

ANNEXURE-2

GROUND WATER ANALYSIS REPORT

S. No	Parameters	Desirable limits	Permissible Limits	Tilda Rly. Stn. (dugwell) (GW1)	Bahesar (dugwel) (GW2)	Tandawa (Hand pump) (GW3)	Tulsi (Bore well) (GW4)	CC Colony (Bore well) (GW5)
1	Colour, Hazen	5	25					
2	Odor	Unobjectionable		Colorless				
3	Taste	Agreeable		Unobjectionable				
4	Turbidity, NTU	5	10	<2	<2	<2	<2	<2
5	pH value	6.5-8.5	6.5-8.5	7.48	7.65	7.42	7.28	7.42
6	Total Hardness (as CaCO ₃) mg/l	300	600	220	210	205	210	225
7	Iron (as Fe) mg/l	0.3	1	0.12	0.15	0.15	0.14	0.15
8	Chloride (as Cl) mg/l	250	1000	68	67	68	72	71
9	Residual, free chlorine, mg/l	0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05
10	Dissolved solids, mg/l	500	2000	260	270	235	264	256
11	Calcium (as Ca) mg/l	75	200	58	68	62	60	61
12	Copper (as Cu) mg/l	0.05	1.5	<0.01	<0.01	<0.01	<0.01	<0.01
13	Manganese (as Mn) mg/l	0.1	0.3	<0.01	<0.01	<0.01	<0.01	<0.01
14	Sulphate (as So ₄) mg/l	200	400	12	16	18	19	18
15	Nitrate (as NO ₃) mg/l	45	100	8.9	8.8	8.8	8.5	8.1
16	Fluoride (as F) mg/l	1	1.5	0.18	0.15	0.15	0.18	0.16
17	Phenolic compounds (as C ₆ H ₅ oh), mg/l	0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001
18	Mercury (as Hg) mg/l	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
19	Cadmium (as Cd) mg/l	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
20	Selenium (as Se) mg/l	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
21	Arsenic (as As), mg/l	0.05	0.05	<0.01	<0.01	<0.01	<0.01	<0.01
22	Cyanide (as CN), mg/l	0.05	0.05	<0.01	<0.01	<0.01	<0.01	<0.01
23	Lead (as Pb), mg/l	0.05	0.05	<0.01	<0.01	<0.01	<0.01	<0.01
24	Zinc (as Zn), mg/l	5	15	0.05	0.06	0.07	0.05	0.08
25	Anionic detergents (as MBAS), mg/l	0.2	1	<0.01	<0.01	<0.01	<0.01	<0.01
26	Chromium (as Cr ⁶⁺)	0.05	0.05	<0.01	<0.01	<0.01	<0.01	<0.01
27	Polynuclear aromatic hydrocarbons (as PAH), mg/l	--	--	Nil	Nil	Nil	Nil	Nil
28	Mineral oil, mg/l	0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01
29	Pesticides, mg/l	Absent	0.001	Nil	Nil	Nil	Nil	Nil
30	Radioactive materials	Absent						
	Alpha emitters, Bq/l	Absent		Nil	Nil	Nil	Nil	Nil
	Beta emitters, pci/l	Absent		Nil	Nil	Nil	Nil	Nil
31	Alkalinity, mg/l	200	600	112	110	112	110	111
32	Aluminum (as Al) mg/l	0.03	2	<0.01	<0.01	<0.01	<0.01	<0.01
33	Boron, mg/l	1	5	<0.1	<0.1	<0.1	<0.1	<0.1
34	Total coliform MPN/100ml	-	10/100ml	Nil	Nil	Nil	Nil	Nil

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GROUND WATER ANALYSIS REPORT

S. No	Parameters	Desirable limits	Permissible Limits	Kirna (Hand pump) (GW6)	Kundru (Hand pump) (GW7)	Konari (Hand pump) (GW8)	Gairara (Hand pump) (GW9)	Kuthrel (Bore well) (GW10)	
1	Colour, Hazen	5	25	Colorless					
2	Odor	Unobjectionable			Unobjectionable				
3	Taste	Agreeable			Agreeable				
4	Turbidity, NTU	5	10	<2	<2	<2	<2	<2	
5	pH value	6.5-8.5	6.5-8.5	7.5	7.6	7.4	7.6	7.4	
6	Total Hardness (as CaCO ₃) mg/l	300	600	220	210	215	220	210	
7	Iron (as Fe) mg/l	0.3	1	0.13	0.14	0.17	0.18	0.17	
8	Chloride (as Cl) mg/l	250	1000	49	52	48	42	53	
9	Residual, free chlorine, mg/l	0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	
10	Dissolved solids, mg/l	500	2000	268	270	272	276	290	
11	Calcium (as Ca) mg/l	75	200	49	52	56	58	60	
12	Copper (as Cu) mg/l	0.05	1.5	<0.01	<0.01	<0.01	<0.01	<0.01	
13	Manganese (as Mn) mg/l	0.1	0.3	<0.01	<0.01	<0.01	<0.01	<0.01	
14	Sulphate (as So ₄) mg/l	200	400	12	15	13	12	16	
15	Nitrate (as NO ₃) mg/l	45	100	4.5	4.7	4.8	4.8	5.8	
16	Fluoride (as F) mg/l	1	1.5	0.10	0.12	0.12	0.10	0.10	
17	Phenolic compounds (as C ₆ H ₅ oh), mg/l	0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	
18	Mercury (as Hg) mg/l	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
19	Cadmium (as Cd) mg/l	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
20	Selenium (as Se) mg/l	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
21	Arsenic (as As), mg/l	0.05	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	
22	Cyanide (as CN), mg/l	0.05	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	
23	Lead (as Pb), mg/l	0.05	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	
24	Zinc (as Zn), mg/l	5	15	0.06	0.02	0.05	0.05	0.05	
25	Anionic detergents (as MBAS), mg/l	0.2	1	<0.01	<0.01	<0.01	<0.01	<0.01	
26	Chromium (as Cr ⁶⁺)	0.05	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	
27	Polynuclear aromatic hydrocarbons (as PAH), mg/l	--	--	Nil	Nil	Nil	Nil	Nil	
28	Mineral oil, mg/l	0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	
29	Pesticides, mg/l	Absent	0.001	Nil	Nil	Nil	Nil	Nil	
30	Radioactive materials	Absent							
	Alpha emitters, Bq/l	Absent		Nil	Nil	Nil	Nil	Nil	
	Beta emitters, pci/l	Absent		Nil	Nil	Nil	Nil	Nil	
31	Alkalinity, mg/l	200	600	142	140	138	128	146	
32	Aluminum (as Al) mg/l	0.03	2	<0.01	<0.01	<0.01	<0.01	<0.01	
33	Boron, mg/l	1	5	<0.1	<0.1	<0.1	<0.1	<0.1	
34	Total coliform MPN/100ml	-	10/100ml	Nil	Nil	Nil	Nil	Nil	

SURFACE WATER ANALYSIS REPORT

S. No.	Parameters	Desirable limits	Permissible Limits	MF-2 Mine Pit-3 rd bench (SW1)	B - Block Mine Pit-3 rd bench (SW2)	Water Reservoir (SW3)
1	Colour, Hazen	5	25	Colorless		
2	Odor	Unobjectionable		Unobjectionable		
3	Taste	Agreeable		Agreeable		
4	Turbidity, NTU	5	10	2.5	2.5	2.3
5	pH value	6.5-8.5	6.5-8.5	7.6	7.8	7.4
6	Total Hardness (as CaCO ₃) mg/l	300	600	176	156	162
7	Iron (as Fe) mg/l	0.3	1	0.09	0.09	0.14
8	Chloride (as Cl) mg/l	250	1000	28	27	32
9	Residual, free chlorine, mg/l	0.2	-	<0.05	<0.05	<0.05
10	Dissolved solids, mg/l	500	2000	345	340	342
11	Calcium (as Ca) mg/l	75	200	42	46	48
12	Copper (as Cu) mg/l	0.05	1.5	<0.01	<0.01	<0.01
13	Manganese (as Mn) mg/l	0.1	0.3	<0.01	<0.01	<0.01
14	Sulphate (as So ₄) mg/l	200	400	22	21	19
15	Nitrate (as NO ₃) mg/l	45	100	6.7	8.2	4.8
16	Fluoride (as F) mg/l	1	1.5	0.12	0.14	0.12
17	Phenolic compounds (as C ₆ H ₅ oh), mg/l	0.001	0.002	<0.001	<0.001	<0.001
18	Mercury (as Hg) mg/l	0.001	0.001	<0.001	<0.001	<0.001
19	Cadmium (as Cd) mg/l	0.01	0.01	<0.01	<0.01	<0.01
20	Selenium (as Se) mg/l	0.01	0.01	<0.01	<0.01	<0.01
21	Arsenic (as As), mg/l	0.05	0.05	<0.01	<0.01	<0.01
22	Cyanide (as CN), mg/l	0.05	0.05	<0.01	<0.01	<0.01
23	Lead (as Pb), mg/l	0.05	0.05	<0.01	<0.01	<0.01
24	Zinc (as Zn), mg/l	5	15	0.02	0.02	0.04
25	Anionic detergents (as MBAS), mg/l	0.2	1	<0.01	<0.01	<0.01
26	Chromium (as Cr ⁶⁺)	0.05	0.05	<0.01	<0.01	<0.01
27	Polynuclear aromatic hydrocarbons (as PAH), mg/l	--	--	Nil	Nil	Nil
28	Mineral oil, mg/l	0.01	0.03	<0.01	<0.01	<0.01
29	Pesticides, mg/l	Absent	0.001	Nil	Nil	Nil
30	Radioactive materials	Absent				
	Alpha emitters, Bq/l	Absent		Nil	Nil	Nil
	Beta emitters, pci/l	Absent		Nil	Nil	Nil
31	Alkalinity, mg/l	200	600	110	120	104
32	Aluminum (as Al) mg/l	0.03	2	<0.01	<0.01	<0.01
33	Boron, mg/l	1	5	<0.1	<0.1	<0.1
34	Total coliform MPN/100ml	-	10/100ml	4	7	8