

VEDANTA LIMITED, JHARSUGUDA THERMAL POWER PLANT (2400 MW)

Half Yearly Environment Quality Report (April 2020 – September 2020)

1. Stack Emission:

i. Particulate Matter (mg/Nm³)

Stack Description	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
SEL - Unit 1	39.20	42.70	41.50	44.7	45.4	44.6
SEL - Unit 2	41.50	40.30	43.40	47.1	46.7	47.3
SEL - Unit 3	35.30	36.10	39.60	38.8	39.2	41.2
SEL - Unit 4	40.60	39.30	38.20	36.70	37.1	39.4

ii. Mercury (mg/Nm³)

Stack Description	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
SEL - Unit 1	0.008	0.006	0.005	0.008	0.006	0.007
SEL - Unit 2	0.005	0.008	0.007	0.006	0.005	0.004
SEL - Unit 3	0.006	0.005	0.008	0.005	0.004	0.006
SEL - Unit 4	0.005	0.007	0.006	0.008	0.007	0.005

2. Ambient Air Quality:

i. PM 10 size <10 (µg/m³)

Sl. No.	Sampling Location	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
Limit (24 Hours Weighed Average)		100					
1	Near Vedanta Township	44.60	43.80	41.50	40.60	39.90	41.30
2	Near Gate No-1	57.20	55.40	53.70	51.10	55.20	53.40
3	Near WTP Clarifier	53.50	51.20	50.40	48.70	51.80	52.60
4	Administrative Office Top	56.30	54.60	53.10	51.20	52.10	53.40
5	In front of Cooling Tower- III	52.80	50.30	51.60	49.90	52.40	55.70
6	Near IPP Office	57.60	56.90	55.70	53.40	57.70	56.80
7	Near CHP ETP building	64.10	63.50	61.80	60.50	62.20	60.90

Note: The Environment Monitoring is done by third party M/s. Visiontek Consultancy Services Pvt. Ltd. The required data is put in format from their report

Ambient Air Quality: Continued.....

ii. PM 2.5 size < 2.5 µg/m³

Sl. No.	Sampling Location	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
Limit (24 Hours Weighed Average)		60					
1	Near Vedanta Township	23.50	24.10	22.60	21.30	20.50	21.40
2	Near Gate No-1	32.30	31.50	32.20	30.70	34.80	33.50
3	Near WTP Clarifier	28.60	29.30	30.50	29.60	31.20	31.60
4	Administrative Office Top	27.90	28.20	29.30	31.10	27.30	25.70
5	In front of Cooling Tower- III	24.70	25.50	24.10	25.20	23.70	24.80
6	Near IPP Office	29.50	28.20	29.80	28.40	28.50	29.20
7	Near CHP ETP building	32.30	31.80	32.60	31.50	32.60	33.50

iii. SO₂ (µg/m³)

Sl. No.	Sampling Location	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
Limit (24 Hours Weighed Average)		80					
1	Near Vedanta Township	22.30	23.10	22.60	22.40	21.30	22.40
2	Near Gate No-1	23.90	24.30	25.10	24.60	24.80	23.70
3	Near WTP Clarifier	24.10	25.60	26.20	25.80	27.40	27.10
4	Administrative Office Top	25.30	25.80	26.40	25.30	28.20	28.60
5	In front of Cooling Tower- III	24.20	25.10	25.90	24.20	25.70	26.30
6	Near IPP Office	25.20	24.90	25.60	24.80	25.80	25.40
7	Near CHP ETP building	26.60	27.30	28.10	27.50	28.10	27.70

iv. NO_x (µg/m³)

Sl. No.	Sampling Location	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
Limit (24 Hours Weighed Average)		80					
1	Near Vedanta Township	23.20	23.50	21.80	20.30	20.10	20.40
2	Near Gate No-1	23.60	23.10	23.40	22.50	22.70	22.60
3	Near WTP Clarifier	25.30	25.80	24.70	24.10	26.20	25.30
4	Administrative Office Top	26.40	26.20	25.30	24.60	25.60	24.70
5	In front of Cooling Tower- III	24.80	26.30	25.20	24.00	24.90	23.40
6	Near IPP Office	25.70	25.20	24.80	23.70	25.30	26.70
7	Near CHP ETP building	27.10	27.60	27.60	26.10	27.90	28.30

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Ambient Air Quality: Continued.....

v. CO (mg/m³)

Sl. No.	Sampling Location	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
Limit (24 Hours Weighed Average)		2.0					
1	Near Vedanta Township	0.34	0.32	0.30	0.28	0.32	0.22
2	Near Gate No-1	0.36	0.35	0.36	0.34	0.35	0.27
3	Near WTP Clarifier	0.31	0.33	0.31	0.30	0.29	0.21
4	Administrative Office Top	0.33	0.34	0.32	0.32	0.33	0.26
5	In front of Cooling Tower- III	0.30	0.31	0.33	0.35	0.31	0.31
6	Near IPP Office	0.35	0.36	0.35	0.34	0.34	0.29
7	Near CHP ETP building	0.32	0.34	0.36	0.37	0.37	0.24

iv. Pb (µg/m³)

Sl. No.	Sampling Location	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
Limit (24 Hours Weighed Average)		1.0					
1	Near Vedanta Township	BDL	BDL	BDL	BDL	BDL	BDL
2	Near Gate No-1	BDL	BDL	BDL	BDL	BDL	0.051
3	Near WTP Clarifier	BDL	BDL	BDL	BDL	BDL	0.044
4	Administrative Office Top	BDL	BDL	BDL	BDL	BDL	0.048
5	In front of Cooling Tower- III	BDL	BDL	BDL	BDL	BDL	0.059
6	Near IPP Office	BDL	BDL	BDL	BDL	BDL	0.055
7	Near CHP ETP building	BDL	BDL	BDL	BDL	BDL	0.052

vii. As (ng/m³)

Sl. No.	Sampling Location	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
Limit (24 Hours Weighed Average)		06					
1	Near Vedanta Township	BDL	BDL	BDL	BDL	BDL	BDL
2	Near Gate No-1	BDL	BDL	BDL	BDL	BDL	BDL
3	Near WTP Clarifier	BDL	BDL	BDL	BDL	BDL	BDL
4	Administrative Office Top	BDL	BDL	BDL	BDL	BDL	BDL
5	In front of Cooling Tower- III	BDL	BDL	BDL	BDL	BDL	BDL
6	Near IPP Office	BDL	BDL	BDL	BDL	BDL	BDL
7	Near CHP ETP building	BDL	BDL	BDL	BDL	BDL	BDL

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Ambient Air Quality: Continued.....

viii. Ni (ng/m³)

Sl. No.	Sampling Location	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
Limit (24 Hours Weighed Average)		20					
1	Near Vedanta Township	BDL	BDL	BDL	BDL	BDL	BDL
2	Near Gate No-1	0.23	0.22	0.24	0.25	0.22	0.15
3	Near WTP Clarifier	0.26	0.25	0.27	0.24	0.28	0.14
4	Administrative Office Top	0.21	0.23	0.25	0.27	0.24	0.21
5	In front of Cooling Tower- III	0.26	0.27	0.28	0.25	0.24	0.23
6	Near IPP Office	0.24	0.25	0.26	0.26	0.23	0.24
7	Near CHP ETP building	0.22	0.24	0.27	0.28	0.27	0.17

ix. BaP (ng/m³)

Sl. No.	Sampling Location	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
Limit (24 Hours Weighed Average)		01					
1	Near Vedanta Township	BDL	BDL	BDL	BDL	BDL	BDL
2	Near Gate No-1	0.21	0.23	0.20	0.21	0.23	0.053
3	Near WTP Clarifier	0.25	0.24	0.22	0.23	0.25	BDL
4	Administrative Office Top	BDL	BDL	BDL	BDL	BDL	0.046
5	In front of Cooling Tower- III	0.24	0.25	0.24	0.26	0.21	0.051
6	Near IPP Office	0.22	0.23	0.25	0.24	0.23	0.045
7	Near CHP ETP building	BDL	BDL	BDL	BDL	BDL	BDL

x. Benzene (µg/m³)

Sl. No.	Sampling Location	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
Limit (24 Hours Weighed Average)		05					
1	Near Vedanta Township	BDL	BDL	BDL	BDL	BDL	BDL
2	Near Gate No-1	0.60	0.63	0.61	0.55	0.59	0.11
3	Near WTP Clarifier	0.62	0.60	0.58	0.52	0.56	0.06
4	Administrative Office Top	0.35	0.36	0.34	0.36	0.37	0.12
5	In front of Cooling Tower- III	0.40	0.42	0.40	0.41	0.42	0.16
6	Near IPP Office	0.44	0.41	0.42	0.44	0.39	0.12
7	Near CHP ETP building	0.55	0.53	0.50	0.48	0.48	0.11

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Ambient Air Quality: Continued.....

xi. NH₃ (µg/m₃)

Sl. No.	Sampling Location	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
Limit (24 Hours Weighed Average)		400					
1	Near Vedanta Township	BDL	BDL	BDL	BDL	BDL	22.2
2	Near Gate No-1	BDL	BDL	BDL	BDL	BDL	23.5
3	Near WTP Clarifier	BDL	BDL	BDL	BDL	BDL	21.6
4	Administrative Office Top	BDL	BDL	BDL	BDL	BDL	25.1
5	In front of Cooling Tower- III	BDL	BDL	BDL	BDL	BDL	26.7
6	Near IPP Office	BDL	BDL	BDL	BDL	BDL	25.4
7	Near CHP ETP building	BDL	BDL	BDL	BDL	BDL	23.7

xii. Ozone (µg/m³)

Sl. No.	Sampling Location	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
Limit (8 Hours Weighed Average)		100					
1	Near Vedanta Township	8.20	8.60	8.30	8.10	7.70	6.10
2	Near Gate No-1	10.40	11.20	10.50	10.10	11.30	6.50
3	Near WTP Clarifier	11.10	10.60	10.80	10.60	10.40	5.70
4	Administrative Office Top	10.80	11.80	11.50	10.90	11.70	6.80
5	In front of Cooling Tower- III	11.50	11.30	11.20	11.10	10.90	7.30
6	Near IPP Office	12.70	12.20	11.90	11.50	11.20	7.10
7	Near CHP ETP building	11.20	11.40	11.10	11.30	11.50	6.70

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3. Noise:

i. Day Time (6.00 a.m. to 10.00 p.m.)

Sl. No.	Sampling Location	Day time (6.00 a.m. to 10.00 p.m.)					
		Noise level in dB (A)					
		Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
1	Cooling tower pump house	61.1	62.3	63.5	62.6	64.7	64.2
2	Raw water pump house	55.4	56.1	55.3	54.7	57.4	45.0
3	Near Banjari gate	58.2	57.6	56.8	58.4	54.6	56.3
4	Near Main gate	60.5	59.4	58.6	57.4	59.7	57.4
5	Vedanta township	43.7	42.6	41.4	41.8	42.3	43.1
6	Geho pump house	65.9	66.2	67.5	68.2	66.6	64.7
7	Coal Yard Track Hopper	60.3	59.3	58.2	56.3	59.1	57.0
8	Coal Handling plant	68.2	67.9	66.8	66.2	67.7	66.4
9	I.D fan- Near Boiler, Unit-II	68.7	69.3	68.7	67.6	66.4	65.7
10	Chimney area Near Boiler, Unit-II	67.2	67.8	68.1	68.4	69.5	70.1
11	Boiler Feed Pump area Unit-II	68.1	69.2	69.4	69.8	68.9	68.6
12	Turbine Area Unit-II	69.5	69.4	68.7	68.6	69.3	69.7
13	Mill Area Unit-II	69.7	68.8	68.3	69.2	69.1	68.9
14	Compressor House Unit-II	68.3	68.5	68.9	68.7	69.1	69.2

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Noise: Continued.....

ii. Night Time (10.00 p.m. to 6.00 a. m.)

Sl. No.	Sampling Location	Night time (10.00 p.m. to 6.00 a.m.)					
		Noise level in dB (A)					
		Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
1	Cooling tower pump house	54.7	55.6	56.2	57.3	55.2	61.8
2	Raw water pump house	48.2	50.3	51.4	51.5	50.3	42.1
3	Near Banjari gate	55.4	54.2	54.1	55.2	51.3	51.7
4	Near Main gate	53.6	52.8	51.8	52.4	51.4	52.8
5	Vedanta township	41.2	40.4	40.6	40.9	39.1	41.4
6	Geho pump house	64.8	63.5	62.7	63.1	62.7	61.1
7	Coal Yard Track Hopper	54.4	53.7	52.9	52.5	54.8	54.4
8	Coal Handling plant	61.1	62.5	63.5	62.2	61.9	61.2
9	I.D fan- Near Boiler, Unit-II	61.3	63.4	64.1	64.4	63.2	62.2
10	Chimney area Near Boiler, Unit-II	60.4	61.7	62.3	63.7	63.8	64.3
11	Boiler Feed Pump area Unit-II	64.7	65.1	66.6	67.1	66.1	65.6
12	Turbine Area Unit-II	67.2	67.8	66.9	65.3	65.9	65.2
13	Mill Area Unit-II	67.4	67.6	67.5	66.8	66.7	65.4
14	Compressor House Unit-II	67.8	67.4	67.1	67.4	67.8	67.7

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4. Water:

a) Effluent Treatment Plant (ETP) Outlet:

Parameters	Unit	Limit	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
pH	-	6.5-9.0	7.35	7.42	7.46	7.42	7.23	7.33
Total Suspended Solids	mg/l	100	44	47	49	47	46	32.0
Dissolved Solids	mg/l	2100	179	163	161	154	172	194
BOD(3 days at 27°C)	mg/l	30	9.5	9.1	9.3	8.9	8.4	9.0
COD	mg/l	250	40	38	37	35	39	40
Oil and Grease	mg/l	10	ND	ND	ND	ND	ND	2.0
Iron	mg/l	3	0.37	0.39	0.36	0.33	0.37	0.19
Copper	mg/l	3	BDL	BDL	BDL	BDL	BDL	BDL

b) Sewage Treatment Plant (STP) Outlet:

Parameters	Unit	Limit	Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
pH	mg/l	6.5-9.0	7.32	7.28	7.37	7.33	7.42	7.47
Total Suspended Solids	mg/l	100	13	15	17	12	16	23
BOD	mg/l	30	8.8	8.4	8.1	8.3	8.3	7.8
COD	mg/l	250	35	33	31	30	36	33

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c) Surface Water:

Sampling location: SW1- Banjari Village Pond

Sl. No.	Parameter	Unit	Standard	SW1					
				Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
1	Colour	Hazen	300	CL	CL	CL	CL	CL	CL
2	pH	--	6.5-8.5	7.08	7.12	7.08	7.10	7.13	7.14
3	DO	mg/l	4 (min)	6.2	6.4	6.0	6.2	6.1	5.6
4	Chloride	mg/l	600	18.2	19.4	20.6	20.2	21.2	21.3
5	Total Dissolved Solids	mg/l	1500	124	121	124	120	120	123
6	Suspended Solids	mg/l	-	47	44	42	44	43	44
7	Oil & Grease	mg/l	0.1	ND	ND	ND	ND	ND	ND
8	BOD (3) days at 27 ⁰ C	mg/l	3	2.0	2.2	2.0	2.2	2.1	2.2
9	Arsenic as As	mg/l	0.2	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead as Pb	mg/l	0.1	BDL	BDL	BDL	BDL	BDL	BDL
11	Cadmium as Cd	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL
12	Hexavalent Chromium as Cr ⁺⁶	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
13	Copper as Cu	mg/l	1.5	BDL	BDL	BDL	BDL	BDL	BDL
14	Zinc as Zn	mg/l	15	BDL	BDL	BDL	BDL	BDL	BDL
15	Selenium as Se	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
16	Cyanide as CN	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
17	Fluoride as F	mg/l	1.5	0.30	0.33	0.32	0.34	0.31	0.32
18	Sulphates (SO ₄)	mg/l	400	13.5	12.6	12.5	13.2	12.7	16.1
19	Phenolic Compounds as C ₆ H ₅ OH	mg/l	0.005	BDL	BDL	BDL	BDL	BDL	BDL
20	Iron as Fe	mg/l	50	0.24	0.23	0.26	0.24	0.24	0.38
21	Nitrate as NO ₃	mg/l	50	1.5	1.6	1.3	1.6	1.2	1.54
22	Anionic Detergents	mg/l	1	ND	ND	ND	ND	ND	ND
23	Total Coliform	MPN/100ml	5000	180	190	185	195	191	210

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Surface Water: Continued.....

Sampling location: SW2- Bhurkamunda Village Pond

Sl. No.	Parameter	Unit	Standard	SW2					
				Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
1	Colour	Hazen	300	CL	CL	CL	CL	CL	CL
2	pH	--	6.5-8.5	7.15	7.10	7.15	7.05	7.08	7.42
3	DO	mg/l	4 (min)	6.1	6.5	6.5	6.3	6.4	6.1
4	Chloride	mg/l	600	19.5	20.2	19.0	19.4	19.3	19.7
5	Total Dissolved Solids	mg/l	1500	125	124	126	123	129	128
6	Suspended Solids	mg/l	-	45	47	45	42	42	51
7	Oils& Grease	mg/l	0.1	ND	ND	ND	ND	ND	ND
8	BOD(3) days at 27 °C	mg/l	3	2.3	2.1	2.3	2.0	2.1	2.4
9	Arsenic as As	mg/l	0.2	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead as Pb	mg/l	0.1	BDL	BDL	BDL	BDL	BDL	BDL
11	Cadmium as Cd	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL
12	Hexavalent Chromium as Cr ⁺⁶	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
13	Copper as Cu	mg/l	1.5	BDL	BDL	BDL	BDL	BDL	BDL
14	Zinc as Zn	mg/l	15	BDL	BDL	BDL	BDL	BDL	BDL
15	Selenium as Se	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
16	Cyanide as CN	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
17	Fluoride as F	mg/l	1.5	0.34	0.35	0.30	0.30	0.33	0.37
18	Sulphates (SO ₄)	mg/l	400	13.1	13.3	13.5	12.6	13.4	14.8
19	Phenolic Compounds as C ₆ H ₅ OH	mg/l	0.005	BDL	BDL	BDL	BDL	BDL	BDL
20	Iron as Fe	mg/l	50	0.22	0.25	0.23	0.26	0.26	0.35
21	Nitrate as NO ₃	mg/l	50	1.7	1.8	1.5	1.3	1.4	1.26
22	Anionic Detergents	mg/l	1	ND	ND	ND	ND	ND	ND
23	Total Coliform	MPN/100ml	5000	195	185	205	180	207	280

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Surface Water: Continued.....

Sampling location: SW3- Banjari Nallah Upstream

Sl. No.	Parameter	Unit	Standard	SW3					
				Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
1	Colour	Hazen	300	CL	CL	CL	CL	CL	CL
2	pH	--	6.5-8.5	7.11	7.14	7.20	7.16	7.24	7.04
3	DO	mg/l	4 (min)	6.0	6.2	6.4	6.0	6.6	6.1
4	Chloride	mg/l	600	18.0	18.5	21.0	20.8	20.6	21.1
5	Total Dissolved Solids	mg/l	1500	120	122	120	121	127	125
6	Suspended Solids	mg/l	-	43	45	41	40	39	40
7	Oils & Grease	mg/l	0.1	ND	ND	ND	ND	ND	ND
8	BOD(3) days at 27 °C	mg/l	3	2.2	2.0	2.1	2.4	2.0	2.1
9	Arsenic as As	mg/l	0.2	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead as Pb	mg/l	0.1	BDL	BDL	BDL	BDL	BDL	BDL
11	Cadmium as Cd	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL
12	Hexavalent Chromium as Cr ⁺⁶	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
13	Copper as Cu	mg/l	1.5	0.038	0.034	0.030	0.033	0.028	0.033
14	Zinc as Zn	mg/l	15	0.22	0.22	0.26	0.23	0.19	0.33
15	Selenium as Se	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
16	Cyanide as CN	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
17	Fluoride as F	mg/l	1.5	0.32	0.30	0.35	0.32	0.31	0.34
18	Sulphates (SO ₄)	mg/l	400	12.4	12.6	12.0	12.4	12.2	15.0
19	Phenolic Compounds as C ₆ H ₅ OH	mg/l	0.005	BDL	BDL	BDL	BDL	BDL	BDL
20	Iron as Fe	mg/l	50	0.26	0.24	0.21	0.20	0.20	0.34
21	Nitrate as NO ₃	mg/l	50	1.3	1.4	1.7	1.2	1.5	1.3
22	Anionic Detergents	mg/l	1	ND	ND	ND	ND	ND	ND
23	Total Coliform	MPN/100ml	5000	185	195	190	195	189	170

Note: The Environment Monitoring is done by third party M/s. Visiointek Consultancy Services Pvt. Ltd. The required data is put in format from their report

Surface Water: Continued.....

Sampling location: SW4- Banjari Nallah Downstream

Sl. No.	Parameter	Unit	Standard	SW4					
				Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
1	Colour	Hazen	300	CL	CL	CL	CL	CL	CL
2	pH	--	6.5-8.5	7.05	7.15	7.12	7.22	7.19	7.35
3	DO	mg/l	4 (min)	6.3	6.1	6.2	6.1	6.7	5.6
4	Chloride	mg/l	600	19.1	19.5	20.4	19.6	20.2	20.5
5	Total Dissolved Solids	mg/l	1500	122	125	125	124	126	123
6	Suspended Solids	mg/l	-	44	44	44	43	46	45
7	Oils & Grease	mg/l	0.1	ND	ND	ND	ND	ND	ND
8	BOD(3) days at 27 °C	mg/l	3	2.3	2.2	2.0	2.3	2.2	2.5
9	Arsenic as As	mg/l	0.2	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead as Pb	mg/l	0.1	BDL	BDL	BDL	BDL	BDL	BDL
11	Cadmium as Cd	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL
12	Hexavalent Chromium as Cr ⁺⁶	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
13	Copper as Cu	mg/l	1.5	0.036	0.032	0.032	0.030	0.030	0.028
14	Zinc as Zn	mg/l	15	0.20	0.24	0.20	0.24	0.22	0.38
15	Selenium as Se	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
16	Cyanide as CN	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
17	Fluoride as F	mg/l	1.5	0.33	0.32	0.31	0.35	0.32	0.31
18	Sulphates (SO ₄)	mg/l	400	12.8	13.2	13.8	12.0	13.4	17.7
19	Phenolic Compounds as C ₆ H ₅ OH	mg/l	0.005	BDL	BDL	BDL	BDL	BDL	BDL
20	Iron as Fe	mg/l	50	0.23	0.22	0.25	0.23	0.24	0.46
21	Nitrate as NO ₃	mg/l	50	1.8	1.3	1.6	1.6	1.5	2.23
22	Anionic Detergents	mg/l	1	ND	ND	ND	ND	ND	ND
23	Total Coliform	MPN/100ml	5000	175	180	200	190	201	240

Note: The Environment Monitoring is done by third party M/s. Visiointek Consultancy Services Pvt. Ltd. The required data is put in format from their report

Surface Water: Continued.....

Sampling location: SW5- Kharkhari Nallah Upstream

Sl. No.	Parameter	Unit	Standard	SW5					
				Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
1	Colour	Hazen	300	CL	CL	CL	CL	CL	CL
2	pH	--	6.5-8.5	7.10	7.12	7.18	7.20	7.25	6.93
3	DO	mg/l	4 (min)	6.4	6.3	6.1	6.4	6.3	5.8
4	Chloride	mg/l	600	21.2	20.6	20.2	20.1	19.7	19.6
5	Total Dissolved Solids	mg/l	1500	121	123	122	126	121	124
6	Suspended Solids	mg/l	-	46	43	40	41	42	46
7	Oils& Grease	mg/l	0.1	ND	ND	ND	ND	ND	ND
8	BOD(3) days at 27 ⁰ C	mg/l	3	2.1	2.3	2.2	2.0	2.3	2.1
9	Arsenic as As	mg/l	0.2	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead as Pb	mg/l	0.1	BDL	BDL	BDL	BDL	BDL	BDL
11	Cadmium as Cd	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL
12	Hexavalent Chromium as Cr ⁺⁶	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
13	Copper as Cu	mg/l	1.5	0.030	0.036	0.028	0.032	0.031	0.041
14	Zinc as Zn	mg/l	15	0.24	0.20	0.24	0.22	0.23	0.36
15	Selenium as Se	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
16	Cyanide as CN	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
17	Fluoride as F	mg/l	1.5	0.31	0.34	0.33	0.31	0.34	0.35
18	Sulphates (SO ₄)	mg/l	400	13.2	12.5	12.6	13.5	12.1	14.4
19	Phenolic Compounds as C ₆ H ₅ OH	mg/l	0.005	BDL	BDL	BDL	BDL	BDL	BDL
20	Iron as Fe	mg/l	50	0.21	0.20	0.22	0.24	0.21	0.41
21	Nitrate as NO ₃	mg/l	50	1.4	1.7	1.2	1.5	1.3	2.33
22	Anionic Detergents	mg/l	1	ND	ND	ND	ND	ND	ND
23	Total Coliform	MPN/100ml	5000	190	200	195	200	198	220

Note: The Environment Monitoring is done by third party M/s. Visiontek Consultancy Services Pvt. Ltd. The required data is put in format from their report

Surface Water: Continued.....

Sampling location: SW6- Kharkhari Nallah Downstream

Sl. No	Parameter	Unit	Standard	SW6					
				Apr'20	May'20	Jun'20	Jul'20	Aug'20	Sep'20
1	Colour	Hazen	300	CL	CL	CL	CL	CL	CL
2	pH	--	6.5-8.5	7.14	7.16	7.10	7.14	7.12	7.27
3	DO	mg/l	4 (min)	6.2	6.4	6.3	6.1	6.1	5.7
4	Chloride	mg/l	600	20.5	21.2	20.5	21.0	20.1	19.8
5	Total Dissolved Solids	mg/l	1500	123	120	123	122	128	127
6	Suspended Solids	mg/l	-	45	46	43	42	44	47
7	Oils& Grease	mg/l	0.1	ND	ND	ND	ND	ND	ND
8	BOD(3) days at 27 °C	mg/l	3	2.0	2.1	2.3	2.1	2.4	2.6
9	Arsenic as As	mg/l	0.2	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead as Pb	mg/l	0.1	BDL	BDL	BDL	BDL	BDL	BDL
11	Cadmium as Cd	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL
12	Hexavalent Chromium as Cr ⁺⁶	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
13	Copper as Cu	mg/l	1.5	0.028	0.028	0.034	0.028	0.035	0.029
14	Zinc as Zn	mg/l	15	0.22	0.24	0.22	0.25	0.25	0.32
15	Selenium as Se	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
16	Cyanide as CN	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
17	Fluoride as F	mg/l	1.5	0.35	0.31	0.30	0.34	0.29	0.31
18	Sulphates (SO ₄)	mg/l	400	12.5	13.5	13.0	13.8	13.3	15.5
19	Phenolic Compounds as C ₆ H ₅ OH	mg/l	0.005	BDL	BDL	BDL	BDL	BDL	BDL
20	Iron as Fe	mg/l	50	0.22	0.21	0.20	0.22	0.21	0.35
21	Nitrate as NO ₃	mg/l	50	1.5	1.4	1.5	1.3	1.4	1.41
22	Anionic Detergents	mg/l	1	ND	ND	ND	ND	ND	ND
23	Total Coliform	MPN/100ml	5000	205	190	180	185	187	280

Note: The Environment Monitoring is done by third party M/s. Visiontek Consultancy Services Pvt. Ltd. The required data is put in format from their report

d) Ground Water:

Sampling Locations:

GW1-Hand pump of North side of Ash pond, near Siriapali

GW2-Hand pump of East side of Ash pond, near Purna school

Sl. No	Parameter	Standards	Unit	GW1		GW2	
				Apr-20	Jul-20	Apr-20	Jul-20
1	Colour	5	Hazen	CL	CL	CL	CL
2	Odour	U/O	-	U/O	U/O	U/O	U/O
3	Taste	Agreeable	-	AL	AL	AL	AL
4	Turbidity	5	NTU	1.0	1.1	1.1	1.0
5	pH Value	6.5-8.5	-	7.18	7.20	7.25	7.15
6	Total Hardness (as CaCO ₃)	300	mg/l	101	99	98	100
7	Iron (as Fe)	0.3	mg/l	0.19	0.23	0.26	0.21
8	Chloride (as Cl)	250	mg/l	22.0	20.0	20.5	21.5
9	Residual, free Chlorine	0.2	mg/l	ND	ND	ND	ND
10	Dissolved Solids	500	mg/l	147	143	142	140
11	Calcium (as Ca)	75	mg/l	25.8	26.4	27.2	25.8
12	Copper (as Cu)	0.05	mg/l	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	0.1	mg/l	BDL	BDL	BDL	BDL
14	Sulphate (as SO ₄)	200	mg/l	14.5	13.7	13.6	14.2
15	Nitrate (as NO ₃)	45	mg/l	2.9	2.2	2.6	2.8
16	Fluoride (as F)	1	mg/l	0.31	0.29	0.30	0.31
17	Phenolic Compounds (as C ₆ H ₅ OH)	0.001	mg/l	BDL	BDL	BDL	BDL
18	Mercury (as Hg)	0.001	mg/l	BDL	BDL	BDL	BDL
19	Cadmium (as Cd)	0.01	mg/l	BDL	BDL	BDL	BDL
20	Selenium (as Se)	0.01	mg/l	BDL	BDL	BDL	BDL
21	Arsenic (as As)	0.05	mg/l	BDL	BDL	BDL	BDL
22	Cyanide (as CN)	0.05	mg/l	BDL	BDL	BDL	BDL
23	Lead (as Pb)	0.05	mg/l	BDL	BDL	BDL	BDL
24	Zinc (as Zn)	5	mg/l	0.40	0.41	0.39	0.38
25	Chromium (as Cr ⁺⁶)	0.05	mg/l	BDL	BDL	BDL	BDL
26	Mineral Oil	0.01	mg/l	ND	ND	ND	ND
27	Alkalinity	200	mg/l	51.0	48.0	49.0	51.0
28	Aluminium as Al	0.03	mg/l	BDL	BDL	BDL	BDL
29	Boron	1	mg/l	0.119	0.114	0.120	0.119

Note: The Environment Monitoring is done by third party M/s. Visiontek Consultancy Services Pvt. Ltd. The required data is put in format from their report

Ground Water: Continued.....

Sampling location:

GW3: Hand Pump of West side of Ash pond, Bhagipali village,

GW4: Bhurkamunda Village

Sl. No	Parameter	Standards	Unit	GW3		GW4	
				Apr-20	Jul-20	Apr-20	Jul-20
1	Colour	5	Hazen	CL	CL	CL	CL
2	Odour	U/O	-	U/O	U/O	U/O	U/O
3	Taste	Agreeable	-	AL	AL	AL	AL
4	Turbidity	5	NTU	0.9	1.2	1.2	1.1
5	pH Value	6.5-8.5	-	7.12	7.22	7.20	7.25
6	Total Hardness (as CaCO ₃)	300	mg/l	101	97	89	102
7	Iron (as Fe)	0.3	mg/l	0.23	0.20	0.21	0.19
8	Chloride (as Cl)	250	mg/l	21.5	22.0	20.0	21.0
9	Residual, free Chlorine	0.2	mg/l	ND	ND	ND	ND
10	Dissolved Solids	500	mg/l	145	147	141	144
11	Calcium (as Ca)	75	mg/l	29.4	28.6	25.6	27.3
12	Copper (as Cu)	0.05	mg/l	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	0.1	mg/l	BDL	BDL	BDL	BDL
14	Sulphate (as SO ₄)	200	mg/l	13.4	14.5	14.2	13.5
15	Nitrate (as NO ₃)	45	mg/l	2.3	2.5	2.5	2.7
16	Fluoride (as F)	1	mg/l	0.32	0.30	0.27	0.28
17	Phenolic Compounds (as C ₆ H ₅ OH)	0.001	mg/l	BDL	BDL	BDL	BDL
18	Mercury (as Hg)	0.001	mg/l	BDL	BDL	BDL	BDL
19	Cadmium (as Cd)	0.01	mg/l	BDL	BDL	BDL	BDL
20	Selenium (as Se)	0.01	mg/l	BDL	BDL	BDL	BDL
21	Arsenic (as As)	0.05	mg/l	BDL	BDL	BDL	BDL
22	Cyanide (as CN)	0.05	mg/l	BDL	BDL	BDL	BDL
23	Lead (as Pb)	0.05	mg/l	BDL	BDL	BDL	BDL
24	Zinc (as Zn)	5	mg/l	0.42	0.40	0.39	0.42
25	Chromium (as Cr ⁺⁶)	0.05	mg/l	BDL	BDL	BDL	BDL
26	Mineral Oil	0.01	mg/l	ND	ND	ND	ND
27	Alkalinity	200	mg/l	48.0	46.0	42.0	43.0
28	Aluminium as Al	0.03	mg/l	BDL	BDL	BDL	BDL
29	Boron	1	mg/l	0.115	0.110	0.111	0.121

Note: The Environment Monitoring is done by third party M/s. Visiontek Consultancy Services Pvt. Ltd. The required data is put in format from their report

Ground Water: Continued.....

Sampling location:

GW5: Hand Pump of South side of Ash pond, Katikela Village,

GW6: Badmal Village

Sl. No	Parameter	Standards	Unit	GW5		GW6	
				Apr-20	Jul-20	Apr-20	Jul-20
1	Colour	5	Hazen	CL	CL	CL	CL
2	Odour	U/O	-	U/O	U/O	U/O	U/O
3	Taste	Agreeable	-	AL	AL	AL	AL
4	Turbidity	5	NTU	1.0	0.9	1.0	1.1
5	pH Value	6.5-8.5	-	7.15	7.14	7.10	7.15
6	Total Hardness (as CaCO ₃)	300	mg/l	99	101	88	90
7	Iron (as Fe)	0.3	mg/l	0.24	0.24	0.25	0.21
8	Chloride (as Cl)	250	mg/l	21.0	22.5	27.0	26.5
9	Residual, free Chlorine	0.2	mg/l	ND	ND	ND	ND
10	Dissolved Solids	500	mg/l	148	142	135	138
11	Calcium (as Ca)	75	mg/l	28.4	28.1	22.5	21.5
12	Copper (as Cu)	0.05	mg/l	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	0.1	mg/l	BDL	BDL	BDL	BDL
14	Sulphate (as SO ₄)	200	mg/l	13.8	13.6	13.30	12.40
15	Nitrate (as NO ₃)	45	mg/l	2.8	2.9	2.66	2.30
16	Fluoride (as F)	1	mg/l	0.25	0.32	0.26	0.21
17	Phenolic Compounds (as C ₆ H ₅ OH)	0.001	mg/l	BDL	BDL	BDL	BDL
18	Mercury (as Hg)	0.001	mg/l	BDL	BDL	BDL	BDL
19	Cadmium (as Cd)	0.01	mg/l	BDL	BDL	BDL	BDL
20	Selenium (as Se)	0.01	mg/l	BDL	BDL	BDL	BDL
21	Arsenic (as As)	0.05	mg/l	BDL	BDL	BDL	BDL
22	Cyanide (as CN)	0.05	mg/l	BDL	BDL	BDL	BDL
23	Lead (as Pb)	0.05	mg/l	BDL	BDL	BDL	BDL
24	Zinc (as Zn)	5	mg/l	0.43	0.41	0.35	0.29
25	Chromium (as Cr ⁺⁶)	0.05	mg/l	BDL	BDL	BDL	BDL
26	Mineral Oil	0.01	mg/l	ND	ND	ND	ND
27	Alkalinity	200	mg/l	45.0	47.0	44.0	42.0
28	Aluminium as Al	0.03	mg/l	BDL	BDL	BDL	BDL
29	Boron	1	mg/l	0.126	0.120	0.138	0.145

Note: The Environment Monitoring is done by third party M/s. Visiontek Consultancy Services Pvt. Ltd. The required data is put in format from their report

Ground Water: Continue.....

Sampling locations: GW7: Neoheight, GW8: Banjari Village

Sl. No	Parameter	Standards	Unit	GW7		GW8	
				Apr-20	Jul-20	Apr-20	Jul-20
1	Colour	5	Hazen	CL	CL	CL	CL
2	Odour	U/O	-	U/O	U/O	U/O	U/O
3	Taste	Agreeable	-	AL	AL	AL	AL
4	Turbidity	5	NTU	1.2	0.8	1.0	1.2
5	pH Value	6.5-8.5	-	7.18	7.12	7.25	7.20
6	Total Hardness (as CaCO ₃)	300	mg/l	82	80	80	84
7	Iron (as Fe)	0.3	mg/l	0.23	0.26	0.27	0.24
8	Chloride (as Cl)	250	mg/l	28.0	27.0	26.5	26.0
9	Residual, free Chlorine	0.2	mg/l	ND	ND	ND	ND
10	Dissolved Solids	500	mg/l	140	141	143	145
11	Calcium (as Ca)	75	mg/l	23.4	22.2	21.6	22.7
12	Copper (as Cu)	0.05	mg/l	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	0.1	mg/l	BDL	BDL	BDL	BDL
14	Sulphate (as SO ₄)	200	mg/l	13.50	13.70	12.50	11.70
15	Nitrate (as NO ₃)	45	mg/l	2.34	2.24	2.40	2.35
16	Fluoride (as F)	1	mg/l	0.23	0.25	0.20	0.22
17	Phenolic Compounds (as C ₆ H ₅ OH)	0.001	mg/l	BDL	BDL	BDL	BDL
18	Mercury (as Hg)	0.001	mg/l	BDL	BDL	BDL	BDL
19	Cadmium (as Cd)	0.01	mg/l	BDL	BDL	BDL	BDL
20	Selenium (as Se)	0.01	mg/l	BDL	BDL	BDL	BDL
21	Arsenic (as As)	0.05	mg/l	BDL	BDL	BDL	BDL
22	Cyanide (as CN)	0.05	mg/l	BDL	BDL	BDL	BDL
23	Lead (as Pb)	0.05	mg/l	BDL	BDL	BDL	BDL
24	Zinc (as Zn)	5	mg/l	0.33	0.30	0.28	0.35
25	Chromium (as Cr ⁺⁶)	0.05	mg/l	BDL	BDL	BDL	BDL
26	Mineral Oil	0.01	mg/l	ND	ND	ND	ND
27	Alkalinity	200	mg/l	47.0	45.0	50.0	43.0
28	Aluminium as Al	0.03	mg/l	BDL	BDL	BDL	BDL
29	Boron	1	mg/l	0.185	0.150	0.221	0.186

Note: The Environment Monitoring is done by third party M/s. Visiontek Consultancy Services Pvt. Ltd. The required data is put in format from their report

Ground Water: Continued.....

Sampling location: GW9: Sarbahal

Sl. No	Parameter	Standards	Unit	GW9	
				Apr-20	Jul-20
1	Colour	5	Hazen	CL	CL
2	Odour	U/O	-	U/O	U/O
3	Taste	Agreeable	-	AL	AL
4	Turbidity	5	NTU	0.9	1.0
5	pH Value	6.5-8.5	-	7.15	7.24
6	Total Hardness (as CaCO ₃)	300	mg/l	83	81
7	Iron (as Fe)	0.3	mg/l	0.24	0.20
8	Chloride (as Cl)	250	mg/l	28.5	28.0
9	Residual, free Chlorine	0.2	mg/l	ND	ND
10	Dissolved Solids	500	mg/l	145	140
11	Calcium (as Ca)	75	mg/l	22.8	21.3
12	Copper (as Cu)	0.05	mg/l	BDL	BDL
13	Manganese (as Mn)	0.1	mg/l	BDL	BDL
14	Sulphate (as SO ₄)	200	mg/l	11.40	12.50
15	Nitrate (as NO ₃)	45	mg/l	2.25	2.28
16	Fluoride (as F)	1	mg/l	0.24	0.20
17	Phenolic Compounds (as C ₆ H ₅ OH)	0.001	mg/l	BDL	BDL
18	Mercury (as Hg)	0.001	mg/l	BDL	BDL
19	Cadmium (as Cd)	0.01	mg/l	BDL	BDL
20	Selenium (as Se)	0.01	mg/l	BDL	BDL
21	Arsenic (as As)	0.05	mg/l	BDL	BDL
22	Cyanide (as CN)	0.05	mg/l	BDL	BDL
23	Lead (as Pb)	0.05	mg/l	BDL	BDL
24	Zinc (as Zn)	5	mg/l	0.27	0.32
25	Chromium (as Cr ⁺⁶)	0.05	mg/l	BDL	BDL
26	Mineral Oil	0.01	mg/l	ND	ND
27	Alkalinity	200	mg/l	45.0	46.0
28	Aluminium as Al	0.03	mg/l	BDL	BDL
29	Boron	1	mg/l	0.219	0.204

Note: The Environment Monitoring is done by third party M/s. Visiontek Consultancy Services Pvt. Ltd. The required data is put in format from their report

e) Ground Water around Ash Pond:

Sampling Locations:

GW1- Bore well (East), GW2- Bore well (West)

Sl. No	Parameter	Standards	Unit	GW1		GW2	
				Apr-20	Jul-20	Apr-20	Jul-20
1	Colour	5	Hazen	CL	CL	CL	CL
2	Odour	U/O	-	U/O	U/O	U/O	U/O
3	Taste	Agreeable	-	AL	AL	AL	AL
4	Turbidity	5	NTU	ND	ND	ND	ND
5	pH Value	6.5-8.5	-	7.05	7.11	7.12	7.16
6	Total Hardness (as CaCO ₃)	300	mg/l	102	99	91	94
7	Iron (as Fe)	0.3	mg/l	0.24	0.22	0.21	0.20
8	Chloride (as Cl)	250	mg/l	30.0	29.0	27.0	31.0
9	Residual, free Chlorine	0.2	mg/l	ND	ND	ND	ND
10	Dissolved Solids	500	mg/l	191	185	182	180
11	Calcium (as Ca)	75	mg/l	24.60	24.70	25.40	26.30
12	Copper (as Cu)	0.05	mg/l	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	0.1	mg/l	0.030	0.034	0.032	0.037
14	Sulphate (as SO ₄)	200	mg/l	21.60	22.50	22.30	21.40
15	Nitrate (as NO ₃)	45	mg/l	2.29	2.30	2.41	2.26
16	Fluoride (as F)	1	mg/l	0.33	0.30	0.35	0.32
17	Phenolic Compounds (as C ₆ H ₅ OH)	0.001	mg/l	BDL	BDL	BDL	BDL
18	Mercury (as Hg)	0.001	mg/l	BDL	BDL	BDL	BDL
19	Cadmium (as Cd)	0.01	mg/l	BDL	BDL	BDL	BDL
20	Selenium (as Se)	0.01	mg/l	BDL	BDL	BDL	BDL
21	Arsenic (as As)	0.05	mg/l	BDL	BDL	BDL	BDL
22	Cyanide (as CN)	0.05	mg/l	BDL	BDL	BDL	BDL
23	Lead (as Pb)	0.05	mg/l	0.009	0.007	0.008	0.008
24	Zinc (as Zn)	5	mg/l	0.42	0.44	0.47	0.40
25	Chromium (as Cr ⁺⁶)	0.05	mg/l	BDL	BDL	BDL	BDL
26	Mineral Oil	0.01	mg/l	BDL	BDL	BDL	BDL
27	Alkalinity	200	mg/l	69.20	68.40	68.50	69.20
28	Aluminium as Al	0.03	mg/l	BDL	BDL	BDL	BDL
29	Boron	1	mg/l	0.043	0.042	0.041	0.045

Note: The Environment Monitoring is done by third party M/s. Visiontek Consultancy Services Pvt. Ltd. The required data is put in format from their report

Ground Water around Ash Pond: Continued.....

Sampling location:

GW3- Bore well (North), GW4- Bore well (South)

Sl. No	Parameter	Standards	Unit	GW3		GW4	
				Apr-20	Jul-20	Apr-20	Jul-20
1	Colour	5	Hazen	CL	CL	CL	CL
2	Odour	U/O	-	U/O	U/O	U/O	U/O
3	Taste	Agreeable	-	AL	AL	AL	AL
4	Turbidity	5	NTU	0.5	0.5	0.4	0.4
5	pH Value	6.5-8.5	-	7.20	7.08	7.25	7.20
6	Total Hardness (as CaCO ₃)	300	mg/l	96	92	103	101
7	Iron (as Fe)	0.3	mg/l	0.25	0.24	0.26	0.21
8	Chloride (as Cl)	250	mg/l	31.0	27.0	28.0	31.0
9	Residual, free Chlorine	0.2	mg/l	ND	ND	ND	ND
10	Dissolved Solids	500	mg/l	184	184	189	181
11	Calcium (as Ca)	75	mg/l	25.80	25.20	26.50	25.10
12	Copper (as Cu)	0.05	mg/l	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	0.1	mg/l	0.038	0.030	0.050	0.042
14	Sulphate (as SO ₄)	200	mg/l	24.70	23.10	20.30	21.50
15	Nitrate (as NO ₃)	45	mg/l	2.36	2.34	2.22	2.20
16	Fluoride (as F)	1	mg/l	0.31	0.34	0.34	0.32
17	Phenolic Compounds (as C ₆ H ₅ OH)	0.001	mg/l	BDL	BDL	BDL	BDL
18	Mercury (as Hg)	0.001	mg/l	BDL	BDL	BDL	BDL
19	Cadmium (as Cd)	0.01	mg/l	BDL	BDL	BDL	BDL
20	Selenium (as Se)	0.01	mg/l	BDL	BDL	BDL	BDL
21	Arsenic (as As)	0.05	mg/l	BDL	BDL	BDL	BDL
22	Cyanide (as CN)	0.05	mg/l	BDL	BDL	BDL	BDL
23	Lead (as Pb)	0.05	mg/l	0.00	0.007	0.007	0.009
24	Zinc (as Zn)	5	mg/l	0.43	0.45	0.44	0.42
25	Chromium (as Cr ⁺⁶)	0.05	mg/l	BDL	BDL	BDL	BDL
26	Mineral Oil	0.01	mg/l	BDL	BDL	BDL	BDL
27	Alkalinity	200	mg/l	69.40	68.10	70.20	68.30
28	Aluminium as Al	0.03	mg/l	BDL	BDL	BDL	BDL
29	Boron	1	mg/l	0.040	0.041	0.045	0.043

Note: The Environment Monitoring is done by third party M/s. Visiontek Consultancy Services Pvt. Ltd. The required data is put in format from their report

5. Soil Quality:

Sampling Location:

S1- Raw Water Pump House

S2- West of ash pond, Bhagipali

S3- Bhurkamunda village

S4- East side of ash pond, Purna

Sl. No.	Parameter	S1		S2		S3		S4	
		Apr-20	Jul-20	Apr-20	Jul-20	Apr-20	Jul-20	Apr-20	Jul-20
1	Colour	Brown	Brown	Brown	Brown	Reddish	Reddish	Brown	Brown
2	Type of Soil	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
3	pH	7.10	7.20	7.13	7.16	7.17	7.12	7.27	7.24
4	Texture	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam
5	Infiltration Rate (cm/hr)	5.4	5.1	5.5	5.4	5.0	5.2	5.2	5.0
6	Bulk Density (gm/cc)	1.15	1.19	1.20	1.15	1.22	1.17	1.14	1.12
7	Porosity %	16.6	17.1	17.8	16.4	16.2	16.8	17.0	17.5
8	Moisture content %	7.3	7.1	7.5	7.6	7.7	7.2	7.4	7.5
9	Fluoride %	0.012	0.010	0.011	0.012	0.012	0.010	0.010	0.011
10	Silica as SiO ₂ %	29.4	28.6	28.8	29.2	30.2	29.5	29.6	30.0
11	Chloride %	0.22	0.24	0.26	0.21	0.20	0.23	0.21	0.20
12	Sulphate %	0.28	0.30	0.31	0.28	0.29	0.31	0.27	0.26
13	Potassium as K%	0.028	0.031	0.030	0.027	0.033	0.030	0.026	0.029
14	Magnesium as Mg%	0.30	0.34	0.33	0.31	0.35	0.33	0.31	0.30
15	Calcium as Ca%	1.15	1.13	1.12	1.10	1.11	1.12	1.16	1.15
16	Manganese as Mn%	0.52	0.50	0.54	0.53	0.51	0.50	0.53	0.52
17	Iron as Fe%	1.27	1.24	1.25	1.30	1.29	1.27	1.31	1.29
18	Available Organic Carbon %	0.28	0.24	0.25	0.27	0.22	0.20	0.23	0.22
19	Available Nitrogen%	0.012	0.011	0.010	0.012	0.011	0.010	0.011	0.012

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