
B Heavy Metals											
3	Cadmium (Cd)	mg/kg	0.018	0.047	0.024	0.043	0.027	0.046	0.043	0.046	0.032
4	Total Mercury (T-Hg)	mg/kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Selenium (Se)	mg/kg	0.222	1.073	0.599	0.431	0.254	0.322	0.56	0.269	0.414
6	Lead (Pb)	mg/kg	0.00	1.11	0.00	0.00	0.00	0.00	1.63	0.57	0.00
7	Arsenic (As)	mg/kg	0.014	0.014	0.019	0.00	0.038	0.035	0.015	0.016	0.017
8	Hexavalent Chromium (Cr ⁶⁺)	mg/kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Zinc (Zn)	mg/kg	2.21	6.35	2.32	5.93	2.99	5.32	4.38	6.57	5.95
10	Iron (Fe)	mg/kg	1682	4080	2076	746.67	2033	7664	2248	2656	2716
11	Manganese (Mn)	mg/kg	218.6	411.4	192.3	304.3	148.6	284.5	235.2	290	198.6

THE RESULT OF BOTTOM-SEDIMENT ANALYSIS CONDUCTED IN SEPTEMBER 2001 (2/2)

No.	Parameter	Unit	Sampling Point (Ref. Figure 1)									Consolidation (G1 - G15)		
			G10	G11	G12	G13	G14	G15	Max.	Min.	Ave.			
A Fundamentals														
1	Temperature	°C	27.1	20.2	24.1	25.2	26.4	24.9	30.7	20.2	26.06			
2	pH	-	7.72	7.99	7.41	8.51	8.46	8.57	8.57	7.03	7.71			
B Heavy Metals														
3	Cadmium (Cd)	mg/kg	0.036	0.057	0.044	0.033	0.031	0.058	0.058	0.018	0.04			
4	Total Mercury (T-Hg)	mg/kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
5	Selenium (Se)	mg/kg	0.338	0.791	0.095	1.098	0.377	1.17	1.17	0.095	0.53			
6	Lead (Pb)	mg/kg	0.16	0.09	0.00	0.00	0.00	0.00	1.63	0.00	0.24			
7	Arsenic (As)	mg/kg	0.021	0.026	0.023	0.007	0.02	0.046	0.046	0.00	0.02			
8	Hexavalent Chromium (Cr ⁶⁺)	mg/kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
9	Zinc (Zn)	mg/kg	4.13	9.03	4.73	3.78	1.72	1.61	9.03	1.61	4.47			
10	Iron (Fe)	mg/kg	1368	4880	2236	2268	896	1032	7664	747	2572			
11	Manganese (Mn)	mg/kg	303.5	393.5	224	174.3	149	205	411.4	148.6	248.9			

THE RESULT OF WATER QUALITY ANALYSIS IN PINOGU IN SEPTEMBER 2001

Parameter	Unit	River water	Well water	Water Quality Criteria			
				Class I	Class II	Class III	Class IV
TDS	mg/l	-	94	1,000	1,000	1,000	2,000
TSS	mg/l	6	-	-	-	-	-
BOD ₅	mg/l	12.28	-	2	3	6	12
Cadmium (Cd)	mg/l	0.002	<0.005	0.01	0.01	0.01	0.01
Mercury (Hg)	mg/l	<0.0002	<0.0002	0.001	0.002	0.002	0.005
Lead (Pb)	mg/l	0.016	0.016	0.03	0.03	0.03	1
Zinc (Zn)	mg/l	0.076	0.073	0.05	0.05	0.05	1
Iron (Fe)	mg/l	0.228	0.528	0.3	(-)	(-)	(-)
Manganese (Mn)	mg/l	0.215	<0.01	0.1	(-)	(-)	(-)
Calcium (Ca ²⁺)	mg/l	18.85	21.15	-	-	-	-
Magnesium (Mg ²⁺)	mg/l	9.10	7.20	-	-	-	-

* Class I water is utilized for drinking water, Class II water is utilized for recreational activity, fresh water fish culture, animal husbandry, irrigation, Class III water is utilized for fresh water fish culture, animal husbandry, irrigation, and Class IV water is utilized for irrigation.

** Pinogu is a village (desa) located in upstream of the Bone River basin.