

ULTRATECH CEMENT LIMITED
UNIT : RAJASHREE CEMENT WORKS, ADITYANAGAR

ANALYSIS REPORT OF GROUND WATER SAMPLES

Date of Sampling : 26.04.2011

Sl No	Parameters	Diggon village bore well	Udagi village bore well	Permissible limits IS 10500
1	Colour (Hazen Units)	Under range	Under range	25
2	Ambient Temperature Deg.C	29.4	30.6	---
3	Conductivity μ s/cm	940	1205	---
4	Turbidity (NTU)	1.6	7.2	10
5	Total Dissolved Solids (mg/l)	548	848	2000
6	Total Suspended Solids (mg/l)	7	14	---
7	DO (mg/l)	5.8	5.7	---
8	pH	7.3	7.16	No relaxation
9	BOD for 3 days at 27 Deg.C (mg/l)	<1	<1	---
10	COD (mg/l)	<1	<1	---
11	Chloride as Cl (mg/l)	60.09	122.58	1000
12	Fluoride as F (mg/l)	0.88	1.03	---
13	Total Iron as Fe(mg/l)	0.341	0.598	1.00
14	Dissolved Phosphate as P (mg/l)	0.032	0.032	---
15	Sulphate as SO ₄ (mg/l)	9.75	71.5	400
16	Calcium as Ca (mg/l)	97.8	149.9	200
17	Magnesium as Mg (mg/l)	19.38	19.35	100
18	Total Hardness as CaCO ₃ (mg/l)	324	454	600
19	Nitrate as NO ₃ (mg/l)	11.5	10.5	100
20	Sodium as Na, mg/l	30	84.1	---
21	Potassium as K, mg/l	14.7	0.5	---
22	Acidity as CaCO ₃ , mg/l	7.5	8	---
23	Alkalinity as CaCO ₃ , mg/l	315	375	600
24	Total Coliform count (MPN / 100 ml)	<1	<1	---
25	E.Coli count (MPN/100 ml)	<1	<1	---
26	Nickel as Ni (mg/l)	0.022	0.016	---
27	Manganese as Mn (mg/l)	0.021	0.019	0.30
28	Copper as Cu (mg/l)	0.019	0.01	1.50
29	Zinc as Zn (mg/l)	0.058	0.052	15
30	Lead as Pb (mg/l)	0.021	0.019	No relaxation
31	Silver as Ag (mg/l)	0.011	0.019	---
32	Chromium as Cr (mg/l)	0.009	0.01	No relaxation
34	Aluminum as Al (mg/l)	0.021	0.009	0.20
35	Mercury as Hg (mg/l)	NIL	NIL	No relaxation
36	Oil & Grease (mg/l)	0.0029	0.0019	---

ULTRATECH CEMENT LIMITED
UNIT : RAJASHREE CEMENT WORKS, ADITYANAGAR

ANALYSIS REPORT OF SURFACE WATER SAMPLES

Date of Sampling : 26.04.2011

Sl No	Parameters	A Block & VI bench water	Pit Water	Kagina River Water	GSFISW sch-VI (EPA-86)
1	Colour (Hazen Units)	2	2	6	--
2	Ambient Temperature Deg.C	31.6	32.1	31.1	--
3	Conductivity μ s/cm	990	1218	531	--
4	Turbidity (NTU)	7	1.2	22.6	--
5	Total Dissolved Solids (mg/l)	990	845	364	--
6	Total Suspended Solids (mg/l)	11	8	32	100
7	DO (mg/l)	5.7	5.5	5.5	--
8	pH	8.1	8.61	8.2	5.5 to 9.0
9	BOD for 3 days at 27 Deg.C (mg/l)	1.7	1.7	2.1	30
10	COD (mg/l)	4	10	3	250
11	Chloride as Cl (mg/l)	187.47	235.54	55.28	--
12	Fluoride as F (mg/l)	0.9	0.89	0.87	2.0
13	Total Iron as Fe(mg/l)	0.031	0.096	0.061	3.0
14	Dissolved Phosphate as P (mg/l)	0.017	0.02	0.027	5.0
15	Sulphate as SO4 (mg/l)	202.5	98.75	6.7	--
16	Calcium as Ca (mg/l)	65.73	55.31	34.47	--
17	Magnesium as Mg (mg/l)	18.42	15.03	26.67	--
18	Total Hardness as CaCO3 (mg/l)	240	200	200	--
19	Nitrate as NO3 (mg/l)	2.5	0.15	0.65	10
20	Sodium as Na, mg/l	108.7	152.2	49.7	--
21	Potassium as K, mg/l	1.5	2.4	1.4	--
22	Acidity as CaCO3, mg/l	5	nil	3	--
23	Alkalinity as CaCO3, mg/l	70	95	245	--
24	Total Coliform count (MPN / 100 ml)	<1	<1	<1	--
25	E.Coli count (MPN/100 ml)	<1	<1	<1	--
26	Nickel as Ni (mg/l)	0.008	0.034	0.024	3.0
27	Manganese as Mn (mg/l)	0.018	0.01	0.009	2.0
28	Copper as Cu (mg/l)	0.019	0.01	0.01	3.0
29	Zinc as Zn (mg/l)	0.01	0.016	0.017	5.0
30	Lead as Pb (mg/l)	0.019	0.02	0.016	0.1
31	Silver as Ag (mg/l)	0.028	0.014	0.016	--
32	Chromium as Cr (mg/l)	0.021	0.02	0.016	2.0
33	Aluminum as Al (mg/l)	0.014	0.023	0.009	--
34	Mercury as Hg (mg/l)	Nil	nil	nil	0.01
35	Oil & Grease (mg/l)	0.0022	0.0026	0.0021	10

ULTRATECH CEMENT LIMITED
UNIT : RAJASHREE CEMENT WORKS, ADITYANAGAR

ANALYSIS REPORT OF GROUND WATER SAMPLES

Date of Sampling : 27.09.2011

Sl No	Parameters	Diggon village bore well	Udagi village bore well	Permissible limits IS 10500
	Physical			
1	Colour (Hazen Units)	Under range	Under range	25
2	Ambient Temperature Deg.C	30.8	32.3	---
3	Conductivity μ s/cm	1970	1690	---
4	Total Dissolved Solids (mg/l)	890	890	2000
5	pH	7.11	7.31	No relaxation
6	Turbidity (NTU)	0.9	1.1	10
7	Total Suspended Solids (mg/l)	9	7	---

	Chemical			
8	DO (mg/l)	6.1	5.8	---
9	BOD for 3 days at 27 Deg.C (mg/l)	<1	<1	---
10	COD (mg/l)	<1	<1	---
11	Dissolved Phosphate as P (mg/l)	0.05	0.055	---
12	Sodium as Na, mg/l	32.7	130.6	---
13	Potassium as K, mg/l	24.5	1.6	---
14	Calcium as Ca (mg/l)	89.78	72.95	200
15	Magnesium as Mg (mg/l)	24.24	33.47	100
16	Total Hardness as CaCO3 (mg/l)	324	320	600
17	Chloride as Cl (mg/l)	55.28	60.09	1000
18	Sulphate as SO4 (mg/l)	15.75	75.5	400
19	Fluoride as F (mg/l)	0.9	1.32	---
20	Nitrate as NO3 (mg/l)	11.25	10.5	100
21	Alkalinity as CaCO3, mg/l	330	440	600
22	Acidity as CaCO3, mg/l	8	8	---
23	Oil & Grease (mg/l)	0.0019	0.003	---
	Heavy Metals			
24	Total Iron as Fe(mg/l)	0.378	0.601	1.00
25	Nickel as Ni (mg/l)	0.019	0.018	---
26	Manganese as Mn (mg/l)	0.019	0.018	0.30
27	Copper as Cu (mg/l)	0.021	0.009	1.50
28	Zinc as Zn (mg/l)	0.061	0.056	15
29	Lead as Pb (mg/l)	0.018	0.017	No relaxation
30	Silver as Ag (mg/l)	0.009	0.021	---
31	Chromium as Cr (mg/l)	0.01	0.009	No relaxation
32	Aluminum as Al (mg/l)	0.019	0.01	0.20
34	Mercury as Hg (mg/l)	NIL	NiL	No relaxation
	Microbiology			
35	Total Coliform count (MPN / 100 ml)	<1	<1	---
36	E.Coli count (MPN/100 ml)	<1	<1	---

ULTRATECH CEMENT LIMITED
UNIT : RAJASHREE CEMENT WORKS, ADITYANAGAR

ANALYSIS REPORT OF SURFACE WATER SAMPLES

Date of Sampling : 27.09.2011

Sl No	Parameters	A Block & VI bench water	Pit Water	Kagina River Water	GSFISW sch-VI (EPA-86)
	Physical				
1	Colour (Hazen Units)	under range	under range	4	----
2	Ambient Temperature Deg.C	29.9	30.6	27.2	---
3	Conductivity μ s/cm	620	904	620	---
4	Total Dissolved Solids (mg/l)	435	630	431	---
5	pH	8.02	8.06	8.2	5.50 to 9.0
6	Turbidity (NTU)	2.5	2.1	47	---
7	Total Suspended Solids (mg/l)	6	5	63	100
	Chemical				
8	DO (mg/l)	6.6	6.8	6.4	---
9	BOD for 3 days at 27 Deg.C (mg/l)	1.8	3	3.3	30
10	COD (mg/l)	4	5	7	250
11	Dissolved Phosphate as P (mg/l)	0.027	0.013	0.044	5
12	Sodium as Na, mg/l	73.1	107.8	48.7	---
13	Potassium as K, mg/l	3.4	4.7	4.4	---
14	Calcium as Ca (mg/l)	48.9	47.29	38.48	---
15	Magnesium as Mg (mg/l)	15.03	18.44	26.21	---
16	Total Hardness as CaCO3 (mg/l)	184	194	204	---
17	Chloride as Cl (mg/l)	73.07	119.6	25.48	---
18	Sulphate as SO4 (mg/l)	84.75	87.75	20.75	---
19	Fluoride as F (mg/l)	0.75	0.8	0.86	2
20	Nitrate as NO3 (mg/l)	2	4.3	0.75	10

21	Alkalinity as CaCO ₃ , mg/l	70	85	265	---
22	Acidity as CaCO ₃ , mg/l	5	Nil	4	---
23	Oil & Grease (mg/l)	BDL	BDL	BDL	10
	Heavy Metals				
24	Total Iron as Fe(mg/l)	0.041	0.074	0.058	3.00
25	Nickel as Ni (mg/l)	0.264	0.271	0.292	3
26	Manganese as Mn (mg/l)	0.024	0.019	0.011	2.00
27	Copper as Cu (mg/l)	0.026	0.019	0.024	3.00
28	Zinc as Zn (mg/l)	0.014	0.021	0.027	5
29	Lead as Pb (mg/l)	0.029	0.028	0.011	0.1
30	Silver as Ag (mg/l)	0.034	0.016	0.026	---
31	Chromium as Cr (mg/l)	0.026	0.031	0.026	2
32	Aluminum as Al (mg/l)	BDL	BDL	BDL	
34	Mercury as Hg (mg/l)	BDL	BDL	BDL	0.01
	Microbiology				
35	Total Coliform count (MPN / 100 ml)	<1	<1	<1	---
36	E.Coli count (MPN/100 ml)	<1	<1	<1	---

ULTRATECH CEMENT LIMITED

**AMBIENT AIR QUALITY MONITORING AT RAJASHREE CEMENT WORKS (Buffer Zone)
LIMESTONE MINE**

Month : Apr-2011

Unit : µg/cum

Ambient Air Quality Monitoring data (Buffer Zone)

06-00 to 06-00 hrs							24 hours average	
Hours	06-00 to 14-00 hrs		14-00 to 22-00 hrs		22-00 to 06-00 hrs		06-00 to 06-00 hrs	
MONTH Avg	SO2	NO2	SO2	NO2	SO2	NO2	PM10	PM2.5
A.I North East Boundary (Near Magazine)								
08.04.2011	9	19	11	13	14	11	41	23
09.04.2011	16	18	13	19	9	21	17	12
11.04.2011	18	20	9	14	12	17	27	17
12.04.2011	17	11	13	29	15	23	30	20
22.04.2011	10	19	8	13	14	16	22	14
23.04.2011	15	22	23	24	10	14	26	18
25.04.2011	12	22	10	16	8	11	47	26
26.04.2011	10	21	14	14	12	11	25	17
A.II South Boundary (III Bench Near electrical JB) :								
08.04.2011	16	18	10	20	12	25	32	21
09.04.2011	11	6	13	18	24	28	29	17
11.04.2011	13	24	8	22	11	18	53	27
12.04.2011	23	24	15	18	20	24	12	10
22.04.2011	9	20	15	26	22	16	18	13
23.04.2011	11	19	9	14	15	25	32	21
25.04.2011	11	27	8	14	9	21	44	23
26.04.2011	14	24	8	13	10	17	45	31
A.III North West Boundary (Colony, Swagat guest House)								
08.04.2011	16	17	13	20	9	11	24	13
09.04.2011	8	13	18	22	14	15	32	23
11.04.2011	8	23	11	16	14	11	29	19
12.04.2011	11	22	17	25	20	26	37	18
22.04.2011	8	15	27	29	18	28	42	25
23.04.2011	12	18	18	19	22	28	20	15
25.04.2011	14	19	9	18	11	16	53	28
26.04.2011	12	24	14	19	11	14	42	22

ULTRATECH CEMENT LIMITED

**AMBIENT AIR QUALITY MONITORING AT RAJASHREE CEMENT WORKS (Buffer Zone)
LIMESTONE MINE**

Month : May-2011

Unit : µg/cum

Ambient Air Quality Monitoring data (Buffer Zone)

06-00 to 06-00 hrs							24 hours average	
Hours	06-00 to 14-00 hrs		14-00 to 22-00 hrs		22-00 to 06-00 hrs		06-00 to 06-00 hrs	
MONTH Avg	SO2	NO2	SO2	NO2	SO2	NO2	PM10	PM2.5
A.I North East Boundary (Near Magazine)								
06.05.2011	19	23	10	19	8	9	22	10
07.05.2011	17	19	12	16	20	23	18	11
09.05.2011	20	22	16	20	12	18	42	19
10.05.2011	12	8	8	15	10	22	60	34
27.05.2011	14	12	19	27	--	--	33	--
28.05.2011	14	24	12	19	19	21	12	--

30.05.2011	19	23	28	27	--	--	37	--
31.05.2011	--	--	12	23	10	12	32	--
A.II South Boundary (III Bench Near electrical JB) :								
06.05.2011	8	12	16	20	10	14	27	14
07.05.2011	16	21	13	20	13	18	17	10
09.05.2011	12	18	10	12	17	19	31	15
10.05.2011	14	22	25	27	9	16	39	24
27.05.2011	22	26	14	17	--	--	59	--
28.05.2011	12	21	18	22	20	16	24	--
30.05.2011	10	18	14	21	--	--	42	--
31.05.2011	--	--	14	11	10	13	31	--
A.III North West Boundary (Colony, Swagat guest House)								
06.05.2011	10	22	13	13	9	19	36	12
07.05.2011	8	17	12	12	14	18	23	13
09.05.2011	12	16	17	13	8	9	22	10
10.05.2011	13	20	15	18	11	16	46	15
27.05.2011	17	30	20	27	--	--	37	--
28.05.2011	11	19	17	25	29	30	28	--
30.05.2011	11	13	17	22	--	--	59	--
31.05.2011	--	--	13	24	8	13	25	--

ULTRATECH CEMENT LIMITED

AMBIENT AIR QUALITY MONITORING AT RAJASHREE CEMENT WORKS (Buffer Zone)

LIMESTONE MINE

Month : June-2011

Unit : µg/cum

Ambient Air Quality Monitoring data (Buffer Zone)

06-00 to 06-00 hrs							24 hours average	
Hours	06-00 to 14-00 hrs		14-00 to 22-00 hrs		22-00 to 06-00 hrs		06-00 to 06-00 hrs	
MONTH Avg	SO2	NO2	SO2	NO2	SO2	NO2	PM10	PM2.5
A.I North East Boundary (Near Magazine)								
10.06.2011	9	13	--	--	--	--	23	18
11.06.2011	8	13	17	23	11	19	17	10
13.06.2011	16	20	19	22	8	16	28	16
14.06.2011	16	20	19	23	14	19	37	20
24.06.2011	14	23	20	28	10	14	60	15
25.06.2011	9	13	16	18	--	--	55	24
27.06.2011	18	22	11	19	--	--	40	13
28.06.2011	11	29	14	16	18	21	32	20
A.II South Boundary (III Bench Near electrical JB) :								
10.06.2011	12	14	--	--	20	22	28	13
11.06.2011	11	17	20	24	14	27	22	10
13.06.2011	18	21	15	24	13	19	75	43
14.06.2011	23	20	17	21	18	22	11	8
24.06.2011	28	27	22	25	--	--	50	22
25.06.2011	15	21	18	26	--	--	45	10
27.06.2011	19	23	12	16	--	--	42	14
28.06.2011	28	20	23	19	27	24	21	8
A.III North West Boundary (Colony, Swagat guest House)								
10.06.2011	17	23	--	--	28	30	14	11
11.06.2011	14	25	20	21	30	13	10	6
13.06.2011	12	17	22	26	14	18	36	21

14.06.2011	11	14	9	18	12	24	87	33
24.06.2011	12	18	15	20	--	--	18	9
25.06.2011	11	19	22	11	--	--	26	15
27.06.2011	12	16	20	22	--	--	21	13
28.06.2011	11	15	12	20	10	9	17	10

ULTRATECH CEMENT LIMITED

**AMBIENT AIR QUALITY MONITORING AT RAJASHREE CEMENT WORKS (Buffer Zone)
LIMESTONE MINE**

**Month : July-2011
Unit : µg/cum**

Ambient Air Quality Monitoring data (Buffer Zone)

06-00 to 06-00 hrs							24 hours average	
Hours	06-00 to 14-00 hrs		14-00 to 22-00 hrs		22-00 to 06-00 hrs		06-00 to 06-00 hrs	
MONTH Avg	SO2	NO2	SO2	NO2	SO2	NO2	PM10	PM2.5
A.I North East Boundary (Near Magazine)								
08.07.2011	12	14	18	19	14	26	24	11
09.07.2011	15	20	23	26	20	23	26	16
11.07.2011	14	16	20	23	--	--	38	20
12.07.2011	18	26	--	--	--	--	56	24
22.07.2011	12	19	13	16	8	14	47	32
23.07.2011	28	30	26	27	14	22	17	12
25.07.2011	9	14	--	--	--	--	55	21
26.07.2011	--	--	12	18	26	28	21	14
A.II South Boundary (III Bench Near electrical JB) :								
08.07.2011	12	16	14	24	22	26	13	5
09.07.2011	12	18	18	17	21	13	21	9
11.07.2011	16	21	12	9	--	--	23	14
12.07.2011	22	26	--	--	--	--	55	21
22.07.2011	28	27	12	15	17	20	48	26
23.07.2011	14	28	17	24	21	20	59	24
25.07.2011	17	25	--	--	--	--	42	30
26.07.2011	--	--	9	23	9	26	53	20
A.III North West Boundary (Colony, Swagat guest House)								
08.07.2011	12	21	15	18	19	26	17	6
09.07.2011	15	20	21	26	18	24	28	8
11.07.2011	12	13	18	22	--	--	41	12
12.07.2011	17	21	--	--	--	--	52	27
22.07.2011	11	22	9	19	16	26	25	11
23.07.2011	14	21	8	15	21	20	30	18
25.07.2011	13	14	--	--	--	--	52	10
26.07.2011	--	--	25	27	10	16	37	17

ULTRATECH CEMENT LIMITED

**AMBIENT AIR QUALITY MONITORING AT RAJASHREE CEMENT WORKS (Buffer Zone)
LIMESTONE MINE**

**Month : August-2011
Unit : µg/cum**

Ambient Air Quality Monitoring data (Buffer Zone)

06-00 to 06-00 hrs							24 hours average	
Hours	06-00 to 14-00 hrs		14-00 to 22-00 hrs		22-00 to 06-00 hrs		06-00 to 06-00 hrs	
MONTH Avg	SO2	NO2	SO2	NO2	SO2	NO2	PM10	PM2.5
A.I North East Boundary (Near Magazine)								
12.08.2011	14	18	12	20	23	28	24	11
13.08.2011	8	26	--	--	19	37	27	13
15.08.2011	18	24	15	19	8	16	23	18
16.08.2011	10	16	25	22	--	--	14	10
27.08.2011	--	--	27	16	--	--	49	15
29.08.2011	15	14	21	28	--	--	19	11
30.08.2011	14	29	25	18	--	--	48	9
A.II South Boundary (III Bench Near electrical JB) :								

12.08.2011	10	16	22	32	13	25	11	8
13.08.2011	29	28	--	--	19	20	35	24
15.08.2011	28	27	18	23	14	25	23	12
16.08.2011	12	18	23	26	--	--	43	36
27.08.2011	--	--	18	30	--	--	77	11
29.08.2011	14	22	23	11	12	29	36	9
30.08.2011	25	28	11	20	--	--	53	13
A.III North West Boundary (Colony, Swagat guest House)								
12.08.2011	13	21	19	35	17	24	46	14
13.08.2011	20	31	--	--	13	30	28	16
15.08.2011	21	21	17	27	21	26	30	12
16.08.2011	19	28	25	26	--	--	18	35
27.08.2011	--	--	27	37	--	--	46	21
29.08.2011	12	19	15	22	20	20	28	14
30.08.2011	16	20	12	19	--	--	53	16

ULTRATECH CEMENT LIMITED

**AMBIENT AIR QUALITY MONITORING AT RAJASHREE CEMENT WORKS (Buffer Zone)
LIMESTONE MINE**

Month : Sept-2011

Unit : µg/cum

Ambient Air Quality Monitoring data (Buffer Zone)

06-00 to 06-00 hrs							24 hours average	
Hours	06-00 to 14-00 hrs		14-00 to 22-00 hrs		22-00 to 06-00 hrs		06-00 to 06-00 hrs	
MONTH Avg	SO2	NO2	SO2	NO2	SO2	NO2	PM10	PM2.5

A.I North East Boundary (Near Magazine)

09.09.2011	18	31	19	19	12	24	9	8
10.09.2011	23	26	17	19	11	18	57	32
12.09.2011	12	17	22	27	12	25	28	21
13.09.2011	21	20	24	28	19	26	12	10
23.09.2011	14	25	23	29	17	21	85	12
24.09.2011	13	18	10	12	18	30	40	19
26.09.2011	6	26	19	22	12	27	22	16
27.09.2011	12	21	18	30	24	19	32	15

A.II South Boundary (III Bench Near electrical JB) :

09.09.2011	19	22	8	26	18	20	8	7
10.09.2011	12	21	9	12	15	20	26	20
12.09.2011	18	23	27	26	11	24	12	15
13.09.2011	12	20	16	24	8	21	32	27
23.09.2011	19	30	12	18	8	26	59	21
24.09.2011	9	12	17	25	19	22	36	14
26.09.2011	14	29	12	26	20	19	43	17
27.09.2011	23	21	14	30	22	28	30	16

A.III North West Boundary (Colony, Swagat guest House)

09.09.2011	17	26	13	20	8	28	18	15
10.09.2011	29	30	19	23	15	26	10	8
12.09.2011	10	17	16	25	8	20	30	22
13.09.2011	8	14	22	28	19	28	19	16
23.09.2011	7	21	12	20	8	21	35	16
24.09.2011	11	24	14	17	21	29	66	14
26.09.2011	19	24	12	19	10	28	32	13
27.09.2011	7	24	10	20	19	22	23	17

ULTRATECH CEMENT LIMITED

Noise monitoring reports at Rajashree Cement Works during 2011-12

	April-11		May-11		June-11		July-11		August-11		September-11	
Location	DAY dB	NIGHT dB	DAY dB	NIGHT dB	DAY dB	NIGHT dB	DAY dB	NIGHT dB	DAY dB	NIGHT dB	DAY dB	NIGHT dB
Shopping Complex Circle	68	59	60	55	56	48	56	50	58	46	56	49
Auditorium	60	54	49	45	52	47	48	50	52	40	53	47
Mangalum (Mines)	59	56	56	50	50	44	52	46	56	49	58	47
Petrol Bunk	62	50	58	45	53	45	58	42	50	40	57	43
Colony Main gate	58	44	50	46	49	42	58	40	48	46	52	40
LPG Godwan	65	60	66	56	58	54	60	58	60	56	48	40
Near TPP	67	58	59	52	58	50	58	50	60	52	57	51
STP	66	68	64	60	66	62	68	65	66	64	67	62